An exploration of the factors associated with suicide risk and self-harm in Jamaica

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Abstract

Background

Suicide is the third leading cause of death among adolescents globally. Therefore, suicide is a global public health concern. The prevalence of suicidal behaviour has been steadily increasing over the past twenty years in the region of the Americas. Moreover, approximately 34.6 million years of life were lost in 2016 as a result of suicide globally. In the case of the Caribbean, of which Jamaica is a part, the age standardised mortality rate per 100,000 from suicide was 4000 between 1990 to 2016. More specifically, Jamaica has had among the largest statistically significant increases in the age standardised mortality rate from suicide, globally between 70.9% to 128.2% for the period 1990 10 2016. Therefore, this thesis aims to better understand (i) key risk and protective factors for suicidal behaviour among young people in Jamaica; (ii) how do persons make sense of their lived experiences of attempting suicide.

Methods

In order to address the aims of the thesis, a number of approaches were taken. First, a systematic review of the existing literature (n=16 studies) was conducted in order to assess the quality and extent of the research related to suicidal and non-suicidal behaviour in Jamaica. Four empirical studies were then conducted exploring the relationship between key psychological variables and suicidal and non-suicidal behaviour. Three of these utilised quantitative cross-sectional study designs. Study 1 (n=1667) was a secondary analysis of data from the Global School Health Survey among adolescents. The second study (n=36) is a pilot study exploring whether items on a survey were suitable and could provide meaningful data on the emotional wellbeing of looked-after and cared-for adolescents in residential childcare facilities. Once the findings from the pilot study were ascertained and modifications made, a third study was conducted. This was a large-scale, island-wide study among looked-after and cared for adolescents (n=221) so as to further investigate key risk and protective factors for suicidal behaviour, and to explore whether we were able to distinguish between those who think about suicide, those who act on their suicidal thoughts, and those who neither think about nor enact suicidal behaviours. The

same was done for self-harm. The fourth study was qualitative in nature and data was obtained using semi-structured interviews. These were conducted among persons who had attempted suicide (n=4) and had presented to hospital. The main purpose of this study was to explore how persons who have attempted to take their lives make sense of their lived experience. In order to conduct a rigorous analysis of the data, all stages of the Interpretative Phenomenological Analysis (IPA) were applied.

Results

Findings from the systematic review of the literature showed that of the 16 papers included, half of them (n=8) were retrospective studies derived from either police or hospital records. In general, the studies were of low to medium quality, a factor which pointed to the need for more rigorous, in-depth research to be conducted on the topic. It was not possible to make generalizations about the population as the samples used were primarily convenience samples, many of which were clinical populations and were therefore not representative of the general population. Nevertheless, three of the main risk factors suggested for risk of suicide include conflicts in intimate relationships, being bullied and having a history of physical and/or sexual abuse. The empirical studies revealed that loneliness, being bullied and physical or sexual abuse placed adolescents at greatest risk of both suicidal ideation and suicide attempt. Emotional distress and exposure to adverse childhood experiences were associated with risk of self-harm ideation, while risk factors for self-harm included perceived stress, defeat, entrapment, emotional distress and adverse childhood experiences.

Conclusions

This thesis has not only contributed four empirical studies to the body of research on suicidal and non-suicidal behaviour in general, but it has helped to fill some critical gaps in our knowledge of suicidal behaviour among young people in Jamaica. Through the lens of the IMV model of suicidal behaviour, we have examine how certain key psychological factors have led to the emergence of suicidal ideation among some individuals and the process of yet other factors led others not only to contemplate suicide, but later, to act on those thoughts. Indeed, we have provided evidence to support and expand the model in part.

The evidence presented herein has implications for policy as well as for clinicians working with adolescents, especially for those in adolescent and mental health. Finally, the findings from this thesis also have important implications for those who work in suicide prevention in Jamaica.

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Acknowledgements

"Anytime you see a turtle up on top of a fence post, you know he had some help."

Alex Haley

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Dedication

This thesis is dedicated to my maternal and paternal grandparents, Eustace Thompson, Imogene Bradshaw, Franz Powell and Edna Madge Powell who have all gone to sleep. They loved me dearly, valued education, understood the importance of hard work, believed in me, and encouraged me to dream big. Their tenacity, faith and perseverance live on in me.

Author's Declaration

I hereby declare that I am the sole author of this thesis, except where the assistance of others has been acknowledged. It has not been submitted in any form for another degree or professional qualifications.

Karyl Tawina Powell Booth

1 Introduction

1.1 General Overview

Suicidal behaviour among young people represents a global public health concern. The context for this thesis, including the theoretical underpinnings of studies contained herein, definition of key terms, the overall aims, research questions and an outline of the structure of this thesis constitute the centre of this chapter. Focusing on key risk as well as on the protective factors associated with suicidal behaviours in Jamaica, this thesis describes the findings from five studies conducted between 2016-2018 on self-harm among young people in Jamaica.

1.2 Country profile and brief history of Jamaica

Jamaica is the third largest island overall, and the largest English-speaking Island in the Caribbean. Located south of Cuba (see Figure 1), the country is 10,991 square kilometres. Jamaica has a population of approximately 2.7 million with a median age of 29.4 years, and a sex ratio of 0.98 males to 1.00 female. The life expectancy at birth is 75.49 years. A little over half (56.3%) of the population live in urban areas (STATIN, 2018). The literacy rate in Jamaica is 89% (STATIN, 2018).

Figure 1. ***Maps showing location of Jamaica in the Caribbean and position in relation to the rest of the world***
Source: https://www.worldatlas.com/upload/c3/b8/ae/jm-02.png

1.2.1 Linkages between Jamaica and Scotland

Jamaica and Scotland have interesting linkages, as Jamaica is a former colony of the UK and a member of the Commonwealth. The connection begins in the mid 1600's when Oliver Cromwell ordered the invasion of Jamaica and, in the next few years, sent more than 1,000 prisoners of war to Caribbean islands such as Jamaica and Barbados. Other waves of Scotsmen from various socio-economic backgrounds arrived in Jamaica to organise and work the sugar and coffee plantations in the eighteenth and nineteenth centuries. As a result, many of the place names and surnames in Jamaica are Scottish. Jamaica is 22 times smaller than the United Kingdom (UK) or 4.5% the size as shown in Figure 2. Both countries' flags share a similar design with St. Andrew's cross, yet another linkage of the two countries (see Figure 3).

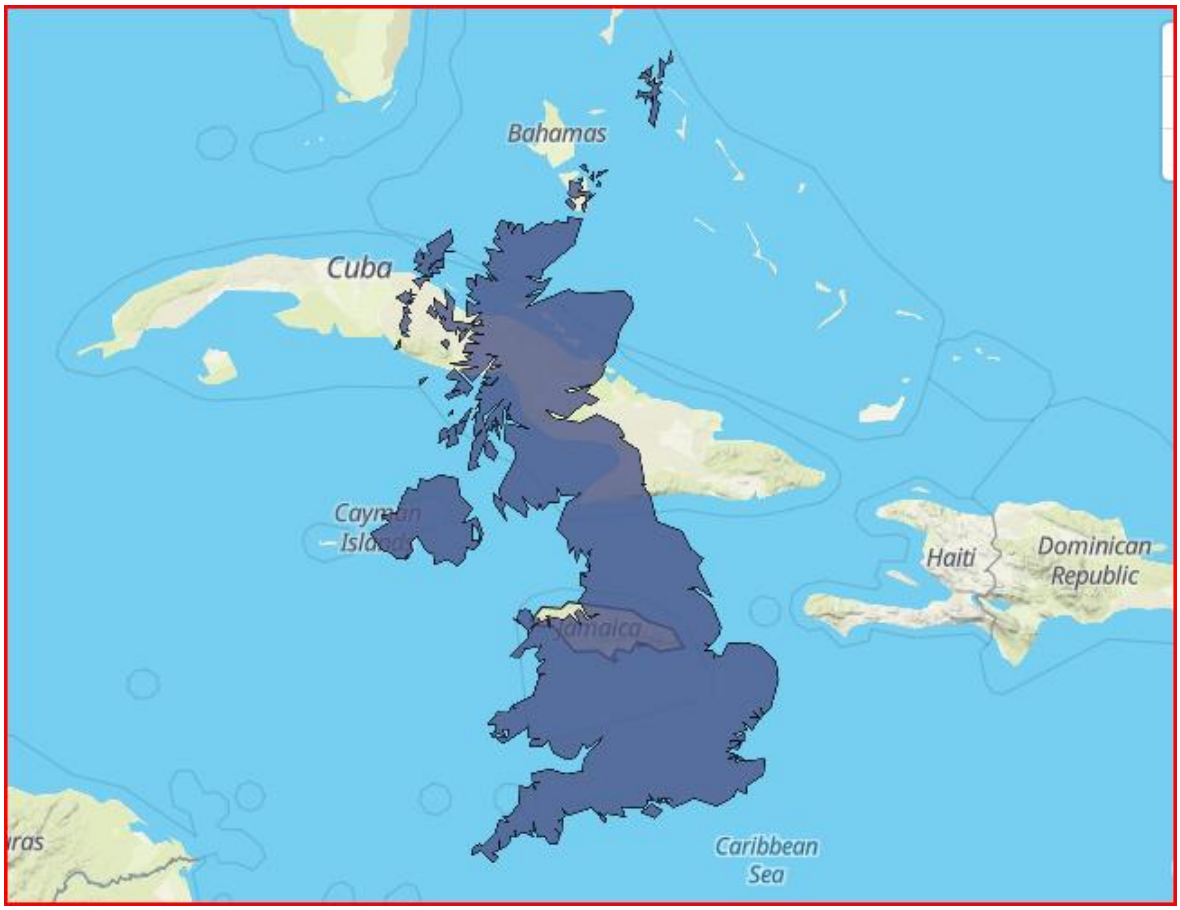


Figure 2. ***Size comparison of Jamaica and the United Kingdom***

Source: https://www.mylifeelsewhere.com/country-size comparison/jamaica/united-kingdom

In August, 2019, Glasgow University signed an agreement with the University of the West Indies to fund a joint centre for development research, in a programme of restorative justice (Capella, 2019; Carrell, 2019). The decision came about after discovering that Glasgow University, one of the oldest universities in the world, had benefitted financially from Scottish slave traders in the 18th and 19th centuries (Capella, 2019; Carrell, 2019). Glasgow University also played a key role in the campaign to abolish slavery in Jamaica and the rest of the Caribbean (Carrell, 2019).

Flag of Jamaica

Flag of Scotland

Figure 3. ***Comparison of design of flags***

Today, Jamaica is known for its rich culture, tasty cuisine including our world-famous Jerk Chicken, our national dish ackee and codfish, beaches, and beautiful landscape. Equally importantly Jamaica has had some iconic figures such as Marcus Garvey, Bob Marley, Usain Bolt, Shelly Ann Fraser Pryce, Asafa Powell, Courtney Walsh, Chris Gayle, Sheryl Lee Ralph and many others. In general, our people tend to be quite easy going, laid back or 'irie' and in fact there is a slogan 'Jamaica No Problem' which embodies the attitude towards obstacles or challenges that may be faced. This mindset speaks to the resilience of the people, yet some members of the Jamaican society experience mental health challenges that (as in many other countries) have not been properly addressed. One such problems is suicidal behaviour.

1.2.2 Scope of the problem

Suicidal behaviour among young people represents a global public health concern. Suicide is the third leading cause of death among those in the 15-19 age group globally (WHO, 2019a). In 2016, approximately 62,000 adolescents worldwide died by suicide (WHO, 2019a). Moreover, estimates for 2016 indicate that 34.6 million years of life lost per annum resulted from suicide (Naghavi, 2019). Although the general trend of suicides has been decreasing globally, the rates for the Americas (of which Jamaica is a part) have been increasing moderately as shown in **Figure 4.**

There is a plethora of studies conducted in high-income countries (HICs) mainly in Europe and North America, with far fewer studies in low and middle income countries (LMICs) (Uddin, Burton, Maple, Khan, & Khan, 2019). Evidence from a few robust studies conducted in LMICs helps to shed some light on the situation in these under-researched regions. One such study is the Global School-based Student Health Survey which included data collected between 2003 and 2015 involving some 229,000 children ages 13 to 17 years from LMICs.

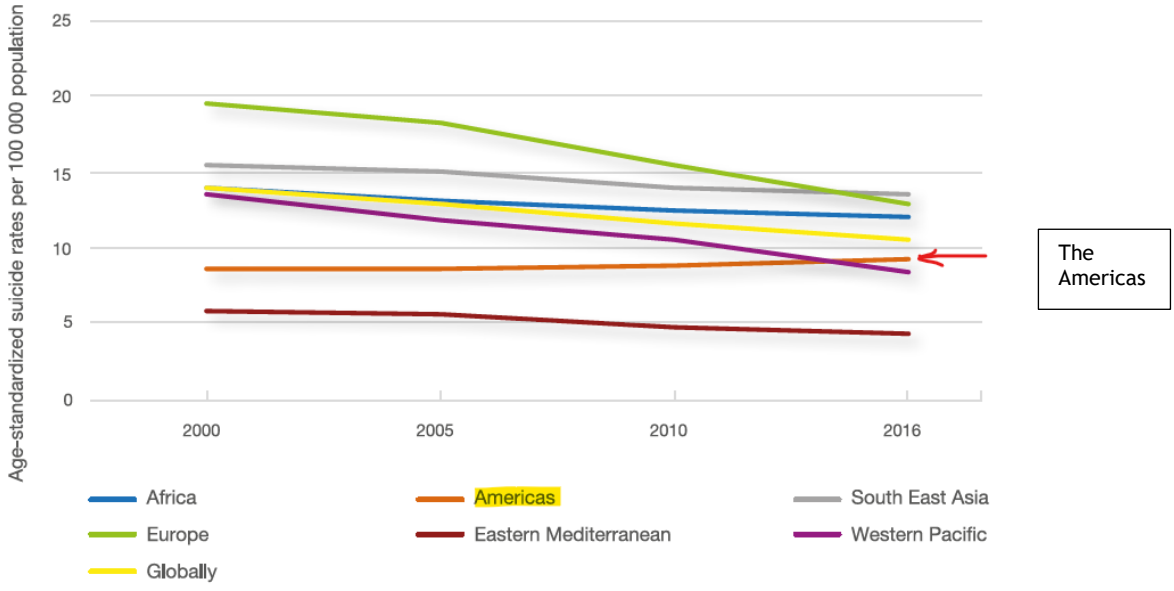


Figure 4. ***Global trends of suicides per region 2006 - 2016***

Source: Suicide in the World, Global Health Estimates, 2019

The results from the study by Uddin et al. (2019) showed that the prevalence of suicidal ideation was higher among girls than boys in most countries, with the lowest rates evident among those in the lower middle-income countries and the highest in low-income countries (Uddin et al., 2019). Another study conducted among 32 LMICs and also using the Global School-based Student Health Survey for the period 2003-2012, reported that suicidal ideation was markedly higher among females (16.2%) than males (12.2%) with a male to female ratio of 1.7 (McKinnon, Gariepy, Sentenac, & Elgar, 2016a). An even more robust study that utilised GSHS data (2003-2015) among 82 countries from HICs, LMICs and LICs (Biswas et al., 2020) showed that the prevalence of suicidal ideation was highest (17-18%) among adolescents in upper-middle-income countries (such as Jamaica) and lowest in LMICs (11-12%) (Biswas et al., 2020).

1.2.3 Definition of key terms

The etymology of the term 'suicide' reveals that it is derived from two terms: *sui,* a pronoun which means "of one's self" and the verb *caedere,* "to kill". (Posner, Brodsky, Yershova, Buchanan, & Mann, 2014). However, there has been a lack of consensus as to what types of behaviour constitute suicidal behaviour. In its 1970 conference on suicide prevention, the National Institute on Mental Health (NIMH) a federal research organisation in the USA, hosted a committee focussed on the issue and chaired by Aaron Beck, American Psychiatrist and founder father of Cognitive Behaviour Therapy. Its findings proposed three classes of suicidal behaviour: (1) suicide, (2) suicide attempt and (3) suicidal ideas (ideation) (Posner et al., 2014).

Although this NIMH classification system was helpful, it failed to take into account the full range of self-injurious thoughts and behaviours such as non-self-harm or non-suicidal self-injury. In order to address this omission, the Centres for Disease Control and Prevention in the USA (CDC), developed the Operational Criteria for the Determination of Suicide (OCDS) during the 1980's. The CDC defined suicide as "death arising from an act inflicted upon oneself with the intent to kill oneself" and "as death from injury, poisoning, or suffocation where there is evidence (either explicit or implicit) of suicidal intent (Posner et al., 2014). However, this approach was criticised as being too subjective (Posner et al., 2014). The World Health Organisation (WHO) later

defined suicide as “an act with a fatal outcome which the deceased, knowing or expecting a fatal outcome had initiated and carried out with the purpose of provoking the changes he desired” (Posner et al., 2014).

The WHO definition points to three defining components: agency; intent; and outcome. The individual must initiate some behaviour that results in or could potentially have an outcome of death, though they may not inflict the act upon themselves. Therefore, if someone acts in a way that causes some other person to shoot them (as in “suicide by cops”) then that behaviour is classified as suicide. Such acts may be active or passive behaviours; hence, if someone refuses to eat or to take essential medication that would help to sustain life this behaviour may also be classified as suicide (Posner et al., 2014).

The term self-harm, may refer to self-injurious behaviour with or without suicidal intent that have non-fatal outcomes, is more commonly used in the Europe and Australia (Silverman, 2016; Silverman & De Leo, 2016). For example, the UK’s National Institute for Clinical Excellence (NICE) defines self-harm as “self-poisoning or self-injury, irrespective of the apparent purpose of the act” (NICE., 2004 pg. 16). The term ‘suicidal behaviour’ includes suicidal ideation, suicide attempts as well as self-harm, is more recently considered to be a more acceptable term (Silverman & De Leo, 2016). The various terminologies used globally, point to the fact that language is constantly evolving and is also reflective of different perspectives. These all highlight the lack of consensus on the terms used. For purposes of this thesis, the term ‘suicidal behaviour’ will be adopted.

1.2.4 The relationship between self-harm and suicide

Self-harm typically begins in early adolescence and the lifetime prevalence is approximately 13 – 23% among adolescents (Jacobson & Gould, 2007 in Nock, 2009b). This rate is significantly higher than the lifetime prevalence rates among adults which range from 1-4% (Nock, 2009b). The question that is often asked is “why do persons engage in self-harm”? Self-harm is deemed to be functional in the following ways: it decreases or distracts from aversive thoughts and feelings; it generates desired feelings or stimulation; it facilitates help-seeking and it helps persons escape from undesired social situations (Nock, 2009b). Motives for

self-harm may also be viewed as externally directed, for example ‘I wanted to show how desperate I was feeling’ or internally directed, for example, ‘I wanted to get relief from a terrible state of mind’ (Scoliers et al., 2009).

There is overwhelming evidence that self-harm greatly increases the risk of future suicide attempts (Hawton et al., 1998; Hawton et al., 2015; Hawton, 2005; Hawton, Rodham, Evans, & Harriss, 2009; Kapur, Cooper, O'Connor, & Hawton, 2013; O'Connor & Nock, 2014; Townsend et al., 2016). Indeed, repetition of self-harm is associated with greater risk of suicide than having a single episode. Similarly, suicide attempts have been shown to be a major risk factor for future death by suicide (Hawton et al., 2009; Kapur et al., 2013). Given that there is a direct link between self-harm and suicide risk, it is important to know the prevalence and level of risk that self-harm poses in order to develop a meaningful suicide prevention strategy.

1.2.5 Suicide in the Caribbean

With a population of some 43 million, Caribbean countries have a wide range of suicide rates, as shown in Figure 5. On the one hand, Guyana has had the highest suicide rates globally for several years. Trinidad and Tobago have also had rates far above global rates as well and even above those for Latin America and the Caribbean. Barbados and Jamaica’s rates lie in sharp contrast, as in the 1990s the rates for both countries were almost the same, but from the early to mid-2000s, Barbados rates climbed steadily, then tapered off until about 2015, and are now lower than those of Jamaica. By contrast, Jamaica’s rates have been increasing since 2005 to present, where it currently stands at approximately 2.1 per 100,000, which are among the lowest rates worldwide. However, the factors responsible for this increase need to be properly researched.

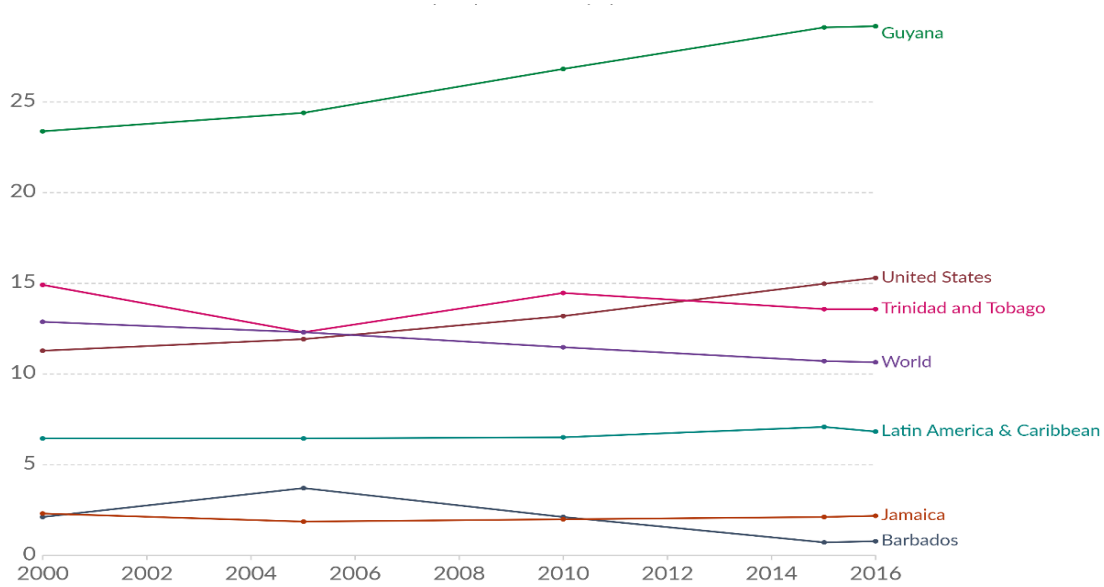


Figure 5 ***Suicide rate, 2000 to 2016 Selected Caribbean Countries vs. USA, UK and the World***

Source:https://ourworldindata.org/grapher/suiciderate?country=BRB~GUY~JAM~Latin%20America%20%26%20Caribbean~TTO~USA~OWID_WRL

1.3 Models of suicidal behaviour

Suicidality is a complex phenomenon. No single factor can explain why an individual takes his or her life, and several theories and models of suicidal behaviour exist. Shneidman (1985, 1993, 1998), a pioneer in suicide research and prevention, referred to 'psychache' which is a response to overwhelming and intolerable emotional and psychological pain.

Several models of suicidal behaviour have been developed seeking to explain the aetiology of suicide risk. Some models, such as the 'escape from self' focused on a single factor leading to suicide. Other models, zero in on a particular domain of risk, for example, the cognitive domain or the biological domain. Yet other models, focus on a group of factors that place one at risk of suicidal behaviour.

Many more people experience suicidal ideation than those who attempt suicide, and even fewer die by suicide. Although previous models of suicidal behaviour have been useful in improving our understanding of suicidal behaviour, until recently we were still unclear as to what led to the emergence of suicidal

ideation and what factors influenced that transition from thinking about suicide to attempting suicide. The recognition of this gap in our knowledge led to the development of more contemporary theories including the Interpersonal Theory of Suicide, (IPTS) (2005, 2010), and the Three-Step Theory, (3ST) (2015). More recently, the Integrated Motivational-Volitional model (IMV) provided an even more detailed theoretical framework thereby expanding our understanding of the process involved in the development of suicidal thoughts and how they are translated later into suicide attempts (2011, 2018). These three contemporary models - the IPTS, 3ST, and IMV, are among those that aim to identify factors that differentiate between those who think about suicide but never act on those thoughts from those who attempt suicide. Given their relevance, all three models which form the 'Ideation to action' framework are described in the following section, as they provide the backdrop for this thesis.

1.3.1 The Interpersonal Theory of Suicide

The Interpersonal Theory of Suicide (IPTS) was first presented by Thomas Joiner in 2005 and subsequently expanded in collaboration with Van Orden and other colleagues (Joiner, Hom, Hagan, & Silva, 2016; Van Orden, 2010). They proffer that suicide occurs when there is a co-occurrence of the desire to die and the acquired capability for lethal self-injury. In other words, people die by suicide because they want to and because they can. Three constructs lie at the centre of this theory: thwarted belongingness, perceived burdensomeness and acquired capability as shown in **Figure 6**. Suicidal desire arises out of two components: *thwarted belongingness* and *perceived burdensomeness (Van Orden, 2010)*.

1.3.1.1 Thwarted Belongingness

An assumption of the IPTS is that one of the strongest predictors of suicidal ideation, attempts and suicide regardless of age is social isolation. As humans, we have a psychological need to belong. If unmet, we develop a sense of thwarted belongingness. One component of thwarted belongingness is chronic feelings of loneliness which is in turn are related to negative emotional states such as anxiety, as well as to feelings of lower levels of social support and pessimism. Suicidal ideation is likely to result if there are prolonged periods of

thwarted belongingness, which is considered to be a dynamic and multidimensional construct.

Low levels of belongingness are evidenced by social isolation, loneliness, and a lack of social connectedness. Suicidal desire emerges when such feelings are coupled with a high perception of burdensomeness, a dynamic cognitive affective state made up of beliefs that one is a liability to others, and further fuelled by feelings of self-hatred. These ideas may be influenced by family conflict, unemployment, physical illnesses or a combination of all three (Van Orden, Witte, Gordon, Bender, & Joiner, 2008; Van Orden, 2010). Figure 6 illustrates these relationships diagrammatically.

1.3.1.2 Perceived Burdensomeness

Perceived burdensomeness is comprised of two components: (1) a faulty sense of self to the extent that one believes that one is a liability on others and (2) a sense of self-hatred. Persons who experience perceived burdensomeness have the misperception that they are expendable – that the world or others would be better off if they were to die. According to Joiner and colleagues (2010), this is one of the main components that is treatable in therapy. Low self-esteem is one of those states that gives rise to self-hate. It is also posited that child maltreatment predisposes individuals to wrongfully perceive themselves as expendable. There is extensive research confirming that perceived burdensomeness is an important correlate of suicidal ideation (De Beurs et al., 2019). Indeed, a synthesis of research from a meta-analysis of studies including a variety of populations has shown that the interaction between perceived burdensomeness and thwarted belongingness is significantly associated with suicidal ideation and suicide risk (Chu et al., 2017).

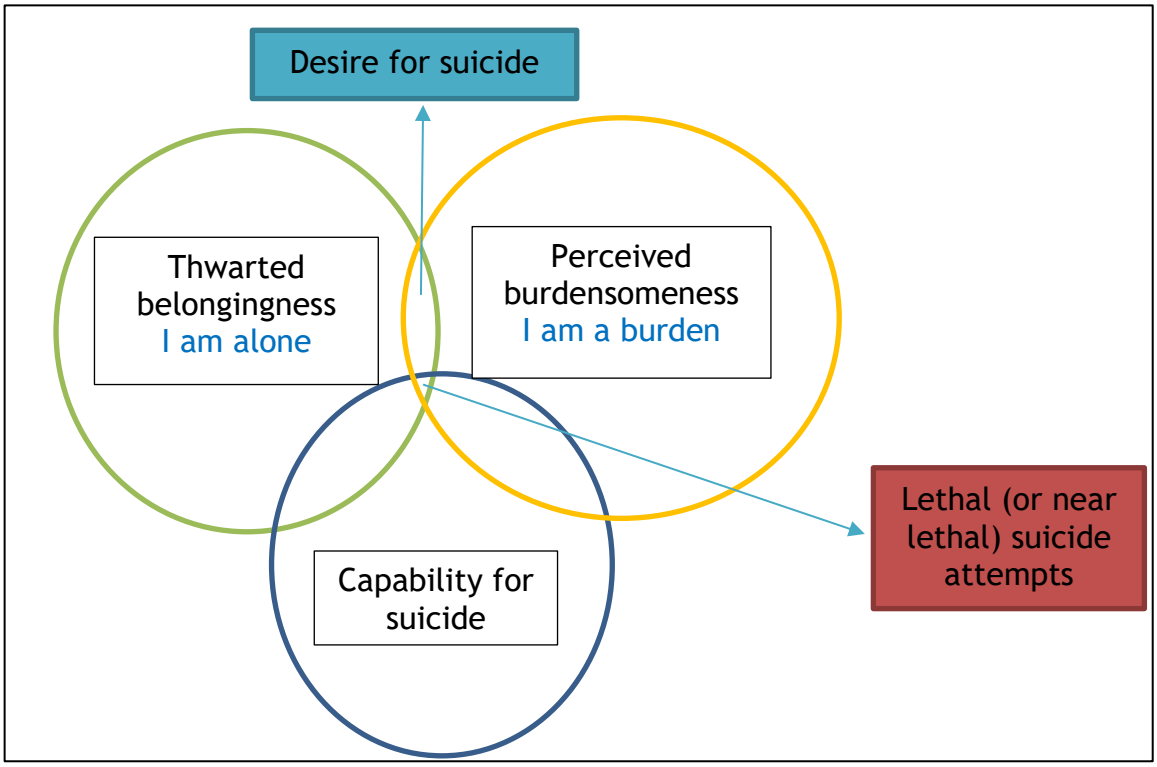


Figure 6. ***Interpersonal Theory of Suicide showing the relationship between the desire for suicide and the acquired capacity for suicide (Joiner, 2010)***

1.3.1.3 Capability for suicide

According to the theory, it is difficult to take one's life as it goes against our innate instinct for survival (Chu et al., 2017). In order to die by suicide an individual must have an increased tolerance for physical pain and/or a reduced fear of death that comes about by habituation through repeated practice such as via self-harm or exposure. It is further posited that at a population level, only a small number of people have both the desire and the capability for suicide. More people contemplate suicide than attempt to take their lives, and an even smaller number of persons actually die by suicide. People who die by suicide, may die not only because they can carry out the suicidal act but because they also wish to do so (Van Orden, 2010). Very little research has been done on the applicability of this theory in LMICs such as Jamaica (Chu et al., 2017).

1.3.2 Three Step Theory (3ST): Ideation-to-Action Framework – Klonsky and May.

Klonsky and May (2015) in their Three Step Theory, posit that suicidal ideation and attempts are explained by four factors: pain, hopelessness, connectedness and suicide capacity. This is depicted graphically in **Figure 7**. Each is discussed below across three steps.

1.3.2.1 Step 1 Pain and Hopelessness

Pain that underpins suicide risk may not only be physical, but it may be emotional or psychological. If someone experiences pain consistently over time, he or she may perceive that the pain is essentially punishment for living, which may reduce a desire to live. However, pain by itself does not lead to suicidal ideation. Instead, this must be combined with a sense of hopelessness.

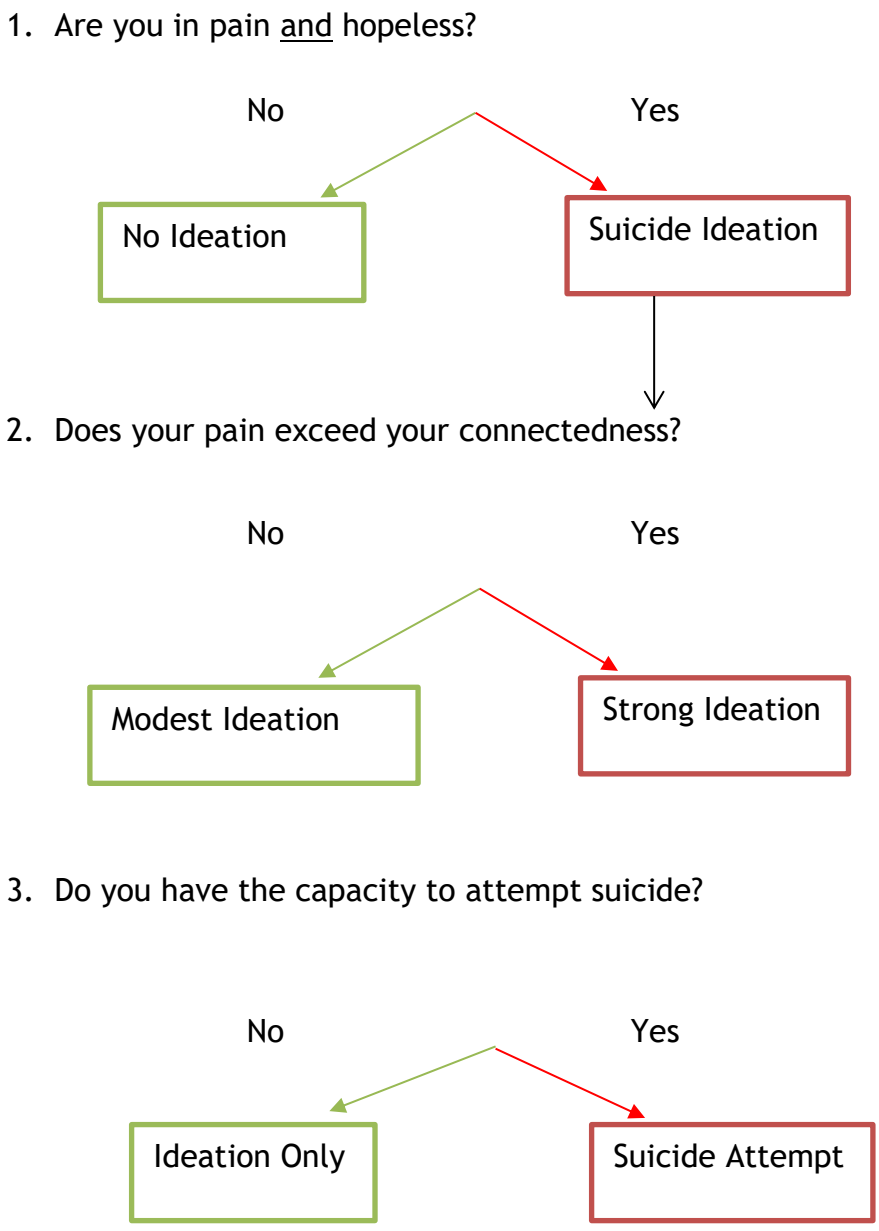


Figure 7. ***Illustration of the Three-Step Theory (3ST) of suicide (Klonsky & May, 2015)***

1.3.2.2 Step 2 Connectedness

Connectedness is key to understanding the pathway to suicide. However, when thinking about connectedness this is not only with other people, but it relates to one's attachment to their job or a role. Such interests are important for providing a sense of purpose in life. A sense of purpose keeps persons invested in living (Klonsky & May 2015). Klonsky & May (2015) also argue that as long as one's connectedness is greater than one's pain, one's desire to die will be

moderate. Despite this however, Klonsky and May do not believe that connectedness is germane to the development of pain or hopelessness. Therefore, connectedness may or may not be present during the development of pain or hopelessness.

1.3.2.3 Step 3 Acquired Capacity

Klonsky and May concur with Joiner that in order for one to act on suicidal thoughts, one must have an acquired capability in order to make an attempt. Three categories of variables must exist for someone to acquire the capability for suicidality: dispositional, acquired and practical factors. Dispositional factors constitute largely genetic factors such as pain sensitivity or blood phobia. Acquired factors include habituation such as exposure to suicide or death. Practical factors refer to the capability of making an attempt such as having a knowledge of and access to lethal means (Klonsky & May 2015).

1.3.3 Integrated Motivational-Volitional Model of Suicidal Behaviour

1.3.3.1 Theoretical Origins

The Integrated Motivational-Volitional model of suicidal behaviour is a tri-partite model that seeks to explain the context of the emergence of suicidal ideation and the factors that lead to the transition to suicide attempts and death by suicide (O'Connor & Kirtley, 2018). This model which was developed by Rory C. O'Connor (2011) is a second-generation model which is consistent with the *Ideation to Enaction* framework. Four main theoretical perspectives helped to influence the development of the IMV model, namely: the diathesis-stress model, the theory of planned behaviour, Williams' Cry of Pain theory of suicide which borrows from the concept of 'arrested flight' and the differential activation hypothesis (O'Connor & Kirtley, 2018). The presence of certain factors may predispose some persons to be more vulnerable to negative life events, as suggested in the diathesis-stress model. Second, the theory of planned behaviour suggests that the strongest predictor of behaviour is the intention or motivation to carry out that behaviour. The Cry of Pain theory asserts that individuals may experience feelings of being overwhelmed or crushed (defeat) with no sign of escape (entrapment). Lastly, the differential activation hypothesis posits that

individuals form an association between feelings of distress and suicidal thinking. Over time, those suicidal thoughts are set in motion more readily in subsequent episodes of distress. This is illustrated in Figure 8.

1.3.3.2 Key Premises of the IMV

The Pre-Motivational Phase

The pre-motivational phase consists of a diathesis-environment-life events triad. Diathesis factors may include biological factors such as genetics, or psychiatric illnesses that make one vulnerable to stress. Personality factors that include high socially prescribed perfectionism; exposure to stressful life events such as early life trauma; or environmental factors such as socio-economic deprivation may make one more vulnerable and increase the likelihood of the development of suicidal thinking.

Some researchers theorize that sensitivity to defeat and humiliation are influenced by factors from the pre-motivational phase. For example, when one has excessive or unreasonable perceptions about the expectation of others, such convictions may lead to the development of suicidal thoughts. Individuals who entertain these thoughts place an inordinate amount of pressure on themselves unreasonably, to succeed and achieve in order to attain or maintain those perceived high standards. This behaviour is known as socially prescribed perfectionism.

The Motivational Phase

Within the motivational phase, the presence of defeat and humiliation may lead to feelings of entrapment. However, this process is not automatic. Instead, factors such as rumination, recall biases and social problem-solving referred to in the model as threats to self-moderators (TSMs) are likely to affect feelings of entrapment. The final phase of the motivational phase of the model speaks to the transition between entrapment and suicidal ideation. Here it is posited that another set of variables, known as motivational moderators (MMs), may either increase or decrease the likelihood that entrapment will lead to suicidal ideation. The presence of protective factors (such as reasons for living, a sense of belongingness or connectedness, the pursuit of a goal), may buffer against

thoughts of suicide. Conversely, the presence of risk factors such as the lack of social support, burdensomeness and low resilience are more likely to result in the emergence of suicidal thoughts (O'Connor & Kirtley, 2018; O'Connor, 2011).

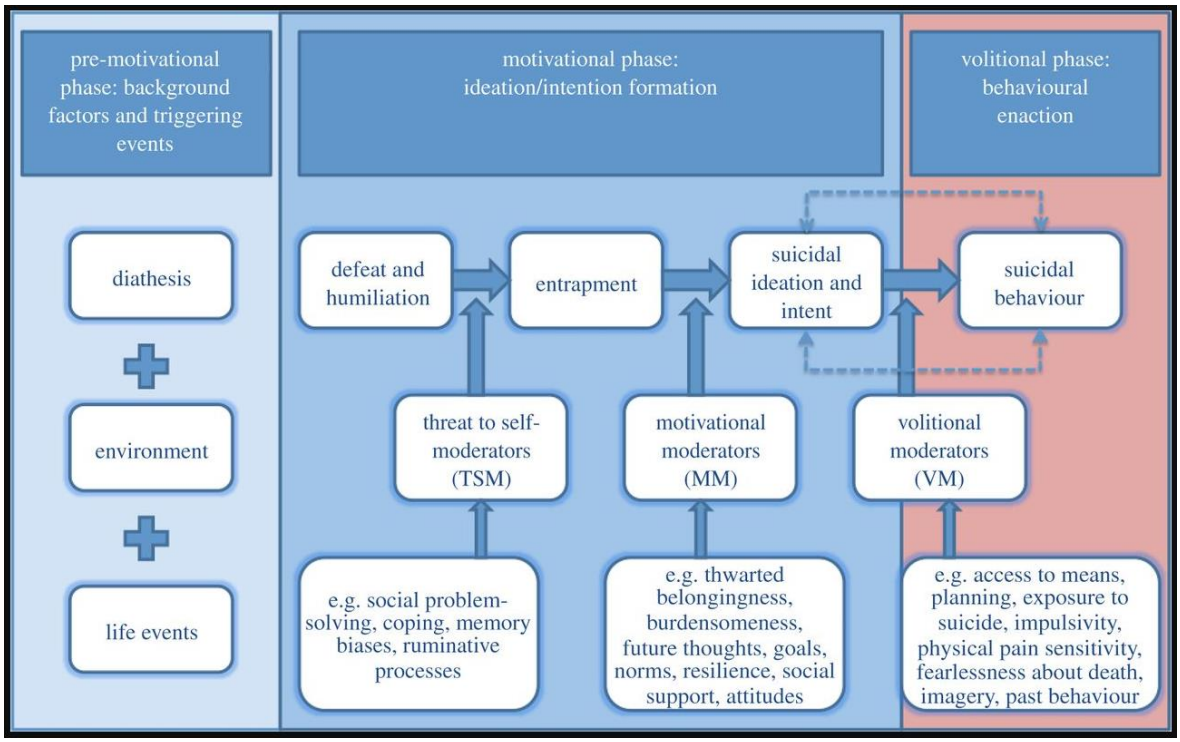


Figure 8. The IMV Model of Suicidal Behaviour

The Volitional Phase

The final phase of the model is the volitional phase, one that seeks to explain the transition from suicidal ideation or intent to enaction. The model proposes that not only must there be the capability for suicide, such as access to means, but there should also be one or more of the following as well: exposure to suicide, impulsivity, lowered physical pain sensitivity or past behaviour. Not only has this model become increasingly prominent in the literature, there is also growing support for its pathways and processes as well, seen not only in UK populations (Dhingra, Boduszek, & O'Connor, 2015; Dhingra, Boduszek, & O'Connor, 2016; Rasmussen et al., 2010b; Wetherall, Robb, & O'Connor, 2019), but also in other cultures such as in German (Lucht et al., 2020) and Chinese (Li et al., 2020) populations. It is within this context that we decided to use the IMV model as the main framework of this study.

1.3.4 Suicide in Jamaica

As the fourth most populous country in the Caribbean, Jamaica represents something of a paradox. While it ranks among the countries with the lowest rates of suicide globally, at 2.1 per 100, 000 Jamaica has also recorded an age standardized mortality rate of 2.9 per 100,000 (Naghavi, 2019). Despite these low rates, in 2014 UNICEF reported that 20% of Jamaican adolescents were at risk of suicide (*UNICEF Annual Report 2014 Jamaica*, 2014). In fact, Jamaica recorded a 70.9% increase in suicide rates between 1990 and 2016 (Naghavi, 2019). This sharp rise was among the largest statistically significant increase in rates globally (Naghavi, 2019).

Suicides are very rare in children younger than 14 years of age globally (Soole, 2015) and this is no different in Jamaica as shown in **Figure 9**. The largest proportion of deaths by suicide that occur in Jamaica is among the 15-49 years age group and this has followed an upward trend over the past three decades. Those 70 years and older have among the lowest proportions of suicides when compared to the rest of the population which is in contrast with global trends (WHO, 2014b). Therefore, the population under consideration for this thesis is between 14-49 years.

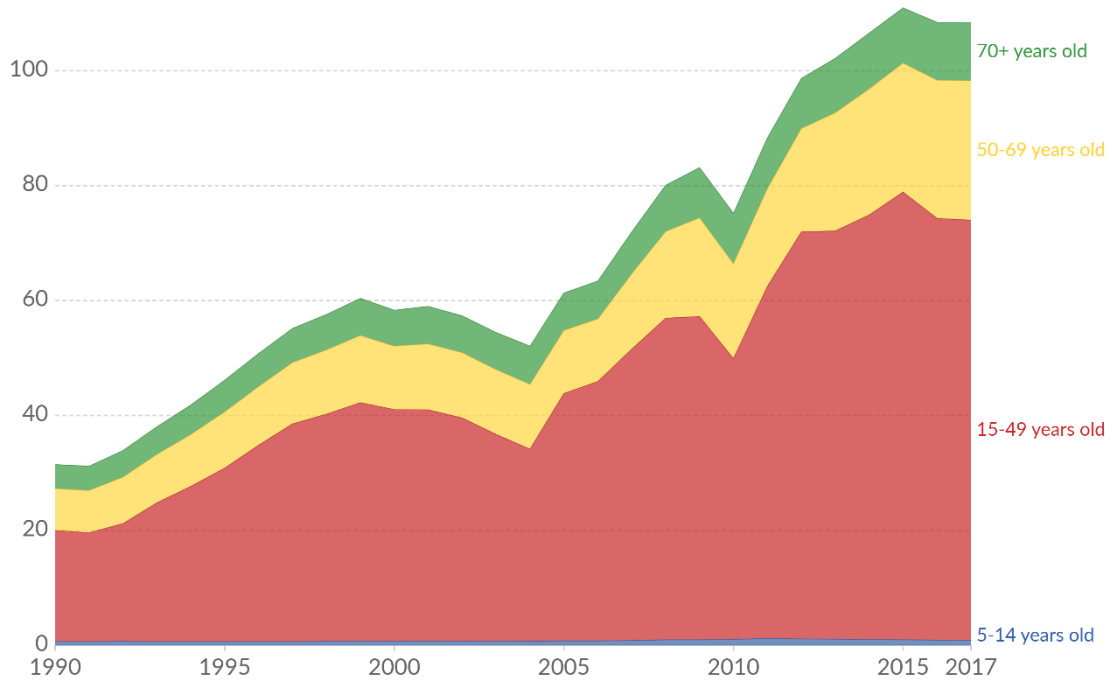


Figure 9. Suicide Deaths by age, Jamaica, 1990 to 2017

Source: https://ourworldindata.org/grapher/suicide-deaths-by-age

In Jamaica more males than females die by suicide (see Figure 10). This difference mirrors global trends (Miranda-Mendizabal et al., 2019). In the past three decades, suicide rates have increased Steadily for both genders. This pattern of increase is of concern. In order to address these findings, we first need to identify the factors that account for the increase and, once we begin to understand those factors, we can then devise appropriate strategies to halt this trend.

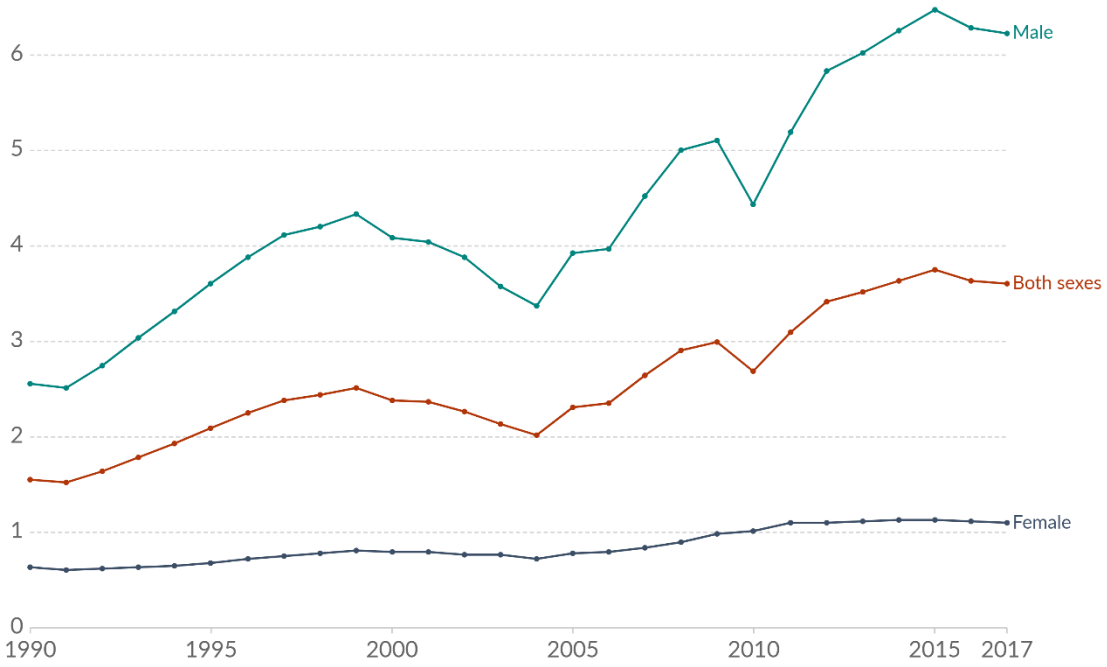


Figure 10. ***Deaths by Suicide: a comparison by gender for Jamaica, 1990 to 2017***

Source: https://ourworldindata.org/grapher/suicide-death-rates-by-sex

1.3.5 Mental Health Policy

According to Mental Health Atlas 2014, target 3.1 specified that by the year 2020 80% of countries should have at least two functioning national, multi-sectoral mental health promotion and prevention programmes (WHO, 2015). At that time, no low-income country and only 10% of middle-income countries had developed a suicide prevention strategy. ("2014 WHO Mental Health Atlas", 2014). The Caribbean Health Research Council has agreed that there is a need for the development of a regional mental health policy, an action plan and

relevant legislation (CHRC, 2011). While Jamaica does have a mental health policy, it was last revised in 1997, it is therefore in need of revision (WHO AIMS Report on Mental Health in Jamaica) and significantly, Jamaica lacks a suicide prevention policy (Abel, Bourne, Hamil, et al., 2009). A telephone hotline for persons who experience emotional distress and who may be thinking about suicide was established in Jamaica in 2018, but this service was not sustained.

1.3.6 Importance and Expected Impact

As noted above, Jamaica has no national suicide prevention policy, nor does it have adequate crisis intervention support for persons who may feel particularly vulnerable to emotional or psychological stressors and who may be contemplating taking their lives. This public health concern stands in need of urgent attention.

A good starting point is to examine the status of the research that has been conducted on suicidal behaviour in Jamaica. Chapter 2 of this thesis therefore offers a Systematic Review of the extant literature, synthesizing the evidence as well as attempting to ascertain those gaps that may exist in our knowledge regarding suicidal behaviour in Jamaica. Systematic Reviews are the gold-standard in the scientific arena as they accurately and reliably evaluate the existing evidence with a view to inform decisions about future research (Liberati et al., 2009; Moher et al., 2015).

Findings from this thesis may help to inform both future policy and practice in Jamaica, guiding multi-disciplinary teams such as frontline workers, staff members and carers in residential care facilities dedicated to the care of children. It is believed by the researcher (KPB) that findings from this study may assist with the design of culturally relevant support systems for looked-after adolescents who contemplate suicidal behaviour.

1.3.7 Aims of the current thesis

The overarching aim of this thesis is, therefore, to arrive at a better understanding of some key risk and protective factors for suicidal behaviour

among young people in Jamaica. Another aim is to explore the ways in which individuals make sense of their lived experiences of attempting suicide.

1.3.8 Research Questions

The main research questions for this thesis are detailed below:

1. What are the risk and protective factors for suicidal behaviour among the youth in Jamaica?

2. What factors differentiate those adolescents in Jamaica who only think about suicide or self-harm from those who act on these thoughts?

3. What are the risk and protective factors for suicidal behaviour among looked-after and cared for adolescents in Jamaica?

4. How do persons make sense of their lived experiences of making a suicide attempt?

1.3.9 Methodological Considerations

In order to adequately address the overarching aims of this thesis, the researcher (KPB) in consultation with the members of the supervisory team agreed that a mixed methods approach would be best. The reasons for utilising a mixed methods approach are many, not the least of which is that it yields richer, broader, deeper and more detailed findings (Creswell, 2015; McKim, 2017). Indeed Creswell (2015) argues that the mixed methods approach is the best way to gain an understanding of complex phenomena (Creswell, 2015). The validity of findings is increased when a mixed methods approach is utilised (McKim, 2017).

The mixed methods approach has become increasingly popular in the social, behavioural and health sciences because it synthesises findings from both quantitative and qualitative research designs (Creswell, 2015; Johnson, Onweugbuzie, & Turner, 2007). Here the researcher employs both closed ended questions (primarily in quantitative studies) as well as open ended questions (primarily in qualitative studies), and then proceeds to make interpretations,

reporting the findings from both types of studies (Creswell, 2015). The bias and weaknesses in quantitative or qualitative research designs are balanced out when they are used in combination with each other. In other words, each approach complements the other. Thus, researchers can be more confident about their results and conclusions (Johnson et al., 2007). It is against that background that a mixed methods approach was employed for this thesis. Each study was analysed using appropriate methods depending on the research question as outlined in Appendix 1.

A critical consideration for any research team is that of time. Time is usually one of the main constraints for researchers and this was no different for the studies that would comprise this thesis. As will be explained in detail in subsequent chapters, dual ethical approval was required as the researcher (KPB) was a full-time student attending the University of Glasgow in Scotland, but all the studies were conducted in Jamaica. It was therefore mandatory that dual ethical approval was sought from entities both in the UK and Jamaica. It took approximately 9 months to gain ethical approval from the Ministry of Health in Jamaica as well as the University Hospital of the West Indies. The result was that a decision was made to employ a convergent mixed methods design, where data was collected for both the qualitative and quantitative studies simultaneously. Therefore, the studies as presented in this thesis, do not reflect a chronological sequence of when the data were collected. Instead, a funnel approach was used to present the findings starting with the general population of adolescents and ending with a specific group of adults who had attempted to end their lives.

The variables of interest in the four empirical studies cited here are not confined to any single theoretical model. Instead, the primary considerations that drove the choice of the variables that were selected was based on the literature - in other words the variables of interest were chosen because of their relevance to the target population - young Jamaicans. Among the known list of factors that influence young people's emotional wellbeing are self-esteem; adverse childhood experiences; alcohol consumption; sleep problems; bullying victimization; perceived stress; trust of others; anxiety; depression; relationship with parents; social connectedness; coping; help-seeking behaviour and

academic/school performance. These factors were explored as potential risk and/or protective factors in various combinations as was possible for each study. To date there are no known theoretical frameworks specific to young people, the population of focus for this thesis.

1.3.10 Participant Groups of Interest

This chapter has established the fact that the largest number of persons in Jamaica who die by suicide are between 15-49 years of age. The studies underpinning this thesis therefore focus on persons below age 50, the group that is at greatest risk of suicide. As stated above, suicidal behaviour presents adolescents with particular vulnerabilities, but this field remains under-researched in LMICs such as Jamaica.

An important starting point must be the examination of potential risk and protective factors for suicidal behaviour among adolescents. To this end, three of the four empirical studies that form part of this thesis investigate certain key psychological factors among the adolescent population. The fourth empirical study broadens the scope to explore those factors that lead to the emergence of suicidal ideation, and those factors that influence persons to act on such thoughts.

Another key consideration guiding the populations that were studied for this thesis was the case of Vanessa Wint, a 16-year-old female who died by suicide while in care in Jamaica. According to reports in the newspapers, Vanessa Wint was raped on multiple occasions while she lived at home with her family and was later placed in the care of the state. She was described by her case workers as ‘troubled and at risk of suicide’. This adolescent reportedly tried on numerous occasions through various means to express her frustrations related to being a victim of child sexual abuse, and subsequently being locked away in the care of the state. Several other children in care may be at similar risk of suicide, yet, very little is known as to how widespread the problem might be in Jamaica, hence the decision to explore the nature and extent of suicidal behaviour among this population.

1.3.11 Structure of Thesis

This chapter serves as an overview of suicidal behaviour among the youth, providing several theoretical models of behaviour which form the backdrop for this thesis. Chapter 2 undertakes a systematic review of the literature on suicidal behaviour in Jamaica. By this means, that chapter highlighting the strengths and limitations of empirical studies conducted in Jamaica, and also identifies gaps in the literature. Chapter 3 consists of a secondary analysis of data as it examines the correlates of suicidal behaviour among adolescents in Jamaica. Next, a pilot study explores the feasibility of conducting a survey among looked-after and cared-for adolescents in Jamaica. That information is found in chapter 4. Chapter 5 then lays out a quantitative cross-sectional study conducted among looked-after and cared for adolescents in Jamaica. Chapter 6, a primary study which is qualitative in nature, applies an Interpretative Phenomenological Analysis (IPA) approach so as to explore the lived experiences of Jamaicans who have attempted to take their lives, and to report on how they make sense of these experiences. The thesis concludes with Chapter 7, a general discussion of the key findings from the systematic review; from all three empirical studies; from the secondary data analysis and then determines how these are situated in the existing literature. The strengths and limitations of this thesis, its recommendations, clinical and theoretical implications as well as suggestions for future research will also be discussed in Chapter 7.

2 Suicidal behaviour in Jamaica: A Systematic Review

2.1 Abstract

Background: The rates of suicide in Jamaica are among the lowest worldwide. Nevertheless, an awareness of the correlates of suicidal behaviour is important for policy and practice. The main aim of this review was to synthesize the literature on suicidal behaviour in Jamaica.

Method: This review was conducted and reported in line with PRISMA guidance. A comprehensive review of relevant primary studies was performed. Five of the main electronic databases were searched from inception up to September 2020. They were EMBASE, Ovid MEDLINE, PsychINFO, SCOPUS and Web of Science. The researcher (KPB) conducted study screening and selection, data extraction and quality appraisal of all included articles. The two other researchers sampled the studies and also conducted data screening and quality appraisal for quality control purposes. A narrative synthesis was performed due to the heterogeneity of the studies.

Results: A total of 98 records was obtained from searching the five databases. Sixteen studies met inclusion criteria and were included in the narrative synthesis. Risk factors for suicide attempts include being male and living in urban areas, while the most common reasons provided for deaths by suicide included interpersonal conflict and financial difficulties. Being in a relationship was found to be a risk factor.

Conclusion: This review is the first systematic review of the risk and protective factors for suicidal behaviour in Jamaica. However, more extensive research is needed to elucidate these phenomena in order to develop more culturally relevant prevention policies.

Key words: Suicidal ideation, suicide attempt, suicide, self-harm ideation, self-harm, Jamaica

2.2 Introduction

According to the World Health Organization, (WHO) the global rate of suicide between 1950 – 2004 increased, especially among males (WHO, 2014a). Approximately 800,000 people die by suicide each year (WHO, 2019d). It is further estimated that for each person who dies by suicide as many as 20 persons attempt suicide. A large cross-national study of 84,850 adult participants showed the lifetime rate of suicidal ideation ranged from 3.1% to 12.4% for low-middle income countries, while for suicide attempts the rate ranged between 0.7 and 4.7%; (Nock, Borges, Bromet, Cha, et al., 2008a). (SE 0.1 for all) (Nock, Borges, Bromet, Alonso, et al., 2008b).

In a population-based study of data gathered between 2003 and 2015 from 59 low-income countries, researchers looked at data provided by the Global School Health Survey. The data yielded a sample size of 229,129 adolescents aged 13 – 17 years: here, the pooled prevalence of suicidal ideation was 16.9% for all countries, while suicide attempt was a close17.0% in the past year prior to completing the survey (Uddin et al., 2019). Comparisons of the prevalence of suicidal ideation showed that for most countries it stood higher among females at18.5%, in contrast to males at 15.1% (Uddin et al., 2019).

In an earlier study across 17 countries (seven low and middle-income countries (LMICs) and ten high income countries (HICs) researchers examined the prevalence, risk and protective factors of suicidal ideation, plans and attempts. While they found a considerable amount of variability in suicidal behaviours cross-nationally, they did find common risk factors. Significantly, 60% of the progression from suicidal ideation to the first suicidal attempt occurred within the first year of the onset of suicidal ideation (Nock, Borges, Bromet, Alonso, et al., 2008a). Furthermore, being female, young, less educated, unmarried and having a mental disorder were also among the strongest risk factors for suicidal ideation (Nock, 2008). In general, the rates were highest among Eastern-European countries and lowest in Central and South America. (Nock, Borges, Bromet, Alonso, et al., 2008a).

There exists what is known as the gender paradox in suicide (Canetto & Sakinofsky, 1998). Females have higher rates of suicidal ideation and attempts than males, yet the rate of suicide among males exceeds that of females (Canetto & Sakinofsky, 1998). Subsequent research confirms this gender difference: higher rates of suicide among males may be attributable, in part, to males use of more lethal methods; to their supposedly have a greater motivation or intention to die and, as a result, engaging more forceful attempts (Callanan & Davis, 2011; Freeman et al., 2017; Nock, Borges, Bromet, Cha, et al., 2008b).

Crude and age-standardized rates for suicide mortality as well as for years of life lost were compared across regions and countries, and also by age, sex, and socio-demographic Index, providing a composite measure of fertility, income, and education (Nahgavi, 2019). Suicide was found to be the leading cause of age-standardized years of life lost in the Global Burden of Disease region of high-income countries. Suicide was among the top 10 leading causes of death in Eastern Europe, Central Europe, Western Europe, Central Asia, Australasia, Southern Latin America, and high-income North America (Nahgavi, 2019).

No single variable leads one to consider suicide, attempt suicide or self-harm. Indeed, there exists a wide range of risk as well as protective factors that may either cause a person to be at greater risk of engaging in these behaviours or reduce risk significantly. However, one of the strongest predictors of suicide is self-harm (Arensman, Griffin, & Corcoran, 2016; Mars et al., 2019).

Protective factors include skills, strengths, or resources at the biological, psychological, family or community level that help people cope with stressful events, lowering the likelihood of negative outcomes (WHO, 2004). Protective factors enhance resilience and may be internal (personal), or external (environmental) in focus. In this context, a protective factor reduces the likelihood of attempting or taking one’s life. Conversely, risk factors increase the likelihood that a negative outcome will occur.

A pre-existing psychiatric disorder is also among the main risk factors for suicidal behaviour. Psychological autopsy studies, which involve conducting structured interviews with family members, friends and healthcare workers, along with analyses of notes left by the deceased, reveal that up to 90% of those who die by suicide had a diagnosable psychiatric disorder at the time of suicide (O'Connor & Nock, 2014). Yet, among persons with psychiatric disorders, suicide rates tend to be low (5%) when compared with the general population (O'Connor & Nock, 2014).

Emile Durkheim was among the first to suggest that being single or divorced provided an important risk factor for suicide (Kposowa, Ezzat, & Breault, 2020). This hypothesis has been tested time and again over the past several decades, as demonstrated by two landmark longitudinal studies, both of them the work of Kposowa (2000 & 2020). Using U.S. census data between 1979-1989 (Kposowa, 2000), the first study shows that divorced or separated persons were twice as likely to end their lives than those who were married (Kposowa, 2000). Divorced and separated persons were twice as likely to end their lives than those who were married, while single people (that is unmarried or widowed persons) (Kposowa, 2000). The risk of suicide among divorced men was more than twice that of married men (Kposowa, 2000). Kposowa's more recent study (based on a large-scale sample of more than 1.38 million persons) reveals that divorced/separated persons were 1.9 times more likely to die by suicide than married persons (Kposowa et al., 2020). Furthermore, those who were single/never married were more likely to die by suicide than those who were married at a rate of 35% in comparison with married persons (Kposowa et al., 2020). The adjusted relative risk for males stood at almost 5 times the risk experienced by females (Kposowa et al., 2020).

Young people aged between 16-25 years are among those at greatest risk of suicide as mentioned in chapter 1. The onset of adolescence, at approximately twelve years of age, seems to coincide with the onset of suicidal ideation, reaching its peak at about age sixteen. (Bolger, 1989; Nock, Borges, Bromet, Cha, et al., 2008a; Nock et al., 2013; Thompson, Dewa, & Phare, 2012).

Among young people, the greatest risk for suicide attempts include adversity in early life together with various form of abuse and having a family history of suicidal behaviour (Nock, Borges, Bromet, Alonso, et al., 2008a; Taliaferro & Muehlenkamp, 2014). Furthermore, among all the various types of abuse, sexual abuse has been found to be most strongly associated with suicidal behaviour (Serafini et al., 2015; Taliaferro & Muehlenkamp, 2014). For other vulnerable youth, a sense of hopelessness, impulsivity, depression, anxiety and emotional pain drive young people to seek escape through suicide (Nock, Borges, Bromet, Cha, et al., 2008a; Taliaferro & Muehlenkamp, 2014). By applying theoretical models of suicidal behaviour to this age group, we may be better able to understand the factors that may place this cohort at risk.

Three theoretical models provide the backdrop for this review: (1) The Interpersonal Theory of Suicide (IPT), (2) The Three-Step Theory (3ST) and (3) The Integrated Motivational-Volitional Model of Suicidal Behaviour (IMV). Each is discussed briefly. First, Thomas Joiner's Interpersonal Theory of Suicide suggests that social isolation constitutes one of the most reliable predictors of not only suicidal ideation, but also of suicide attempts and deaths by suicide across the lifespan (Chu et al., 2017; Joiner et al., 2005; Van Orden, 2010). Thwarted belongingness or a desire to die develop as a result of a lack of social connectedness (Van Orden, 2010).

Secondly, it is posited in the IPT that perceived burdensomeness which includes self-hatred and a faulty self-perception that one is a liability on others, is also a key cause of suicidal ideation (Van Orden, 2010). However, it is argued that having a desire to die (i.e., suicidal ideation) is not sufficient but rather another key precondition for serious suicidal behaviour is having the acquired capability for suicide which includes having both an increased tolerance for physical pain as well as a reduced fear of death through habituation (Van Orden, 2010).

The Three-Step Theory, by Klonsky and May, posits that a precursor to the emergence of suicidal ideation is the presence of pain (Klonsky & May, 2015b; Klonsky, Saffer, & Bryan, 2017). This may be either physical or emotional pain. The second step is having a sense of hopelessness. Pain and hopelessness combined, may lead to the development of suicidal ideation (Klonsky & May,

2015b; Klonsky, Saffer, et al., 2017). If one has a sense of connectedness with others that serves as a protective factor against suicidal ideation among those who are vulnerable due to high pain and hopelessness. The progression from ideation to enaction occurs with an increased capacity for suicide. Three sets of factors contribute to a high capacity for suicide: dispositional, which are largely genetic; acquired or habituation to pain, similar to Joiner's concept (Van Orden, 2010) and practical, such as knowledge of and access to means, like a firearm (Klonsky & May, 2015b; Klonsky, Saffer, et al., 2017).

The Integrated Motivational-Volitional Model of Suicidal Behaviour, updated in 2018, proposes that suicidal behaviour occurs as a result of a combination of factors and is a process moving through three phases: (1) *pre-motivational phase*, which includes genetic, environmental, and life-events which act as triggers which provide the context for (2) the *motivational phase*, which primarily encompasses feelings of defeat which later leads to entrapment along with other moderators. It is here that suicidal ideation and intent are formed. The third phase (3) is the *volitional phase* in which one has the capability to act on the thoughts of taking their lives (O'Connor, Cleare, Eschle, Wetherall, & Kirtley, 2016).

Despite the theoretical advances, we need to better understand what are the processes that drive suicidal ideation and what factors cause persons to act on these thoughts, as there are many unanswered questions. Additionally, suicidal behaviour remains under-researched in the Caribbean region and by extension in Jamaica. Given that previous research is primarily on high income countries, the evidence is insufficient to assume that the same risk and protective factors would apply to Jamaica. In fact, as indicated in chapter one, to rely on research done in other Caribbean countries may not be applicable to Jamaica, as the rates of suicide vary across the Caribbean, with Guyana having among the highest rates worldwide with 30.2 per 100, 000 population, placing them in the highest quintile. Trinidad on the other hand had a rate of 12.9 per 100, 000 for the same period while Jamaica fell in the lowest quintile, with a rate of 2.0. per 100,000.

Chapter 1 of this thesis showed that the rate of suicide has increased by approximately 70% in the past 25 years and that most of the research about suicidal behaviour have been conducted in HICs. Indeed, one systematic review showed that only 2 percent of the studies were conducted in LMICs. We cannot generalize that the findings from research conducted in non-Caribbean contexts are applicable to the Caribbean, neither should we assume that what is true in one Caribbean country is relevant to all, due to cultural differences. To date there have been no systematic reviews of the literature specifically related to suicidal behaviour in Jamaica, hence the need for this review. A synthesis of this literature is important to advance our understanding of suicidal behaviour, given the serious public health concern, with a view to help provide culturally relevant intervention, support systems and develop policies for Jamaica.

2.2.1 Aims

The overarching aims of the review were to synthesize the existing research literature on suicidal behaviour in Jamaica. More specifically the objectives were to:

1. determine the rates of suicidal behaviour in Jamaica,
2. explore what are the risk and protective factors of suicidal behaviour in Jamaica, and
3. identify the gaps in the literature that could be the focus of future research.

2.3 Method

The review conforms with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Protocols (PRISMA-P) (Moher et al., 2015). This protocol for this review was not registered prior to conducting the review. Checks with PROSPERO and Cochrane, the two main bodies where systematic reviews are submitted, revealed that no other protocols were registered that were addressing topics directly related to this review.

2.3.1 Eligibility Criteria

Studies were selected for inclusion if they met the following criteria:

(i) The published study **must** be original; and **must** appear in peer-reviewed journals,
(ii) Data **must** be collected in Jamaica,
(iii) The paper **must** be written in English,
(iv) The paper **must** directly assess either suicide, suicidal behaviour, self-harm, self-injury or suicidal ideation.
(v) Both quantitative and qualitative studies are eligible

Studies were excluded if they met the following criteria:

(i) The study focused on Jamaicans living outside Jamaica,
(ii) Homicide-suicide outcomes were reported,
(iii) Assisted suicide was an outcome,
(iv) Case study reports.

2.3.2 Information sources and search strategy

By means of a systematic search strategy, the researcher (KPB) sought to identify potential articles for the review for the period beginning in 1864 and ending September 30, 2020. Five of the main psychological and medical databases were searched: EMBASE (1947-Present), Ovid MEDLINE (R) (1946-September week 3 2020), EBSCOhost (PsychINFO), SCOPUS and Web of Science (1864-2020). No age or date restrictions were applied in the search.

The following search terms were used: Suicid* OR Self NEAR/2 harm* OR Self NEAR/2 injur* OR Self NEAR/2 poison* OR Overdos* Self NEAR/2 cut OR Parasuicid* AND Jamaica. The search used generic words so as to capture as many published papers as possible. Further details of the search strategy for each database are appear in Appendix 2.

2.3.3 Study Selection

The titles and abstracts of retrieved records were evaluated by means of a two-stage screening process. At the first stage, titles and abstracts were reviewed against eligibility criteria, and initial decisions regarding inclusion were made by the researcher (KPB). This process was then followed by verification of 31% of the papers from the other two researchers, RO and HM. Following further review

of the full text by the first author (KPB), only studies satisfying inclusion criteria were retained. Any uncertainty in inclusion was discussed with the supervisory team where a consensus was reached.

Reference lists of included studies were then hand-searched to determine whether any additional studies had been missed by using the databases. Three additional papers were identified from that search. Three authors who publish in this specific field of research were also contacted to determine if any additional eligible studies existed. One responded and confirmed that no additional papers were available.

2.3.4 Data extraction and Quality Assessment

Once the list of included articles was complete, the primary reviewer (KPB) extracted data for each paper using the Data Extraction Sheet in Appendix 3. Information related to methodology, sample size, and results relevant to this systematic review were then recorded.

Data extraction completed, a quality assessment framework developed by O'Connor and colleagues was adapted and used to assess study rigour (O'Connor, Ferguson, Green, O'Carroll, & O'Connor, 2016). This modified version evaluates study quality by assessing the risk of bias across six domains: aims, study design, sample size/power, outcome measure, comparison group as well as any confounding variables (see Appendix 4 for details). A score from 0 to 2 was given for each domain, (save when the comparison group scored 0 to 1) and was calculated ranging from 0 to a maximum of 11. Based on the total scores, each paper could receive a quality rating ranging from low (0-3); to moderate (4-7) or high (8-11).

The researcher (KPB) independently assessed all papers that met inclusion criteria, while the other two co-authors blindly assessed a sample of 5 papers (31%) for risk of bias. Agreement was achieved after meeting to determine consensus on study quality. Papers were not excluded from the review based on quality.

2.3.5 Data Analysis and Synthesis

It was deemed appropriate to conduct a narrative synthesis because of the heterogeneity of the study designs, populations, settings, and outcomes (Popay, 2006). Thematic analysis was used to analyse and summarize key findings that emerged from the selected studies (Braun & Clarke, 2006; Clarke & Braun, 2016). Coding was performed by KPB. Thereafter, the other two members of the supervisory team, who are experienced systematic reviewers, independently perused the codes from a sample of the papers (6/16) for quality assurance purposes. Disagreements between reviewers were resolved by consensus. The emergent themes were then compared with three predominant models of suicidal behaviour: namely, the Integrated Motivational-Volitional Model of Suicidal Behaviour, the Three Step Theory and the Interpersonal Theory of Suicide.

2.4 Results

2.4.1 Study selection

Figure 11. Three additional papers were found from hand searches of reference lists of articles, making a total of 98 articles. Of these, 26 were duplicates, and were removed. Of the remaining 72 articles, all were screened for eligibility based on title and abstract. Forty articles were excluded, while 32 were retrieved for full-text review. Sixteen articles were excluded because either suicide, self-harm or suicidal ideation was not reported as an outcome, or they were not empirical papers, or the study had not been conducted in Jamaica. Sixteen articles fulfilled the eligibility criteria and were included in the narrative synthesis which is reported in this chapter. Of those included, 38% (6/16) articles were independently screened by the other two researchers for eligibility.

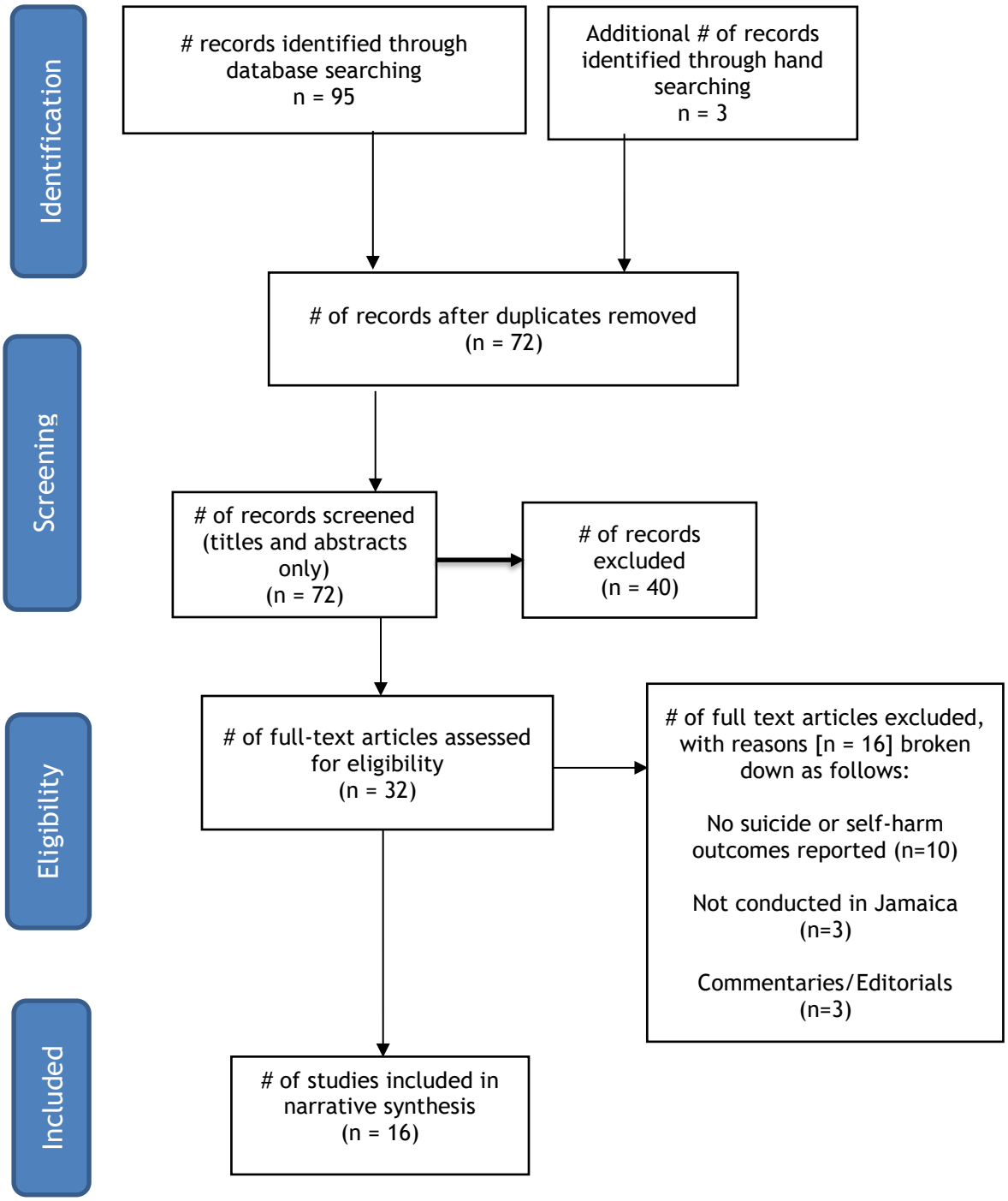


Figure 11. ***PRISMA diagram illustrating the flow of information through the different phases for the systematic review: Suicidal behaviour in Jamaica***

2.4.2 Study characteristics

Sixteen papers were included in the review. Half (n = 8, 50%) of these reported on secondary data analyses using retrospective designs with A quarter (4/16) were retrospective studies of hospital records and less than 20% (n=3/16) were based on retrospective studies of either police or the Registrar General Department reports where records of deaths by suicide were analysed. Approximately 20% (3/16) of the papers were based on one large-scale community survey conducted among school-age children. Three of those papers were reports on one study of adolescents. The other five studies were surveys among adolescent populations. All studies were quantitative, except one which employed a mixed methods approach including psychological autopsy and secondary data.

The articles that were included in the review were published between 1985 and 2016. The collated sample size was n = 5,396. It is important to note that although there were three papers that reported on the same set of participants, the participants were only counted once and included in the figure of 5,396. It was not possible to ascertain the mean age of participants, as for most of the studies, this information was not reported. Instead, six studies reported on the age range of participants which was ranged from 9 to 19 years.

2.4.3 Study Quality

The methodological quality of the studies ranged from 2-7 out of a possible total of 11, which are rated as low to medium/high. This was assessed by the quality assessment framework in Table 1. For full details of the quality assessment outcome for each study see Table 1.

Table 1 Summary of studies and quality assessment

Study	Year of Publication	Population	Method	Results	Quality Assessment Score	Outcomes reported			
						Suicide	Suicide Attempt	Suicidal Ideation	Self-Harm
Abel, WD; Bourne, PA; Hamil, HK; Thompson, EM; Martin, JS; Gibson, RC; Hickling, FW.	2009	Persons who died by suicide.	Retrospective study. Secondary data analysis of police records. Period 2002-2006.	Highest rates among males were recorded within the age group 65-74 years, while the lowest rates were among the 5-14 years age group. The highest rates among females were recorded in the 65-74 years age group, while the lowest rates were not reported.	5	√			
Abel, WD; James, K; Bridgelal-Nagassar, R; Holder-Nevins, D; Eldemire, H; Thompson, E; Sewell, C.	2012	Persons who died by suicide.	Retrospective study. Secondary data analysis of police records. Period 2002-2010.	The rates for males was higher than that for females for all years. Male to female ratio for the period 2007-2010 was 10:1. Largest number of cases occurred in the Kingston & St. Andrew (KSA) municipality. St. Thomas reported the lowest rates.	3	√			
Abel, WD; Sewell, C; Martin, JS; Bailey-Davidson, Y; Fox, K.	2012	Adolescents 10-15 years n = 2997	Survey	Among those who had seriously considered suicide within the past year, ~ 40% admitted to feeling depressed, 27% exhibited aggressive behaviour, 22% considered harming someone, 13% had been teased or bullied within the past month and 21% had been physically abused or mistreated. Protective factors include living in rural areas, liking oneself and factors within the home.	3			√	

Study	Year of Publication	Population	Method	Results	Quality Assessment Score	Outcomes reported			
						Suicide	Suicide Attempt	Suicidal Ideation	Self-Harm
Abel, WD; Bailey-Davidson; Gibson, RC; Martin, MS; Sewell, CA; James,S; Fox, K.	2012	Adolescents 10-15 years n = 3003	Survey	Adolescents reporting depressive symptoms also reported having suicidal ideation than those who did not report having depressive symptoms. Having thoughts of harming oneself was more prevalent among adolescents with depressive symptoms.	3			√	
Bhatt-Poulose, K; James, K; Reid, M; Harrison, A.	2016	Adolescents with Sickle Cell Disease. n = 122	Survey	Adolescents with SCD were at greater risk of attempted suicide. Females and those with body image dissatisfaction were more likely to have attempted suicide.	5		√		
Burke, A.W.	1985	Persons who died by suicide	Retrospective study. Secondary data analysis of records from the Dept. of Registrar of Deaths. Period 1975-1976.	Living in urban areas is protective for females. Highest among those never married (4.8 males and 0.6 per 100, 000 females) while the rates for married and for divorced were similar (3.6, 0.8) and 3.5, 5.8) respectively.	3	√			
Fox, K; Gordon-Strachan, G.	2007	Adolescents 10-15 years n = 3003	Survey	Approximately 10% of the sample had considered suicide in the past year. More females (3.5%) than males (2.6%) had attempted suicide in the past year. The total proportion of the sample who had attempted suicide prior to doing the survey was 3.1%	3			√	

Study	Year of Publication	Population	Method	Results	Quality Assessment Score	Outcomes reported			
						Suicide	Suicide Attempt	Suicidal Ideation	Self-Harm
Henry, M; Whitehorne-Smith, P; Abel, WD.	2015	Adults presenting to an Emergency Department at a hospital in Kingston.	Retrospective study. Secondary data analysis of patients' records.	Overdose was the main method of suicide attempt. There was a significant association between suicide attempt and psychiatric illness ($p < 0.001$).	5		√		
Holder-Nevins, D; James, K; Bridgelal-Nagassar, R; Bailey, A; Thompson, E; Eldemire, H; Sewell,C; Abel, WD	2012	Persons who died by suicide age 9-19 years. n = 26	Retrospective study. Secondary data analysis of police records. Period 2007-2010.	Most suicides occurred during the periods June -August and December to February. Most were in rural areas. Hanging was the most common method used among 96.2% of cases. Kingston and St. Andrew accounted for the largest number of cases while St. Mary and Westmoreland had the least.	5	√			
Kukoyi, OY; Shuaib, FM; Campbell-Forrester, S; Crossman, L; Jolly, PE.	2010	Adolescents 10-19 years in Western Jamaica n = 342	Survey May – August 2006	Approximately 25% of the sample admitted to attempting suicide in their lifetime. The majority (64%) were females. 24% of attempters reported being physically abused or knew someone in their family who was abused, while 33% reported past sexual abuse themselves or knowing a family member who had been sexually abused.	7		√		
McFarlane, S; Younger, N; Francis, D; Gordon-Strachan, G, Wilks, Rainford.	2013	Adolescents 15 – 19 years	Retrospective study. Secondary data analysis of national survey.	Approximately 10% of the sample had considered or planned suicide, while 3% had attempted suicide.	4		√	√	

Study	Year of Publication	Population	Methods	Results	Quality Assessment Score	Outcomes reported			
						Suicide	Suicide Attempt	Suicidal Ideation	Self-Harm
Mills, MO; Lee, MG	2008	Persons presenting to the Emergency Department at a hospital in Kingston. n = 49	Retrospective study. Secondary data analysis of patients' records. 1994-2004.	Ages ranged from 14 to 39 years. Paracetamol, NSAIDS and antidepressants were the most commonly ingested substances.	4		√		
Pottinger, AM	2005	Children age 9-10years old living in inner-city communities in Kingston and St. Andrew. n = 54	Survey	Children's unhappiness with migration of parents was correlated with depressive symptoms and suicidal ideation.	2			√	
Pottinger, AM; Milbourne, PE; Leiba,J.	2003	Children presenting to either of 4 clinics in Kingston. n = 56	Retrospective study. Secondary data analysis of patients' records.	Ages ranged from 6-18 years. Almost 30% had attempted suicide. Conduct/oppositional disorder and child abuse were correlated to suicidal behaviour.	3		√		
Smith, D. and Moore, T.	2013	Adolescents 11-19 years in Kingston Metropolitan Area (KMA). n = 563	Survey	Authoritarian parenting style was significantly associated with suicidal ideation.	3			√	
Williams-Johnson, J; Williams, E; Gossell-Williams, M; Sewell, C; Abel, WD; Whitehorne-Smith, PA	2012	Persons presenting to the Emergency Department at a hospital in Kingston. n = 127	Retrospective study. Secondary data analysis of patients' records. 2005-2009	More females than males presented to hospital with self-poisoning. Most common reason given for suicide attempt was interpersonal conflict.	5		√		

2.4.4 Rates of suicide, suicidal ideation, and attempts

One of the aims of this review was to determine the rates of suicidal thoughts and behaviour as well as the rates of self-harm in Jamaica. This section seeks to answer this question by reporting the findings related to this aim. Each sub-section deals with each sub-topic sequentially.

2.4.4.1 Rates of Suicide

Twenty five percent (4/16) of the studies examined the prevalence of suicide in Jamaica. All four papers reported higher rates of suicide for males than females. Between 2002 to 2010, according to Abel and colleagues, (2012) the mean annual suicide rate for the period was 2.1 per 100,000 population. The rates for males ranged from 2.3 to 4.7 compared to the rates for females which ranged from 0.2 to 0.8. Slightly higher rates of 2.7 were recorded in an earlier paper published in 2009 by Abel and colleagues that reported on the period 2002 to 2006. The highest rate for males was 4.7 in 2003. The corresponding rates for females for 2003 were not reported. Instead, the highest rate for females was 0.8 in 2005. Burke found much lower rates of 1.4 for the periods 1969/70 and 1975/76. The fourth study was conducted among adolescents ages 9-19 years and reported on the period 2007 to 2010. The total number of adolescents who died by suicide was 26, with a mean age of 16 years, SD ±3.01. Approximately 80% of those who died by suicide were male while 20% were female.

2.4.4.2 Rates of Suicidal Ideation

Six papers (38%) reported on suicidal ideation. There was a range of prevalence rates reported. Three of the papers related to a single large-scale study among a high school sample of approximately 3000. It was found that the proportion of respondents who admitted to having suicidal ideation in the past year was 9.5% (Abel, Bailey-Davidson, et al., 2012; Fox, Gordon-Strachan, Johnson, & Ashley, 2009; McFarlane, 2014).

The rate of suicidal ideation was slightly higher in another study where 13% of the sample reportedly had experienced suicidal ideation (Pottinger, 2005). In a much smaller cross-sectional study, among adolescents in western Jamaica, the rate of suicidal ideation was as much as 38% (Kukoyi, Shuaib, Campbell-Forrester, Crossman, & Jolly, 2010a).

Results showed that there were more females than males who had thought about suicide. For example, in a relatively large sample of 1185 students, in the 12 months leading up to the study, 9.7% adolescent females and 2.8% males of the entire sample had thought about suicide (McFarlane, 2014). Kukoyi and colleagues (2010), who also focused on adolescents, but had a much smaller sample size of 342 adolescents found that as many as 60% of the sample had lifetime suicidal ideation with 40% of them being male. It is important to note that the way in which suicidal ideation was measured was not clearly stated for most studies. Therefore, it is difficult to comment on the uniformity or possible lack thereof of measurement of this phenomenon and how that may have contributed to the variation in results. There was also a lack of uniformity in the ages of the participants This may also help to account for the vast difference in the rates of suicidal ideation reported across studies.

2.4.4.3 Rates of Suicide Attempt

In their study on suicidal ideation and attempts among adolescents in Western Jamaica, Kukoyi et al. found that 24% of the sample reported having made an attempt to end their lives within the past 12 months (Kukoyi et al., 2010a). Another study comparing adolescents with Sickle Cell Disease with those without suggested that 12.4% of adolescents with SCD had made an attempt in the past compared with controls 6.6% (Bhatt-Poulose, James, Reid, Harrison, & Asnani, 2016). Those were the only two studies that examined suicidal attempts and reported on risk factors.

2.4.5 Risk and Protective Factors

A second aim of this review was to explore the risk and protective factors of suicidal behaviour in Jamaica. As highlighted below, this is an underexamined facet

of the literature in Jamaica. This section presents findings for the risk and protective factors related to suicides, suicide attempts, and suicidal ideation and have been organized and presented in categories as follows: demographics, temporal-spatial, history of violence, method of choice and other.

2.4.5.1 Demographic Risk Factors

Age

In general, the age group 25-49 consistently accounted for the highest proportion of suicides across all studies (Abel, Bourne, Hayden, et al., 2009; Abel, 2012). When one looks at the rates by age and gender in the period between 2000 and 2006 the highest rates of suicide of 11.3 per 100, 000 occurred among males aged 65-74 years old; while for females the highest rate was 3.4 per 100, 000 were among those in the same 65 to 74 years age group (Abel, Bourne, Hayden, et al., 2009). Between 2007 and 2010, a decline in the rate of suicides occurred among the 75 year old and older age group. (Abel, James, et al., 2012). The lowest rate for the same period was 0.3 per 100, 000 among those aged 5 to14 years. (Abel, James, et al., 2012; Burke, 1985).

Gender

The rate of suicide for males was significantly higher than that of females, with a ratio of 10:1 for the period 2007 – 2010 (Abel, James, et al., 2012). Men in the 25-34 age group and those 75 and older had the highest rates of suicide compared with women. For the studies that examined suicide attempts, females outnumbered males. One study showed that of those who had attempted to take their lives, 64% were females (Kukoyi, 2010) while another study reported that 84% of the sample who had presented to hospital and attempted to take their lives using paracetamol were females (Mills, 2008). A third study, reported it another way, by indicating that the odds ratio of females to males was OR = 2.25, CI: 1.61–3.14 (Bhatt-Poulose et al., 2016).

Marital Status

Of the two studies that reported on the marital status among those who presented to hospital having made a suicide attempt, one study revealed that the majority (82%) were single, while only 10% were married. The remainder were either in common-law unions, visiting relationships (i.e., they do not co-habit) or were divorced (Henry, Whitehorne-Smith, & Abel, 2015b) . Williams-Johnson et al. on the other hand reported that most participants were in a common-law union (29%) followed by those who were single (24.4%). They further analysed the sample based on whether they were in a relationship or not. They found that men who attempted suicide were more likely to be in a relationship than women. The same study showed that those older than 30 years of age who attempted suicide and presented to hospital were more likely to be in a relationship than those less than 30 years of age (Williams-Johnson et al., 2012). None of the studies that reported on persons who died by suicide reported marital status.

Occupation

Two studies reported the occupation of those who died by suicide in their findings. One was a retrospective study of police records. It was found that professionals, senior officials and technicians accounted for the largest proportion of suicides (Abel, James, et al., 2012). The other study focused on adolescent suicides and it was found that the majority were students (Holder-Nevins et al., 2012).

2.4.5.2 Temporal-spatial factors

Time of Year

Two studies reported the time of year when suicides occurred. One reported that June to August and December to February were the times when suicides peaked. (Holder-Nevins et al., 2012). Similarly, in another study, it was reported that the highest numbers of suicides occurred in June (Abell et al., 2012).

Location

Only three studies examined where suicides occurred the most. The capital of Jamaica, Kingston located in the parish of St. Andrew, which has the largest proportion of the population, approximately 666,000 was found to have the highest rates. This was followed by Manchester, Portland, St. Mary. St. Thomas on the other hand had the lowest rates (Abel, James, et al., 2012). In another study conducted by Abel at al among Jamaican youth, less precise reports were made, that suicide rates were higher in urban than rural areas (Abel, Sewell, Martin, Bailey-Davidson, & Fox, 2012). A third study examined suicide among Jamaican adolescents, and it was found that St. Mary and Westmoreland had the lowest rates in that sub-population.

2.4.5.3 History of Violence

Only one study examined whether participants had been exposed to violence (Kukoyi, 2010). Those who had attempted suicide either had been exposed themselves or had a close family member being physically abused (24%) or sexually abused 33%). Additionally, of those who had a history of past attempts, 70% also had a history of violence to others while among those who had a history of suicidal ideation, 60% of them had a history of violence to others (Kukoyi et al., 2010a).

2.4.5.4 Method of Choice

Several studies examined method of choice for suicide or attempted suicide. Hanging was found to be the method of choice for suicides as well as suicide attempts (Abel, James, et al., 2012; Burke, 1985; Henry, Whitehorne-Smith, & Abel, 2015a; Holder-Nevins et al., 2012; Pottinger, Milbourn, & Leiba, 2003). The most common methods of hanging were via belts, neck ties, shoelaces, electrical cords and ropes (Abel, Sewell, et al., 2012; Pottinger et al., 2003). In one study, all persons who used a firearm to take their lives were male (Abel, James, et al., 2012). Among the adolescent population, ropes (33%) followed by electrical cords (19 %) were the most commonly used methods of hanging (Holder-Nevins et al., 2012).

Only three studies reported on persons who attempted suicide and presented to hospital. In the first instance, 33% took an overdose of pills, while 23% tried to hang themselves and another 14% reportedly tried cutting themselves (Henry, Whitehorne-Smith, et al., 2015a). Paracetamol was the most commonly used drug among those who took an overdose (71%) and the majority of them were females who were approximately 23 years of age (Mills & Lee, 2008). In a similar study among persons who presented to a hospital for suicide attempts by self-poisoning, 52% of persons took analgesics.

In a few cases, persons took a combination of two or more of the following: paracetamol, antibiotics or antidepressants (Mills & Lee, 2008). Significantly more females than males presented to hospital for self-poisoning (Williams-Johnson et al., 2012).

2.4.5.5 Other

Only two studies reported the reasons given for suicide attempts. Both studies were secondary data analyses using hospital patient records however while one had a sample size of n = 61 records and examined trends over a six-month period from March to September 2011, the other focused on trends between 2005 -2009 with a sample size of 127 records. Approximately half the sample reportedly indicated that interpersonal conflict was the reason for their attempt (Henry, Whitehorne Smith, & Abel, 2015; Williams-Johnson, 2012). It remains unclear whether those interpersonal conflicts occurred with a spouse or with family members within the home or outside the home, as this detail was not included in the discussion. A single study which (focused on adolescent suicides and based on police records) notes that 54% of suicides were attributable to domestic disputes (Holder-Nevins et al., 2012). Financial constraints, feeling sad, panic attacks, hearing voices telling them to end their lives as well as witnessing a violent event were also cited as reasons for making an attempt to end their lives (Henry, Whitehorne-Smith, et al., 2015a).

2.5 Discussion

2.5.1 Rates

The present systematic review synthesizes the fragmented literature on the risk and protective factors of suicidal behaviour in Jamaica. Jamaica's suicide rates are among the lowest worldwide. Consistent with a recently conducted global large-scale study which showed suicide rates of 2.2 to 2.9 (Naghavi, 2019), the studies in this review revealed rates which ranged from 2.3 to 4.7 per 100,000 for males, while that of females is 0.2 to 0.8 per 100,000. The mean annual age-adjusted rate for 2002 to 2010 was 2.1 per 100,000 population.

2.5.2 Suicide Risk

One of the aims of this review was to uncover the risk and protective factors of suicidal behaviour in Jamaica. Several important factors were identified. The evidence points to the fact that males are at higher risk of suicide than females. The ratio of male to female suicides for the period 2007-2010 was 10:1. While this is consistent with previous research conducted internationally which shows that the suicide rates of males tend to be higher than that of females (Callanan & Davis, 2011; Canetto & Sakinofsky, 1998; Freeman et al., 2017) the disparity between males and females was surprising. It would be beneficial to conduct studies among males to elucidate the key drivers of male suicide, as well as to examine what are the protective factors for females.

There was some evidence derived from information gleaned from psychological autopsies that interpersonal conflict, domestic disputes, financial problems and the presence of psychiatric disorders were the main reasons that persons decided to end their lives. This was not analysed by gender. The findings from this review related to history of mental disorders (Armitage, Panagioti, Abdul Rahim, Rowe, & O'Connor, 2015; O'Connor & Nock, 2014) as well as history of exposure to violence or abuse is consistent with previous findings of studies conducted in other countries such as in Europe, North America and Asia(Cleare et al., 2018; Mars et al., 2019; Morrison & O'Connor, 2005; O'Connor & Nock, 2014; O'Connor & Pirkis, 2016). The generalizability of these findings should be interpreted with caution because all

the studies were retrospective studies utilizing a combination of police records, hospital records, surveys and psychological autopsies, and they represent less than 25% of the total number of papers included in the review. Moreover, there was some overlap in the period under investigation for at least two of those studies.

Age-specific rates were found to be lower among females than males. Overall, the highest rates of suicide occurred between the ages of 25 and 44 years for the period 2007-2010. For the same period, a total of 26 adolescents died by suicide. Another group at risk were those 65-74 years. Also, the largest group to die by suicide were professionals, senior officials and technicians. However, this was reported in only one study related to completed suicides (Abel, James, et al., 2012).This points to the need for more studies that include occupation for not only suicides but other forms of suicidal behaviour.

2.5.3 Risk of Suicide Attempts

There was limited evidence of risk factors for persons who had attempted suicide as only two studies (13%) reported on this. Moreover, the total sample size for both studies was 464, focusing on an adolescent population drawn from three of the island's fourteen parishes. Nonetheless, one study showed 24% of a sample of 342 adolescents aged 10-19 years had attempted suicide at some point in their lifetime (Kukoyi, Shuaib, Campbell-Forrester, Crossman, & Jolly, 2010c).

The main risk factors of suicide attempts were having a history of violence towards others, being diagnosed with an emotional or mental health problem not including depression, a history of sexual abuse or having a family member who was sexually abused, or either being physically abused or knowing someone who had been physically abused. While this is consistent with previous research conducted outside of Jamaica , which shows a significant relationship between physical and sexual abuse (Devries et al., 2014; Klonsky & Moyer, 2008) and suicide attempts, the findings from the local study in Jamaica need to be disaggregated, in order to better understand what exactly the risk factor entails as it is unknown whether being a victim of abuse is more of a risk of suicide attempts than knowing someone

who is a victim. Coupled with that, the progression from having thoughts of suicide to acting on those thoughts is unknown from the studies conducted.

Another important finding from the study by Kukoyi and colleagues (2010) is that 52% of those who had endorsed having made at least one previous lifetime suicide attempt indicated that they could easily obtain the means to take their life. This is important because the IMV, IPT and the 3ST each posit that access to means puts one at significantly greater risk of suicide than others who do not have access (Chu et al., 2017; Joiner et al., 2005; O'Connor & Pirkis, 2016; O'Connor & Kirtley, 2018; Van Orden et al., 2008). One can only extrapolate from the findings from other studies that hanging was the most commonly used form of suicide or attempted suicide (Abel, James, et al., 2012; Burke, 1985; Henry, Whitehorne Smith, et al., 2015; Holder-Nevins et al., 2012; Pottinger, 2003), and that males are most likely to use firearms (Abel, Sewell, et al., 2012) as a means to take their lives while females' primary method was self-poisoning (Mills & Lee, 2008; Williams-Johnson, 2012).

The other study that examined risk factors for suicide attempts was among a specialised population – adolescents with Sickle Cell Disease (Bhatt-Poulose et al., 2016). The researchers explored the risk of depression and attempted suicide among this population. More adolescents with Sickle Cell Disease had attempted suicide and girls were more likely to make an attempt than boys. The depression scores among those who had attempted suicide were significantly higher among participants with Sickle Cell Disease than the matched peers who did not have Sickle Cell Disease (Bhatt-Poulose et al., 2016).

Evidence on the relationship between physical health and death by suicide in the international literature is mixed. On the one hand, it was found in a recent large-scale study in the USA that there is an association between physical health problems and suicide risk (Onyeka, Maguire, Ross, & O'Reilly, 2020) but on the other hand other longitudinal studies conducted in the UK after a 20-year follow-up have found that multi-morbidities alone do not increase the risk of either suicidal ideation nor suicide attempt (Kavalidou, Smith, Der, & O'Connor, 2019). Instead,

what was found is that having physical and mental health conditions, including depression increases the risk of suicidality (Kavalidou et al., 2019). Body dissatisfaction was a major predictor in the local study by Bhatt et al., (2016) in general but it was unclear whether this was included in the analyses related to suicide attempts (Bhatt-Poulose et al., 2016). It would be useful to explore these factors in the general population using more rigorous research designs.
It was difficult to say with any degree of certainty whether being married was protective or not. This was so for a number of reasons, First, only two studies reported the martial status of persons who attempted suicide (Henry, Whitehorne Smith, et al., 2015; Williams-Johnson, 2012), both of which were retrospective studies using hospital records of persons who presented to hospital having attempted suicide. In one study, findings showed that for persons 30 years and older who had attempted suicide, they were more likely to be in a relationship than those under 30 years of age (Williams-Johnson, 2012). It was not known if this meant that they were married or not, while for the other they reported that 82% were single (Henry, Whitehorne Smith, et al., 2015). For males, being in a relationship was a risk factor (Henry, Whitehorne Smith, et al., 2015). It is difficult to say whether this contrasts with previous findings as it was unclear whether they were married or in a visiting relationship. Therefore, the extent to which men have higher risk based on marital status has not been fully explored in this review.

Counter to what was expected, persons who were in a relationship were more likely to have attempted suicide that those who were not. This is not in keeping with some previous studies that persons who are single and never married are up to 35% more likely to die by suicide (Kposowa et al., 2020). This points to the need for more extensive research in this area as only two studies examined marital status and both utilised hospital records.

2.5.4 Risk of Suicidal Ideation

The risk of suicidal ideation rose to its highest among the following: those with an absent, emigrant parent; those who had been teased or bullied within the previous

30 days; those who experienced PTSD; those who had used substances. One must also include those who had been physically and/or sexually abused or those who had a family member who was physically or sexually abused. Existing research reveals that although the rates of suicide in Jamaica are low, the rates of suicide are highest among two groups: the young and the elderly. These studies also show that males face greater risk of suicide than females; and that hanging was the most common method of choice. This is in keeping with global patterns.

2.5.5 Gaps

In addition to the gaps mentioned above, very little is known about vulnerable populations such as clinical populations with physical as well as mental health conditions, those with exceptionalities, the elderly and adolescents and their level of risk of suicide, suicidal ideation, suicide attempts as well as self-harm.

While this systematic review has elucidated the status of the literature in Jamaica, and that we have limited knowledge of the risk and protective factors for suicidal behaviour in Jamaica, we have very little evidence of the risk and protective factors of suicidal behaviour among the group that is most at risk – those below age fifty years. This would be useful information to help inform a suicide prevention policy in Jamaica. Chapter 3 seeks to explore some of these factors including bullying in the general adolescent population.

Contemporary theories such as Joiner's 3ST, Klonsky & May's IPT and O'Connor et al's IMV all posit that there is a progression from suicidal ideation to attempts. The research conducted in Jamaica so far has not explored whether in fact there is any evidence to support or refute these theories. We are unaware for example whether social isolation and social connectedness are risk factors for suicidal behaviour and the extent to which they may be risk factors. Neither do we know whether or not those who are at greater risk of suicidal ideation due to increased exposure to pain and have a higher level of hopelessness as suggested in Klonsky & May's 3ST.

It is also difficult to say whether persons in Jamaica go through three phases: pre-motivational, motivational and then volitional phases and what factors act as

threats to self-moderators, motivational or volitional moderators. It is also not possible to say what is the nature and extent of self-harm in the population at various ages and stages of life. Moreover, while we do have evidence from international studies that there is an increased risk of suicide if there is a history of self-harm, we are unclear what if any are the potential pathways in the Jamaican context. The implication of all of this is that without the evidence it is difficult to develop culturally relevant policies and interventions that will be appropriate for our population.

2.5.6 Strengths and limitations

This systematic review of studies conducted in Jamaica constitutes the first of its kind. No restrictions such as date of publication limit the range of this review. As a result, it provides a comprehensive assessment of extant research in Jamaica. The review highlights some of the epidemiological knowledge of suicidality in Jamaica and also provides a summary of the evidence to date with respect to risk and protective factors.

Key limitations constrain the inferences that might be made here about suicidal behaviour in Jamaica. No meta-analysis could result, given the heterogenous nature of aims, research design, and findings of the studies. Instead, a narrative review has been presented, one which may be more vulnerable to bias and subjectivity than a meta-analysis would be. Most of the studies were retrospective drawing from police or hospital records. Thus, the richness of information gleaned is limited because many of the data sources were not designed for research purposes.

Although the quality assessment tool employed was adapted and modified from a published tool, it may not have been exhaustive in terms of the criteria necessary to appraise the research studies. The methodological quality assessment scores ranged from 2-7 (low-medium/high) with the majority of papers (9/15) having scores less than five out of a possible eleven. As such, the inferences that can be made from these papers are limited.

Concerns also arise relating to how suicidal ideation, suicide attempts and self-harm was measured. In several studies, single item measures included in self-report surveys were used to measure these phenomena. Furthermore, for those studies that did specify, the time period when suicidal behaviour occurred was recent, mainly within the past 30 days as opposed to data such as annual rates or lifetime occurrence. This disparity implies that the extant literature does not adequately address critical issues relevant to gaining a better insight into suicidal behaviour in Jamaica.

Too few studies have been conducted, and among those conducted some are not sufficiently methodologically rigorous enough to allow researchers to draw definitive conclusions and make generalizations about the population. While studies have been conducted among adolescents, these have been primarily epidemiological or descriptive studies.

It is noteworthy that only one study in this review utilised a mixed methods approach, the rest were quantitative. Jamaica's elderly constitutes a very significant under-researched population. As shown in chapter 1, there is evidence that, next to young people, this group is notably vulnerable. Research of this cohort requires timely attention, given the aging of the population, however, that is not the focus of this thesis.

2.5.7 Future Research

The methodological quality of the studies included in the review was generally low to medium/high. Rather than merely replicating earlier descriptive work, future researchers need to conduct more analytical studies in order to elucidate the factors that underpin suicidality in Jamaica.

Among the seven studies that utilised primary data, only one mentioned power calculations. Despite considering statistical power, the authors indicated that power was not achieved due to the inadequate sample size (Kukoyi, Shuaib, Campbell-Forrester, Crossman, & Jolly, 2010b). Thus, making it difficult to make

generalisations about the wider population. While some papers had large sample sizes, there was some overlap in reporting, as one study was reported across three papers. This overlap highlights the need to have more robust studies conducted with adequate sample sizes.

The measurement of suicidal behaviour was unclear in many of the studies. Emerging gold standards in the field reflect the complexity of the broad construct of suicidality and the importance of considering possible confounds. Thus, a more rigorous and comprehensive assessment of suicidality is needed.
Future research must explore in detail the experiences of those who may have attempted suicide, as well as the accounts of family members and the friends of those who have died by suicide.

This review did not place a limit on type of research to only quantitative studies, however, except for one study which utilised a psychological autopsy, only quantitative studies were found. It is therefore critical that qualitative research be conducted in the future to gain a deeper understanding of suicidality in Jamaica that quantitative studies cannot provide.

Further, there is a growing body of evidence which suggests that suicidal ideation is distinct from suicide attempts (Klonsky, Saffer, et al., 2017; O'Connor, 2011). So too is self-harm distinguishable from suicidal behaviour. Therefore, a more detailed investigation of the role of different variables and their relationship with suicidality should be further explored in the Jamaican context.

2.6 Conclusion

This systematic review highlights some evidence of the risk and protective factors of suicidal behaviour in Jamaica. Risk factors include the following: having a history of sexual abuse; being male and living in urban areas. However, these findings were weakened significantly, thanks to some of the research designs which relied heavily on a retrospective approach utilising police and hospital records. While these findings provide the platform for future research into suicidal

behaviour in Jamaica, they also point to the need for more extensive studies to be conducted including those among sub-populations that may be at far greater risk than the general population.

The following chapter, the first of the empirical studies presented in this thesis, explores risk and protective factors of suicidal ideation and attempts among the general adolescent population. Some of the factors which emerged from the findings of this systematic review such as bullying victimization and relationship with parents are further explored. It was not possible to explore all the main findings from this systematic review in that study, however, as it was a secondary analysis of data, and we were not a part of the planning of that study. Other factors related to this systematic review were explored in the subsequent chapters as was possible.

3 Correlates of suicidal behaviour among adolescents in Jamaica: a secondary analysis

3.1 Abstract

Background: Suicide is the second leading cause of death among young people ages 15 and 29 years of age. In this study, we examined the prevalence and correlates of suicidal ideation and attempts among adolescents in Jamaica.

Method: A secondary analysis of data from the Global School Health Survey (GSHS) collected in 2017 was conducted among 1,667 adolescents aged 11-18 years, a representative sample from across the island. Psychological risk and protective factors that are common in adolescence including sleep, loneliness, having no close friends, being bullied, and sexual abuse were examined to test their association with suicidal ideation and suicide attempts, using logistic regression analyses.

Results: Approximately one in four adolescents (n=419, 25.1%) had lifetime prevalence of suicidal ideation. Significantly more girls (n=290, 17.4%) than boys (n=129, 7.7%) had thought of taking their lives at least once during their lifetime. Fewer adolescents attempted to take their lives, (n=309, 18.5%) overall with almost twice as many females (n=193, 11.6% compared to n=116, 6.9% males). Results also indicated that factors such as loneliness, being bullied, having no close friends were associated with an increased risk of both suicidal ideation and suicide attempts. Having parents who showed them affection served as a buffer against suicidal ideation and attempts.

Conclusion: Suicidal thoughts and behaviours are evident among adolescents in Jamaica**.** This study underscores the need for a multimodal approach in which targeted prevention strategies that focus on building positive social relationships with peers, increased awareness among parents, social learning utilizing the media, as well as educational programmes are prioritised.

3.2 Overview

Suicide is the second leading cause of death among the segment of the world's population aged 15 and 29 years (WHO, 2019c). Indeed, throughout the lifespan, the sharpest increase in the number of deaths by suicide occurs between early adolescence and young adulthood (Cha et al., 2018). The prevalence rates for suicidal ideation among young people ranges between 14.5 % and 24% (Cash & Bridge, 2009; Cha et al., 2018) while the lifetime prevalence rates of suicide attempt range from 3.1 to 8.8% (Cha et al., 2018). Suicide rates are higher among boys than girls, yet, girls have higher rates of suicidal ideation and attempts than boys (Cash & Bridge, 2009).

A recent systematic review and meta-analysis on youth suicide globally revealed that of the 99 unique studies reviewed only 2% were conducted in LMICs (Robinson et al., 2018). Despite the paucity of research, we can glean some important initial information. The overall prevalence of suicidal ideation among adolescents was 25.1% and suicide attempt was marginally higher at 17.0%. Older adolescents had a higher prevalence of both suicidal ideation 17.8% and attempts 17.6% compared with younger adolescents 15.9% and 16.2% respectively) (Uddin et al., 2019). When the data were disaggregated by region, the Americas, of which Jamaica is a part had the lowest prevalence rates of suicidal ideation, at 1.7%, while the African region had the highest at 21.6% (McKinnon, Gariepy, Sentenac, & Elgar, 2016b).

As discussed in chapter one of this thesis, the largest proportion of suicides that have occurred in Jamaica between 1990 and 2017 have been among those in the 15-49 age group. The previous chapter's systematic review of the literature indicates that very little is known about the prevalence of suicidal ideation and suicide attempts among young Jamaicans. The review also pointed to gaps in our knowledge about what are the correlates of suicidal thoughts and behaviours in Jamaica among this group.

Suicide may be prevented, but in order to develop targeted prevention strategies, we need to know the extent of the problem and we need to better understand the correlates of suicidal ideation and suicide attempt among vulnerable groups such as adolescents. In addition, in order to provide adequate

support for persons who are considered at high risk, we need to further explore these phenomena in detail. It is upon the basis of these considerations that this study was conducted.

In this chapter we present the findings from a cross-sectional study conducted among adolescents in secondary high schools across the island of Jamaica. First, we provide the background to the study by summarizing the theory against which the study was framed. Then we go on to set the groundwork for this study, highlighting results from previous research conducted outside of Jamaica and making reference to the main variables of focus. We will then describe the methods and findings from this study are described. Finally, those findings are compared and contrasted with the existing literature, so as to explore the implications for policy and practice along with recommendations for future research.

3.2.1 Theoretical Background

One contemporary model of suicidal behaviour, discussed in detail in chapter one, is the Integrated Motivational-Volitional Model of suicidal behaviour (IMV) (O'Connor & Kirtley, 2018; O'Connor, 2011). This model proposes that suicidal behaviour is complex and results from a combination of pre-motivational, motivational and volitional factors. According to the model, some persons are more prone to develop thoughts of suicide because of personality characteristics such as high socially prescribed perfectionism (O'Connor & Kirtley, 2018; O'Connor, 2011). They may also be exposed to acute or chronic life stressors thereby increasing the likelihood that they will experience an adverse reaction to stress (O'Connor & Kirtley, 2018; O'Connor, 2011).

In the following sections, details of the factors included in the present study are outlined. As will be discussed in detail, previous research outside of Jamaica, shows that all the variables under consideration for this study have been shown to be relevant risk factors for suicidal behaviour among adolescents. Some of the variables such as bullying victimization and exposure to abuse also emerged from the systematic review (chapter 2) as being salient to the phenomenon of suicidal behaviour in Jamaica.

3.2.2 Bullying Victimisation

Bullying is estimated to affect some 200 million children and youth globally and is therefore an important public health concern (UNICEF, 2015). It is a negative life event associated with suicidal thoughts and behaviour (Hawton, Saunders, & O'Connor, 2012) and is a pre-motivational moderator within the context of the IMV model. A meta-analysis of 80 articles has shown that the self-reported rate of traditional bullying is approximately 35% while cyberbullying was less prevalent, at approximately 15% (Modecki, Minchin, Harbaugh, Guerra, & Runions, 2014). For purposes of our discussion, we will be focusing on traditional forms of bullying, as it is more prevalent than cyber-bullying (Modecki et al., 2014; Noret, Hunter, & Rasmussen, 2020).

For purposes of this thesis, the term bullying that will be used, is defined as unwanted aggressive behaviours carried out by a young person towards another young person who is neither a sibling nor a dating partner (Gladden, Vivoio-Kantor, Hamburgher, & Lumpkin, 2014). Usually, an imbalance of power exists between the perpetrator and the victim. Bullying takes various forms such as physical, verbal, and relational and can also include damage to property, and may be direct or indirect (Gladden et al., 2014). Being bullied is associated with mental health difficulties (Noret et al., 2020).

Very few studies have been conducted on the association between bullying and suicidal behaviour in low-and middle-income countries such as Jamaica. One large-scale study across 48 countries including Jamaica (Kim & Chun, 2020), that focused on the relationship between bullying and suicidal behaviour was very insightful as it pointed to a pooled odds ratio of 3.06 for suicide attempts among those respondents who had been bullied in the period of 30 days prior to participating in the survey. The authors also found a prevalence rate of 10.7% for suicide attempts and 30.4% for bullying victimisation. (Kim & Chun, 2020). That is persons who were victims of being bullied.

In one of the few mixed methods studies on bullying in Jamaica, the survey component conducted among 1,867 children from 70 schools across the island showed that approximately 65% of respondents reported having experienced bullying at some time bullied (UNICEF, 2015). This figure is high in comparison to

the global rates of 32% (Elgar et al., 2015). One would expect the rates in Jamaica to be lower than global rates, given that the overall rates of deaths by suicide are low, however, that study did not examine the association between bullying and suicidal behaviour among adolescents. Therefore, we do not know the association between bullying and suicidal behaviour among adolescents in Jamaica.

Several students who participated in the qualitative element of the Jamaican study conducted by UNICEF, were of the view that one of the most serious mental health consequences of bullying was suicide (UNICEF, 2015). Sadly, suicide was also cited by students as one of the best ways to defend against bullying (UNICEF, 2015). While this qualitative study sheds some light on bullying in Jamaica, and points to a potential association between bullying and suicidal ideation or attempts among adolescents outside of Jamaica, we still do not know the nature of the relationship between bullying and suicidal behaviour in Jamaica. This knowledge is critical to help shape tailored interventions as well as the development of an appropriate, culturally relevant, population specific suicide prevention policy in Jamaica.

3.2.3 Loneliness

For most persons, loneliness is a transient phenomenon, whereas for others it can be long lasting and is associated with several adverse health outcomes (Stickley & Koyanagi, 2016). The concept of loneliness is the perception that one's social needs are unmet based on the quality and quantity of one's social relationships which results in feelings of distress (Hawkley & Cacioppo, 2010).

Between late childhood and adolescence, the quality of one's social relationships gains importance (Qualter et al., 2015). Indeed, the nature and quality of friendships, of peer rejection, of bullying and of any lack of close friends may become predictors of loneliness in adolescence (Qualter et al., 2015). Social support, however, may act as a buffer against loneliness if the support comes from friends or romantic partners but not from family members (Lee & Goldstein, 2015).

Adolescents with high levels of loneliness are almost 11 times (OR=10.99) more likely to have reported suicidal ideation than their peers who experienced low levels of loneliness, while those with chronic levels of loneliness were more than seven times (OR= 7.41) as likely to report suicidal ideation than their peers (Schinka, van Dulmen, Mata, Bossarte, & Swahn, 2013). A recent large-scale study among adolescents in the Western Pacific revealed that students who are bullied are more likely to report loneliness than their peers who do not experience bullying (Sharma, Lee, & Nam, 2017). By extension, loneliness was associated with suicidal behaviour, as well as poor physical and mental health outcomes.

3.2.4 Alcohol Consumption

One of the most common psychoactive substances used by adolescents is alcohol, mainly because it is readily available (WHO, 2018). The public health burden of alcohol use is significant, and is attributable for 5.1% of the global burden of disease (WHO, 2018). Additionally, alcohol consumption has health consequences not the least of which are unplanned pregnancies, sexually transmitted infections, academic failure and suicide attempts (WHO, 2018).

In Jamaica, alcohol is the most widely used intoxicant among adolescents (Atkinson, Abel, & Whitehorne Smith, 2015). An island-wide survey among high school students showed that alcohol use accounted for a lifetime use of 65% (Atkinson et al., 2015). On average Jamaican adolescents begin consuming alcohol at 12.6 years (Atkinson et al., 2015). A direct relationship is yet to be established between alcohol use (on one hand) and adolescent depression and suicidal behaviour among adolescents in the Caribbean on the other (Reid, 2015). These factors all point to the urgent need for research to be conducted to determine if alcohol consumption among Jamaican adolescents constitutes a risk factor for suicidal ideation and attempts and if so, what is the level of risk.

3.2.5 Sleep problems

Although some evidence suggests that sleep problems during early adolescence may predict suicidal ideation up to five years later some degree of uncertainty remains (Kearns et al., 2020). This likelihood was shown in a systematic review

limited to longitudinal studies in which sleep problems were examined as predictors of youth suicidal thoughts and behaviours. The authors acknowledged that the results were mixed, and that the variations in the periods of follow-up presented a significant weakness in the studies included in the review (Kearns et al., 2020).

Similarly, another recently conducted systematic review of studies conducted among university students that examined the relationship between poor sleep and self-harm as well as suicidality, revealed that insomnia and nightmares place one at an elevated risk of suicidality (Russell et al., 2019). While some studies showed an association between sleep problems, nightmares and suicidal thoughts and behaviours, other studies indicated that there was no significant relationship (Russell et al., 2019). Russell et al., (2019) pointed out that some of the studies were fraught with shortcomings that made it difficult to conclusively say exactly what effect insomnia has on suicidal thoughts and behaviours (Russell et al., 2019). Some of the reasons for the uncertainty included the fact that potential confounding variables were not controlled for in some studies, while for others there may have been self-selection bias as reflected in low response rates (Russell et al., 2019). Equally important was the matter of a lack of standardised terminology used for sleep problems as well as the wide variety of types of sleep problems (Russell et al., 2019).

To the best of our knowledge, the relationship between sleep challenges and suicidality has not been explored in the Jamaican population. Given the findings from studies conducted outside of Jamaica, the evidence suggests that it would be worthwhile exploring the relationship between these variables in the Jamaican population.

3.2.6 Parental affection

Parenting style can either be beneficial or damaging especially as it relates to the relationship with suicidal behaviour among adolescents (Cheng et al., 2009). When parents demonstrate a close relationship with their children, understand their problems and worries (Cheng et al., 2009), provide social support (Brausch & Gutierrez, 2009), or display an authoritative parenting style characterised by high levels of warmth and responsiveness to the needs of children without being

overindulgent (Donath, Graessel, Baier, Bleich, & Hillemacher, 2014) this is usually protective against negative mental health outcomes. An authoritative parenting style acts as a buffer against suicidal ideation and attempts (Hart, Coates, & Smith-Bynum, 2019). This was corroborated by a large-scale study (n= 44, 610) of adolescents in Germany (Donath et al., 2014). Adolescents whose parents practice an authoritative parenting style also report higher levels of trust than those whose parents exhibit other parenting styles (Hart et al., 2019).

Conversely, an authoritarian parenting style, characterised by high expectations of children by parents with strict rules, where punishment is harsh and punitive combined with low affection, support and warmth, is associated with 2.6-to-5-fold increase in suicidal ideation. Having parents with an authoritarian parenting style also increases the likelihood of suicide attempts between 3.4 and 9.9 times compared to adolescents whose parents demonstrate an authoritative parenting style (Donath et al., 2014; Garcia, Skay, Sieving, Naughton, & Bearinger, 2008).

The literature on the topic of parenting style and risk of suicidal behaviour is sparse. Research on the association between levels of parental affection towards adolescents and suicidal thoughts and attempts is even more limited, especially in the Jamaican context. We need to better understand this relationship in order to help inform suicide prevention policies for adolescents.

3.2.7 Adolescent suicidal ideation and attempt in Jamaica

Very little is known about adolescent suicidal ideation and attempts in Jamaica, as was made clear in the systematic review in Chapter 2. One take home message from the review is that risk factors for suicidal ideation among adolescents include being depressed, having aggressive behaviour, being teased or bullied and being physically abused. The study that was rated the highest quality in that systematic review focused on suicide attempts among 342 adolescents in western Jamaica. Key findings indicated that 24% of participants reportedly had attempted suicide at some point during their lives (Kukoyi et al., 2010c). These findings are not representative of the entire population of adolescents in Jamaica, as it was conducted among two out of fourteen parishes.

The dearth of empirical studies highlights the gaps in our knowledge of the risk and protective factors for suicidal ideation and suicide attempt among adolescents in Jamaica. As discussed above, bullying victimisation, loneliness, ever had sexual intercourse, alcohol consumption, sleep problems, parental affection have been found to play a critical role in the risk of adolescent suicidal ideation, suicide attempts and self-harm in other countries. However, the extant research has tended to focus on high income countries such as those in Europe and North America, so that we do not know whether these factors play a similar role in the Jamaican context. This study, therefore, aims to address this gap by examining the association between those selected psychological variables and suicidal ideation and attempts. In short, the following section outlines the aims of this study.

3.2.8 Aims

The first aim of the present study was to determine the prevalence of suicidal ideation and suicide attempts among adolescents in Jamaica. A second aim was to explore the association between selected psychological variables, namely bullying victimisation, loneliness, ever had sexual intercourse, alcohol consumption, sleep problems, parental affection and suicidal ideation as well as suicide attempts among adolescents in Jamaica.

3.3 Method

As discussed in chapters 1 and 2 of this thesis, adolescents are at greatest risk of suicidal behaviour and is a public health concern and the rates of suicide have been steadily increasing over the past fifteen years. It is therefore important to try to unearth what are the risk and protective factors of suicidal ideation and suicide attempts among this most vulnerable group - adolescents.

This study is a secondary analysis of cross-sectional data obtained as part of the Jamaica-Global School-Based Student Health Survey (GSHS) 2017. The GSHS is a combined venture by the World Health Organization (WHO), the United Nations (UN), along with the Centers for Disease Control (CDC). This school-based self-administered survey conducted mainly among students between 11–18 years of age has been conducted in over 100 countries worldwide (Campisi et al., 2020).

One of the aims of the GSHS is to ascertain the prevalence of health behaviours among youth, with a view to strengthening existing programmes as well as to shape policies related to child health. A high-level team of global specialists agreed on a rigorous, standardised and scientific research design. We can, therefore, be confident that findings from this study are valid and reliable. Permission was granted by the National Council on Drug Abuse to conduct the analysis for this study (see Appendix 5).

3.3.1 Sampling procedure and sample size

A standardised sampling frame was used to select the sample for the GSHS. This included a two-stage cluster sample design which was employed to yield a representative sample of students aged 11-18 years (Sinyor, Tse, & Pirkis, 2017). In the first stage, schools from across Jamaica were selected randomly to produce a nationally representative sample of all students. At the second stage, classes were also selected randomly with all students between the age group 11-18 years (grades 7-12) eligible to participate. A total of 1,667 students participated in the survey.

3.3.2 Power

Although this was a secondary data analysis, a power calculation was conducted. The power calculation based on a regression model with up to 10 predictor variables requires a minimum sample size of 172 to detect a medium effect size ($f2 = 0.15$), given $\alpha = 0.05$ and power = 0.95 (Tabachnick, 2014).

Study variables

Items in the GSHS are categorised according to ten main health indicators referred to as modules, related to: nutrition, mental health, substance use, hygiene, sexual behaviour, physical activity, violence/injury, and protective factors. The variables in the present study were primarily drawn from the mental health, substance use and protective factors modules.

The variables for this study included: age, gender, bullying, parental affection towards adolescents, loneliness, sleep problems, alcohol use, sexual encounter

and close friends as well as demographic characteristics. Suicidal ideation was examined by the use of the single item “During the past 12 months, did you ever seriously consider attempting suicide?” with binary responses “yes” or “no”. Suicidal attempt was investigated with the question During the past 12 months, how many times did you actually attempt suicide?”. This was assessed with a 5-point Likert-type scale ranging from 0 time to 6 or more times (Appendix 6).

3.3.3 Data Analysis

Descriptive statistics were used to provide an overview of the prevalence of the different psychological variables and suicidality. Bivariate analyses were performed to test the univariate associations between the outcome variables i.e. suicidal ideation, suicide attempt and the following predictors: bullying, parental affection towards adolescents, loneliness, sleep problems, alcohol use, sexual abuse and close friends. Multivariate logistic regression modelling was used to evaluate independent associations between predictors and outcome variables. The associations that were significant univariately were selected for inclusion in the multivariate analyses. The Hosmer and Lemeshow Goodness-of-Fit Test was used to assess the goodness of fit model. In all analyses, $p < 0.05$ was taken to indicate statistical significance. The data were analysed using SPSS version 27.

3.4 Results

A total of 1,667 students between the ages of 11 and 18 years participated in the survey. A little less than half the sample was male (n=755, 45%) and more than half (n=900, 54%) was female. Approximately one quarter (n=395, 23.7) of the sample reported being bullied within 30 days prior to completing the survey. One in five experienced loneliness in the past 12 months, and approximately one in ten had sleep problems due to worry. Of note, almost half of the sample had consumed alcohol within the past 30 days and a little less than a half of the participants had parents who showed them affection in the past 30 days. For further details please see Table 2.

3.4.1 Prevalence of suicidal ideation and behaviour

Approximately a quarter of the sample (n=419, 25.1%) had seriously considered taking their life in the past 12 months and fewer (n=309,18.5%) had made an attempt. Overall, almost twice as many females (n=290, 32.2%) reported suicidal ideation compared to males, 17.1% (n=129). Similarly, the number of females who attempted suicide (n=193, 21.4%) was greater than the number of males (n=116, 15.4%). Of those who responded to the item related to suicidal ideation, more than twice as many girls (n=290, 69.2%) reported that they had thought about suicide compared with boys (n=290, 30.8%). Overall, the percentage of missingness was low at 4.7% (n=78).

Table 2 Socio-demographic and psychological characteristics among adolescents age 11-18 years in Jamaica, 2017

Variable	Frequency (n=1667)	Percentage (%)
Age		
≤ 11 years	4	0.2
12	7	0.4
13	185	11.1
14	432	25.9
15	437	26.2
16	361	21.7
17	186	11.2
≥18	47	2.8
Missing	8	0.5
Gender		
Male	755	45.3
Female	900	54.0
Missing/Not reported	12	0.7
Bullied in past 30 days	395	23.7
Lonely in past 12 months	318	19.1
Sleep problems due to worry in past 12 months	216	13.0
Does not have close friends	144	8.6
Drank alcohol at least once in past 30 days	754	45.2
Parents showed them affection	705	42.3
Suicidal Ideation	419	25.1
Male	129	17.1
Female	290	32.2
Suicide Attempt	309	18.5
Male	116	15.4
Female	193	21.4

3.4.2 Suicidal Ideation

Binomial logistic regression analyses were conducted to test the associations between suicidal ideation and selected psychological variables as well as to determine entry into the multivariate analyses. Each predictor was entered in

the model univariately. All predictors were statistically significant except age, and a lack of close friendships as shown in Table 3.

Females were significantly more likely (OR= 3.44) to report suicidal ideation than males. Those adolescents whose parents showed them affection were less likely to think about taking their lives (OR=.52, CI=.41-.66) than their peers whose parents did not show them affection within 30 days prior to participating in the study.

Loneliness placed adolescents at greatest risk of suicidal ideation of all the predictors we examined, as they were more than four times as likely as their counterparts who did not experience loneliness (OR=4.03, CI=3.10 - 5.23). Experiencing sleep problems also placed adolescents at a significantly greater risk (OR=3.51, CI= 2.60 - 4.73) of seriously contemplating taking their lives whereas being bullied placed one at great risk of suicidal ideation with (OR = 2.78, 95% CI = 2.16 - 3.76). Those who experienced loneliness had a much greater likelihood (OR= 4.03, CI= 3.10 - 5.23) of experiencing suicidal ideation. Indeed, of all the psychological predictors examined in this study, loneliness resulted in the greatest univariate risk for suicidal ideation. Sleep problems also placed adolescents at greater risk of seriously thinking about suicide (OR=3.51, CI= 2.60- 4.73).

Table 3 Univariate Logistic Regression Analyses Investigating the Association between Psychological Factors and Suicidal Ideation

				95% C.I. for EXP(B)		
	B	S.E.	Exp(B)	Lower	Upper	Sig.
Bullied	1.02	.13	2.78	2.16	3.76	**<.001***
Lonely	1.39	.13	4.03	3.10	5.23	**<.001***
Sleep problems	1.25	.15	3.51	2.60	4.73	**<.001***
No close friends	.22	.20	1.24	.840	1.84	.277
Consumed alcohol	.45	.12	1.57	1.25	1.97	**<.001***
Parents or guardians showed them affection	-.66	.12	.52	.41	.66	**<.001***
Age in years	-.031	.04	.97	.89	1.06	.472
Gender(1)	-.83	.12	.44	.34	.55	**<.001***

(1) = reference category males

*Statistically significant

Thereafter, a forced entry multivariate regression model was used to determine which factors significantly distinguished between those with and without a history of suicidal ideation. This model included all variables that were shown to be statistically significant in the univariate analyses (Table 3). The variables entered in the model were experience of being bullied, loneliness, sleep problems, consumption of alcohol, affection from parents or guardians and gender. All variables were associated with suicidal ideation and remained statistically significant. This is shown in Table 4. Females were twice as likely to think about suicide than males. Numerically, loneliness was the strongest statistical predictor of suicidal ideation among the sample of adolescents, followed by being bullied, then sleep due to worry and alcohol consumption in descending order, as shown in Table 4. Adolescents whose parents showed them affection were almost twice less likely to seriously suicidal ideation.

Table 4 Multivariate Logistic Regression Analyses Investigating the Association between Psychological Predictors and Suicidal Ideation

				95% C.I. for EXP(B)		
	B	S.E.	Exp(B)	Lower	Upper	Sig.
Gender (1)	-.88	.14	.42	.31	.55	**<.001***
Bullied	.68	.15	1.98	1.48	2.64	**<.001***
Lonely	.98	.16	2.65	1.96	3.60	**<.001***
Sleep problems	.67	. 18	1.96	1.38	2.79	**<.001***
Consumed alcohol	.44	.13	1.55	1.19	2.02	**<.001***
Parents or guardians showed them affection	-.56	.14	.57	.44	.75	**<.001***

*Statistically significant

(1) Males is the reference category

3.4.3 Suicide Attempt

Univariate logistic regression analyses were conducted to test the association between suicidal attempt and associated psychological variables as well as to determine entry into the multivariate analyses. All predictors were statistically significant, except age in years as shown in Table 5.

Being bullied was the strongest predictor of suicide attempt, with an odds ratio of 3.36 (CI=2.567 - 4.402) when compared to the other psychological variables. This was followed by sleep problems, loneliness, and not having close friends in that order. Similar to what was found for suicidal ideation, adolescents who had parents who showed them affection were less likely to attempt to end their lives, than those whose parents did not show them affection (Table 5).

Table 5 Univariate Binomial Logistic Regression Analyses Investigating the Association between Psychological Factors and Suicidal

				95% C.I. for EXP(B)		
	B	S.E.	Exp(B)	Lower	Upper	Sig.
Bullied	1.212	.138	3.361	2.567	4.402	**<.001***
Lonely	1.183	.141	3.265	2.478	4.301	**<.001***
Sleep problems	1.190	.159	3.286	2.406	4.488	**<.001***
No close friends	.835	.196	2.304	1.571	3.381	**<.001***
Consumed alcohol	.688	.133	1.989	1.533	2.580	**<.001***
Parents or guardians showed them affection	-.517	.133	.596	.459	.774	**<.001***
Age in years	-.050	.048	.951	.865	1.046	.300
Gender(1)	-.404	.130	.668	.518	.861	**.002***

*Statistically significant

(1) Males is the reference category

A multivariate binomial logistic regression model was used to ascertain the relative influence of gender, bullying victimisation, loneliness, sleep problems, having no close friends, consumption of alcohol, and parents or guardians showed them affection as well as gender on the likelihood that participants reported a suicidal attempt in the past 12 months. The forced entry method was used to test the model. All the predictors entered in the model were statistically significant when examined univariately. Of the eight predictor variables, five remained statistically significant in the multivariate model: bullying victimisation, loneliness, sleep problems, parents or guardians showing them affection and gender (as shown in Table 4). Of all the predictors that were examined, being bullied placed adolescents at greatest risk for suicidal attempts. Those who were bullied were more than twice as likely to attempt suicide OR = 2.24, CI=1.60-3.12. Similarly, those who reportedly had no close friends were a little more than two times as likely to attempt to end their lives than those who did not feel that way OR = 2.07, (CI=1.26-3.42). Loneliness also played an important role among those who attempted suicide. Those who were lonely were twice as likely OR=2.04, CI=1.43-2.90) to attempt to take their lives as their peers who did not experience loneliness. Finally, sleep problems due to worry also contributed to adolescents who attempted suicide, more so than their peers who did not report having similar problems, OR =2.02, (CI=1.36-3.01). Females had significantly higher odds or were more than 3 times more likely to have reported a suicide attempt than males.

Table 6 Multivariate Binomial Logistic Regression Showing the Association between Psychological Factors and Suicide Attempt

				95% C.I. for EXP(B)		
	B	S.E.	Exp(B)	Lower	Upper	Sig.
Gender	-.56	.18	.57	.40	.81	**.001**
Bullied	.80	.17	2.24	1.60	3.12	**<.001***
Lonely	.71	.18	2.04	1.43	2.90	**<.001***
Sleep problems due to worry	.71	.20	2.02	1.36	3.01	**<.001***
No close friends	.73	.26	2.07	1.26	3.42	**<.001***
Consumed alcohol	.61	.16	1.84	1.33	2.53	**<.001***
Parents or guardians showed them affection	-..29	.16	.75	.55	1.03	.08

*Statistically significant

3.5 Discussion

One of the aims of this study was to determine the prevalence of suicidal ideation and suicide attempts among adolescents in Jamaica. Overall, we found that suicidal ideation and suicide attempt were common among adolescents in Jamaica, as 25% of the sample indicated that they had seriously thought of taking their lives at some point during their lifetime, and 19% reportedly had attempted to take their lives within the past 12 months prior to participating in the study. The prevalence rates of both suicidal ideation and attempts are both higher than the pooled prevalence rates reported in a large-scale study in 59 low and middle income countries (LMICs) across six WHO regions of 17% for each (Uddin et al., 2019). Twice as many girls (17%) than boys (8%) reported suicidal ideation. Similarly, significantly more girls (12%) than boys (7%) had attempted suicide. This is in keeping with another study, perhaps one of the largest global studies involving 90 countries (Campisi et al., 2020) as well as regional figures such as those reported for the Americas, of which Jamaica is a part, where suicidal ideation was markedly higher among females than males (McKinnon et al., 2016b). The findings also showed that bullying (24%) and loneliness (19%) are commonplace among the adolescent population in Jamaica.

The second aim was to explore the association between selected psychological variables, namely bullying victimisation, loneliness, alcohol consumption, sleep problems, parental affection and suicidal ideation as well as suicide attempt among adolescents in Jamaica. According to our findings, several adverse psychological factors were associated with adolescents' suicidal behaviour.

In line with previous research, we found a significant relationship between sleep problems (Kearns et al., 2020; Russell et al., 2019), loneliness (Schinka et al., 2013), being bullied (Kim & Chun, 2020) and suicidal ideation. Adolescents with sleep problems were almost 3 times more likely to seriously consider suicide than their peers who do not experience such sleep problems.

In this study, being a victim of bullying was one of the key risk factors for both suicidal ideation and suicide attempts among adolescents. Adolescents who were bullied were up to two times as likely to seriously think about taking their lives and three times as likely to attempt suicide than their counterparts who did not

experience being bullied. These findings are consistent with other large-scale studies in LMICs (Koyanagi et al., 2019). One qualitative study that was conducted in Jamaica, suggested that suicidal attempts may be a coping mechanism among adolescents (UNICEF, 2015).

The only psychological factor that was found to be protective is having parents who showed the adolescents affection. This important and unique findings is in keeping with research conducted in high income countries such as Germany (Donath et al., 2014) and the USA (Hart et al., 2019) that showed that parenting style and the quality of the relationship with parents is protective against suicidal behaviour.

While this study did not slavishly adhere to the IMV, our findings lent validity to the model in part. Bullying, not having close friends, loneliness and sleep problems due to worry were risk factors for both suicidal ideation and suicide attempts. Bullying may be considered a negative life event that corresponds to the pre-motivational phase of the model and may therefore act as a precursor for the emergence of suicidal ideation. Likewise, having no close friends and loneliness, may be proxy measures for thwarted belongingness which is a motivational moderator leading to suicidal ideation and intent. We still are unclear how to account for the duplication of risk factors for both suicidal ideation and suicide attempts. However, this is an area for future research.

In sum, feeling lonely, experiencing sleep problems due to worry or being bullied, made adolescents twice as likely to make a suicide attempt than their peers who did not experience these situations. While, having parents who showed them affection was a key protective factor against both suicidal ideation and suicide attempts. Taken together, these findings highlight the complexity of suicidal behaviour.

3.5.1 Strengths

To our knowledge, this is the largest cross-sectional study to explore correlates of suicidal ideation and suicide attempts among adolescents in Jamaica to date. This, therefore, adds to the existing body of knowledge in general, and to local knowledge in particular. Indeed, this study helps to broaden our understanding

of some of the key risk and protective factors of suicidal ideation and attempt in this vulnerable group.

This study had a large nationally representative sample size (n=1,667) and far exceeded the minimum requirements to achieve power and thus increases the confidence in the findings. Therefore, we can be confident that the findings are representative and can be generalised to the population of adolescents in Jamaica.

Few studies have examined the combination of psychological factors associated with suicidal behaviour among adolescents as has been done in this study; thereby making this study's contribution to research quite unique. As discussed previously, matters related to bullying, loneliness, sleep problems, having close friends and alcohol consumption are all very relevant issues that adolescents are likely to face. Previous studies have examined the contribution of each of the factors separately or in association with other factors but not in the Jamaican context. By examining these factors together, we were able to provide novel findings that establish important associations with suicidal thoughts and behaviours.

3.5.2 Limitations

These results should be interpreted in the context of potential limitations. First, this is a cross-sectional study design and therefore it is not possible to determine causal relationships between variables. The cross-sectional design also precludes temporal inferences. However, this is not to diminish the importance of our findings.

Second, the timeframe for the assessment of the variables was not uniform or standardised. For the items related to bullying, alcohol consumption and parents showing them affection the time period was in the past 30 days, while the items related to feeling lonely most of the time and sleep problems due to worry, referred to the past 12 months. It is therefore recommended that future research should utilise prospective designs perhaps adopting uniform timelines in order to follow changes over time as well as changes in individuals' circumstances within the study.

Third, the analysis was based on retrospective self-reports which are likely to contain inaccuracies which may occur due to social desirability and recall biases. People may have been reluctant to disclose suicidal behaviour as it is still illegal in Jamaica. Moreover, Jamaica is a Christian country; consequently, discussion of suicidal behaviour is usually shrouded in secrecy. There is also a significant amount of stigma and taboo surrounding the topic. Therefore, it is likely that the prevalence rates are under-reported.

Another consideration is the fact that the survey was restricted to those students who attended school on the day of the survey, although the school attendance rates in Jamaica are relatively high overall at 80%, attendance in rural areas is usually less than 75% (UNICEF, 2018b).It is likely that some adolescents who may be at risk would have been omitted from participating in the study due to absence on the day of the survey.

We conducted secondary analysis of existing data, as such, we were unable to explore other relevant variables such as anxiety, depression, socioeconomic status and self-harm which are also important predictors of suicidal behaviour. It is also worth noting that only single items were used to measure each variable. Two of the main advantages of using single item measures is ease of administration and the simplicity that they provide. However, some may argue that this is a drawback as this may diminish predictive validity (Diamantopoulos, Sarstedt, Fuchs, Wilczynski, & Kaiser, 2012). Conversely, others counter with the view that if the attribute under investigation is deemed to be concrete, there is no need to use more than a single item (Rossiter, 2002) and they have been shown, time and again, to provide useful information (Ahmad, Jhajj, Stewart, Burghardt, & Bierman, 2014). Indeed, there is evidence that the predictive validity of a single item predictor is like that of a multi-item scale (Diamantopoulos et al., 2012).

3.6 Implications

Despite these limitations, the findings from this study have important implications for the improvement of adolescents' mental health in Jamaica. First, given that social factors such as loneliness, and not having close friends are significant risk factors for suicidal behaviour, adolescents should be

encouraged to engage in social activities, such as sports and service clubs such as Boys' Scouts, Girls' Guide and 4-H, where communication, negotiation and social skills can be learnt.

A key policy implication that flows from our study is the need for antibullying intervention programmes. School-based programmes which aim to prevent bullying, empower children with skills in conflict management, empathy, problem solving and communication from preschool into high school; have proven to be effective in high income countries and therefore should be considered (CDC, 2014; Stalker, 2017; WHO, 2019b). Anti-bullying campaigns including the use of the mass media showcasing influential local personalities such as those in sports, music and entertainment, as well as social media may also prove to be effective. These strategies could be combined with the establishment of 'peace gardens' that are known to provide a safe space for students to amicably resolve conflicts, which have already been piloted in rural Jamaica and have met with success (UNICEF, 2018b).

School staff should also be trained in identifying early warning signs of poor mental health including depression and suicidal behaviour and how to make referrals. This has been successfully done in at least one other Caribbean country, Guyana, (Persaud, 2019) where they have among the highest suicide rates globally, as discussed in chapter 1 of this thesis. Peer-counsellors should be available in schools, and they too should receive training to provide support to their counterparts who may be experiencing emotional disturbances. Soft skills such as empathy, self-esteem, thoughtfulness and kindness should also be embedded in the curriculum in order to neutralise aggressive tendencies that children may have been exposed to in their homes or communities.

General Practitioners (GPs) are usually the first point of contact in primary care settings for adolescents, and therefore physicians should do routine screening for depression, anxiety as well as early intervention for suicide risk whenever adolescents visit them. Due consideration should also be given to providing interventions online, as this is one of the main means by which adolescents communicate and thus should be taken advantage of (Asarnow, 2018; Perry, Werner-Seidler, Calear, & Christensen, 2016; Torok et al., 2020).

Parental support, both social and emotional as well as understanding, is a key ingredient in tackling suicidal behaviour, as shown in our study. This underscores the need for parental support in order to foster meaningful relationships with their children especially during this critical phase of development. Future research should explore if there are age differences in the patterns of suicidal behaviour. Another important area is to determine the pathways to suicidal behaviour as children and young people in Jamaica move from childhood, through adolescence into adulthood. It is also critical to know the nature and extent of suicidal behaviour among vulnerable sub-populations of adolescents such as those in care. The focus of Chapter 4, therefore, is a pilot study examining the feasibility of conducting a cross-sectional survey among adolescents in care.

3.7 Conclusion

Our findings confirm that suicidal behaviour is a major public health concern in Jamaica. Adolescent mental health should be recognised as a priority and central to on the political agenda of the government. Adolescence is a critical phase of life and should therefore be protected and supported using a multimodal approach. In order to reduce the risk of suicide, targeted plans, policies and support systems are urgently required to prevent suicidal behaviour occurring in this most vulnerable group.

4 A pilot study testing the feasibility of a psychological survey among looked after and cared for adolescents in Jamaica

4.1 Abstract

Background: In contrast with their peers in the general population, looked after and cared for adolescents (LAACs) tend to experience poorer mental health than do their peers in the general population who are not in care. LAACs may be at increased risk for suicidal behaviour. The main aim of the study was to determine the feasibility of conducting a psychological survey among LAACs.

Method: A cross-sectional quantitative study was conducted using self-administered psychological surveys among 36 females (LAACs) in a residential care facility in Jamaica.

Results: The response rate was relatively high as approximately 80% of eligible participants chose to take part in the study. Several items on the outcome variable measure remained incomplete. This feature may have arisen in part because of a poor numbering system and confusion surrounding the layout of the items. Of those who responded, 50% (n=18) reported a suicide attempt within the week prior to participating in the study while approximately 40% (n=14) had engaged in self-harm. Little's test used to determine the pattern of missingness, revealed that the values were missing completely at random. With few exceptions, respondents appear to have easily understood the items on the questionnaire.

Conclusions: These findings support the implementation of a large-scale study to be conducted among looked after and cared for adolescents in Jamaica. With some modification the selected instruments appeared to be appropriate for the population under investigation.

4.2 Introduction

Worldwide, an estimated 2.3 million children aged between 0 and 17 years live in residential care. Of that number, approximately 188,000 reside in Latin America and the Caribbean, of which Jamaica is a part (Desmond, Watt, Saha, Huang, & Lu, 2020; Petrowski, Cappa, & Gross, 2017). In 2017, Jamaica reportedly had 4,195 children living in residential facilities. Slightly more than half (52%) of them were boys (UNICEF, 2018a). Several reasons lead to the placing of children in alternate care such as residential care facilities. Significant causes include neglect, child maltreatment, family poverty, disability, family disintegration, and the lack of adequate support systems (Pinheiro, 2006). Although a child may have been moved beyond the reach of familial endangerment, however, its new residence may not assure its wellbeing or security from harm.

This chapter will provide an overview of those main factors that raise the threshold of vulnerability for children in care. It will then briefly examine suicidal behaviour among looked after and cared for adolescents or LAACs and proceed to a summary assessment of the role and functions of the Child Protection and Family Services Agency (CPFSA). Formerly known as the Child Development Agency (CDA) in Jamaica, this government agency took responsibility for children in need of care and protection including LAACs. The main predictor variables under investigation in the survey are also described, followed by delineation and discussion of the method and findings drawn from the pilot study. In closing, the discussion outlines recommendations for a larger study.

4.2.1 Looked After and Cared for Children

Originating in the legal terminology of the United Kingdom, the term " looked after and cared for children" (LAACs) is a legal term referring to any child government care for more than 24 hours, and who and is provided with accommodation (Government of the United Kingdom, 1989). More

simply, these children may be referred to as “children in care”. In Jamaica, such children are referred to as “wards of the state” (Government of Jamaica, 2004). Throughout this thesis, the term LAACs will be used to designate children living in such situations.

Evidence suggests that LAACs – despite being “looked after and cared for” experience poorer outcomes of physical and mental health outcomes than do their peers in the general population (Cousins, Taggart, & Milner, 2010; Gearing et al., 2015; Lou, Taylor, & Di Folco, 2018). Many predisposing factors render LAACs more vulnerable to mental health problems than their peers who are not in care. While all children would be affected by the following markers, these factors assume significance for LAACs. Significant markers include having parents with mental illness; parents or caregivers who abuse substances; as well those who neglect or abandoned their children. For the vulnerable child, the list extends to being abused, neglected or abandoned as well as having to leave the child’s family of origin for life among strangers and be relocated (often over irregular periods of time) to several different care facilities (Fisher, 2015; McCall, 2013; Pinto & Woolgar, 2015).

It is hardly surprising that children who are institutionalized may also experience a wide range of cognitive, physical and emotional delays and long-term deficits in addition to the predisposing factors mentioned above (Pinto & Woolgar, 2015). These deficits include poor academic performance and failure-to-thrive syndrome deriving from chronic stress and leading to the suppression of growth hormones (Pinto & Woolgar, 2015).

Other cognitive and emotional challenges include difficulties with learning; memory; language acquisition and usage; task completion; internalizing and externalizing behaviours; self-control and emotional regulation - to name some of most essential to wellbeing (McCall, 2013; Pinto & Woolgar, 2015; Rees, 2006; Rees, 2013). Some evidence indicates that children who are in care who are then relocated either to foster families or who have been

adopted by families may show signs of ‘catch up’: the longer children remain in care, the longer their difficulties persist and the worse the prognosis worsens steadily (McCall, 2013).

4.2.2 Suicidal behaviour among looked after and cared (LAACs) for adolescents

In a recent systematic review comparing LAACs and their non-cared for counterparts, Evans et al. (2017) found that individuals in care are twice as likely to experience suicidal ideation when compared to their peers in the general population. The same review noted that children in care were more than three times more likely to attempt suicide than their age-related peers who were not in care. The prevalence of suicide attempts among children and adolescents in care is 3.6% while that of the non-care population stands at 0.8% (Evans, 2017).

Self-harm is the most important risk factor for future suicide among young people (Hawton & Harriss, 2007; Hawton, Saunders, & O'Connor, 2012), this is especially so for adolescents (Gillies et al., 2018; Hawton et al., 2020; Hawton et al., 2015; Hawton, Bergen, Kapur, et al., 2012; Hawton & Harriss, 2007; Hawton & O’Connor, 2012; Hawton, Saunders, et al., 2012). From this overwhelming evidence adolescence is a vulnerable time for young people. Those who are looked after and cared for are at even greater risk. It is important, therefore, to examine both the risk and protective factors for suicidal behaviour among sub-groups of adolescents who may be even more vulnerable such as looked after and cared for adolescents.

4.2.3 Child Protection and Family Services Agency (CPFSA)

The Child Protection and Family Services Agency (CPFSA), formerly the Child Development Agency (CDA), is an Executive Agency of the government of Jamaica with overall responsibility for children in need of care and protection. This mandate includes providing support, care and protection

for those who are in such need. According to the Childcare and Protection Act (2004), a child is deemed to be in need of care and protection if (s)he is abused, neglected or abandoned by his/her parents or guardians or “if the child’s physical, mental health or emotional state is being impaired”. This ruling is also applicable if the child is “a member of the same household as a person who has been convicted of such an offence in respect to a child” (Government of Jamaica, 2004).

The CPFSA provides residential child-care services for approximately 2,000 children, between the ages of 0-18 years in Jamaica. This agency has direct responsibility for the operation and management of eight government children’s homes and places of safety, and the monitoring and licensing of more than forty private homes. This pilot study was conducted at one such government-operated facility.

4.2.3.1 New Day Place of Safety (Pseudonym)

The New Day Place of Safety (not real name) is a maximum-security facility examined in this pilot study. A pseudonym has been used in order to assure the anonymity of the facility. LAACs housed at the New Day Place of Safety fall into one of two categories: those in need of care and protection or those in conflict with the law (Government of Jamaica, 2004). These populations are, in essence dissimilar.

As a form of temporary, alternative care, a Place of Safety provides an interim residential facility for two populations: children in conflict with the law as well as victims of assault; ill-treatment or neglect. (Government of Jamaica, 2004; UN, 2010). Intended to offer brief, temporary shelter, in reality, children may spend in excess of six months in these facilities while waiting for the court to decide on an appropriate placement for them.

The Childcare and Protection Act makes provision for all persons in Jamaica under the age of 18 years to be protected from all types of abuse: physical,

emotional and sexual abuse and from neglect. One is considered in need of care and protection according to the Act, if their rights to being free from abuse and/or neglect are violated (Government of Jamaica, 2004). Some of those who are deemed to be in need of care and protection manifest conditions such as psychosis, severe to profound intellectual disabilities. Many had been abandoned or neglected by their families.

Those in conflict with the law make up approximately 85% of the population at the facility. These youths have been arrested and charged or convicted involvement in criminal activities. Very little research exists in Jamaica on this vulnerable group. A pilot study was warranted in order to determine the feasibility of conducting a psychological survey as well as to identify any potential pitfalls in administering a large-scale survey successfully in this population.

In general, it is correct to state that the mental health care needs of LAACs in Jamaica have received little attention. Moreover, robust evidence on the psychological wellbeing and correlates of suicidal behaviour among LAACs in Jamaica is lacking. While large-scale studies have been conducted among the general adolescent population in Jamaica, and these have provided information on the general physical health of children ages 11-18 years of age, such studies provide no insight into the LAAC population. This deficit points to the need for a pilot study in order to provide preliminary data and lay the foundation for a large-scale study in the future.

4.2.4 Potential Risk Factors for suicide or self-harm in adolescents

The following sub-sections lay out a brief overview of key risk factors for suicide or self-harm in adolescents. These variables include self-esteem, perceived stress, coping, defeat and entrapment, psychological/emotional distress and child maltreatment. The discussion is also situated in the context of evidence related to LAACs.

4.2.5 Self-Esteem

Low levels of self-esteem constitute a major risk factor for suicidal behaviour in adolescents (Evans, Hawton, & Rodham, 2004; Hawton, Saunders, et al., 2012; Soto-Sanz et al., 2019). According to Rosenberg and colleagues, self-esteem constitutes "an attitude favourable or unfavourable that people have about themselves" (Farineau, Stevenson Wojciak, & McWey, 2013 pg. 1). Kernis defines self-esteem as the manner in which an individual feels about him or herself: one's self-worth, liking and acceptance (Kernis, 2003). Given the strong association with suicide risk, some researchers have suggested that when children are found to have low levels of self-esteem, they should be closely monitored and assessed for future suicidal behaviour (Thompson, 2010). Consistent with this view, Hawton and colleagues recommend that – in suicidal behaviour prevention programmes geared toward adolescents - self-esteem should be among the targeted areas. (Hawton, Saunders, et al., 2012).

Despite the established relationship between self-esteem and suicide risk in community samples of adolescents, very little research has been conducted on the levels of self-esteem among children in care. One study, however, did show that children in foster care are considered at greater risk of low self-esteem resulting from the interplay of a number of factors (Farineau et al., 2013). These factors include: exposure to various forms of child abuse and neglect prior to entering care; multiple placements; loss of family, friends and community in which they lived prior to being in care; the stigma of being in care and the stereotype of being a delinquent all diminish self-esteem (Farineau et al., 2013). One would anticipate finding similar forces at work among LAACs.

4.2.6 Stress

Adolescence can be stressful especially because of the cognitive, emotional, biological and social changes that occur during this phase of development (Carballo et al., 2020; Compas, Connor-Smith, Saltzman, Thomsen, &

Wadsworth, 2001; Tang, Xue, & Qin, 2015). Indeed, there is extensive evidence to suggest that exposure to chronic stress during adolescence creates deleterious psychological effects (Romeo, 2017). The main areas of the brain that are susceptible to stress include the amygdala and the hippocampus, both of which perform a major role in emotional regulation and memory (Eiland & Romeo, 2013). The pre-frontal cortex which is responsible for executive functions including planning and self-control is also susceptible to stress as well (Eiland & Romeo, 2013; Romeo, 2017). Some of the main stressors for adolescents include family conflict, financial difficulties, poor peer relations, romantic breakups, and poor school performance among others (Carballo et al., 2020). Despite this knowledge, we still do not fully understand the role of stress in the wellbeing of LAACs. In the current study, we assessed the ways in which LAACs view stressful situations (perceived stress) and how perception informs the ways by which they cope and, in turn, they construct associations with positive or negative outcomes (Smith, 1997).

4.2.7 Coping

As defined by Lazarus and Folkman (1994), the process of coping involves the exercise and deployment of cognitive or behavioural strategies in order to respond to psychological stressors whether internal or external (Lazarus & Folkman in Horwitz, Hill, & King, 2011). Evidence from a systematic review suggests a clear association between poor coping strategies and self-harm (Fliege, Lee, Grimm, & Klapp, 2009). Findings from another systematic review showed that adolescents who engaged in self-harm were more likely to employ emotion-focused coping strategies such as getting angry or drinking alcohol, while those adolescents who reportedly did not engage in self-harm utilised problem-focused coping: for example, talking with someone. (Evans, Hawton, & Rodham, 2005).

For some adolescents, self-harm functions as a way of coping with psychological distress. This process seems to offer tension reduction as a

means of escape from emotional distress by, in a sense, relocating pain (Guerreiro, Figueira, Cruz, & Sampaio, 2015; Hall & Place, 2010; Madge et al., 2008; Nielsen, Sayal, & Townsend, 2016) A recent longitudinal study, conducted among adolescents between 16 -18 years of age in residential care, found that there is an inverse relationship between active coping and self-esteem among adolescents in residential care (Barendregt, Van der Laan, Bongers, & Van Nieuwenhuizen, 2015). Although the relationship between coping and stress is complicated, it is evident that both are inter-related and are implicated in the aetiology of self-harm and suicide.

4.2.8 Defeat and Entrapment

The concepts of defeat and entrapment are central to the IMV model. As discussed in chapters one and four of this thesis (O'Connor & Pirkis, 2016; O'Connor & Portzky, 2018). In fact, entrapment is considered to be a critical driver of suicidal ideation (De Beurs et al., 2020; O'Connor & Portzky, 2018). Gilbert and Allan (1998), however – when looking back in their landmark study - found that defeat, entrapment and depression were highly correlated. They defined defeat as the perception of a failed struggle or a sense of powerlessness while entrapment refers to a thwarted motivation to escape threatening, stressful or unpleasant situations (Gilbert & Allan, 1998). Some authors conceive of defeat and entrapment as separate constructs (e.g., Gilbert & Allan, 1998), yet others view them as a single construct (Taylor, Wood, Gooding, Johnson, & Tarrier, 2009) while others view defeat and entrapment as distinct yet highly related factors (Forkmann, Teismann, Stenzel, Glaesmer, & de Beurs, 2018).

Higher entrapment scores have been shown to be associated with higher levels of suicidal ideation among adolescents (Park et al., 2010). In a systematic review examining the role of defeat and entrapment in suicide, Taylor and colleagues found an association between these variables (Taylor, Gooding, Wood, & Tarrier, 2011). Since then, a meta-analysis utilizing stricter inclusion and exclusion criteria has updated the search to include

studies that were not captured in Taylor's narrative review providing evidence that perceptions of defeat and entrapment are strongly associated with suicidality (Siddaway, Taylor, Wood, & Schulz, 2015). Many of the studies conducted have been among adult populations only and very little evidence exists for adolescents. To our knowledge, there are no studies that have examined the role of defeat and entrapment among LAACs.

4.2.9 Psychological/Emotional Distress

Psychological/emotional distress refers to transient mental discomfort resulting from a range of psychological symptoms including depression and anxiety (Ridner, 2004). One may experience emotional distress as a result of exposure to traumatic or stressful situations and one's perceived inability to cope (Arvidsdotter, Marklund, Kylen, Taft, & Ekman, 2016). In such situations, one's emotional wellbeing is threatened. It is not unusual for people who experience emotional distress to feel overwhelmed thanks to the intensity of their feelings at a particular time (Arvidsdotter et al., 2016; Auerbach, Millner, Stewart, & Esposito, 2015; Evans et al., 2004; Klonsky, Qiu, & Saffer, 2017; May & Klonsky, 2016; Ridner, 2004). Of note, psychological/emotional distress is usually considered to be short-term as emotions improve when the source of the stress is removed or if one adapts to the stressor (American Psychological Association, n.d.; Arvidsdotter et al., 2016; Faubion, 2020; Kane, 2019; Ridner, 2004).

A systematic review by Evans and colleagues demonstrates overwhelmingly that adolescents who have depressive symptoms are at an increased risk for both suicidal ideation and for suicide attempts (Evans et al., 2004). A relatively recent meta-analysis of factors that differentiate those adolescents who think about suicide (ideation group) (ideation group) from those who attempt suicide (enaction group), provided evidence that adolescents with suicidal ideation had elevated levels of depression as compared to controls, while little distinction existed between those in the ideation and enaction groups (May & Klonsky, 2016).

Yet another review, however, indicates that several studies show that anxiety distinguishes those adolescents who think about suicide (ideation group) from the others who attempt suicide (enaction group) and ideators versus controls (Klonsky, Qiu, et al., 2017; May & Klonsky, 2016). Moreover, according to the IMV model of suicidal behaviour, with each successive episode of emotional distress, the pathway between distress and ideation manifests itself more and more clearly (O'Connor & Kirtley, 2018; Rasmussen et al., 2010a). Other studies have indicated that major depressive disorder as well as dysthymia constitute risk factors among adolescents for the transition from ideation to attempts (Nock et al., 2013). The LAAC population is under-researched. More specifically, very little is known about the association between emotional distress and vulnerability to suicidal behaviour among LAACs.

4.2.10 Adverse Childhood Experiences

It is well established that adverse childhood experiences are risk factors for various adverse outcomes, such as emotional distress, low self-esteem, psychopathology and behavioural challenges (Felitti, 1988; Naughton et al., 2017; Zarse et al., 2019). In past years some divergence of opinion has existed, however, regarding the association between adverse childhood experiences and suicide or self-harm behaviour. On the one hand, a recent meta-analysis has shown that child sexual abuse plays a central role in the development of self-injurious behaviour (Serafini et al., 2017). In contrast, older meta-analyses did not find evidence to support the claim that child sexual abuse played a major role in the development of suicidal behaviour (Klonsky & Moyer, 2008). One possible reason for the lack of evidence is that there is usually a lack of disclosure of child sexual abuse (Morrison, Bruce, & Wilson, 2018).

For those studies that found such a relationship, the pathways leading to self-injurious behaviour remain unclear. One study, for example, found that adolescents reporting adverse childhood experiences may be at an

increased risk of cognitive distortions, and these factors may, in turn, lead to non-suicidal self-injury (Vaughn, Salas-Wright, Underwood, & Gochez-Kerr, 2015). In another study, Taussig et al (2014) found higher rates of suicidal ideation in children who have been physically or sexually abused when compared to other forms of maltreatment. They also found that children exposed to multiple forms of maltreatment are at a higher risk of lifetime suicidal ideation than are those exposed to a single form of abuse.

Adolescent females in care are more likely to attempt suicide than their male counterparts to attempt suicide (Cousins et al., 2010). Having a family history of either drug use or of a mental disorder distinguishes those children and youth in care who take their lives compared to those who do not have a history of suicidal behaviour (Taussig 2014 in Evans et al., 2017).

4.2.11 Age group of potential participants

It has been widely established that the average age of onset for suicidal behaviour is 14 years with a peak at around age 16 years, followed by a decline beginning around age 18 years. (Ammerman, Jacobucci, Kleiman, Uyeji, & McCloskey, 2018; Geulayov et al., 2018; Hawton et al., 1998; Hawton et al., 2015; Hawton, Bergen, Waters, et al., 2012; Hawton & Harriss, 2007; Hawton & James, 2005; Hawton et al., 2009; Hawton, Rodham, Evans, & Weatherall, 2002; Hawton, Saunders, et al., 2012; Muehlenkamp, Xhunga, & Brausch, 2019; Nock, Borges, Bromet, Cha, et al., 2008a; Nock et al., 2013; Nock, Holmberg, Photos, & Michel, 2007; Nock et al., 2009; Nock, Hwang, Sampson, & Kessler, 2010; Plener et al., 2016; Swannell, Martin, Page, Hasking, & St John, 2014; Taliaferro & Muehlenkamp, 2014). It is also important to note that LAACs upon reaching 18 years of age are required to leave the care facilities, as they are deemed to be adults. Based on the foregoing, the decision was taken by the research team (KPB, RO & HM) to set the lower age limit for both the pilot and main studies among LAACs at 14 years and the upper limit at 17 years.

4.2.12 Methods of suicide attempts

Children and adolescents apply a variety of methods in order to attempt suicide. For example, a large longitudinal study of 13,410 children aged 0-19 years who died by suicide or attempted suicide in Switzerland over a ten-year period reveals certain clear trends. For males, firearms had provided the most widely used methods (35%) followed by hanging (29%). In contrast, the dominant method used by females were intoxication (26%); hanging (22%); and jumping from heights (18%) (Hepp, Stulz, Unger-Koppel, & Ajdacic-Gross, 2012; Miranda-Mendizabal et al., 2019). Among young people as well as in adult populations, males - in contrast to females - tend to choose more lethal methods of attempting suicide (Miranda-Mendizabal et al., 2019).

In another study by Beautrais (2003), more than 60% of male suicide attempts (irrespective of whether the outcome was fatal or non-fatal) involved highly lethal methods such as hanging, firearms, jumping and vehicle exhaust fumes. On the other hand, almost 95% of females who attempted suicide tended to favour less lethal means, predominantly using self-poisoning such as taking over-the-counter medication, drinking alcohol, or ingesting some easily available household product (Beautrais, 2003). Even though some of these methods used by females had high toxicity, the instruments were low in lethality. More lethal methods necessarily incur a higher case fatality: in other words, they are more likely to result in death.

Comparison of youngsters in care show that adolescents – unlike younger children under 12 years – tend to seek out more violent methods of self-injurious behaviour (Preyde, 2012). It is therefore important to know the methods of choice as well as the level of access to these methods so that appropriate preventive policies may be designed and aimed specifically at this population.

4.2.13 Rationale for this study

As discussed in chapter one, Jamaica's rate of suicide has been rapidly increasing, especially among the youth. In chapter one it was also noted that self-harm is the greatest risk factor for suicide. Furthermore, studies conducted mainly in high-income countries have shown that self-harm is quite commonly seen among adolescents. The Systematic Review in chapter two, magnified the gaps that exist in our knowledge and understanding of suicidal ideation and attempts. While the review showed that having a history of physical and sexual abuse were among the main risk factors for suicidal behaviour, it was unclear whether this was related to being a victim of abuse or being a witness of abuse in the family, neither was a distinction made between factors that led to suicidal ideation versus making a suicide attempt (chapter 2). We also know from the background section of this chapter, that LAACs is a doubly vulnerable population for suicidal behaviour due not only to their developmental stage but also as a result of their living outside of their family of origin and in residential care.

Previous research provides evidence to suggest that there is a relationship between suicidal or non-suicidal behaviour and certain psychological correlates e.g., self-esteem; perceived stress; coping; defeat; entrapment; emotional distress; and child maltreatment. However, most of the studies conducted have been among the general population of adolescents. Curiously, few, if any, of these associations have been examined among the population of adolescents who are looked after and cared for. In addition, very few of the concepts discussed above have been investigated among the local population here in Jamaica, and to the best of our knowledge, have never been explored among the LAAC population in Jamaica. We therefore set out to conduct a self-report study of the relationship between key psychological variables and suicidal behaviour.

4.2.14 Study Aims and Research Questions of the Present Study

Surveys are considered to be useful ways to get accurate data about sensitive issues as participants feel more comfortable to provide responses especially if their identity remains anonymous (*The SAGE Encyclopedia of Communication Research Methods*, 2018). Compared to interviews, surveys are efficient and easy to administer, thereby making it possible to sample a large number of persons in a short time (*The SAGE Encyclopedia of Communication Research Methods*, 2018). Another advantage of using surveys it that they can be analysed quickly, especially when using software such as SPSS (*The SAGE Encyclopedia of Communication Research Methods*, 2018). Finally, surveys sometimes yield results that may be useful but unexpected by the researcher (*The SAGE Encyclopedia of Communication Research Methods*, 2018).

It was established earlier in this chapter that various aspects of emotional wellbeing such as exposure to adverse childhood experiences, self-esteem, emotional distress and suicidal behaviour history would be explored. These topics are known to be sensitive. Therefore, the research team (KPB, RO & HM) decided that the best tool that could be used to obtain the desired answers to the research questions for this pilot study and the main study (see chapter five) was a survey. Having compiled the survey containing the desired measures, the next step was to conduct a pilot study with a focus-group like environment in which the participants were able to provide feedback on completing the survey. To that end, in keeping with good research practice (Haasan, 2006; Thabane, 2010; van Teijlingen, 2001), this pilot study was conducted with the following aims in mind:

1) to determine the suitability of items in the survey to see if they are easily understood by respondents.

2) to identify and address any potential challenges that may arise with respect to the administration of the survey.

3) to explore if the use of a survey method could provide meaningful data on the emotional wellbeing of LAACs in a childcare facility in Jamaica.

The following are the research questions related to the aims mentioned above:

1) Is the survey instrument easily understood by participants?

2) What are some of the logistical challenges that may arise in the preparation and administration of the survey?

3) Do LAACs report thinking about and/or attempting suicide or engaging in self-harm?

To this end, the data collection instrument was tested, while the researcher became familiar with the procedures needed to administer the instrument and to devise appropriate sample recruitment strategies (Haasan, 2006; Thabane, 2010).

4.3 Method

4.3.1 Participants and setting

This pilot study was conducted in August 2017 among looked after and cared for adolescents in an all-female Place of Safety in Jamaica. “A place of safety is any setting designated as such by the court. It can be a hospital, a home of a family, friend or an unrelated adult, or a children’s home” (Institute, 2018)”. This facility was one on the sampling frame provided by the CPFSA (Appendix 9).

4.3.2 Inclusion Criteria

Adolescents were eligible if they met the following criteria:

1. Participants must be between ages 14-17 (inclusive) years.

2. Participants must be able to give assent to participate.

3. Participants must have been a resident in a children's home at least one week prior to completing the questionnaire.

4. Additionally, they had to be able to answer the items on the survey. The reading age of the survey was at a Flesh-Kincaid grade level 5. This was determined using the Readability feature in Microsoft Word in Office 365 (See Appendix 11).

4.3.3 Exclusion Criteria

1. Individuals who are unable to provide informed assent were excluded.

2. Individuals who are unable to meaningfully complete the questionnaire due to cognitive disabilities were excluded from the study. (Members of staff at the facility have access to the LAACs health records and therefore those LAACS who were previously diagnosed by a clinician as having moderate to severe cognitive impairments were excluded from participating by members of staff).

The main study was conducted between September – November 2017.

4.3.4 Measures

The following measures comprise the Survey Packet (Appendix 7) and were administered in the order specified.

1) Demographic Questionnaire
2) The Social Connectedness Scale (SCS)
3) The Screening to Brief Intervention instrument, (S2BI)

4) Adverse Childhood Experiences (ACE)
5) Brief Adolescent Coping Scale, Second Edition (ACS-2)
6) General Help-Seeking Questionnaire, Vignette Version (GHSQ-VV)
7) The Self Injurious Thoughts and Behaviours Interview -Brief (SITBI-B)
8) Rosenberg Self Esteem Scale (RSES)
9) The Brief Defeat and Entrapment Scale (BDES)
10) Perceived Stress Scale (PSS)
11) Paediatric Inventory of Emotional Distress (PI-ED)

Except for the demographic questionnaire, all measures are standardized, age-appropriate and have been shown to be valid and reliable. (Appendix 10). These features are routinely used in Glasgow University's Suicidal Behaviour Lab and prior permission has been granted to use them, where appropriate.

4.3.4.1 The Demographic Questionnaire

A short demographic questionnaire containing 10 items detailing participants' age, gender, grade level in school, duration of time in care was administered. See Survey Packet for Pilot in Appendix 7.

4.3.4.2 The Social Connectedness Scale (Lee, 1995)

This scale assesses the degree to which young people feel connected to others in their social environment. Designed for young people aged 14–18 years, it consists of 8 items which tap into connectedness to persons in one's environment. For example, items such as 'I feel disconnected to the world around me', 'I feel close to people' and 'My friends feel like my family' are rated using a 6-point Likert scale. The reliability is relatively high with $\alpha = .92$ (Lee, 1995).

4.3.4.3 Adverse Childhood Experience Questionnaire (ACE -Q)

The Adverse Childhood Experiences (ACE) questionnaire by Felitti and colleagues, was designed for adults over the age of 18 years of age, and was adapted for use among the LAACs, as this measure is notably one of the best scales for exposure to adverse experiences that one may face as a child. A subset of 10 items that refer to some of the most intensive and frequently occurring types of traumas that adolescents may be exposed to were chosen (Felitti, 1988; Zarse et al., 2019). Five items refer to personal abuse or neglect; while the other five refer to exposure to family violence e.g. between parents or caregivers (Felitti, 1988; Schulman, 2019). Items on this questionnaire include the following: 'Did you live with anyone who was a problem drinker or alcoholic or who used street drugs?', 'Did an adult or person at least 5 years older than you ever touch or fondle you or have you touch their body in a sexual way, OR Try to or actually have oral, anal or vaginal sex with you'? Given that the ACEs were of critical interest to the researcher (KPB), the team decided that this should be placed among the first of the measures to be answered before participants got tired or for whatever reasons did not complete the survey.

4.3.4.4 The Adolescent Coping Scale - Second Edition (ACS-2) (Frydenberg, 2011a)

The ACS-2 is an assessment tool designed to measure adolescents' coping behaviour (Frydenberg, 2011b). The second edition was updated to measure both the usage and helpfulness of coping strategies in both general and specific situations and was designed specifically for adolescents from 12-18 years of age. The *ACS-2 Short Form Questionnaire* contains 20 items. This form provides a useful indicator of a respondent's coping strategies. The Short Form provides scores on two coping styles:

(i) Non-productive coping

(ii) Productive coping

A five-point Likert scale with the options from 'never', 'seldom', 'sometimes', 'often' and 'very often', was used to rate both the

helpfulness and usage of ways of coping – that is there were (2 responses required per item). Examples of items found in the scale are ‘Look for support and encouragement from others’ and ‘Don’t let others know about my problem’ (Frydenberg, 2011b).

4.3.4.5 The General Help-Seeking Questionnaire, Vignette Version (GHSQ-VV) (Wilson, 2005)

The (GHSQ) was developed to assess intentions to seek help from different persons and for various challenges that may be faced. These persons include not only health professionals, but family and friends. Validity and reliability properties render this scale superior to most other scales for Help-Seeking Behaviour. Of the available measures of help-seeking behaviour, it is also deemed most appropriate, as it is one of few scales that specifically measures help - seeking behaviour for suicidal thoughts and feelings. (Wilson, 2005).

The General Help Seeking Behaviour instrument that was used is a brief version including 2 scenarios. In the first scenario, John is described as showing symptoms of depression (although it is not so labelled in the vignette). These symptoms include feeling unusually sad and down-heartened, loss of appetite, weight loss, difficulty concentrating on studies, difficulty completing daily tasks and low self-worth. Respondents were asked to indicate the level of likelihood that they would seek help from a list of persons if they were feeling like John.

4.3.4.6 The Self Injurious Thoughts & Behaviours Interview – Brief (SITBI) – Brief

The SITBI is a brief interview-based measure consisting of items that assesses the presence, of (a) suicidal ideation, (b) suicidal attempts, (c) self-harm ideation, and (d) self-harms. When administered to an adolescent population, test–retest reliability for the presence versus absence of each lifetime outcome was strong for suicidal ideation (r=.70), suicide plan (r = .71), suicide attempt (r = .80), and NSSI (r = 1.0) (Nock et al., 2007). This

was the only measure related to the outcome variables of interest namely, suicidal ideation, suicidal attempt, self-harm ideation, self-harm and method of suicide attempt used in this survey. Notably, the SITBI which is widely used measure internationally among adolescents, was adapted four use as a survey rather than an interview.

4.3.4.7 Rosenberg Self Esteem Scale (Rosenberg, 1965)

The Rosenberg Self-Esteem Scale is a 10-item self-report measure of global self-esteem among adolescents. It consists of 10 statements related to overall feelings of self-worth or self-acceptance, such as 'On the whole I am satisfied with myself' and 'I feel I do not have much to be proud of'. The items were answered on a four-point scale ranging from strongly agree to strongly disagree. The Rosenberg Self-Esteem Scale presented high ratings in reliability areas; internal consistency was 0.77, minimum Coefficient of Reproducibility was at least 0.90 (Rosenberg, 1965).

4.3.4.8 The Short Defeat and Entrapment Scale (SDES) (Griffiths et al., 2015)

The Defeat Scale was designed by Gilbert and Allan (1998). The short Defeat and Entrapment Scale (SDES) developed by Griffiths et al., is a subset of the original scale by Gilbert and Allan (1988). The SDES version consists of 8 items on a 5-point Likert scale (ranging from 0 = 'Never' to 4 = 'Always') asking participants how much they had felt defeated or entrapped in the previous seven days. An example of an item related to such a feeling of defeat is "I feel defeated by life". The Entrapment Scale has two sub-scales: internal entrapment and external entrapment. An example of one of those items is "I can see no way out of my current situation" The scale has high internal consistency (α = .88 to .94) (Griffiths et al., 2015). The Defeat and Entrapment scales offers high internal consistency with α coefficients of 0.94 for females and 0.93 for males in both groups, and reliability of α = 0.94 for students and α =0.93 for depressed group (Gilbert & Allan, 1998).

4.3.4.9 The Perceived Stress Scale (PSS) (Cohen, 1983)

A widely used psychological instrument for measuring the perception of stress the PSS measures the degree to which situations in one's life experiences are appraised as stressful. It consists of 10 items which were designed to tap in to how unpredictable, uncontrollable, and overloaded respondents find their lives. Two such examples of items on that scale are 'how often have you been upset because of something that happened unexpectedly' and 'how often have you felt that you could not cope with all the things you had to do'? Participants are asked to respond to each question on a 5-point Likert scale ranging from 0 (never) to 4 (very often), indicating how often they have felt or thought in a certain way within the past month (Cohen, 1983).

4.3.4.10 Paediatric Index of Emotional Distress (PI-ED) (O'Connor, Ferguson, Carney, House, & O'Connor, 2016)

The PI-ED was developed in 2016 as a standardised measure to assess emotional distress, namely depression and anxiety among children ages 8-16 years. The PI-ED enables the early identification of mental health problems among children and adolescents. It contains 14 items and is brief, and easy to administer listing such items as 'I feel shaky or wound up' and 'I feel sluggish/slowed down' (O'Connor, Ferguson, Carney, et al., 2016).

4.3.5 Sample size

The recommendations for conducting pilot surveys in social science research is for the sample size to be between 10 – 30 (Johanson & Brooks, 2010). As such the aim was to get a minimum of 20 participants for the pilot. Thirty-eight questionnaires were administered, however, only 36 were included in the analysis as there was one that had more than 50% of the items incomplete due to difficulties comprehending the items while another

participant voluntary withdrew from the study before completing the survey.

4.3.6 Ethical and Governance Considerations

Dual ethical approval was granted by the Ministry of Health's ethics committee in Jamaica, as well as by the College of Medical Veterinary and Life Sciences (MVLS) ethics committee at the University of Glasgow. Endorsement was also provided by the then Child Development Agency (CDA) now the Child Protection and Family Services Agency, (CPFSA) in Jamaica.

A commonly held perception suggests that mere enquiring into suicidality in clinical or research settings may exacerbate distress or otherwise cause harm. A review of the literature published on this topic between 2001-2013, however, shows no evidence to support that view (Dazzi, Gribble, Wessely, & Fear, 2014). No statistically significant increase in suicidal ideation appears in response to inquiries. This zero-reaction holds equally for the general population and, importantly, for those at-risk population (Dazzi, Gribble, Wessely, & Fear, 2014).

Given the nature of this study, this survey was considered a low-risk experience for participants. However, the possibility does exist that participant might become upset when asked to reflect on aspects of their psychological health and wellbeing and on their history of self-harm/suicide attempts or suicidal ideation. Participants were informed that they need answer no questions they preferred to avoid, and that they were free to withdraw at any time without providing an explanation and without any effect on their usual care.

Standard support to children was provided by the CPFSA staff at the Place of Safety, in the event of any emergencies. In addition, all participants were provided with an information sheet detailing local support services

they might contact so as to augment the provision of support from their care homes. Such support included discussion of any salient topic with an independent trained mental health professional (Appendix 8). The information sheet sets out the researchers' details in case respondents felt concerned about any of the non-clinically related topics covered by the survey.

4.3.7 Statistical Methods

Descriptive analyses were used to analyse the data given the aims of the study and small sample size. Cronbach's alpha was also used as an index of internal consistency. Data were analysed using the Statistical Package for Social Sciences (SPSS) version 25.

4.3.8 Recruitment & Procedure

The CPFSA provided a list of eligible facilities (sampling frame) and contact information of administrators who could be approached for inclusion in the study, given the inclusion criteria (below). She was then given a Briefing Pack (Appendix 14) which included a brief protocol sheet outlining the nature of the study as well as a copy of the Participant Information Sheet. The Briefing Pack also included a flyer advertising the study (Appendix 12).

The study was advertised via a flyer prepared by the researcher (KPB) and was distributed in the care facility two weeks prior to administering the survey by supervisors/managers. Those who expressed an interest in participating in the survey were advised of the date and time when the data would be collected. Being the legal guardian of the children in their care, the facility manager was invited to provide proxy consent for those adolescents whom they deemed eligible to participate and who indicated their willingness to take part (Appendix 18). This approach was recommended by the team from the Research and Development team CDA.

On the morning the study took place, potential participants who had expressed an interest in gaining further information about the study were given a Participant Information Sheet outlining the aim and nature of the study (Appendix 16). Potential participants kept this form for future reference. This Information Sheet contains researchers' contact details. Consistent with other studies undertaken by members of the University of Glasgow Suicidal Behaviour Research Lab, they were given 2 hours to decide if they wished to participate.

Those who decided to participate were asked to sign the Assent Form (Appendix 13). Participants were given a copy of the Consent Form to keep for their records, and the signed copy was collected and kept by the researcher (KPB). Once written consent was obtained, participants were invited to complete the questionnaires.

No incentives were provided for participants. Anonymity was preserved as participants were assigned unique ID numbers. Signed consent forms were stored separately from completed questionnaires in a locked cabinet in the researcher (KPB)'s office which is also locked outside of working hours.

Participants were given envelopes in which they placed their completed questionnaires that only contained an assigned alpha-numeric ID number. They were not asked to provide their names or other identifying information on the questionnaire.

Respondents were gathered in the main dining area which has seating to accommodate all residents of the facility at the Place of Safety. Questionnaires and pencils were handed out to each participant who completed the survey within a group setting, but well-spaced, as not all residents were eligible to participate due to age or disability. The main advantage of this is that it is one of the most efficient ways of having many questionnaires completed with a limited time and with little effort on the

part of the researcher. The researcher (KPB) remained in the room to clarify any questions the respondents may have had.

None of the participants were known to the researchers and hence were not in a dependent relationship with them. Thus, participants did not feel an obligation to participate in the study. Data analysis was conducted by the main researcher and all electronic files are stored on a password protected computer to which only the researchers have access.

4.4 Results

4.4.1 Participants

A total of thirty-six surveys were analysed. This is an all-female facility; therefore, only female participants were in this pilot study. In the interests of time, because the response rate by facility Managers/House Mothers/House Fathers was very slow in the beginning of the data collection period, a decision was made to start with this facility using it as the pilot. The age range of the adolescents were between 14 and 17 years, with a mean of 15.11 years and SD=.89.

4.4.1.1 Recruitment of participants and characteristics of target population

The total population of girls in the facility was 59, but it was during the summer holidays and 4 of the young people were allowed to leave and spend time with family before the start of the new school year in September. Nine of them were ineligible to participate: 3 due to mental health challenges and 6 were less than 14 years of age.

Forty-six potential participants were given the Participant Information Sheet (Appendix 16) to read and make an informed decision about whether they wished to participate or not. Eight of the girls declined to participate

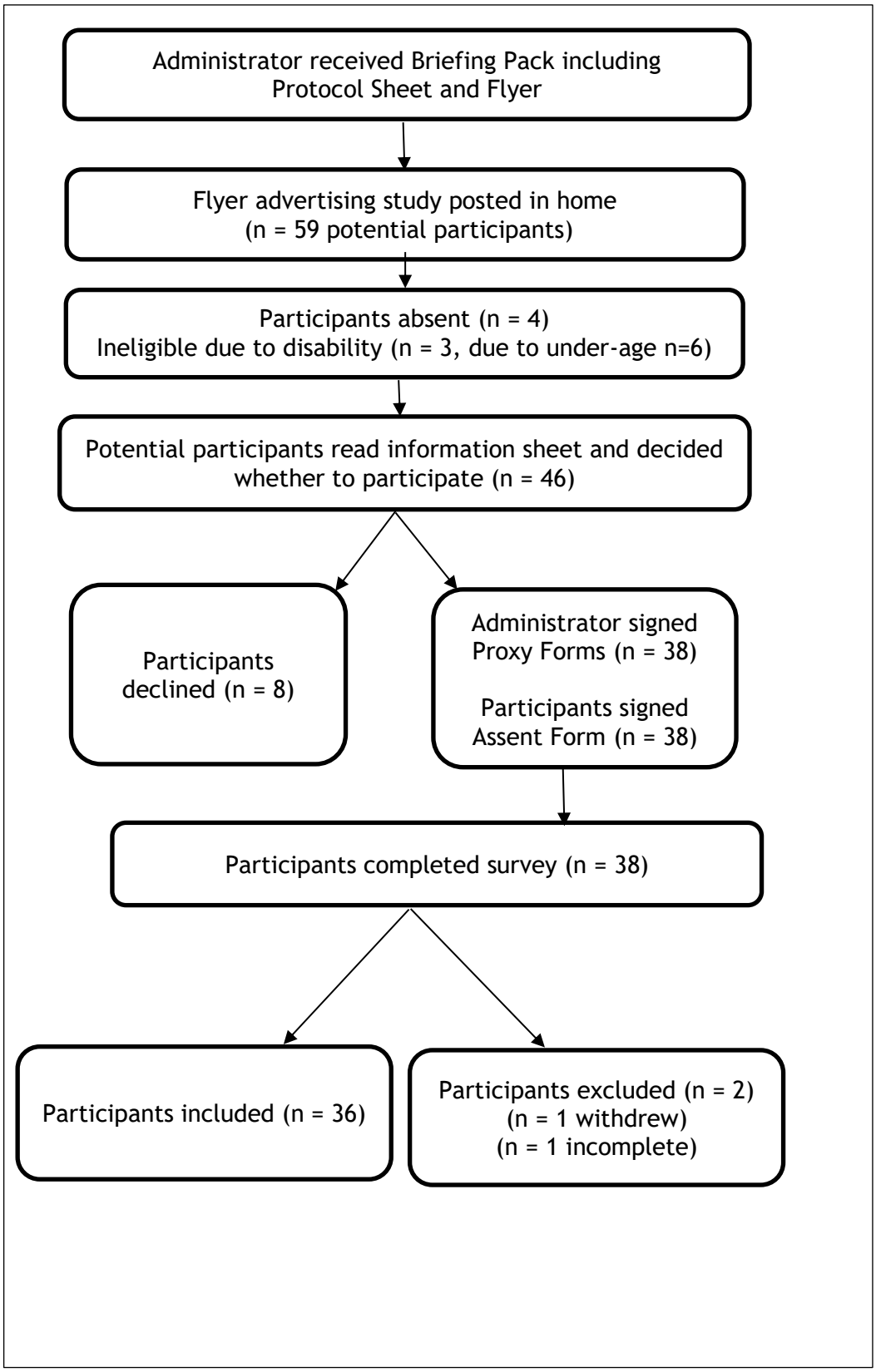
in the study due to a lack of interest. A total of thirty-eight questionnaires were administered, however, 1 person withdrew from the study before completing the questionnaire and one questionnaire was discarded because only the demographic section was completed. See Participants' Flow Chart Figure 12.

4.4.1.2 Context and Setting

The general psychosocial atmosphere at the facility appeared to be 'tense' as LAACS were observed to be verbally abusive both to the staff as well as to their peers. This is a maximum detention facility and there were several layers of gates with padlocks that one had to go through for ingress and egress. It is likely, that this would affect the overall emotional wellbeing of the LAACs there.

The survey was conducted in the dining room of the facility. For those participants who experienced emotional distress while completing the survey, staff members were present, in the room and took them to a private office for intervention. This was done discretely and did not appear to disrupt nor disturb the other participants in a significant way. Instead, the rest of them went on to complete the survey seemingly with little discomfort.

Figure 12. Flow Chart showing how participants were recruited



4.4.2 Testing the instruments

The overall instrument (containing the 11 measures) was found to be lengthy as participants took approximately 80 minutes, ranging from 55 – 95 minutes to complete the survey (Appendix 7). This did not include 2 breaks of 10 minutes each. Feedback from participants as well as observation showed that some participants found particular items difficult to comprehend and some had difficulty with the instructions for some of the tests. Two examples of these problems were the Adolescent Coping Scale (Frydenberg, 2011b) and the Self-Injurious Thoughts and Behaviour Interview (SITBI) (Nock et al., 2007). In both examples the instructions appeared confusing for several respondents as clarification was sought.

Table 7 illustrates the comparison of the survey instrument for the pilot and then the one that was modified and used in the main study. Average time to complete the survey was reduced by about half the time.

Table 7 Comparison of survey instrument used for the pilot before and after modification.

	Pilot Before Modification	Pilot After modification
Total No Items	128	86
Total no. Pages	12	8
Av. Time for completion	80 minutes	* 45 minutes
No. Key variables	10	9
Measures (In order of how they appeared in the survey)	Demographics (10 items) Adverse Childhood Experiences (10 items) Adolescent Coping Scale (40 items) Self-Injurious Thoughts and Behaviour Interview (16 items) Short Defeat and Entrapment Scale (8 items) Perceived Stress Scale (10 items) Rosenberg Self-Esteem Scale (10 items) Paediatric Index of Emotional Distress (14 items) Social Connectedness Scale (8 items) General Help Seeking Behaviour (2 vignettes)	Demographics (10 items) Rosenberg Self-Esteem Scale (10 items) Perceived Stress Scale (4 items) Self-Injurious Thoughts and Behaviour Interview (19 items) Short Defeat and Entrapment Scale (8 items) General Help Seeking Behaviour (1 vignettes) Paediatric Index of Emotional Distress (14 items) Adverse Childhood Experiences (10 items) Adolescent Coping Scale (10 items)

*This was determined when the main study was conducted. See details in the following chapter. In general, the instrument appeared to more user-friendly and easier to read after review and refinement.

4.4.3 Missing Data and Missing Value Analysis

There were some scales that had noticeably more items left unanswered (missing) than others. The main scales were the Adolescent Coping Scale (ACS-2), SITBI, ACE. The general feedback from the participants could be categorized into both positive and negative feedback. On the positive

side, participants reported that they found that filling out the survey made them feel better as they had never before confronted those issues before. A number of them said they were motivated to complete the survey because they found it interesting. Two participants asked for a blank copy of the survey to have for their personal use in the future as they thought it would help them when they were writing in their private journals.

On the other hand, most of the participants (n= 33/36 or 92%) felt that the survey was too long and that some of the instructions were confusing, especially as it related to the ACS, SITBI and ACE. Some of them indicated that they simply omitted items that they found to be too personal such as those that related to history of abuse or neglect. Based on the feedback from the participants, as well as information from the missing value analysis, the research team after much discussion, decided by way of consensus, to modify the survey and remove some of the items, as well as to make instructions clearer, as outlined in sections 4.4.2 and 4.4.5 of this chapter.

Using SPSS version 25, Little's test was applied to evaluate whether the data was missing completely at random (MCAR). For this test, a statistically nonsignificant result is desired (Tabachnick, 2014), assessing the continuous predictor variables. The results of the analysis are summarized in Table 8 *Results of Little's Test*. For all the continuous predictor variables, all were nonsignificant. Therefore, it may be inferred that the level of missingness occurred completely at random (MCAR). This suggests that missingness in the main study is likely to be MCAR.

Table 8 ***Results of Little's Test & Reliability***

Variable	Sig.	Reliability (α)
Adverse Childhood Experiences	.138	.674
Coping	.106	-.314
Defeat	.249	.751
Entrapment	.353	.545
Perceived Stress	.822	.489
Self Esteem	.147	.762
Paediatric Index of Emotional Distress	.225	.627
Social Connectedness Scale	.352	.668

4.4.4 Reliability

Cronbach's alphas is a measure of the internal consistency or reliability of a scale (i.e., the items as a group) (Field, 2013). For the assessment of reliability, Cronbach's alpha (α) indices were calculated. Thresholds for these indices are traditionally suggested as: $\alpha \geq 0.9$ excellent, $0.9 > \alpha \geq 0.8$ good, $0.8 > \alpha \geq 0.7$ acceptable, $0.7 > \alpha \geq 0.6$ questionable, $0.6 > \alpha \geq 0.5$ poor, and $\alpha < 0.5$ unacceptable. Analyses of reliability were conducted as shown in Table 8. Based on the guide above, most of the measures had levels of reliability that were questionable or less than acceptable. In the case of that for coping, the author of the scale was contacted via email, to cross check if the scoring procedure was done accurately, which it was. It is likely that the results were due to the level of confusion surrounding the instructions.

4.4.5 Emotional wellbeing

4.4.5.1 Suicidal behaviour

More than eighty percent of the sample (83%) admitted to attempting to take their lives at least once in the past and 64% had a history of self-harm. For details see Table 9.

Table 9 ***Proportion of sample with a lifetime history of suicidal/self-harm ideation or behaviour***

	Response			
Variable	Yes	No	Missing	Total
	% (n)	% (n)	% (n)	% (n)
Suicidal Ideation	83.3 (30)	2.8 (1)	13.9 (5)	100 (36)
Suicide Attempt	83.3 (30)	11.1 (4)	5.6 (2)	100 (36)
Self-harm Ideation	72.2 (26)	13.9 (5)	13.9 (5)	100 (36)
Self-harm Episode	63.9 (23)	13.9 (5)	22.2 (8)	100 (36)

When asked about when was the last time they had engaged in suicidal behaviour, 50% of LAACs admitted to making an attempt within the past week of completing the survey. The percentage who engaged in self-harm in the past week was lower at 38.9%. Suicidal ideation and self-harm ideation were lower than suicide attempts. See Table 10.

Table 10 ***Time of last self-harm or suicidal episode***

	Last Time			
	Past week	Past year	More than a year ago	Would rather not say
Variable				
Suicidal ideation	47.2 (17)	5.6 (2)	8.3 (3)	38.9 (14)
Suicide attempt	50.0 (18)	5.6 (2)	2.8 (1)	41.7 (15)
Self-harm ideation	44.4 (16)	11.1 (4)	5.6 (2)	38.9 (14)
Self-harm	38.9 (14)	11.1 (4)	5.6 (2)	44.4 (16)

There was more than 50% missing data for items related to frequency of suicidal ideation, suicide attempt, self-harm ideation and self-harms. Despite the high levels of missing data, up to 14% of the sample reported that they had made a suicide attempt more than 10 times. This contrasted with self-harm which was found to be 3% of the sample. For further details see Table 11.

Table 11 ***Frequency of lifetime suicidal/self-harm ideation and behaviours***

	Frequency Percentage (Number of times)				
	1 – 3	4 – 6	7 – 9	≥ 10	Missing
Variable					
Suicidal ideation	19 (7)	3 (1)	3 (1)	6 (2)	69 (25)
Suicide attempt	36 (13)	8 (3)	25 (9)	14 (5)	86 (31)
Self-harm ideation	22 (8)	8 (3)	3 (1)	8 (3)	57 (21)
Self-harm	19 (7)	11 (4)	-	3 (1)	66 (24)

It is noteworthy that of all the age groups, the age of onset of suicidal behaviour occurred mostly during early adolescence between 10- 14 years. On the other hand, the proportion of the sample who reported onset of the behaviours before age 10 years was relatively low (see Table 12)

Table 12 ***Age of onset of suicidal/self-harm ideation and behaviours***

	Years of Age			
	< 10	10 – 14	≥ 15	Missing
Age first	n (%)	n (%)	n (%)	n (%)
Suicidal ideation	6 (2)	36 (13)	6 2	53 (19)
Suicide attempt	3 (1)	42 (15)	6 (2)	50 (18)
Self-harm ideation	3 (1)	28 (10)	14 (5)	56 (20)
Self-harm	3 (1)	33 (12)	11 (4)	53 (19)

4.4.5.2 Adverse Childhood Experiences (ACE)

In order to get a more comprehensive picture of what types of adverse childhood experiences the young people were exposed to, analyses were done for each of the ten items on the survey. As shown in Figure 13, the most common types of ACEs were physical abuse followed by emotional abuse. Almost 80% of them also endorsed the item that indicated they didn't feel loved, while more than a half of them reported being sexually abused.

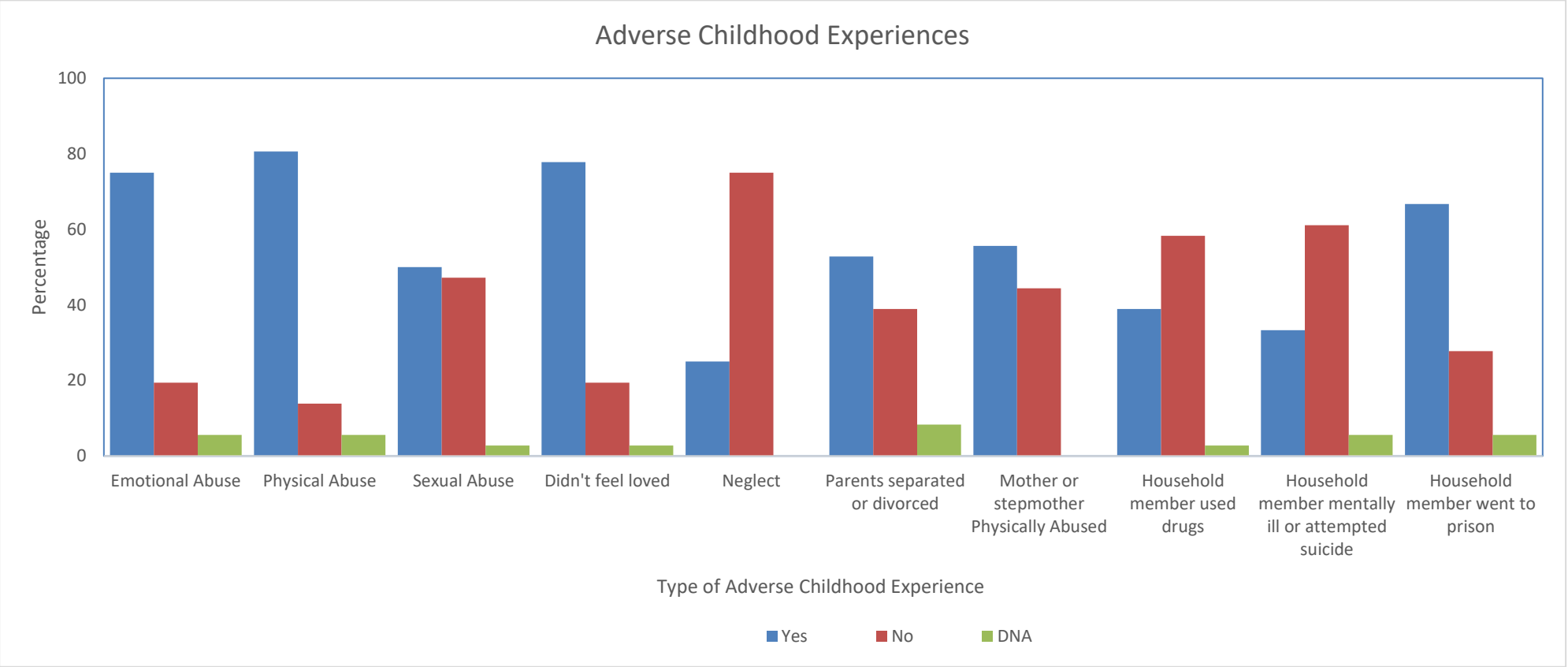


Figure 13. ***Types of Adverse Childhood Experiences***

4.4.5.3 Adolescent Coping

The ACS may be further broken down into two categories: productive and non-productive coping. Among the productive coping strategies used, praying was the most often used by approximately 50% of the sample. Other techniques used included working hard, keeping fit and spending time with a friend.

Worrying was the non-productive strategy employed very often by almost half the sample (>40%). Letting off steam and shutting myself off were also endorsed by almost 40% of respondents who indicated they did these very often as their ways of coping with stressors.

4.4.5.4 General Help Seeking Behaviour

Most respondents indicated they would seek help from a girlfriend/boyfriend or simply a friend, parent, other relative or house mother. Only a few indicated they would seek help from a doctor, minister/religious leader or a phone/help line or no one.

A similar pattern was found when the scenario was changed to a female Jess, who had suicidal ideation for at least one time each week for the past four weeks. They were again asked to indicate how likely they would seek help from the same list of persons, if they were having thoughts like Jess. These are illustrated in Figure 14.

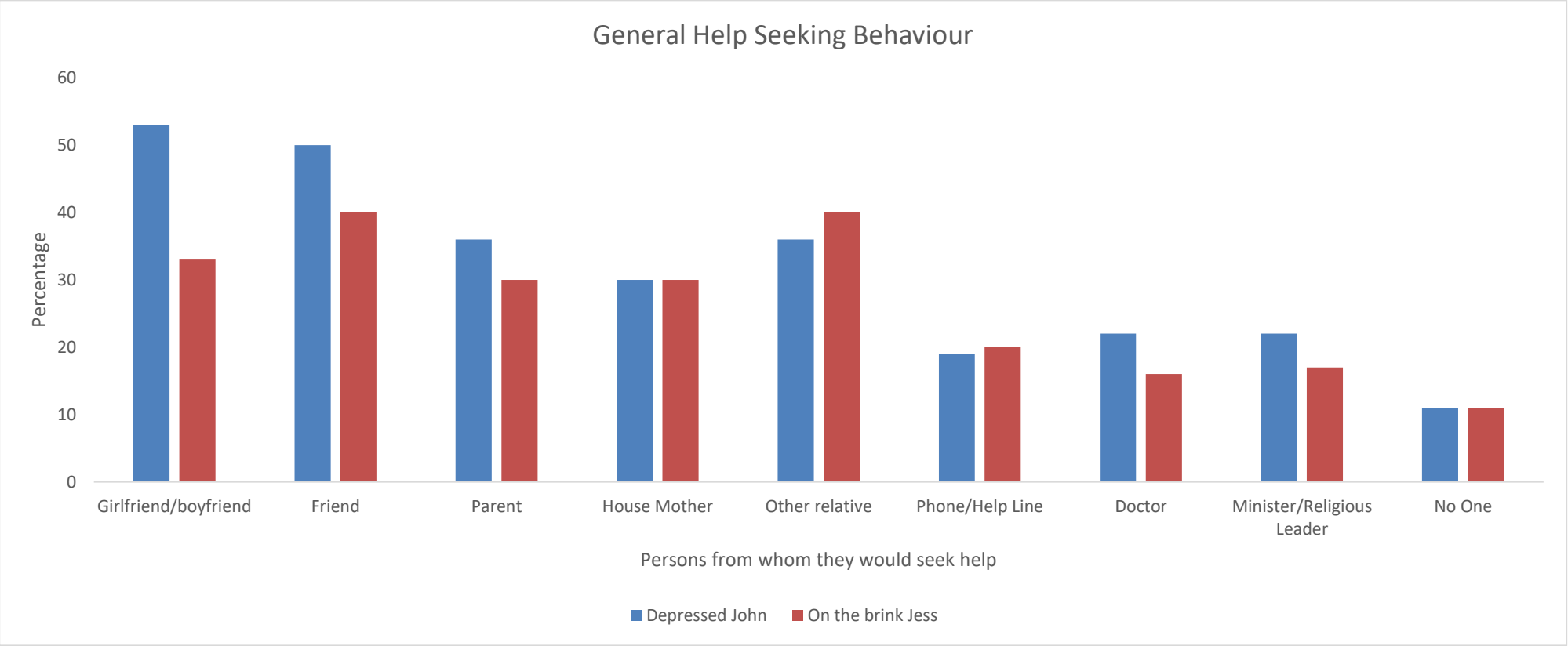


Figure 14. ***Persons to whom help would be sought by participants if depressed or thinking of suicide***

4.4.6 Discussion

This pilot study was conducted with the view to determine if the items were easily understood by participants and the responses were as expected. A secondary aim was to identify potential logistical problems in the administration of the survey in order to address them before carrying out the main study. Another aim was to see if the proposed method of using a survey was able to provide meaningful information about the emotional wellbeing of LAACs in a child-care facility in Jamaica. The long-term aim was to conduct such a survey in a larger group of Jamaican LAACs. There were some notable issues with the instrument which resulted in its modification. Problems identified with the administration of the survey were minimal but were noted.

The questionnaire for the pilot study took on average, 80 minutes to be completed, not including two 5-minute breaks at the 25- and 50-minute marks. One of the main reasons for the questionnaire taking so long, apart from being lengthy was, in part, due to a sub-group of participants needing some of the questions read and explained to them, despite the survey having a reading age of Kincaid level 5. This may be due to the poor academic performance, low comprehension skills and difficulties with concentration that are characteristic of children in care (McCall, 2013; Rees, 2006).For those who did not require assistance to read or comprehend the items, the average completion time was 65 minutes.

The sequence of items and some of the instructions were modified to make it simpler to comprehend. Specifically, from observing the respondents, it was evident that many misunderstood the instructions for the Adolescent Coping scale and the SITBI. The ACS was also particularly confusing as it presented ways of coping and required participants to indicate how often they used a particular method of coping on a Likert-type scale on the left side of the question as well as to determine how often they found this method helpful (also using a Likert scale) on the right-hand side. Due to the widespread confusion, the decision was made to modify the instructions by removing the helpfulness component and simply have respondents indicate their usage of various ways of coping.

The SITBI was also modified. Firstly, the layout of the items proved to be confusing for many respondents as all the items had an alphanumeric numbering system as shown in Appendix 7. For many, the confusion surrounded whether they should answer all items or whether they should choose from those relevant to them. As a result, the questionnaire was modified so that the numbering was simply numeric. This may have helped to account for the relatively low response rate for some of those items.

More than half of the items on the SITBI were left unanswered and this does not appear to be because they were not relevant to the participants. Instead, it is likely that this may have been due to the difficulty in understanding that all items in a particular block should be answered. It is hoped that the modifications made will help to increase the response rate for those items as they are critical for all analyses as they are outcome variables. This was directly related to one of the main aims of conducting the pilot study prior to the roll-out of the large-scale study.

It is important to note that the Screening to Brief Intervention (S2BI) which is a tool used to determine frequency of substance use by adolescent patients in different risk categories that was originally intended to be included in the survey was removed prior to the administration of the pilot.

The reason for this is that members of the Research team at the CPFSA who vetted the questionnaire locally prior to going out in the field for data collection strongly advised against using it. The rationale they gave is that from their experience LAACs do not answer questions related to substance use for fear of sanctions that may be brought against them because these are contraband substances.

Given that there was consensus between the researcher (KPB) and the team at the CPFSA that the protocol was lengthy, the decision was made to exclude this instrument and hence to remove substance use as a key predictor variable for this study.

Table 13 ***Sample SITBI Questionnaire for Pilot showing alpha numeric numbering system.***

1	A	Have you ever seriously **thought** of taking your life, but not actually attempted to do so?	1	Yes
			2	No *(If no, go to item 2A)*
			3	Would rather not say
	B	When did you last **think** about taking your life?	1	The past week
			2	The past year
			3	More than a year ago
			4	Would rather not say
	C	How many times has this occurred?		Answer:
				Would rather not say
	D	How old were you the first time you had this thought?		Answer:
				Would rather not say

2	A	Have you ever **made an attempt** to take your life, by taking an overdose of tablets or in some other way?	1	Yes
			2	No *(If no, go to item 3A)*
			3	Would rather not say
	B	When did you last **attempt** to take your life?	1	The past week
			2	The past year
			3	More than a year ago
			4	Would rather not say
	C	How many times have you **made an attempt** to take your life?		Answer:
				Would rather not say
	D	How old were you the first time you **made an attempt**?		Answer:
				Would rather not say

Overall, the battery of tests was found to be too long and onerous from some of the respondents. The instrument had 12 pages consisting of 135 items. In order to address this, following a consensus meeting among the research team, this was shortened to 8 pages with 86 items. The main modifications included the removal of the Social Connectedness scale (15 items), a reduction in the number of items for the Adolescent coping scale from 24 to 12 items, the Perceived Stress Scale from 10 to 4 items, and the General Help Seeking Behaviour scale from 20 items to 1 item. For details see the pilot study in Appendix 7 and the modified version used for the main study in Appendix 17. This decision was arrived at after a consensus meeting between the members of the research team.

The sequence of tests administered was also modified. From observation it was felt that after the first set of questions which focused on demographics, the next set of questions related to adverse childhood experiences which was upsetting for a number of participants. Given that most of them were in care due to adverse childhood experiences, it was felt that the less threatening scales should be used at the beginning to get them comfortable and motivated to complete the survey. At the same time, a balance had to be struck between this and the fact that the main outcome variables, suicidal behaviour, should not be left to the end in order to ensure that these data were captured. As such the SITBI was

kept close to the middle of the test battery. Overall, the items on the test battery seemed to be understood by the participants.

4.4.7 Logistics

There were a few logistical challenges identified that should be applied to the design of the next phase /main study. These included ensuring that preparations were made by the administrators of the POS to facilitate the survey.

Closely linked to this was the matter of where the questionnaires would be administered and what would happen with those LAACs who were not participating. The location where the pilot was conducted was an open space which was used as a dining area. This was heavily trafficked by both LAACs and staff members alike as it was the link between the administrator's office and the bedrooms where LAACs slept. It was noisy, and hot. Consequently, the conditions under which the participants completed the questionnaire was less than ideal. However, this was the only available space at the facility to do the survey. Apart from these main challenges, things ran relatively smoothly. This was noted as a consideration in order to reduce the likelihood of this happening for the main study.

4.4.8 Emotional Wellbeing

Almost 85% of the sample admitted to a history of attempting suicide while on average 65% reported at least one self-harm episode. Although it is known that LAACs are at greater risk of mental health challenges than the rest of the population, these numbers exceed expectations (Fisher, 2015; Pinto & Woolgar, 2015). The reason for the elevated levels of suicidality including the risk and protective factors would be areas that could be further explored in a larger scale study with a more representative sample. The findings from the large-scale study would be beneficial in helping to shape policy and provide intervention for those at risk.

There is a link between the onset of puberty and suicidal behaviour. It has been found that there is as much as a four to five-fold increase in the likelihood of self-harm in late puberty compared with a peak in early-mid puberty with

(Patton et al., 2007). Our findings showed that for all four outcome variables, namely suicidal ideation, suicide attempts, self-harm ideation and self-harms only in a minority of the cases was the age of onset below age 10 years. In fact, our findings showed that the age of onset for suicidal behaviour occurred most frequently between 10-14 years of age which is roughly around the onset of puberty. It will be interesting to further explore this in the main study.

Adverse childhood experiences (ACEs) are associated with several mental health challenges in adulthood. A recent study which highlighted this explored the relationship between ACEs and hospital self-harm. They found that after controlling for all other psychological variables, participants who had four or more ACEs were more likely to repeat self-harm than those who had 3 or less ACEs (Cleare et al., 2018). While the scope of this study did not include determining risk factors, it is important to note that more than 70% of the sample endorsed each of the following: that they were victims of physical, emotional and sexual abuse and did not feel loved. These findings are not surprising as abuse and neglect are some of the main risk factors for being in care (Cousins et al., 2010; Fisher, 2015).

4.4.9 Missingness

A significant finding from this pilot study is that more than 50% of the data related to suicidal behaviour was missing. One of the main contributing factors may have been the layout of the items on the scale as well as the alpha numeric numbering system which may have been confusing for the participants. As such, in refining the survey for the large-scale study, modifications were made that simplified the numbering system. The layout of the items was also more straightforward.

On the other measures, it is also important to note that the level of missingness of the data was found to be missing completely at random and was low. This was a good sign as of all the types of missingness, this is the most desirable (Tabachnick, 2014), as this suggests that the missing values were randomly distributed across all observations. Thirty-six of the thirty-eight cases were included in the analyses.

4.4.10 Generalizability

It is not possible to draw inferences about the larger LAAC population due to small sample size, n = 36 and the uniqueness of the sample being made up primarily of adolescents who have come in contact with the law and therefore have committed a crime. In addition, the sample was not representative of the population as it was an all-female facility. Further, any conclusions drawn are done so with a great degree of caution. The following chapter details the main study that was conducted on a larger scale

4.4.11 Summary and Recommendations

The fact that this small sample yielded important and potentially concerning findings about mental wellbeing serves to heighten the need for further research on a larger scale, using more sophisticated and complex analyses, comparing sub-groups such as males and females. An advantage of this study design is that as the response rate was reasonably high it augurs well for the main study.

As outlined in detail above, after the pilot was conducted, modifications were made to enhance the likelihood that participants would complete the survey and that the results would be valid and reliable. The modifications included shortening the length of the survey by removing some items, rearranging the order of some sub-sections, changing to wording of some items and increasing the font size. See Appendix 17 for the modified instrument used for the main study.

Establishing levels of emotional wellbeing among LAACs is important. Findings from this pilot survey point to the need for a large-scale study to be conducted among this vulnerable population. To the best of our knowledge, up to the point when this pilot study was conducted, the risk and protective factors of suicidal behaviour among LAACs were unclear.

Without large-scale multivariate studies distinguishing LAACs who think about suicide or self-harm and those who act upon these thoughts compared with those who do not it is difficult to provide culturally relevant intervention and recommendations for policy. It was determined that the modified survey

instrument could be used to conduct a study which would provide great insight into the emotional wellbeing of this population. Such a study was conducted. The key limitations identified in the pilot study were addressed in the larger study. The details are discussed in chapter 5 of this thesis.

5 Suicidal behaviour among looked-after and cared for adolescents in Jamaica

5.1 Abstract

Background: Suicide is the third leading cause of death among young people 15-19 years of age. Looked after and cared for adolescents (LAACs) are doubly vulnerable and are at increased risk for suicidal behaviour. The aim of the study was to identify risk and protective factors of suicidal behaviour among LAACs.

Methods: A cross-sectional quantitative study was conducted using self-administered surveys among 221 male and female LAACs in 19 residential care facilities in Jamaica.

Results: Approximately half (n= 113, 51%) of the sample reported a lifetime prevalence of suicide ideation while 45% (n=99) had attempted to take their lives at some point during their lifetime. Eighteen percent of the sample reported that they had attempted suicide in the past week prior to completing the survey. Logistic Regression analyses were used to analyse the data. Child sexual abuse was the strongest risk factor for suicide attempts. For self-harm, 43% of the sample indicated having lifetime self-harm ideation while 36% had reportedly harmed themselves at least once during their lifetime. The mean age of onset for suicidal and self-harm behaviour was 12 years of age.

Conclusions: These findings suggest the need for policies to be developed to guide suicidal behaviour prevention activities in Jamaica. This can be achieved through the training of frontline workers in residential care facilities, providing social support for and teaching productive coping strategies to LAACs who are at risk.

5.2 Looked after and Cared-for Adolescents (LAACs)

Adolescence - itself a difficult stage of life – brings special challenges to those who find themselves in situations of official, government-ordained care. Young people in care experience rates of emotional disturbances and of mental disorders up to six times higher than those of their counterparts in the general population (Cousins et al., 2010; Meltzer, 2003). It was highlighted in chapter 4 that the LAAC population is between three to five times more likely to engage in suicidal behaviour than would be among their peers from the general population who live in family-centred settings (Evans et al., 2017; Farand, 2004; Katz et al., 2011). It was also argued in chapter 4 that despite this glaring disparity, relatively little research has been carried out on this doubly vulnerable group (Wadman et al., 2017). This double vulnerability has been discussed in detail in chapter four of this thesis. In that study, the survey instrument was piloted and was subsequently modified, based on feedback from participants, as well as from missing value analyses conducted. The updated version of the survey was used for this study.

In this chapter we present the findings from an island-wide study conducted among looked after and cared for adolescents (LAACs) in Jamaica. First, we provide the background to the study by summarizing the theoretical models that helped to shape the research design. Then we go on to situate the discussion in the context of results from previous research conducted outside of Jamaica with reference to the main variables under investigation in this study. Next, we summarize the findings of research conducted on suicidal behaviour in Jamaica generally. We will then describe the methodology and findings offered by this study. Finally, those findings are discussed in relation to current research, looking at the likely implications for policy and practice along with recommendations for future research.

5.3 Theoretical models

The following theoretical models form the backdrop for this study:

1. Interpersonal Theory of Suicide (IPT)

2. The Integrated Motivational-Volitional Model (IMV)

3. Three Step Theory (3ST)

Each of these is summarized below. See Chapter 1 for a more detailed discussion of these models.

5.3.1 Interpersonal Theory of Suicide (IPTS)

Considered to be among the newer generation of suicide theories, the IPTS has among its assumptions, that suicidal thoughts emerge when there are elevated levels of two interpersonal constructs occurring simultaneously, namely: *perceived burdensomeness* and *thwarted belongingness* (Van Orden, 2010). *Perceived burdensomeness* signifies mistaken thoughts that one's existence constitutes a liability to others (Chu et al., 2017; Van Orden, 2010). This person next develops intense negative feelings toward him or herself – self-hate a misperception which leads the individual into believing he or she to be expendable (Chu et al., 2017; Van Orden, 2010). *Thwarted belongingness* occurs when one feels socially isolated or lonely, a state arising out of an unfulfilled yet innate need to belong (Chu et al., 2017; Van Orden, 2010). Particularly vulnerable persons include the unemployed; the physically ill; as well as those experiencing family conflict.

Each one of these mental states does not by itself, however, constitute sufficient cause for an attempt at suicide (Chu et al., 2017; Van Orden, 2010). Instead, suicide attempts become more likely when perceived burdensomeness and thwarted belongingness combine with the capability for suicide. Capability for suicide may occur after having been repeatedly exposed to painful situations such as physical abuse, and this single factor may in turn lead to an increased tolerance for pain and a lowering of one's fear of death (Chu et al., 2017; Van Orden et al., 2008; Van Orden, 2010). In short, therefore, suicidal ideation may result in a serious suicide attempt if all three factors are present (Van Orden et al., 2008; Van Orden, 2010).

5.3.2 The Three-Step Theory (3ST)

As discussed in Chapter 1 of this thesis, Klonsky and May (2015) in their 3ST also conceive of suicide as a progression from suicidal ideation to suicide attempts. In one of their studies, they reported evidence in support of their model, namely that suicidal thoughts result from a combination of pain and hopelessness. However, just as one finds in the IMV model, (discussed below) and the IPTS, these factors by themselves do not necessarily lead to suicidal ideation. Connectedness plays a protective role, reducing the likelihood that suicidal ideation escalates (Klonsky, 2015) .

5.3.3 Integrated Motivational Volitional (IMV) Model

The tripartite IMV model synthesizes a range of biopsychosocial factors that may lead to suicidal behaviour. The first, the pre-motivational phase, arises from certain stressful life events: early adversities combined with factors arising from genetic, personality or environmental vulnerabilities. Taken together, these conditions form the backdrop for the development of suicidal ideation. Central to the second - or motivational phase of the model stands what is perceived as the relationship between defeat and/or humiliation which may lead to feelings of entrapment. Finally, fewer people attempt suicide than those who think about suicide. This is likely to happen as a result of a group of factors known as volitional factors that include fearlessness about death, decreased sensitivity to pain, mental imagery, and past suicidal behaviour (O'Connor & Kirtley, 2018). Elements of this model will be tested among the LAAC population in Jamaica.

5.4 Risk Factors

5.4.1 Age of onset of suicidal behaviour

The onset of suicidal ideation among children before less than ten years of age is rare indeed (Bolger, 1989; Kessler, 1999; Muehlenkamp et al., 2019; Nock et al., 2013; Thompson et al., 2012). However, between the ages of 12 and 17, the onset of suicidal ideation tends to rise sharply (Bolger, 1989; Nock et al., 2013). In fact, several studies have reported a significantly increased risk for onset of

suicidal ideation starting at approximately 12 years, rising to a peak at age 16 years and then trending upwards into young adulthood (Bolger, 1989; Kessler, 1999; Muehlenkamp et al., 2019; Nock, Borges, Bromet, Cha, et al., 2008a; Nock et al., 2013; Portes, 2002; Thompson et al., 2012).

Research also suggests that there is an increased risk for severity of suicidal behaviour arises with the earlier onset of suicidal ideation. In other words, the younger the age of onset of suicidal thoughts, the more likely it is that an individual will later engage in more serious self-injurious behaviour later (Muehlenkamp et al., 2019; Thompson et al., 2012). One must emphasise that there is a transition from having thoughts of suicide to having a plan and then to making an attempt. This transition has been found to occur often during the first year of onset of suicidal ideation (Kessler, 1999; Nock et al., 2013).

The theoretical models discussed above, amply demonstrate that there are many factors associated with suicide risk. The following risk factors were explored in the present study: self-esteem, perceived stress, defeat, entrapment, emotional distress, adverse childhood experiences, coping. For details of the relationship between each of these factors with suicidal behaviour, see chapter 4.

5.5 Child Protection and Family Services Agency, Jamaica

The Child Protection and Family Services Agency (CPFSA) is an Executive Agency of the government of Jamaica. It was formed as a result of a merger between the former Child Development Agency, (CDA) and the Office of the Children's Registry (OCR). This agency works collaboratively with the Office of the Children's Advocate (OCA) and other government agencies for the protection of children living in Jamaica. It has direct responsibility for children in need of care and protection.

In recent years, there has been a major effort to change how children who come in contact and / or conflict with the law are managed. As such, the CPFSA's focus is on keeping children out of state care, through the provision of counselling and other interventions. The aim is to have them either remain with

their families or with other relatives who are able to provide a loving and caring environment for them to grow up in (*UNICEF Annual Report 2014 Jamaica*, 2014).

For those children who cannot be accommodated in these environments, residential care is provided for approximately 2,000 children, aged 0-18 years. This includes support, care and protection for those who have been abused, neglected, abandoned or who are vulnerable due to a disability. A core function of the CPFSA therefore, includes direct responsibility for the operation and management of eight government owned children's residential care facilities and places of safety, and the monitoring and licensing of more than forty private residential care facilities in Jamaica.

5.6 What do we know about suicidal behaviour among looked after and cared for adolescents in Jamaica?

Despite recent marked increases in suicide research in Western countries, no similar expansion exists in Jamaica: indeed, one faces a dearth of research conducted on suicidal behaviour among Jamaicans. The most recent Jamaican data suggest an overall suicide rate of 1.1 per 100, 000 between 2007-2010. Of these deaths, 14% were of adolescents aged 9-19 years (Abel, Sewell, et al., 2012; Holder-Nevins et al., 2012). The National Family Planning Board in collaboration with the CPFSA, conducted a survey in two state care facilities. It was striking from the findings that approximately 50% of LAACs reported having suicidal ideation within the past year and 46% of them said that they had attempted suicide within the same period (*UNICEF Annual Report 2015 : Jamaica*, 2015). It is unclear when the study was conducted.

In Chapter 2, the extant literature on the topic of suicidal behaviour in Jamaica was evaluated. Among the main conclusions and recommendations of that systematic review, was that while some studies have described demographic and geographic patterns of suicide across the lifespan, there is a need for high quality research on the key precipitants and risk factors of suicidal behaviour among looked-after adolescents. To date, and to our knowledge, there have

been no studies conducted on the risk and protective factors of suicidal behaviour among looked-after and cared-for adolescents in Jamaica.

As noted in Chapter 4, the results from the pilot study (conducted as a pre-test of the instruments used for this main study) showed that 83% of the sample acknowledged having made an attempt to take their life at some point, while 64% admitted to self-harm. Indeed, approximately 50% of the respondents reportedly made a suicide attempt within the past week of completing the survey. While those results should be used with caution due to the small sample size (n=38 participants) it underlines the need to conduct a large-scale study that is representative of the LAAC population in Jamaica.

5.7 Gaps in the literature

Suicidal behaviour are complex phenomena. Some of the factors associated with suicide risk were discussed above, drawing mainly on studies conducted outside of Jamaica. For the most part, studies conducted to date in Jamaica on suicidal behaviour have been primarily those of completed suicides in the general population, mainly descriptive studies drawing on police records. Very little is known about the prevalence, nature and risk factors for suicidal behaviour among looked after and cared for adolescents in Jamaica, despite this being a vulnerable group.

5.8 Rationale

Given that self-harm constitutes one of the strongest predictors of future suicide with 40 – 60% of those who die by suicide having a history of self-harm (Hawton, Bergen, Kapur, et al., 2012; O'Connor, Rasmussen, & Hawton, 2010; Owens, 2002; Townsend, 2014), and given that the pilot study in the previous chapter revealed that 64% of the respondents had admitted to engaging in self-harm and 83% reportedly had made at least one suicide attempt in their lifetime a deeper and more informed understanding of these phenomena in this doubly vulnerable population becomes essential.

It is therefore imperative that more research be carried out with this group, focussing especially on the investigation of multiple risk factors. In order that

appropriate and culturally relevant interventions may be developed, we need a far better understanding of the patterns of suicidal behaviour among LAACs, as well as of those factors contributing to this suicidal behaviour. In the future, such insights will help prevent or - at the very least - reduce the frequency and severity of self-destructive behaviours. In light of these concerns, the following aims and research questions guided the present study:

5.9 Aims and Objective

The overarching objective of this study was to examine the psychological wellbeing of looked-after and cared for adolescents in Jamaica. The specific aims of this study were to:

1. Investigate the risk and protective factors for suicidal ideation, self-harm-ideation, suicide attempts and self-harm among Jamaican looked-after adolescents.

2. To explore the extent to which key psychological factors help to distinguish between LAACs who think about suicidal behaviour, those who act on those thoughts and those who do not.

Against this background the following research questions guided this study, concentrating entirely on Jamaica's population of LAACs.

5.10 Research Questions

1. What is the prevalence of self-reported suicide ideation, suicide attempts, self-harm ideation and self-harm among LAACs in Jamaica?
2. What are the methods used by LAACs who attempt suicide?

3. What factors distinguish between LAACs in Jamaica with a history of suicidal behaviour, and those without?
4. What factors distinguish between LAACs in Jamaica with a history of self-harm behaviour and those without?
5. What factors distinguish between those who think about suicide (suicidal ideation group), those who attempt suicide (suicide attempt group) and

those who have never with no history of suicidal thoughts or attempts (control group) among the LAAC population in Jamaica?

6. What factors distinguish between those who think about self-harm (self-harm ideation group), those who attempt self-harm (self-harm group) and those who have never self-harmed (control group) among the LAAC population in Jamaica?

5.11 Method

5.11.1 Research Design and Procedure

Cross-sectional retrospective surveys were conducted. Anonymous, paper-and-pencil, self-administered questionnaires containing a combination of open- and closed-ended questions formed the basis of this study. Questionnaires elicited details on demographics such as age, gender, length of time in care, as well as items measuring emotional well-being and history of self-harm.

5.11.2 Sampling

Purposive sampling was used. This method was chosen in order to recruit the target group of interest, that of 14-17-year-old looked after and cared for adolescents in Jamaica. The sampling frame comprised of a list of all residential care facilities in Jamaica, both government owned and private facilities.

A total of 26 out of 55 residential care facilities were targeted for recruitment. The additional 29 residential care facilities housed children who were ineligible to participate in the study as these homes catered for children with moderate to severe intellectual and physical disabilities. Supervisors from nineteen residential care facilities agreed to have their institutions included in this study, and these included government owned as well as private facilities, both urban and rural.

Out of a possible 275 eligible participants, data was collected from 234 LAACs. However, 13 questionnaires were not included in the analysis as five participants voluntarily withdrew, four were ineligible because of age, and four returned as

blank forms. Data from a total of 221 adolescents were analysed. (See **Figure 15**). No incentives were provided to participants for completing the questionnaires. It is important to note that the facility and be extension LAACs who were a part of the pilot study were not included in the main study.

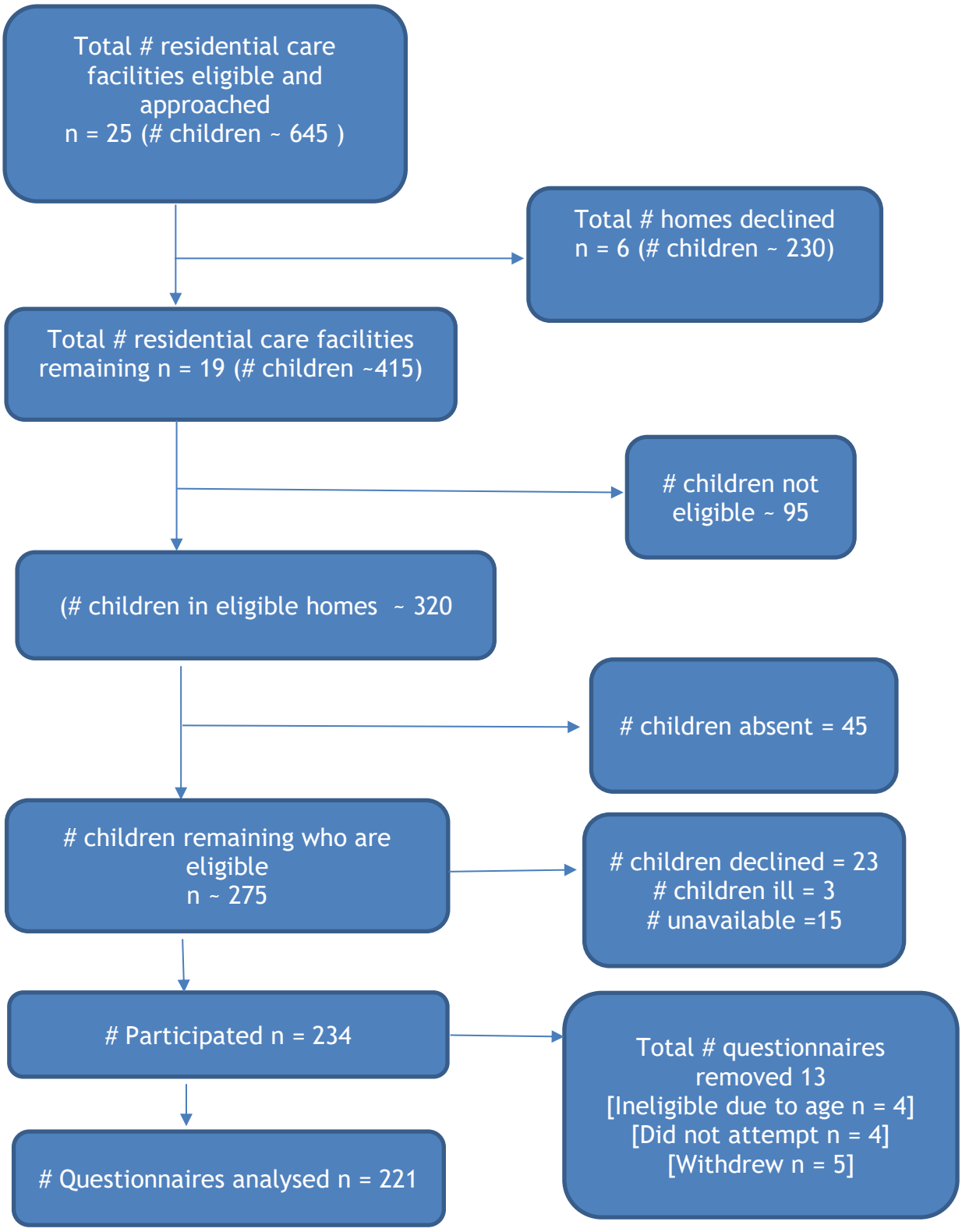


Figure 15. ***Flow chart illustrating the participant recruitment process.***

5.11.3 Power

Power calculations show that a linear regression model with up to 10 predictor variables requires a sample size of 172 to detect a medium effect size ($f2 = 0.15$), given $\alpha = 0.05$ and power = 0.95. (Appendix 19). To account for possible missing data, a minimum of 200 participants was targeted for recruitment for the main study (Tabachnick, 2014).

5.11.4 Procedure

Group administered self-report surveys were conducted in the residential facilities where the looked after and cared for adolescents lived. The researcher oversaw the proceedings and was available to answer any questions that participants may have had while completing the questionnaire. Thanks to the experience of the pilot study, the length of the questionnaire was shortened and some of the instructions were simplified; participants took approximately 45 minutes to complete the questionnaire. It is worth noting that a significantly smaller number of participants in the main study required assistance with reading and comprehending the questions as compared to those in the pilot study.

5.11.5 Ethical considerations

Ethical approval was provided by both the College of Medical, Veterinary and Life Sciences, (MVLS) at the University of Glasgow (Appendix 20), and Jamaica's Ministry of Health ethics committee (Appendix 21). The study was also endorsed by the Child Development Agency (CDA) (Appendix 22).

Taking part in the study was likely to elicit sensitive and personal information. Participants were made aware of this likelihood in advance via the Participant Information Sheet which they were given to keep for future reference, together with the Assent Form (Appendix 13). Prior to the start of the completion of the survey, they were also reminded orally prior about matters related to confidentiality, anonymity and freedom to withdraw at any time.

Proxy Informed Consent was obtained from the administrators of each participating children's home (Appendix 18). In addition, each participant was asked to sign an Assent Form indicating their willingness to participate in the study. The researcher's contact details were included in the information sheet in order to allow potential participants to ask any questions they may have about the research. No participant was included in the study without presentation of written confirmation of their assent, as well as written consent from the respective administrators of the facilities where the LAACs reside.

No major risks to participants were identified in the study. However, a small chance existed that they might have become upset when asked to think about their psychological health and wellbeing; their history of self-harm/suicide attempts or of suicidal ideation. Participants were informed that they need answer only such questions as they chose, and that they were free to withdraw at any time without providing an explanation and without any effect on their usual care.

All participants were provided with an information sheet detailing local support services which they could contact should they like to discuss any issues that may have arisen (Appendix 8). The information sheet also included the researcher's details in case participants became concerned about any of the topics covered by the survey. In a few cases, participants became emotionally distressed during or after completing the survey. These were first referred to the staff at the facility. All such cases were managed with no reported incidents of chronic emotional distress. Each participant was also given the option to be referred to a trained professional on the Directory of Service Providers which included Psychologists, Social Workers and Psychiatrists in the geographic locations nearest to them.

5.11.6 Participants and setting

The surveys were completed between mid-August and mid-November 2017, primarily on weekdays between mid-morning to early afternoon. Once the school-term began, surveys were scheduled for weekends or early evenings after the children came back from school and were refreshed. The residential care

facilities included were either government owned including Places of Safety or privately owned.

5.11.6.1 Inclusion Criteria

Adolescents were eligible if they met the following criteria:

1. Participants must be between ages 14-17 (inclusive) years.

2. Participants must be able to give assent to participate.

3. Participants must have been a resident in a children's home at least 48 hours prior to completing the questionnaire.

4. Additionally, they had to be able to answer the items on the survey. The reading age of the survey was at a Flesh-Kincaid grade level 5. This was determined using the Readability feature in Microsoft Word in Office 365 (Appendix 23).

5.11.6.2 Exclusion Criteria

1. Individuals who are unable to provide informed assent were excluded.

2. Individuals who are unable to meaningfully complete the questionnaire due to cognitive disabilities were excluded from the study.

The main study was conducted between September – November 2017. No incentives were provided for participants.

5.11.6.3 Participant Recruitment

Multi-stage recruitment of participants was utilised as summarised below:

Stage 1

Before conducting the surveys, the CPFSA sent introductory letters describing the study to each facility manager. The managers were then contacted via

telephone by the lead researcher to set up appointments for administration of the questionnaires if they were interested in taking part. Briefing Packs (Appendix 14) were also sent by the researcher to facility administrators prior to the day the survey was conducted. Written permission (via Proxy Consent forms – Appendix 18) was obtained from facility managers for each participant on the day of administration of the survey.

Stage 2

Facility Administrators also known as House Mothers or House Fathers who are persons in charge if the residential care facilities and are serve as guardians for the children made potential participants aware of the study by posting a flyer (Appendix 12) on the notice boards at each residential care facility. They advised the looked-after adolescents of the agreed date when the study would be conducted where those who had expressed an interest in getting more information about the study would meet with the researcher prior to when the surveys were administered.

Stage 3

On the day that the surveys were to be conducted, potential participants were approached by the researcher, who gave them a Participant Information Sheet outlining the aim and nature of the study (Appendix 16). Potential participants kept a copy of this form for future reference, or if they had any questions or concerns about the research, they were encouraged to ask any questions. The researcher's contact details were also provided. Consistent with other studies undertaken by members of the University of Glasgow Suicidal Behaviour Research Lab, potential participants were given a minimum of an hour to decide if they wished to participate. During that one-hour period, the room where the survey was to take place along with all materials required such as all questionnaires, forms and seating arrangement was done.

Stage 4

If a young person decided to participate, they were asked to sign the Assent Form (Appendix 13). Once written assent was obtained, participants were invited

to complete the questionnaires. All questionnaires were self-administered. Participants were given a copy of the Assent Form, whilst the signed copy was collected and kept in a locked storage cabinet by the researcher.

5.11.7 Measures

The following protocol was used. All measures, except for the demographic questionnaire are standardized, age-appropriate and have demonstrated acceptable levels of validity and reliability (Appendix 10). These are routinely used within the University of Glasgow's Suicidal Behaviour Research Lab and prior permission had been granted to use them.

The following is a list of measures used:

(a) Demographic Questionnaire

(b) Rosenberg Self Esteem Scale

(c) Perceived Stress Scale

(d) The Self Injurious Thoughts and Behaviours Interview (SITBI-brief)

(e) The Defeat and Entrapment Scale

(f) General Help-Seeking Questionnaire, Vignette Version (GHSQ-VV)

(g) Paediatric Inventory of Emotional Distress (PI-ED)

(h) Adverse Childhood Experiences (ACE)

(i) Adolescent Coping Scale, Second Edition (ACS-2)

Below is a brief description of each scale and a summary of the psychometric properties of each:

5.11.7.1 Demographic Questionnaire

A short demographic questionnaire containing 10 items about participants' age, gender, grade, duration of time in care was administered.

5.11.7.2 Rosenberg Self-Esteem Scale (RSES) (Rosenberg, 1965)

The Rosenberg Self-Esteem Scale is a 10-item self-report measure of global self-esteem among adolescents. It consists of 10 statements related to overall feelings of self-worth or self-acceptance (Rosenberg, 1965). For example, "At times, I think I am no good at all" and "All in all, I am inclined to feel that I am a failure". The items were answered on a four-point Likert-type scale ranging from strongly agree to strongly disagree. The Rosenberg Self-Esteem Scale presented high ratings in reliability; internal consistency was 0.77. Independent studies showed α coefficients ranging from 0.72 to 0.87 (all fairly high).

1. **Perceived Stress Scale (PSS) (Cohen, 1983)**

The PSS is a widely used psychological instrument for measuring an individual's perception of stress. It is a measure of the degree to which situations in one's life are appraised as stressful. It consists of 10 items to tap how unpredictable, uncontrollable, and overloaded respondents find their lives (Cohen, 1983). Two of the items on the scale were "In the last month, how often have you felt that difficulties were piling up so high that you could not overcome them" and "In the past month, how often have you felt confident about your ability to handle your personal problems" Participants were asked to respond to each question on a 5-point Likert-type scale ranging from 0 (never) to 4 (very often), indicating how often they had felt or thought a certain way within the past month.

The PSS was designed for use in community samples with at least a junior high school education. The items are easy to understand, and the response alternatives are simple to grasp. Moreover, the questions are of a general nature and hence are relatively free of content specific to any subpopulation group. The questions in the PSS ask about feelings and thoughts during the last month. In each case, respondents were asked how often they felt a certain way.

5.11.7.3 Short Defeat and Entrapment Scale (SDES) (Griffiths et al., 2015)

The Defeat Scale was designed by Gilbert and Allan (1998). The short Defeat and Entrapment Scale (SDES) developed by Griffiths et al., is a subset of the original scale by Gilbert and Allan (1988). The SDES version consists of 8 items on a 5-point Likert scale (ranging from 0 = 'Never' to 4 = 'Always') asking participants how much they had felt defeated or entrapped in the previous seven days. An example of an item related to feeling of defeat is "I feel defeated by life". The Entrapment Scale has two sub-scales: internal entrapment and external entrapment. An example of one of those items is "I can see no way out of my current situation" The scale had high internal consistency (α = .88 to .94) (Griffiths et al., 2015). These scales have very high internal consistency with α coefficients of 0.94 for females and 0.93 for males in both groups, and reliability of 0.94 for students and 0.93 for depressed group (Gilbert & Allan, 1998).

5.11.7.4 General Help-Seeking Behaviour Questionnaire, Vignette Version (Brief) (GHSQ-B) (Wilson, 2005)

The (GHSQ) was developed to assess intentions to seek help from different sources and for different problems. These sources include not only health professionals, but family and friends. Validity and reliability properties render this scale superior to most other scales for Help-Seeking Behaviour. It is also, one of few scales that specifically measures, help - seeking behaviour for suicidal thoughts and feelings. "As a single scale that included all specific help source options for suicidal and non-suicidal problems (Cronbach's α = .85, test-retest reliability assessed over a three-week period = .92)" (Wilson, 2005).

5.11.7.5 Paediatric Index of Emotional Distress (PIED) (O'Connor, Ferguson, Carney, et al., 2016)

The PI-ED was developed in 2016 to assess psychological distress, namely depression and anxiety among children ages 8-16 years. It contains 14 items (seven items measuring depression such as "I look forward to fun things" and seven anxiety for e.g. "I worry about things") and is brief and easy to administer (O'Connor, Ferguson, Carney, et al., 2016). The measure has been found to have

good internal reliability for both anxiety and depression with αs of 0.79 and 1.74, respectively (O'Connor, Ferguson, Carney, et al., 2016).

5.11.7.6 Adverse Childhood Experiences Scale (Brief) (ACE-B) (Felitti, 1988)

Adverse Childhood Experiences (ACE) contains 10 items that refer to some of the most intensive and frequently occurring sources of stress that children may be exposed to early in life. Such experiences include abuse; neglect; and household dysfunction. Items include "Did a household member go to prison" and "Was a household member depressed or mentally ill or did a household member attempt suicide?" Respondents were asked to indicate whether or not each of the items apply to them yes or no? (Felitti et al., 1998).

5.11.7.7 Adolescent Coping Scale – Second Edition (ACS-2) (Frydenberg, 2011a)

The ACS-2 is an assessment tool designed to measure adolescents' coping behaviour. It was designed specifically for adolescents between 12 and 18 years of age. This Short Form is used as a research tool examining young people's coping. The ACS-2 Short Form Questionnaire contains of 20 items, 10 of which have been used in this study (Frydenberg, 2011a). The second edition of the scale measures the usage and helpfulness of coping strategies in general and specific situations. Based on findings from the pilot study (see previous chapter) the Short Form was simplified to only include the respondents' usage of various coping strategies. This was decided by the research team in order to reduce the likelihood of confusion and inaccuracy as was found during pilot testing.

The Short Form provides scores on two coping styles:

(i) Non-productive coping with reliability of 0.68

(ii) Productive coping with reliability of 0.71

The ACS-2 consisted of items related to ways in which people cope with concerns or problems. An example of an item related to Productive Coping style is "Keep

fit and healthy" while an example of Non-Productive Coping is "Blame myself". Participants were instructed to select one from five alternatives that indicated how often they used each example of coping from among the following: 'Never', 'Seldom/A few times', 'Sometimes', 'Often' or 'Very Often' which were coded 1 to 5 respectively (Frydenberg, 2011a).

5.11.7.8 Outcome measure: Self-Injurious Thoughts & Behaviours Interview – Brief (SITBI-Brief) (Nock et al., 2007)

The SITBI Brief is a short measure consisting of items that assess the presence, of (a) suicidal ideation, (b) suicidal attempts, (c) self-harm ideation, and (d) self-harm. Nineteen items were used from the SITBI Short Form which consists of 72 items.

When administered among an adolescent population, test–retest reliability for the presence versus absence of each lifetime outcome was strong for suicidal ideation (α =.70), suicide plan (α = .71), suicide attempt (α = .80), and NSSI (α = .87). (Nock, Holmberg, Photos and Michael, 2007). Suicidal ideation was assessed with the question 'Have you ever had thoughts of taking your life, but not actually done so?' Suicide attempt was assessed with the question 'Have you ever made an attempt to take your life, in which you had the intention to die?' Similarly, presence of thoughts of self-harm was determined from responses to the question 'Have you ever seriously thought about trying to deliberately harm yourself, not with the intention to die, but not actually done so?'. The item ascertaining self-harm was 'Have you ever deliberately harmed yourself in any way, but not with the intention to die?'. Response options for these questions were 'yes' or 'no'.

Those who responded positively to any of these questions were then asked follow-up questions related to frequency, history, lifetime prevalence, age of onset, methods used (for suicide attempters). Many of these were open ended questions.

5.11.8 Statistical Analysis

Descriptive analyses were conducted to determine frequencies and relationships between independent and dependent variables. Subsequently, a series of univariate and multivariate logistic regression analyses were conducted to test the association between (1) suicidal behaviour and associated psychological variables to determine entry into the multivariate models. A similar set of analyses was conducted for the association between self-harm and psychological variables and self-harm.

Predictor variables included self-esteem, perceived stress, defeat, entrapment, emotional distress, coping and adverse childhood experiences. A forced entry model was run to determine the variables that significantly distinguish those with and without a history of suicidal behaviour as well as those who think about suicide (ideation group), those who attempt suicide (enaction group) and those without a suicide or self-harm (controls). As many of the relationships vary by age and gender, the latter were controlled for in all inferential analyses.

Binomial logistic regression analyses were used to compare LAACs with a history of suicidal behaviour and those with no history, as well as to compare LAACs with and without a history of self-harm behaviour. Additionally, multinomial logistic regression analyses were used to see if there was a difference between suicidal those adolescents who think about suicide (ideation group), those adolescents who attempt (enaction group) and controls. The same procedure was done for self-harm.

5.12 Results

5.12.1 Overview

Data were analysed for 221 looked-after and cared for adolescents. Their ages ranged from 14-17 years, with a mean age of 15.36 years, SD, 1.029. The sample was relatively evenly split by gender as 50.7% (n = 112) were males while 49.3% (n = 109) were females. Approximately 65% (n=142) of the participants reportedly have received counselling or therapy while in care. Just about 25% (n = 52) of the participants were in care for five years or more, while 30% (n=65)

were in care for one to four years. Another 34% (n= 75) had been in care for one year or less. Additionally, for a little under half of them 40% (n=86) they were in care for the first time. Three of the facilities (16%) were government owned.

Based on observation, there was variability in terms of the psychological environment at the facilities. In some cases, there was a warm, caring environment as both staff and children appeared respectful and loving towards each other. In other facilities, there was a lot of hostility and aggression that was shown among LAACs and with staff. The layout, cleanliness and general level of organization of the facilities was also different from place to place. Some appeared crammed, dark and in need of repair, while others were very clean, and well maintained with space both inside and outside. It is likely that the psychological environment of the facilities impacted on the thoughts, feelings and behaviour of the LAACs. It is difficult to comment on the relationship between that and the overall results of this study.

5.12.2 Prevalence of Suicidal behaviour

As shown in Table 14, of the overall sample of 221 looked-after and cared-for adolescents, 51% (n=113) reported having had thoughts of suicide at some stage in their lifetime, while 45% (n=99) reported that they had attempted suicide. Of those who had ever thought about suicide, 30% (n=34) were male and 70% (n=79) were female. Of those who had ever attempted suicide, 23% (n=23) were male and 67% (n=66) were female. Eighteen percent of LAACs endorsed having attempted suicide with the past week of doing the survey. Self-harm behaviour was slightly less, as 43% (n=95) reported lifetime self-harm ideation and 36% (n=79) reported having acted on those thoughts at some stage in their lives. A larger proportion of LAACs reported having thoughts of suicide or self-harm than those who made gestures. The average age of onset of suicidal behaviour behaviours was approximately twelve years of age.

Descriptive statistics also showed that 51% (n = 113) of LAACs had a lifetime prevalence of suicidal thoughts (suicide ideation group), 45% (n = 99) had attempted suicide (enaction group) and 35% had neither thought about nor attempted suicide (controls); 26 respondents (12%) did not answer either or both of the items on suicidal ideation or attempts as shown in Table 14.

Of those who responded to the item on suicidal ideation, more girls 70% (n=79) than boys 30% (n=34) endorsed having lifetime suicidal ideation. Similarly, there were also a greater proportion of females 67% (n=66) than males 23% (n=23) who admitted to lifetime suicide attempts.

Table 14 *Prevalence of suicide and self - harm based on recency of attempt*

	Male	%	Female	%	Total	%
Lifetime prevalence suicidal ideation						
No	67	75	22	25	89	40
Yes	34	30	79	70	113	51
Lifetime prevalence suicide attempt						
No	69	75	33	36	92	42
Yes	23	23	66	67	99	45
Most recent suicide attempt						
Past week	7	3	33	15	40	18
Past year	9	4	24	11	33	15
More than a year ago	15	7	21	10	36	16
Not applicable	67	30	21	10	88	40
Lifetime prevalence self-harm ideation						
No	70	32	33	15	95	43
Yes	25	25	66	67	99	45
Lifetime prevalence self-harm						
No	67	30	38	17	105	48
Yes	23	29	56	71	79	36
Most recent self-harm						
Past week	3	1	26	12	29	13
Past year	9	4	19	9	28	13
More than a year ago	10	5	19	9	29	13
Not applicable						

5.12.3 Methods used

Participants were asked which method they used in their last attempt to take their life. They were given the option to indicate more than one method if applicable. The most frequently used methods of suicide attempt among LAACs who reported ever attempting suicide is by sharp object (less lethal method), followed by hanging and jumping from a height (highly lethal methods) (See Table 15). The least frequently used methods were illicit drugs and guns (both highly lethal methods) as seen in Table 15. Methods used for self-harm were not explored in this study.

Table 15 ***Frequency of methods used to make suicide attempts***

Method Used	n	%
Hanging	28	13
Jump from height	26	12
Drowning	15	7
Suffocation	14	6
Car (exhaust gas)	10	5
Illicit Drugs	2	.9
Gun	2	.9
Sharp Object	33	15
Own prescription drugs	11	5
Someone else's drugs	10	5
Poison	4	2
Over the counter drugs	3	1

5.12.4 Factors Associated with Suicidal Thinking or Attempts

Univariate logistic regression analyses were conducted for each variable to determine which if any of the predictors distinguished between those LAACs who had a history of suicidal thoughts or attempts and those without a history of either thoughts or attempts. We also controlled for age and gender. Except for age, all predictors were statistically significant distinguishing between those with and without a history of suicidal behaviour as shown in Table 16.

Table 16 ***Univariate analyses of suicide risk among those with and without a history of suicidal thoughts or behaviour.***

	B	S.E.	Sig.	Odds Ratio Exp (B)	95% C.I. for EXP(B) Lower	Upper
Age	-.070	.142	.622	.932	.706	1.232
Gender	-1.957	.330	<.001	.141	.074	.270
Self Esteem	-.123	.034	<.001	.885	.828	.945
Perceived Stress	.216	.052	<.001	1.241	1.121	1.374
Defeat	.147	.038	<.001	1.159	1.076	1.249
Entrapment	.082	.035	.019	1.086	1.014	1.163
Emotional Distress	.152	.033	<.001	1.165	1.093	1.242
Adverse Childhood Experiences	.356	.073	<.001	1.427	1.237	1.647
Coping	.110	.032	.001	1.116	1.048	1.188

Next, we entered those variables that significantly distinguished looked after and cared for adolescents with and without a history of suicidal thoughts or behaviour previously entered univariately in a binary logistic regression model, using a forced entry method. Adverse childhood experiences and gender remained statistically significant. OR = 1.245, *p* = .032, CI 1.019 to 1.522. All other predictors were non-significant. This is detailed in Table 17.

Table 17 ***Binomial logistic regression, forced entry examining risk factors for suicide with and without a history of suicidal behaviour***

	B	S.E.	Sig.	Odds Ratio Exp(B)	95% C.I. for EXP(B) Lower	Upper
Age	-.460	.240	.056	.632	.394	1.011
Gender	-1.542	.501	.002**	.214	.080	.571
Self Esteem	-.047	.062	.454	.955	.845	1.078
Perceived Stress	.034	.090	.705	1.035	.868	1.234
Defeat	.064	.076	.395	1.066	.919	1.237
Entrapment	-.112	.073	.125	.894	.775	1.032
Emotional Distress	.079	.044	.076	1.082	.992	1.180
Adverse Childhood Experiences	.219	.102	.032**	1.245	1.019	1.522
Coping	.052	.056	.356	1.053	.943	1.176

A multinomial logistic regression analysis to determine which predictors distinguished between those who think about suicide (suicidal ideation group), those who attempt suicide (suicide attempt group) and those who have never with no history of suicidal thoughts or attempts (control group) among the LAAC population in Jamaica. This was conducted univariately. All assumptions were met for multinomial logistic regression analyses (Tabachnick & Fidell, 2013). All predictors were statistically significant distinguishing those in the suicidal enaction group from those in the suicidal ideation group except age when examined univariately (see Table 18).

When all variables were forced into the model simultaneously, adverse childhood experiences remained the only statistically significant factor to distinguish those adolescents who attempt (enaction group) from controls. None of the predictors differentiated between those adolescents who think about suicide (ideation group) and those adolescents who attempt (enaction group) nor those adolescents who think about suicide (ideation group) and controls. These are summarized in Table 19.

Table 18 ***Univariate Logistic Regression Analysis investigating the risk of suicidal Ideation among 3 groups***

	Suicide ideation group vs. controls				Interval for Exp(B)		Suicide attempter group vs ideation group					
	B	SE	Sig.	OR	Lower	Upper	B	SE	OR	Lower	Upper	Sig.
Age	-.002	.151	.991	.998	.743	1.342	-.002	.151	.998	.743	1.342	.991
Gender												
Self Esteem	-0.05	0.05	0.33	0.95	0.87	1.05	-0.15	0.04	0.86	0.80	0.93	<.01
Perceived Stress	0.14	0.07	0.05	1.15	1.00	1.33	0.24	0.06	1.27	1.14	1.42	<.01
Defeat	0.07	0.05	0.18	1.08	0.97	1.20	0.17	0.04	1.18	1.10	1.28	<.01
Entrapment	0.08	0.05	0.13	1.08	0.98	1.20	0.08	0.04	1.09	1.01	1.17	0.02
Emotional Distress	0.11	0.04	0.01	1.12	1.03	1.22	0.17	0.04	1.18	1.10	1.27	<.01
Adverse Childhood Experiences	0.30	0.10	<.05	1.35	1.11	1.64	0.37	0.08	1.45	1.25	1.69	<.01
Coping	0.07	0.05	0.16	1.07	0.98	1.17	0.12	0.03	1.13	1.06	1.21	<.01

Table 19 ***Multinomial Logistic Regression Analysis Distinguishing Persons in the Suicidal Ideation Group from the Enaction and Control Groups***

	Ideation group vs controls				Enaction group vs controls				Ideation group vs Enaction group			
	B	SE	Sig.	OR	B	SE	Sig.	OR	B	SE	Sig.	OR
Age	-.51	.32	.11	.60	-.44	.26	.09		-.07.	.30	.81	.93
Gender	-.89	.66	.17	.408	-1.82	.546	.001	.16	.93	.63	.14	2.53
Self Esteem	-.06	.08	.50	.95	-.04	.07	.52	.96	-.01	.07	.86	.99
Perceived Stress	.06	.11	.63	1.06	.02	.10	.81	1.02	.03	.11	.77	1.03
Defeat	.00	.10	1.00	1.00	.09	.08	.27	1.09	-.09	.09	.31	.92
Entrapment	-.05	.10	.58	.95	-.14	.08	.08	.87	.08	.09	.36	1.09
Emotional Distress	.06	.06	.30	1.06	.09	.05	.07	1.09	-.03	.05	.60	.97
Adverse Childhood Experiences	.23	.13	.08	1.25	.22	.11	.05**	1.24	.01	.12	.93	1.01
Coping	.04	.07	.62	1.04	.06	.06	.33	1.06	-.02	.07	.74	.98

** Statistically significant

5.12.5 Factors Associated with Self-Harm Thoughts or Self-harm behaviour

Each variable was entered into a binary logistic regression model univariately to determine if they distinguished between looked after and cared for adolescents with and without a history of self-harm thoughts behaviour. All the variables except age were statistically significant. (See Table 20).

Table 20 ***Univariate logistic regression analyses of self-harm risk among those with and without a history of self-harm thoughts or behaviour***

	B	S.E.	Wald	Odds Ratio (Exp B)	95% C.I. for EXP(B) Lower	Upper	Sig.
Age	-.09	.146	.41	.91	.68	1.21	.52
Gender	-1.75	.32	29.22	.17	.092	.33	<.005
Self Esteem	-.10	.03	10.35	.90	.846	.96	.001
Perceived Stress	.21	.05	15.95	1.24	1.11	1.38	<.005
Defeat	.15	.04	17.53	1.17	1.08	1.25	<.005
Entrapment	.13	.04	12.08	1.14	1.05	1.22	.001
Emotional Distress	.19	.04	28.85	1.22	1.13	1.31	<.005
Adverse Childhood Experiences	.33	.07	21.55	1.39	1.21	1.59	<.005
Coping	.12	.03	12.69	1.12	1.05	1.20	<.005

When we entered the variables in a model using the forced entry method, adverse childhood experiences and emotional distress remained statistically significant (see Table 21).

Table 21 ***Logistic regression analyses of self-harm risk among those with and without a history of self-harm behaviour forced entry***

	B	S.E.	Odds Ratio Exp (B)	95% C.I. Lower	Upper	Sig.
Gender	-0.72	.50	0.49	0.18	1.30	0.15
Self Esteem	-0.01	.06	.99	.88	1.11	0.85
Perceived Stress	0.00	.09	1.01	.84	1.19	1.00
Defeat	0.01	.07	1.01	.88	1.16	0.92
Entrapment	0.04	.07	1.04	.91	1.20	0.57
Emotional Distress	0.15	.05	1.16	1.06	1.28	<.01**
Adverse Childhood Experiences	0.22	.10	1.25	1.02	.1.53	0.03**
Coping	-0.02	.06	0.98	.88	1.09	0.73

In order to understand the relationship between the predictor variables and suicidal behaviour, all variables were analysed univariately as a first step using multinomial logistic regression. As seen in Table 22, perceived stress, defeat, entrapment, emotional distress, adverse childhood experiences and coping by themselves were all risk factors for suicidal ideation among LAACs who participated in this study. Additionally, the presence of all predictors on their own distinguished between those in the suicide attempter group and those in the control group (see Table 22).

Table 22 ***Univariate logistic regression analyses of risk of self-harm among three groups***

	Suicide ideation group				Interval for Exp(B)		Suicide attempter group				Interval for Exp(B)	
	B	SE	Sig.	OR	Lower	Upper	B	SE	Sig.	OR	Lower	Upper
Age	-.791	0.428	.064	.454	.196	1.048	-.251	.262	.339	.778	.465	1.301
Gender	-.361	.796	.206	.697	.146	3.318	-.852	.540	.114	.427	.148	1.228
Self Esteem	-0.08	0.05	0.13	0.92	0.83	1.02	-0.12	0.03	<.005	0.89	0.83	0.95
Perceived Stress	0.35	0.10	<.005	1.42	1.16	1.74	0.20	0.06	<.005	1.23	1.10	1.37
Defeat	0.17	0.06	<.005	1.19	1.07	1.33	0.16	0.04	<.005	1.17	1.09	1.27
Entrapment	0.19	0.06	<.005	1.21	1.07	1.37	0.12	0.04	<.005	1.13	1.05	1.22
Emotional Distress	0.15	0.05	0.01	1.16	1.04	1.28	0.20	0.04	<.005	1.22	1.13	1.32
Adverse Childhood Experiences	0.35	0.11	<.005	1.42	1.14	1.77	0.34	0.07	<.005	1.40	1.21	1.62
Coping	-.40	.093	.666	.961	.801	1.152	.022	.060	.707	1.023	.910	1.149

Reference category is controls

As shown in ***Table 23*****,** when all predictors were entered in the model simultaneously, apart from gender, none differentiated between those adolescents who think about self-harm (ideation group) and controls. Emotional distress and adverse childhood experiences were statistically significant and distinguished between those adolescents who self-harm (enaction group) and those who do not (controls). Gender, entrapment and adverse childhood experiences were statistically significant and able to differentiate between those adolescents who attempt self-harm (enaction group) and those adolescents who have neither thought of nor attempted self-harm (controls).

Table 23 Multinomial Logistic Regression analyses distinguishing between self-harm ideaton group, enactor group and controls

Predictors[a]		B	Std. Error	Wald	df	Sig.	Exp(B)	95% Confidence Interval for Exp(B)	
								Lower Bound	Upper Bound
Ideation Group	Self Esteem Total Score	.050	.063	.640	1	.424	1.052	.930	1.189
	Perceived Stress Scale Total Score	.060	.096	.390	1	.532	1.062	.880	1.281
	Defeat Total Score	-.041	.081	.256	1	.613	.960	.820	1.124
	Entrapment Total Score	-.028	.077	.128	1	.720	.973	.836	1.132
	Depression Total Score	.087	.092	.877	1	.349	1.090	.910	1.307
	Anxiety Total Score	.117	.082	2.046	1	.153	1.124	.958	1.318
	Adverse Childhood Experiences Total Score	.194	.112	2.982	1	.084	1.214	.974	1.513
Enaction Group	Coping Total Score	.035	.064	.298	1	.585	1.036	.914	1.174
	Age	-.376	.254	2.194	1	.139	.687	.418	1.129
	[Gender=1]	-1.072	.532	4.057	1	.044	.342	.121	.972
	Self Esteem Total Score	-.014	.048	.080	1	.778	.986	.897	1.085
	Perceived Stress Scale Total Score	.078	.079	.981	1	.322	1.081	.926	1.262
	Defeat Total Score	.078	.065	1.444	1	.230	1.081	.952	1.228
	Entrapment Total Score	-.150	.063	5.569	1	.018	.861	.760	.975
	Depression Total Score	.115	.074	2.438	1	.118	1.122	.971	1.297
	Anxiety Total Score	.086	.066	1.708	1	.191	1.090	.958	1.241
	Adverse Childhood Experiences Total Score	.192	.089	4.601	1	.032	1.211	1.017	1.443
	Coping Total Score	.063	.049	1.630	1	.202	1.065	.967	1.173
	Age	-.163	.199	.671	1	.413	.850	.575	1.255
	[Gender=1]	-1.552	.424	13.408	1	.000	.212	.092	.486

a. The reference category is: Controls.

b. This parameter is set to zero because it is redundant.

5.12.6 Missing Data

Missing data analysis was conducted to determine the pattern of missingness. Specifically, Little's test was used to determine whether the data were missing at random (MAR), missing completely at random (MCAR), or not missing at random (NMAR) (Tabachnick, 2014). All predictor variables had levels of missingness less than 5%, while the outcome variables had levels of missingness a little over 10% (See Table 24). It is not recommended that any steps be taken to address outcome variables that are missing (Tabachnick & Fidell, 2013), but it was important for the levels of missingness to be ascertained.

The results suggested that the missing values were MCAR ($p > .05$) as illustrated in Table 24 *Percentage of Missing Data*. The appropriate handling of missing values for variables is important, to prevent distortion of the data. Multiple Imputation method was chosen as the method to handle missing data. This is the most acceptable method of dealing with missing data (Tabachnick, 2014). This method makes no assumptions about whether data were missing randomly or not and is often used in Logistic Regression analyses (Tabachnick, 2014). The number of imputations was set at five. This is standard practice in statistics (Field, 2013). After multiple imputation was conducted, there were no differences between pooled results compared with output from the original data set (Appendix 38). All other assumptions for Binomial and Multinomial Logistic Regression were met, including no multi-collinearity between predictors.

The multiple imputation (MI) method has been recommended to be superior to expectation maximisation (EM), and was therefore employed (Tabachnick, 2014). However, when results were analysed using split file analysis on imputation method, it was found that the multiple imputation results were no different from the original data. Therefore, the decision was taken to report on the original sample (without imputations). The table below illustrates the percentage of missing data for each variable.

Table 24 ***Percentage of Missing Data***

Variable	Valid	Percentage valid	Missing	Percentage Missing
Age	221	100	-	-
Self Esteem	220	99.5	1	0.5
Anxiety	214	96.8	7	3.2
Entrapment	215	97.3	6	2.7
Defeat	215	97.3	6	2.7
Non-productive coping	216	97.7	5	2.3
Productive Coping	216	97.7	5	2.3
Coping	217	98.2	4	1.8
Adverse Childhood Experiences	216	97.7	5	2.3
Depression	216	97.7	5	2.3
Outcome Variables				
Suicide 3 groups (Suicidal attempts, suicidal ideation, controls)	195	88.2	26	11.8
Suicide 2 groups (with and without a history of suicide)	195	88.2	26	11.8

5.13 Main Discussion

This study undertakes a variety of interconnected aims while focussing on the nature of suicidal behaviour among LAACs in Jamaica. It attempts to tease out and evaluate patterns of motivation, separating those LAACs with an intent to die from those with no such intent. In order to do so, the research has explored the roles of self-esteem, perceived stress; defeat; entrapment; emotional distress; adverse childhood experiences, and coping strategies. The roles of these factors had to be revealed and measured in the context of suicidal behaviour, and likely correlations made clear.

In general, we found that both suicide attempts as well as self-harm were common amongst LAACs in Jamaica: approximately half the sample (51%) reportedly having ever thought about suicide, and 46% reportedly having attempted suicide. This finding is significantly higher than the pooled prevalence of either suicidal ideation (approximately 25%) or suicide attempt (3.6%) reported in a recent systematic review among children in care among a cross-section of countries and cultural contexts (Evans, 2017). Less LAACs admitted to having ever engaged in self-harm behaviour i.e., without the intention to die. The elevated levels of suicidal behaviour among LAACs should urge policy makers to develop culturally relevant prevention and intervention approaches.

In the binomial logistic regression analyses, all predictors significantly differentiated those LAACs with and without a history of suicidal behaviour univariately. However, when all variables were placed in a model simultaneously, adverse childhood experiences remained the only psychological factor to significantly distinguish between the two groups. Similarly, for self-harm, all predictors were able to differentiate between LAACs with and without a history of self-harm univariately except age. However, when all predictors were entered in a model together, emotional distress and adverse childhood experiences remained statistically significant.

For suicidal behaviour, all variables were statistically significant, univariately. In the case of suicide attempts, adverse childhood experiences and gender significantly distinguished those adolescents who attempt (enaction group) from controls. None of the variables were able to distinguish between those in the ideation group compared from the controls. Entrapment, adverse childhood experiences and gender differentiated those in the enaction group from the controls. The IMV, posits that entrapment plays a central role in the emergence of suicidal ideation and intention formulation (O'Connor & Kirtley, 2018) in the general population. To our knowledge this is the first time the IMV has been used among the LAAC population. These are preliminary results and need to be further tested among larger samples of LAACs before we can make any definitive pronouncements about possible expansion to the IMV. Nonetheless, our findings do show promise that the IMV may also be applied to this unique population. The IMV does not make a distinction between behaviours based on intention, neither

do the other models of suicidal behaviour that we are aware of. Further research is needed to distil the underpinnings of these behaviours even more.

On the other hand, emotional distress and adverse childhood experiences distinguished those adolescents who engage in self-harm (enaction group) from those who do not (controls). FOR those adolescents who think about suicide (ideation group), perceived stress set them apart from controls. These results lend support in part to the belief that a difference exists for those adolescents who think about suicide (ideation group), those adolescents who attempt (enaction group) and controls. These results also suggest that LAACs with a history of suicidal behaviour or self-harm behaviour differ from those without a history (neither thoughts nor attempts).

The average age of onset of approximately 12 years marked both the onset of suicidal ideation and attempts as well as self-harm ideation. This finding is in keeping with previous research (Kessler, 1999; Nock et al., 2013). This process also coincides with the age of onset coinciding with puberty when various hormonal changes are occurring and adolescents are trying to resolve issues of identity versus role confusion, according to Erikson (Portes, 2002). Suicidal behaviour therefore seem more likely to emerge during this critical phase of development especially when coupled with other adolescent stressors such as the need to achieve academically, to handle peer pressure; and to navigate interpersonal conflict (Compas et al., 2001; Pettit, Green, Grover, Schatte, & Morgan, 2011; Portes, 2002; Smith, 1997; Stewart et al., 2019).

Participants' choices for a method of suicide presented a mixed picture: the most frequently endorsed method was use of a sharp object, considered to be a low lethal method. However, this choice was followed by hanging and jumping from heights, both highly lethal methods. This pattern is of concern: lethal methods are associated with greater likelihood of completed suicide. Least popular were illicit drugs and guns. These patterns are in sharp contrast with previous research conducted among adolescents in care outside of Jamaica which showed that more violent methods are used such as hanging, throwing self-down stairs, and self-poisoning usually requiring hospital admission (Preyde, 2012). One possible explanation of this feature may be that LAACs in Jamaica have limited access to such methods. It is imperative that any policies that are

developed to help prevent suicidal behaviour among LAACs must be geared towards reducing access irrespective of the type of method.

A significant association was found between adverse childhood experiences (child neglect, emotional, physical or sexual abuse) and suicidal behaviour. Post hoc tests showed that child physical and sexual abuse contribute more substantially to the development of suicidal behaviour than do emotional abuse and neglect. Child sexual abuse remained the highest risk for suicide. There has been some debate about this particular factor, but, our findings, nevertheless, are consistent with previous research including a recent systematic review (Serafini et al., 2017) and are upheld by those from an older meta-analysis in which the relationship between child sexual abuse and self-injurious behaviour was present though very small (Klonsky & Moyer, 2008).

The current study offers the first attempt to explore and define the relationships between key psychological variables and suicidal behaviour or self-harm behaviour among LAACs in Jamaica. The sample offers a reliably representative population Jamaica's LAACs: we were able to sample 20 out of a possible 26 residential care facilities established in Jamaica, all of them eligible for inclusion in the study. Of those residential care facilities that were included, the response rate was estimated at almost 85% of the eligible population. Of the four administrative regions defined by the CPFSA, three are represented in this study. In the fourth region, a single home proved eligible for inclusion, but its managers declined to participate in the survey.

5.13.1 Limitations

This study design was cross-sectional: causal inferences therefore cannot be made. However, the strong association between adverse childhood experiences and suicidal behaviour, is in keeping with the established scholarship. A second limitation arises from the fact that information obtained from participants was based on retrospective accounts. It is possible that the findings may be affected by recall bias.

Furthermore, because of the sensitive nature of many of the items in this survey (combined with the fact that respondents were required to self-report), the

survey items may have resulted in social desirability bias leading to both underreporting or overreporting on some items. All these possibilities point to the need for longitudinal, prospective studies to be conducted. Qualitative studies should also be carried out to further distil the events leading to suicidal ideation among LAACS so as to explicate the process that led them to act on those thoughts.

The current study included only looked after and cared for adolescents. It is recommended that future research should compare LAACs with their peers who are not in care to see if there are differences in suicidal behaviour. It would also be most illuminating to explore the timeline for the occurrence of traumatic life events and the trajectory of suicidal and self-harm behaviours.

Further, wider ranging research is required to examine other potential correlates of suicidal behaviour: the potential pathways between childhood maltreatment and suicidal behaviour should be further investigated, given current findings of the association between child sexual abuse, physical abuse and suicidal behaviour.

5.14 Conclusions and implications

Suicidal behaviour present major public health concerns. Given that the prevalence of suicidal ideation and attempt is elevated among this doubly vulnerable population there is a need for immediate as well as medium to long term interventions to prevent or diminish these behaviours presents a public health challenge.

The first of its kind to be conducted in Jamaica, this study provides findings that add to the existing body of knowledge concerning the nature of suicidal behaviour among LAACs, and it also covers a wide cross section of Jamaica's LAAC population from both government owned as well as private facilities. Apart from helping to shape policy relating to the provision of adequate resources for adolescents in care, these findings may also lead to an improvement in clinical practice for LAACs.

As discussed above, emotional distress and adverse childhood experiences were the main risk factors for suicidal behaviour among LAACs. Future research should investigate in detail what factors lead to the emergence of suicidal ideation and what factors act as a catalyst for persons to act on these thoughts. The most direct and detailed way to explore this is through qualitative research. These results were not uncovered until after the analyses were complete. The methodology for this thesis included concurrent studies involving both qualitative and qualitative research among various sub-populations under the age of 49 years of age. Given that the research team had access to a clinical population at one of the largest hospitals in the island with a psychiatric ward, a qualitative study had been undertaken that further explores the aforementioned topic in detail. This will be discussed in the following chapter (chapter six) of this thesis.

6 “I had nobody to talk to”. Exploring the Lived Experiences of Persons who have Attempted Suicide in Jamaica

6.1 Abstract

Objective: This chapter presents a detailed idiographic analysis of the experience of attempting suicide from the perspective of four adult Jamaican individuals.

Design: This is a qualitative interview study utilising interpretative phenomenological analysis (IPA).

Method: In-depth semi-structured interviews were conducted with a purposive sample of four adults who had a history of suicide attempt and who later presented to hospital for treatment as a result of making a suicide attempt. There were three females and one male, ages ranged from 18 to 43 years (mean=27.75 years). Interviews were audio-recorded and transcribed verbatim. Smith’s six stages of IPA were adhered to in order to conduct a rich, in-depth and rigorous analysis of interview data.

Results: Three master themes emerged from the data: 1) ‘Stressed Out’ as precursors for suicide 2) ‘A Hard Life’ and 3) ‘A Mistake’. The main ‘Stressed Out’ included challenges with family and others including romantic partner, and a lack of trust of others. Over time, exposure to stressors led to the development of psychological vulnerabilities such as loneliness, depression, frustration and a lack of social support. These experiences were catalysts for suicide attempt. Post attempt, with the realization that their lives were valuable coupled with social connectedness and social support, participants began their road to recovery and resilience.

Conclusion: The study illuminated the complex process of thinking about suicide, attempting suicide as well as one’s thoughts and feelings post suicide attempt. Results suggest that having adequate social support, social

connectedness, adaptive coping skills and positive self-esteem is associated with recovery from past suicidal thoughts and behaviours and a reduction of current suicide risk. Theoretical and clinical implications are discussed.

6.2 Introduction

Suicide is a major public health issue globally. As discussed in previous chapters, approximately one million person die by suicide annually (WHO, 2014a). Because of this, suicide prevention is an important international priority (WHO, 2013, 2014a). The age-standardized rate of suicide is higher in high-income countries (12.7 per 100,000) than in low-and middle-income countries (11.2 per 100,000) (WHO, 2014b). This rate is even lower, at 5.2 per 100,000 for Latin America and the Caribbean, of which Jamaica is a part (PAHO & WHO, 2014).

In the UK, between one quarter to a third of individuals who die by suicide were in contact with mental health services within twelve months leading up to their death (O'Connor & Pirkis, 2016) . The figures are even lower in LMICs (O'Connor & Pirkis, 2016). However, we do not know the true picture by country due to the lack of adequate research on the topic.

Suicide is a complex phenomenon (WHO, 2014a). As shown in chapters 1, 3, 4 and 5 of this thesis, and in keeping with international literature, there is no single factor responsible for why persons decide to end their life (Hawton, Saunders, et al., 2012; O'Connor, Cleare, et al., 2016). Indeed, the problem is multi-faceted and includes social, cultural, psychological, biological, economic, and environmental factors. In addition, in some cultures, there is considerable stigma that surrounds persons and their families who attempt suicide (WHO, 2014a). This further exacerbates the problem as persons who may have these thoughts and feelings often have some antipathy about revealing this to anyone and therefore, they do not seek nor receive the help that they need.

It has been estimated that for each death by suicide that occurs, there are up to 25 times more suicide attempts. Indeed, for every person who attempts suicide, there are approximately 2 – 3 who have seriously contemplated suicide but have not attempted. Even though there is a large body of research on the topic, there has been a gradual increase in the rates of suicide between 2000 and 2016 in the

Americas of which Jamaica is a part (WHO, 2019c). This was previously discussed in chapter 1 of this thesis.

As discussed in chapter 1, Klonsky & May (2015) argued that an Ideation-to Action Framework suicide theory should guide research and prevention of suicide and that ideation and enaction are two distinct processes with distinct explanations (Klonsky & May, 2015a). Three of the main theories related to the Ideation-to action framework that have been examined throughout this thesis are Joiner's Interpersonal Theory of Suicide (IPTS) (Chu et al., 2017; Van Orden, 2010), O'Connor's Integrated Motivational Volitional Model (IMV) (O'Connor & Pirkis, 2016; O'Connor et al., 2018) and Klonsky & May's Three Step Theory (3ST) (Klonsky & May, 2015a; Klonsky, Saffer, et al., 2017).

All three theories converge on the same general idea that there is a distinction between factors leading to suicidal ideation and those that lead to suicide attempts. If one should accept that this framework is correct, then in order to have effective suicide prevention strategies we need a better understanding of the factors that lead to the development of suicidal ideation, what causes some persons to transition to act on these thoughts with some eventually resulting in death.

Previous chapters have helped to answer and lend support to the Ideation-to-Action framework, but we still do not have a good grasp of what factors lead some persons to attempt to take their lives. We have some evidence from quantitative studies that factors such as hopelessness, emotional dysregulation, social disconnection and low belongingness are independently strong predictors of suicidal ideation, but they have failed to predict suicidal attempts among ideators (Klonsky, Saffer, et al., 2017).

Despite the large body of evidence internationally, on the subject of suicide, there is the recognition that more research is needed in Latin America and the Caribbean to examine the socio-cultural factors associated with suicidal ideation and attempts (PAHO & WHO, 2014). To the best of our knowledge, there are no qualitative studies to date that have been conducted in Jamaica among persons who have attempted suicide, yet as shown in chapters 1 and 2 of this thesis, there has been a gradual increase in the rates of suicide for Jamaica. Based on

the foregoing, in order to improve our understanding of this complex phenomenon, we sought to better understand the lived experiences of Jamaicans who attempt suicide utilizing a qualitative approach. More specifically this study aimed to:

1. Identify the factors that may have led to thoughts of suicide.

2. Explore what may have led participants to act on suicidal thoughts.

3. Analyse how those who have attempted suicide view their experience since attempting to take their life.

6.3 Method

6.3.1 Background to Interpretative Phenomenological Analysis (IPA)

In line with the exploratory, inductive nature of the study, Interpretative Phenomenological Analysis (IPA) was adopted to analyse the data (Smith, Flowers, & Larkin, 2009; Smith & Osborn, 2015). Interpretative Phenomenological Analysis (IPA) is an inductive qualitative approach developed by Jonathan Smith that aims to explore in detail how people make sense of their life experiences (Smith et al., 2009; Smith & Osborn, 2015). IPA researchers try to understand what it is like to stand in the shoes of the participant, although they acknowledge that this is not totally possible. Nevertheless, it is believed that to the extent that the researcher is able to comprehend the participant's experiences and language, through active interpretation and translation, he is able to make sense of the participant's world. By utilising this methodological approach, it was believed by the research team that it would yield rich, detailed information that would otherwise not be obtained using quantitative and/or questionnaire methods. Influenced by two main figures, the 20th century philosopher Edmund Husserl's idea that phenomenology should aim to go 'back to things themselves' rather than by previously established hypotheses or placing them in abstract categories (Smith et al., 2009; Smith & Osborn, 2015), and later by Heidegger's ontological question of the existence of the self (Pietkiewicz, 2014), this approach has three main theoretical underpinnings: phenomenology, hermeneutics and Idiography (Smith et al., 2009; Smith & Osborn, 2015).

The first perspective, Phenomenology, is a philosophical approach that utilizes a distinctive method that studies human experiences, those things that matter to us and make up our lived world (Smith et al., 2009). A second major theoretical underpinning of IPA is that of hermeneutics, where the researcher is involved in a two-stage interpretation process of making sense of the participants' making sense of their world – double hermeneutics. In other words, IPA is concerned with trying to understand a particular phenomenon or experience from the perspective of the participants. Thus, IPA researchers acknowledge the integration of the cognitive, emotional, physical and social aspect of one's existence and that each influences the other (Smith & Osborn, 2015). The outcome of the analysis, therefore, is a product created by both the participant (the experiential expert) and the researcher.

Idiography, which is primarily concerned with having a detailed look at particular cases in a particular context, is the third important theoretical component of IPA. As such, IPA typically utilizes small, purposively chosen homogenous samples within carefully chosen contexts. Therefore, the objective is not to make generalizations but to describe and make specific statements about the particular sample (Smith & Osborn, 2015). It is this combination of phenomenological and hermeneutic insights, that distinguishes it from other qualitative approaches such as thematic analysis, grounded theory or even discourse analysis. IPA is therefore a suitable approach to use when trying to understand complex phenomena such as suicide attempts.

In recent years the IPA method has become increasingly popular not only in Psychology, but in Health, Human and Social Sciences research too (Smith, 2019; Smith & Osborn, 2015). Participants are deemed to be the experts on their own experiences (Biggerstaff & Thompson, 2008) rather than the researcher. IPA also calls for an intensive analysis of those expert personal accounts from participants (Smith, 2010, 2019; Smith et al., 2009). The results are transparent as an audit trail can be clearly produced, documenting how the researchers formed their findings (Reid, Flowers, & Larkin, 2005) and are presented in participants' own words (Smith, 2010, 2019; Smith et al., 2009). Larkin (2006) aptly describes IPA as not easy, as it tries to "do something a little different from other qualitative methods… but it can be very powerful when it is carried out with the requisite care and commitment" (Larkin, Watts, & Clifton, 2006, p. 103).

Another defining feature of IPA in comparison to other qualitative approaches is the relationship between cognition and language (Smith et al., 2009). Therefore, IPA is centred around a deep, rich and rigorous analysis of various aspects of language for example pronouns, metaphors, repetition, pauses, laughter and fluency used by the participant to describe their experiences (Smith et al., 2009). That use of language conveys how they think about (cognition), process and understand the phenomenon under investigation (Eatough & Smith, 2017). In other words, we can understand better our participants' experiences by analysing the language they use to describe their experiences. IPA is therefore considered a suitable approach to use when trying to understand complex phenomena such as suicide attempts.

Previous research on the risk factors for suicidal behaviour has largely been quantitative and survey-based - at the macro level. In contrast, this study places the individual at the centre of focus, uncovering individuals' unique experiences surrounding *why* they decided to take their lives, while utilising the researchers' interpretation of the participants' accounts and the language used. IPA is therefore considered a suitable approach to use in

order to enhance our understanding of these complex phenomena. None of the other qualitative approaches including discourse analysis nor thematic analysis would be able to capture the depth and breadth of information as the IPA.

6.4 Population

As discussed in chapter one of this thesis, the parget population was persons under years of age, as this is the group who are at greatest risk of suicide in Jamaica. It was agreed by the supervisory team, that since the local supervisor, Prof. Wendel Abel, who is a consultant Psychiatrist and Head of the Department of Community Health & Psychiatry at the University Hospital of the West Indies, the hospital that has the largest Psychiatric ward in the country, that the qualitative study would be conducted at that facility. Up until the time of data collection, no other known qualitative study was conducted on the topic. The following criteria were used to determine eligibility to participate in the study:

6.4.1 Inclusion criteria

1. Jamaicans who present to the UWHI within the past 12 months (of being interviewed) with at least one suicide attempt.

2. Be at least 18 years of age.

6.4.2 Exclusion criteria

1. Persons who are unable to provide informed consent will be excluded.

2. Persons who are unable to meaningfully participate in the interview due to cognitive disabilities will be excluded from the study.

6.5 Sampling

In keeping with the theoretical underpinnings of IPA, a purposive sampling technique was employed to recruit participants. As per the inclusion/exclusion criteria, the sample comprised six participants (five women and one man) between 18 and 45 years of age (mean = 27.75) and was drawn from a clinical population at one of the main public hospitals in the island's capital, Kingston. All participants had attempted suicide at least once within twelve months of being recruited for the study and presented to that hospital for medical attention as a result of making the attempt. For further information on the participants, please refer to Table 25.

The recommend sample size for IPA studies for doctoral theses is six to eight participants. (Pietkiewicz, 2014). This is particularly applicable when the entire thesis is based on the IPA. For theses which include other studies, the sample size may be less (Pietkiewicz, 2014; Smith et al., 2009). Our target sample was ten participants (inclusive of two participants as part of the pilot study). However, due to the low uptake, six interviews were conducted. The reasons for the low uptake may be many. Anecdotally it is usually challenging to find willing participants for research in the Social Sciences as we do not have a strong research culture in Jamaica, more so when it comes to sensitive topics. As such much of the research conducted is quantitative using secondary data or among university or high school students. Another possible reason is that suicide is still illegal in Jamaica, although within the past 45-50 years that law has not been enforced when someone attempts to take their life. Instead, there is usually taboo, shame and guilt (WHO, 2019d) surrounding persons who attempt suicide as well as for their families who usually try to keep the fact that they made such an attempt a secret. Jamaica is also a very religious society with Christianity the predominant religion. One of the main tenets of Christianity is the sanctity of human life and by extension the belief that to take one's life is a sin for which there is no possibility of forgiveness. As shown in the chapter containing the systematic review, very few studies have been conducted on

the topics of suicide, suicide attempts and self-harm in Jamaica. For those that exist (we reviewed 16 papers), they had small sample sizes and only one involved qualitative research where psychological autopsies were conducted. Despite all of this, however, we were still able to analyse the transcripts in-depth, and were able to identify similarities and differences between participants.

Table 25 ***Demographic characteristics of participants***

Pseudonym of Participant	Age	Gender	Parish of residence	Marital Status	Employment Status	Highest educational attainment	VAS 1	VAS 2	Last time ideation	Last attempt	Likelihood of future attempt (0-4)	Attempt Method
Abbey	18	Female	St. Andrew	Single never married, cohabiting	Unemployed	High school Grade 11	6	8	Last week	I week prior to interview	3	Drank bleach
Danny	24	Male	St. Andrew	Single never married	Part-time	Tertiary (currently in final year)	6	8	Over a year ago	13 months prior to interview	0	Sleeping tablets
Ellie	43	Female	St. Andrew	Single never married, was cohabiting but moved out after attempt	Unemployed	Gr 8 Secondary	8	4	-	12 months prior to interview	0	Alcohol
Fanny	26	Female	St. Andrew	Single never married, cohabiting	Employed	Secondary	5	9	A week ago	9 months prior to interview	0	Allergy meds, Panadol and alcohol

6.5.1 Recruitment process

In the first instance, potential participants were identified by residents/physicians who work at the hospital in line with the inclusion/exclusion criteria. Physicians made potential participants aware of the study by providing them with a flyer advertising the study (Appendix 24) and sought their permission for a researcher to tell them more about the study, without obligation to take part. If they agreed to be approached, the resident obtained their permission to pass their contact information to the researcher. This resulted in two potential participants for the study after 3 months.

Given the low uptake of only two participants, after another 6 weeks (4.5 months in total) and in consultation with both the local and UK supervisors, another approach to identifying participants who met the eligibility criteria was sought. This included obtaining a list of all persons who presented to the hospital within the past 12 months who had attempted suicide. Permission was granted through the head of the Emergency Medicine Division's at the UHWI, for this list to be obtained. The researcher subsequently got a list of 53 potential participants with their contact numbers. These were individuals who had initially been briefed about the study by a member of the hospital staff and who agreed that they could be approached to receive further details about the study, to determine if they were interested in participating. Of the 53 persons who were approached, 45 declined to participate and eight agreed to take part in the study upon hearing about the nature and objectives of the study.

The main reasons offered for declining participation (provided by 44/45 of the persons approached) included: wanting to put the experience behind them (n= 4); feeling embarrassed and ashamed (n=23); and not wanting to stir up old, painful memories (n=17). Another person said she wasn't sure if she wanted to die when she made the attempt and on that basis was not interested in participating in the study. Two of the eight participants who had agreed to participate in the study did not attend the interview without explanation. When the researcher (KPB) tried to contact them by telephone, there was no response.

Potential participants were then approached by the researcher, who provided an Informed Consent Form outlining the aim and nature of the study (Appendix 29). Participants were able to retain this form for future reference. Should participants have had any questions or concerns about the research afterwards, they could contact a member of the researcher team via contact details provided on the form. Otherwise, if participants wished to contact an independent party outside of the research team, they could do so by contacting Professor Horace Fletcher, Dean, Faculty of Medical Sciences, UWI, Mona (Appendix 27). Consistent with other studies undertaken by members of the University of Glasgow Suicidal Behaviour Research Lab, potential participants were given 2 – 3 hours to decide if they wished to participate. For this study, on the day of their follow-up visit, upon registration at the outpatient clinic, and while waiting to be seen by the Psychiatrist, they were given the Participant Information Sheet and were allowed the time to decide if they wished to participate. If they chose to participate, they were asked to sign the consent form. In keeping with guidelines from the UWI/ FMS ethics committee, the University of Glasgow's Participant Information Sheet and the Consent Forms have been consolidated into one document.

6.5.2 Procedure and interview

A semi-structured interview schedule was developed in accordance with Smith et al. (2009). (Smith et al., 2009; Smith & Osborn, 2015). Questions were open-ended in order to be as non-directive as possible. The aim was to ensure that the participant directed the focus of the discourse with the interviewer seeking clarification where necessary. The interview schedule was designed to be flexible in nature so as to allow for each participant to share unique aspects of their own experiences. The questions also centred around the events leading up to the attempt, including what cognitions and emotions were experienced prior to the attempt and then afterwards. This was to capture any patterns or possible changes over time. A copy of the interview schedule is found in Appendix 34.

All interviews were conducted face to face and lasted between 40 and 90 minutes over an eight-month period between June 2017 and February 2018. Participants

were given the option to either have the interview in a private room at the Department of Psychiatry, UHWI, or at another venue of their choice. All participants opted to attend the interviews at the UHWI except one who arranged for it to be at the researcher's (KPB) private office at the University of Technology, Jamaica. With the permission of the participants, all Interviews were audio recorded using a digital voice recorder. However, two audio recordings were lost due to malfunctioning of the equipment, leaving four interviews for analysis. All four interviews were transcribed verbatim by the researcher (KPB). Field notes were made during and after the interviews, an example of which is provided in Appendix 33. Field notes are important as they reflect the thoughts of the researcher during and after the interview has taken place. They include impressions that may have been made or observations that cannot be captured through audio recordings but may be relevant to the analysis of the transcripts later.

A Directory of Services was provided to all participants at the end of the interview by the researcher (KPB), containing the address and telephone numbers for psychological and psychiatric services that they could consult if they experienced any psychological distress as a result of participating in the study (Appendix 25).

6.5.3 Ethical Considerations

Dual ethical approval was sought and granted from the College of Medical Veterinary and Life Sciences ethics committee at the University of Glasgow and the Faculty of Medical Science's ethics committee at the University of the West Indies, Mona prior to the start of the study (Appendix 26 and Appendix 27).

Data was collected by the researcher (KPB) who is a trained Associate Clinical Psychologist, and who attended a two-day training workshop on the IPA approach. Data were stored in a locked filing cabinet in a locked room to which the researcher (KPB) has keys. All information was kept confidential. Participants were assigned pseudonyms which have been used to maintain anonymity and protect confidentiality. Participants were made aware of this confidentiality and anonymity

through the Informed Consent Form (Appendix 29), and again at the start of the interviews.

Informed consent was also obtained from participants for audio recordings to be made of interviews (Appendix 29). The researchers' contact details were included in the information sheet to allow potential participants to ask any questions they may have about the research at any point after the interview was conducted. Additionally, contact information for the chair of the Medical Science's ethics committee was also provided on the Informed Consent Form if they wished to discuss the study with an independent person who was not on the research team. No participant was included in the study without their written consent for them to do so.

There was no major risk to participants in the proposed study. However, like all studies that ask about wellbeing, there was a small chance that participants could become upset when asked to think about their past history of suicide attempts or suicidal ideation. Participants were informed by way of the Participant Information Sheet as well as orally at the start of the interview that they did not need to answer any questions that they did not wish to and that they were free to withdraw at any time without providing an explanation and without any effect on their usual care.

In our experience of over 20 years, participants often report taking part in such studies as being rewarding and cathartic (even though that is not their primary purpose in this instance). Provisions were put in place in the unlikely event of a participant becoming excessively distressed or upset by any of the topics discussed during the interview If a participant became fatigued or particularly distressed, the interview session was paused, and, after a few minutes, with the participant's consent, was resumed and completed in the same sitting. This only became necessary for one of the participants.

In addition, a referral pathway was put in place for participants to receive support from a qualified Psychologist at the UHWI hospital. All participants were provided

with an information sheet detailing local support services they could contact if they felt they would like to discuss any issues that had arisen as a result of participating in the study (Appendix 25). The information sheet also included the researcher's details in case they felt concerned about any of the topics covered in the interview.

None of the participants were known to any of the researchers prior to the start of the study neither were they in a dependent relationship with the researchers. Participants were provided with $2000 JMD (£10 GBP) to help offset travel expenses to attend the interview. This was necessary, as they would not otherwise have had those expenses other than to participate in the interviews. This cost was paid from Professor Rory O'Connor's endowment fund.

6.6 Analysis

Following transcription which was done by the researcher (KPB), data was analysed using the process recommended by Smith et al. (2009). The steps taken are outlined below:

1. Reading and re-reading each transcript
2. Initial noting of semantic and linguistic content
3. Developing emergent themes
4. Searching for connections across emergent themes
5. Moving to the next case and repeating steps 1-4
6. Looking for patterns across cases and developing superordinate themes.

A detailed description of what was done for each step is provided here:

1. **Transcripts were read and re-read** a number of times, whilst also listening to the audio-recordings of the interviews. This was conducted with a view of

becoming fully immersed in the data- increasing familiarity with the content, language tone and expression used by participants to gain a better understanding of their story.

2. The left margin was used to capture initial thoughts/comments (**notes**) focusing on **semantic content and language used**. This included first descriptive, followed by linguistic, and then interrogative notes and was colour coded in purple, pink and green ink respectively. (Appendix 35)

3. Over time themes emerged for each transcript with the use of field notes and other exploratory comments. This was recorded in the right margin using blue to denote initial **emergent themes**. Patterns and connections were made, as sections of each transcript was broken down into smaller sections (Appendix 35).

4. As the researcher (KPB) examined the initial themes some more, and in consultation with the IPA specialist, on the team (AD), some themes were discarded as they did not directly relate to the research question or aims of the study. The remaining themes were typed as they appeared chronologically in a list and cut up so that each was on a separate piece of paper and placed on a large surface (Appendix 36). This enabled the researcher (KPB) to see **connections between themes**. It was then decided to use the subsumption approach (Smith et al., 2009) to capture super-ordinate themes by merging those themes that appeared to be directly related to each other. The final super-ordinate themes were agreed by two of the researchers (KPB and AD).

5. Steps 1-4 was repeated for **each case**. This was a time consuming and painstaking process which required much concentration and clear thinking. This took place over several months.

6. In the last step, the researcher (KPB) **looked for patterns across the cases**. Similarities and differences were noted, and key superordinate themes were

identified for the entire study. The main IPA specialist on the team, (AD) was shown the superordinate themes identified by (KPB) for all cases. A sample of the list of emergent themes with corresponding super-ordinate themes and quotes from transcripts as supporting evidence was provided to the other two researchers on the team (RO & HM) for the purpose of quality control. Recommendations from those researchers were discussed until consensus was achieved on the final list of superordinate themes and sub-themes.

After writing the first draft for the superordinate themes across cases, it was noted and agreed by the researcher (KPB) and (AD) that it made sense to categorize each superordinate theme in terms of a further breakdown of two time points (before the attempt and after the attempt). The rationale for this was two-fold. Not only was it important to ensure that the objectives of the study were met, but also that naturally, this is how the themes appeared to emerge. As such, this is how the findings for each superordinate theme will be presented and discussed in this chapter.

6.6.1 Researcher team and reflexivity

The interviews were conducted by the researcher (KPB) and first author of the study (KPB), who is an Associate Clinical Psychologist, pursuing a PhD in Psychological Medicine at the University of Glasgow. She also underwent specialized training in IPA methodology with special emphasis on data collection, analysis and write up. The supervisory team for this study included Professors Adele Dickson, (IPA specialist and Health Psychologist), Rory O'Connor (Health Psychologist and Suicide Researcher) and Hamish McLeod (Clinical Psychologist and Programme Director Doctor of Clinical Psychology). The only background information about the researchers provided to potential participants were their names, institutional affiliations email addresses and telephone numbers.

This was the first time I was doing an IPA. Prior to starting my PhD, I had never heard of an IPA. At first, I struggled with the methodology, as I was unable to distinguish between thematic analysis and an IPA. I quickly recognized my deficiencies and decided to plug the knowledge gaps through reading anything and

everything about how IPAs are conducted, as well as talking to fellow PhD students who were also utilizing this approach. In addition to those strategies, I attended a training and conference on IPA which enabled me to gradually begin to understand the uniqueness and value of IPAs. This also afforded me access to other doctoral students as well as more seasoned researchers in the form of a social support group online where persons at various levels have discussions, ask questions and received feedback and assistance into the IPA world and how to go about navigating in what an seem like a maze.

As someone trained in Clinical Psychology, and indeed as a human being, there were many times I grappled with my own subjectivity as I tried to suspend my own thoughts in order to first understand the participants' perspective. How was I to represent a multiplicity of voices through the double hermeneutic? There were many times when I simply had to put aside reading and trying to code the transcripts for a few days and instead do my own personal introspection. At other times, I had to have meetings with other members of the research team, where I would share my thoughts and feelings many of which were documented in a journal. Eventually, the research 'took on wings' of its own so to speak and after several drafts and discussions back and forth with my supervisors and feelings of frustration at times - I am proud of the final product. I do believe that the completed version of the research report as presented in this chapter does justice to the participants' stories as it empowered them to find a voice. This study has become my favourite of all the five studies conducted for the thesis and I am confident that I will be utilizing the IPA technique in future research projects.

6.7 Findings

We begin with a background summary of all four participants. This provides the backdrop for their accounts.

Abbey, who was 18 years of age at the time of the interview was the youngest of all participants. She also had most recently attempted suicide only a week prior to the interview. She presented as timid with a flat affect and spoke in soft tones and

short sentences. She lived with her boyfriend with whom she had a difficult relationship. This was reportedly her first attempt.

Danny, the only male participant was 24 years of age and in his final year of university when he participated in the study. He was single and worked part-time. He was very expressive and analytical during the interview.

Ellie, the oldest participant was 43 years of age at the time of the interview. She was living on her own, and unemployed. She openly expressed her emotions both verbally and physically as she broke down and cried at one point as she recounted living in an abusive relationship for several years. After attempting to take her life, she decided to end the relationship and leave her partner.

Fanny, the fourth participant was 26 years of age at the time of the interview. She was employed full time and had a two-year-old son. As discussed in this section, she experienced multiple losses and although she lives with her partner and her partner's family, she was unhappy in the relationship.

As shown in Table 26, three superordinate themes were derived from the data: 'Stressed Out', 'A Hard Life' and resilience. Each superordinate theme will be discussed in detail. These findings helped to deepen our understanding of some of the factors that led to the development of suicidal ideation. We learnt about the catalysts for the suicide attempt. We also gained insight into the journey after the attempt.

Table 26 ***Superordinate themes and corresponding sub-themes***

Super-ordinate theme	Sub-themes
'Stressed Out'	I. Loneliness II. Challenging family relationships III. Challenging Romantic Relationships IV. Lack of Trust of Others V. The last straw VI. Multiple losses
'A Hard Life'	I. Lack of social support II. Shutting people out III. Loneliness IV. Depression, sadness and a longing to be happy V. Frustration VI. Substance Use
'A Mistake'	I. Turning Point II. Reason for Living III. Religion as a buffer against future attempts IV. Belongingness V. Self-confidence and self-love

6.7.1 'Stressed Out'

In this section we examine events, experiences, social connections and environmental stimuli all perceived by participants as challenging or threatening and which ultimately constituted contributing factors to their suicide attempts.

6.7.1.1 Loneliness

When asked about the circumstances leading up to the emergence of suicidal thoughts, all four participants alluded to feeling lonely. We begin with an excerpt from Danny, one that echoes a recurring sentiment expressed by all participants throughout the interviews. Implicit in his lamentation is the suggestion that had he had at least one person to talk to, it would have been a cure or a buffer against the suicidal behaviour.

> *"So I got worried, and added to my worry, I mean, I didn't have anybody to talk to, so I didn't really, I don't really have much friends. I had nobody to talk to…*Me an' mi bes' fren', [my best friend and I] we had a really bad fallout. And (pause), dis is ma fren' [this is my friend] from when ah [I] was young growing up, and it got so overwhelming and I couldn't sleep.*" (*Danny, 24)

Danny was keen to point out that he felt overwhelmed emotionally, and that he felt that he had no options available from whom to seek help. His longstanding, cherished friendship had ended. He conveyed considerable distress that he had 'no one to talk to' and that he lost this important relationship. He may have perceived that to mean that he was invisible, that his life was inconsequential and that the loneliness was a direct result of the deliberate dejection by others.

It is important to note that loneliness is seen by the participants both as a stressor *and* the result of their negative cognitive processes and will be mentioned as a component of 'A Hard Life' as well.

6.7.1.2 Challenging Family Relationships

All the participants reported that – without exception – none had ever had a close relationship with his or her family of origin and that this emotional, social and

moral vacuum served as a catalyst for their suicidal thoughts and attempts. Indeed, two of the participants, Danny and Ellie referred to themselves as "the black sheep" of the family, suggesting that they saw themselves (and perhaps were seen by others) as outcasts. There can be little doubt that such an alienated view of their status coloured the way they perceived the world as well as the way they viewed themselves, diminishing any notions of self-worth. It also shaped any expectations that they had of how others would accept them as individuals. This excerpt from Abbey reflects the sentiment of all four participants.

> *"I've been through a lot in my family. My mom doesn't really care much about me. So even by age 16 and even before that she said that 'I'm on my own'… The first time I had those thoughts was around the same time, age 16"* (Abbey, 18)

6.7.1.3 Challenging Romantic Relationships

The emergence of suicidal ideation was very different for Ellie. For several years she lived in an abusive relationship, experiencing emotional, physical and sexual abuse. As she recalls, these traumas became the catalysts for the development of her suicidal thoughts. She describes it this way:

"The last thing the man say when him come in the evening him ago kill me and me say to myself (myself) 'you see before you kill me, me ago kill myself'. Me not going let him kill me, me a kill myself before him kill me" … "Yeah, sometimes me say Lord Jesus me here so and this man a beat beat me. It's better me jump over there so and broke my neck because me no see what me a live for". (Ellie, 43)

For Ellie, so intense and dangerous was the abuse that she most likely saw no solution to her existential problem other than to take her life. This life had been deemed null and void, awaiting execution. By whose agency should it end, by that of the man who beat her, or by her own hand, in her own way? For her, life seemed no longer of any value, purpose or meaning. Most likely she was afraid and mortified at the thought of allowing her partner to take her life, of enduring that fearful, rage-filled avalanche of pain and suffering. Usually, abusive relationships are about power and control by the perpetrator over the victim who is usually

rendered powerless. Perhaps she thought that in order to take back control of the little she had left, the ultimate solution was to take her life herself rather than to allow her partner to take that as well?

6.7.1.4 Lack of Trust of Others

A lack of trust of others can be considerably isolating. Such and absence or loss of trust of others provides a significant driver towards the development of suicidal thoughts and behaviours. For all participants, such lack of trust emerged after their privacy and integrity had been betrayed - sometimes more than once - and confidential information given to trusted persons was used against them sometimes by the very persons in whom they had confided. This excerpt from Abbey aptly reflects the sentiment of all interviewees:

> *" I, I, I, I like to keep things close to myself. I have a huge trust issue. No matter who the person is I just don't feel like I can just tell them anything. Cause there are people out there who you tell things and they just throw it back at you"* (Abbey, 18)

This quotation provides good insight into the complexity of the stressors that Abbey faced. Her lack of trust of others may very well be a barrier to help-seeking behaviour. This lack of trust was coloured by past experiences where her words were used as weapons against her. In turn, these experiences seemed to become self-destructive for her.

6.7.1.5 Multiple losses

All the participants experienced losses of one type or another that may have contributed to their dismal views of life. A clear example of significant and multiple losses is from Fanny, who more so than the other participants was able to make direct connections between those losses and her suicidal ideation. Her account though not reflective of the group, encapsulates the complexity of suicidal behaviour:

> *"Well, I would say I lost my dad. I had a still birth at age 20, and not having a relationship with my family. Aaah, the relationship that I was*

> *in was like aahh, not stable to begin with. Ahm, the first relationship that I was in as a teen, I was abused by him. So, I guess like everything just like poured down. And I feel insecure about myself.* (Fanny, 26)

In this short, yet deep and reflective account, Fanny presents a complex series of traumatic events that she experienced. There is a sense of very dark rain clouds that hovered over her directly and constantly followed her throughout her life. Then as it were, all at once those clouds burst and drenched her leaving her emotionally fragile and feeling that there was no way of escape.

6.7.1.6 The last straw

This sub-section outlines the main trigger for the suicide attempt.

Females

It is noteworthy that all three female participants indicated that the main trigger for their attempt was having an unstable and difficult relationship with their spouse. When asked what were the events that led up to the attempt, Abbey recounted:

> *"I was upset"... "I was confused"… "It was an argument with my boyfriend. I, I'm not sure but I like, I, I, I can say that it really wasn't about him 100% it was more about me and what I've been through, and not wanting to be hurt in any form in any way at all. And then, I'm not sure , ahm I was just confused to be honest".* (Abey,18 years)

Abbey seems overwhelmed and crippled by insecurity. There is a real struggle to make sense of her feelings here. For Abbey her previous traumatic experiences have led to a need for self-protection. She appears to be shielding or guarding herself against the recurrence of potential hurt in the future.

Male

In contrast to the females, fear of failure and the possibility of jeopardizing losing his scholarship provided the trigger for Danny. Males fear social and economic ruin

in a profound fashion. Danny may have been perceived his scholarship as his sole solution, as his only way out of his unhappy family environment.

"Its complicated. But November, December, dere [there] was, de [the] pressure became more intense… It was close to exams, an' [and] (long pause), chuckles, I fe___, I was on a scholarship, so I feel like I was going to fail. So I was stressed out, ahm, so I went to the health centre and I got some medications, cause I'm, I wouldn't, I wasn't sleeping. And I was, an' my, the doctor said I was hypertensive. So, (pause) so, I wasn't sleeping, my blood pressure was up, my kidneys were becoming more damaged, so I was becoming a total wreck". (Danny, 24 years)

The metaphor 'becoming a total wreck' highlights the sense of movement towards violent and absolute ruin. Danny likened his life to a complex structure, a purpose-driven creation of many working parts like a car or a ship that was becoming damaged beyond repair. This term, 'becoming a total wreck' anticipates a bad accident. It suggests that Danny perceived his life as moving further and further in a process of dismemberment, of becoming irreparable. It is interesting that his focus appears to be on his physical self without explicit mention of his psychological self. There probably was some avoidance of that aspect of his life.

Danny appeared to be ensnared by thoughts showing that his life was beyond repair. His intense negative sense of self, his fear of failure and the unbearable situation that he felt he was in all seemed to render him paralysed. He believed that he lacked agency, and that he was powerless over his life situation. The social stakes were high. Students on scholarship are expected to perform at high levels, and to maintain good grades in order to retain the scholarship. All of these factors combined, and their confluence seems to have precipitated his decision to yield to those thoughts and to attempt to end it all.

6.7.2 'A Hard Life'

The accounts from participants were laden with a mixture of emotions that they experienced both pre and post attempt. Inevitably, they presented an overflowing of negative thoughts, emotions and behaviours which made them fragile and at risk

of succumbing to stressful situations. The deeply negative beliefs and emotions, such as depression, loneliness, fear, confusion, hopelessness, sadness, anger, hurt and insecurity, all contributed to the presence of suicidal ideation and subsequently led to the participants acting on those thoughts. Below, we lay out for discussion the most significant of those vulnerabilities. The participants' accounts are peppered with a combination of emotions which include depression, sadness, loneliness and frustration.

6.7.2.1 Lack of Social Support

All of the participants in this study identified a lack of social support as one of the catalysts that drove them to attempt suicide. Fanny's account shows that she has analysed and identified what she needed, critical factors of existence that others evidently missed:

> *"When my dad passed, everyone did what was in their power to ensure I was okay, or they thought I was okay. And I was okay financially, but not emotionally. So, it's like if I had a problem, and call them, they don't listen, they just spend money. It's like, when I hear persons like complaining for money, like 'all I work for is money', it's like, I don't have that hunger for money that you have for money. I have the hunger for the attention. And it's like, maybe I would cry out for help, but as much as I want the help, like I don't want persons to know that I want the help. And then persons tend to misunderstand me".* (Fanny,26)

This excerpt is fraught with contradiction and confusion. On the one hand, Fanny indicates that *everyone* was doing *all* they could for her. But in reality, they did not give her all that she needed. She was starved of emotional support and made futile attempts to let them know that. However, she may have gotten so used to having her emotions ignored that in response, her default was to conceal this emotional malnourishment from others yet was desperate for help.

She was unable to bring herself to admit that she needs help. This may be an effort to protect herself from being deprived of the emotional support that she lacked. It is also likely that she felt culpable for her own isolation and that she is to blame for others' not understanding her. This perception seems to point to her perception of her lacking social support.

Ellie's approach was somewhat different from Fanny's, but she too appeared to have been denied meaningful social support. Given that Ellie was in an abusive relationship and the abuse took various forms: physical, sexual and emotional, she describes how she reached out for help but got very little if any assistance:

> *"People hear me a bawl (cry) out murder murder help, help! Nobody come!… Sometimes people see me pon (on) the road and if somebody could even stop and you just share your thoughts but you 'fraid (are afraid). Because you can't talk to nobody. People will take it tell you (they will throw it back at you). You have to just keep it to yourself"* (Ellie, 43)

Here we have the juxtaposition between the screams she makes and the silence that is heard. She may have interpreted the silence in response to her shouts for help as her being invisible and devalued. She may even have felt muted as she was not given the forum to make her voice heard. This excerpt is seasoned with a sense of entrapment and hopelessness. We also get the feeling that Ellie saw herself as injured not only by her spouse but by others in whom she confided as they used her words as weapons against her. This most likely led to her feelings of loneliness and a lack of trust of others.

Inevitably, all participants shared a common behaviour which could be interpreted as self-imposed isolation which was an outgrowth of a lack of trust of others and a lack of social support. This is explained in detail below.

6.7.2.2 Shutting people out

A striking feature running through all four interviews was their absolute refusal to allow anyone to get close to them socially or emotionally. Past experiences of being hurt and disappointed ensured their isolation. In all probability, this isolation arose from a need to protect themselves, a mechanism of self-preservation in response to those experiences that had in the first place, led them to becoming socially isolated. The following passage speaks in some way for all the participants – each of whom echoed a high level of social disconnectedness:

> *"The moment I realize that I'm getting close to someone I disconnect. Because I don't want anyone to hurt me. And I know, I know I'm strong when I'm around people but, when I'm by myself, I'm not that strong. My friends have hurt me before, so, I just don't with people again"* (Fanny, 26).

Here we see the use of a possible coping mechanism, that of self-protection or self-shielding as illustrated earlier. It is as though Fanny has built a fortress around herself in order to keep people out and to keep herself safe inside. One reason for this self-imposed isolation is the unbearable psychological pain that she experienced in the past. Such experience has fuelled her desire to prevent any further hurt and pain. As she tries to make sense of the inherent contradictions, the ambivalence is clear: on the one hand she appears to be strong but on the other she is not.

It is almost as if there is a façade that the public sees, but that belies what is inside. Her insecurity and lack of trust of others may have led to this false self-portrait. This image of herself conceals her true emotions. It is likely that this picture of self-confidence prevents her from being seen or heard when she really needs help.

6.7.2.3 Depression, sadness, and a longing to be happy

All of the females lived with their partners, yet while having them present physically, they saw themselves as forlorn, neglected, deserted even in the presence of someone who supposedly loved them. At times, the male partner did not present support, but its opposite. These insoluble, fluid problems all may have led to the respondents' desire to be happy again or, at the very least to be rid of the intense emotional pain which drove them to breaking point and to act on their suicidal thoughts. Fanny, eloquently sums up this dilemma in her hopeless desire to return to the safety and wellness of the irretrievable past:

> *"So I just wanted to just be at the place where I was most comfortable and happy, and I was about 6, 7, 8 when I had my dad so I just wanted to, to be at that place".* (Fanny 26)

6.7.2.4 Loneliness

Another pervasive theme that ran across all the interviews were the sentiments expressed by the participants about being unhappy because they felt they had no one to talk to and with whom to share their concerns. It is as though they were all alone in a world by themselves trying to cope with life's stressors. Thanks to the frequency with which this sense of total isolation was repeatedly described throughout the interviews by all the participants, one got the feeling that at times, these feelings must have fluctuated through periods of high intensity while never completely disappearing. For these respondents, there was no term of relief. Although the reader does not have the benefit of hearing the passion and emotion in tone as expressed by each of the participants, the words captured here (as spoken by Fanny), captures in part the emotional essence of all the respondents:

> *"I don't have no one to listen to me. No one takes the time out to listen to me. Ahm, so that's about it. I get really tired of being alone".* (Fanny, 26)

6.7.2.5 Frustration

All the participants expressed being very upset and felt that they were unable to do anything about the situation in which they found themselves. This assertion implies that their self-efficacy might have been low as they saw themselves powerless to get out of their current situation. This quote although from Ellie which suggests that she had reached breaking point, is similar to that expressed by all participants who indicated that they reached a point where they could no longer cope with the emotional stress experienced:

> *"Fed up! me tired of it! You ever tired of sup'm (something) yet? Mi tired of it man! Mi couldn't manage it anymore (I couldn't take it anymore)".* (Ellie, 43 years)

6.7.2.6 Substance Use

To escape the unbearable emotional pain, Danny, Ellie and Fanny chose self - medication as a route out of despair and turmoil. Consuming alcohol became the means of forgetting their sorrows and experiencing temporary tranquillity. This was their way of trying to cope with the situation and get some relief. Danny's account reflects the sentiment of all three:

> *"Last year I was drinking a whole lot because I wanted to feel calm, But I stopped. I stopped. 'Cause I realize that it was damaging my liver".* (Danny, 24).

6.7.3 'A Mistake'

Prior to the attempt, we see that the participants had a fixed mindset where they were unable to view any other option but to take their lives in response to the stressful situations they faced. However, post attempt, it seems as though the attempt itself unlocked their cognitive processes which led to a change in their perception of their situation and later a change in thinking overall. As a result, they were able to embrace other more adaptive ways of coping which in turn led to resilience. This is manifested in various ways as discussed below.

6.7.3.1 Turning point

Without exception, all four participants expressed feelings of sorrow for attempting suicide. In an effort to comprehend the implications of their actions, they each bemoaned the fact that they tried to end their life, suggesting that they may have made a mistake. Abbey's words were few, but they most fittingly denote a sharp contrast with how she had thought and felt prior to making the attempt.

> *"I regretted it after though, <u>definitely</u>".* (Abey, 18 years)

As participants' self-perception and self-understanding improved, they found new ways of managing their emotional distress through various means including social

support, social acceptance and belongingness. They came to realize that they were not alone or valueless, as they had previously perceived. This new insight challenged their view that their lives had no purpose or meaning, and this liberating insight allowed them to be receptive to help from others. Danny described the moment of empowering enlightenment in this way:

> *"When ma, ma mother, I was on the ward and I was heading back up to the area where the visitors sit, and I saw my mother and I was shocked! And I think that moment right there healed everything because I saw that she left Montego Bay, she doesn't know Kingston, but she left Montego Bay, she travelled all the way to Kingston and she took me home the day. So, that day I realized that you know what? She cares. That's all I really want to, to know. And I haven't gone back to counselling or anything. And I've been fine. I've been trying to find a reason to be depressed and unhappy but I can't find any".* (Danny. 24)

6.7.3.2 Reason for living

With the passage of time, and after considerable reflection, the participants found some degree of hope and reasons to keep going on. The following excerpts both provide different sources of motivation. First, we see how Danny puts it:

> *"And during that period to January I had got time to heal. So that space was filled with you know, telling myself that I'm ok. I need to be focusing on my goal. People care, my lecturers were calling me, checking up on me. I saw that people really care about me. Even at church. That allowed me to heal. And since that time, I have been better".*
> (Danny, 24 years)

Here we see that for Danny, several factors can be ascribed to a process of restoration that began where he started the re-building process setting his life back in order. There seemed to be a liberation and re-awakening for him as after he received social support from various sources, he had a sense of belongingness which put him on the path to recovery. Accepting support seemed to have made him become grounded. These stand in stark contrast to his cynicism and trust issues prior to making the attempt.

On the other hand, we see a single goal and vision in what Fanny says:

> *"The only person is there is my son. My interest was just to leave that hospital and see my son. That's what was my main interest. That was my aim to go to my son".* (Fanny, 26)

For Fanny, her main reason for living became her two-year-old son. It appears that it was not until after she attempted to take her life, did she realize her parental responsibility and obligation. This realization was pivotal in her road to recovery.

6.7.3.3 Role of religion as a buffer against future attempts

All four participants, after attempting to end their lives, seemed to experience a reawakening as they returned to their religious beliefs and practices such as reading the Bible, praying and attending church. One possible explanation for the return to religion is the guilt that may have been experienced post attempt may have led to the decision to make themselves vulnerable to a body that should provide unconditional positive regard. In other words, having hit rock bottom, there was no further to go, therefore, they were willing to give this a try.

Another possibility is that after such a self-imposed traumatic event the participants were frightened and decided to seek solace or refuge in a higher power that they once knew. After trying the option of religion and having met with success, that became one of the new coping strategies that served as a protective factor against any further attempts at suicide. Ellie presents a typical account of all the participants:

"It happen' di Tuesday, the Sunday me go ah church (the Sunday I went to church). And me start tell (telling) di pastor and him start cry (I started telling the pastor and he started to cry). And the man hug mi up and say 'Ellie God love you stop the crying, God love you'! Him say to me say Ellie come back in a (to) church God want you. God ah go see you through (God is going to see you through)". God bring me from so far to this. Me believe inna God, me believe inna God! (Ellie, 43)

For Ellie, she made a conscious decision to go to church after her unsuccessful suicide attempt and share her experience. She discovered that she had control over her circumstances and that there were other ways of dealing with life's stressful situations. The crying of the pastor seems pivotal for Ellie. In the past, her cries for help were met with silence, as discussed previously, but now, perhaps for the first time, she felt safe and understood. Finally, someone connected with her and felt her pain. She may also have experienced unconditional love at church that was not experienced elsewhere. This sense of belongingness combined with her deep belief in God, formed a source of strength that she felt she could draw on when she felt vulnerable or emotionally fragile.

6.7.3.4 Belongingness and acceptance

We have evidence from Danny's account that knowing that his university counsellor was willing to take the time to show concern for him, inspired hope and resulted in his increased self-worth. This outcome stands in contrast to earlier parts of the interview when he recounted thinking that he had no one to call on and to provide support. The buoyancy in his voice during this part of the interview conveyed a notable level of healing. His words matched the joy that emanated from his tone and disposition:

> *"I felt like I belonged. I'm a part of something. I felt like somebody actually bothers with me and cares about me so much that they spend time to talk to me, sit down, counsel me, tell me their experiences in life. And so yeah, I felt really good. I felt better".* (Danny, 24)

6.7.3.5 Self-confidence and self-love

Although Ellie was the only one who expressed this view, the researchers thought it was important to include it among the findings, given its salience to the research objectives. The excerpt below, highlights what she views as the importance of loving yourself as a pre-requisite for loving others. Ellie also mentioned the importance of self-confidence.

> *"You haffi believe in ah yourself first If you don't love yourself you know you can't love me".* (Ellie, 43)

It is interesting to note, that her use of the third person perhaps reflects a difficulty in making personal the material she describes and may in fact show that while cognitively she was aware of what is required in order to become resilient, emotionally she was not quite fully prepared and ready in emotional terms. Such a hesitancy would hardly be unusual, given that each person's rate of healing is different, and that healing is not a linear process. Instead, her self-confidence would have grown over time as a result of social acceptance, feeling valued by others such as her pastor and others at church, social connectedness and belongingness.

6.8 Discussion

In this chapter we have presented the journey of four Jamaicans who have transitioned from considering suicide to acting on those thoughts, and, later, how they viewed the experiences. This study provides a unique understanding of the progression that one may make from thinking about suicide to attempting to take one's life. The diagram in Figure 16 , illustrates a summary of those pathways utilising the super-ordinate themes of stressors, 'A Hard Life' and resilience. Our study helps to shed light on the potential pathways and connections between stressors and later suicidal behaviour.

Across interviews, there appeared a myriad of emotions that could be considered central to the emergence of their suicidal thoughts. Participants reported a perceived lack of social support as well as a lack of trust born out of past experiences. Further, participants expressed intense feelings of depression, loneliness, and hopelessness among others. This combination of forces led to the emergence of suicidal thoughts.

There were also highly significant stressors which served as catalysts for participants to act on those thoughts. The main catalysts for the attempt included stressful life events such as the death of a close family member, as well as intimate partner violence, arguments with a partner and the possibility of academic failure. It was found that having social support and a positive outlook were pivotal in the

process towards recovery. These findings reflect the complexity of the problem of suicidal behaviour.

Healing after a suicide attempt is not a linear process (Chi et al., 2014). Findings from one qualitative study suggested that healing occurs in five phases: self-awareness, inter-relatedness with life, reappearance of stressors, discovery and owning of one's emotions and acceptance (Chi et al., 2014). The authors went further to explain that persons may move backwards and forwards through phases, thus they likened those phases of recovery and healing as a wheel (Chi et al., 2014). In our study we found limited evidence to support the cyclical nature of recovery, however, we did not find clear evidence to support each of the five phases as described by Chi et al (2014). The fact that this did not emerge from our data may be more a reflection of the direction that participants decided to focus on as the interviews were participant led rather than researcher led. It is recommended that this be pursued in future IPA studies among a similar population, but with a larger sample.

In summary, the current study allows us to better understand how psychological vulnerabilities are shaped through repeated exposure to stressors during one's lifetime. The accounts of participants also pointed to loneliness which seemed to be a key stressor and the dual role of loneliness as a component of 'A Hard Life'. It seems as though a reflection of experiences during childhood helps to shape one's view of the world and one's self esteem which leads to the development of suicidal ideation in childhood then continues into adulthood.

By contrast, after the attempt, there was a reawakening of the value of life and a change in cognitive appraisals of life's stressors and hence how to manage those stressors. This resulted in the exchange of more adaptive coping strategies including help seeking behaviour, self-confidence, and religiosity that act as a buffer against suicidal ideation. For three out of four participants their last attempt was less than a year prior to the interview which may be reflective of renewed hope, recovery and resilience.

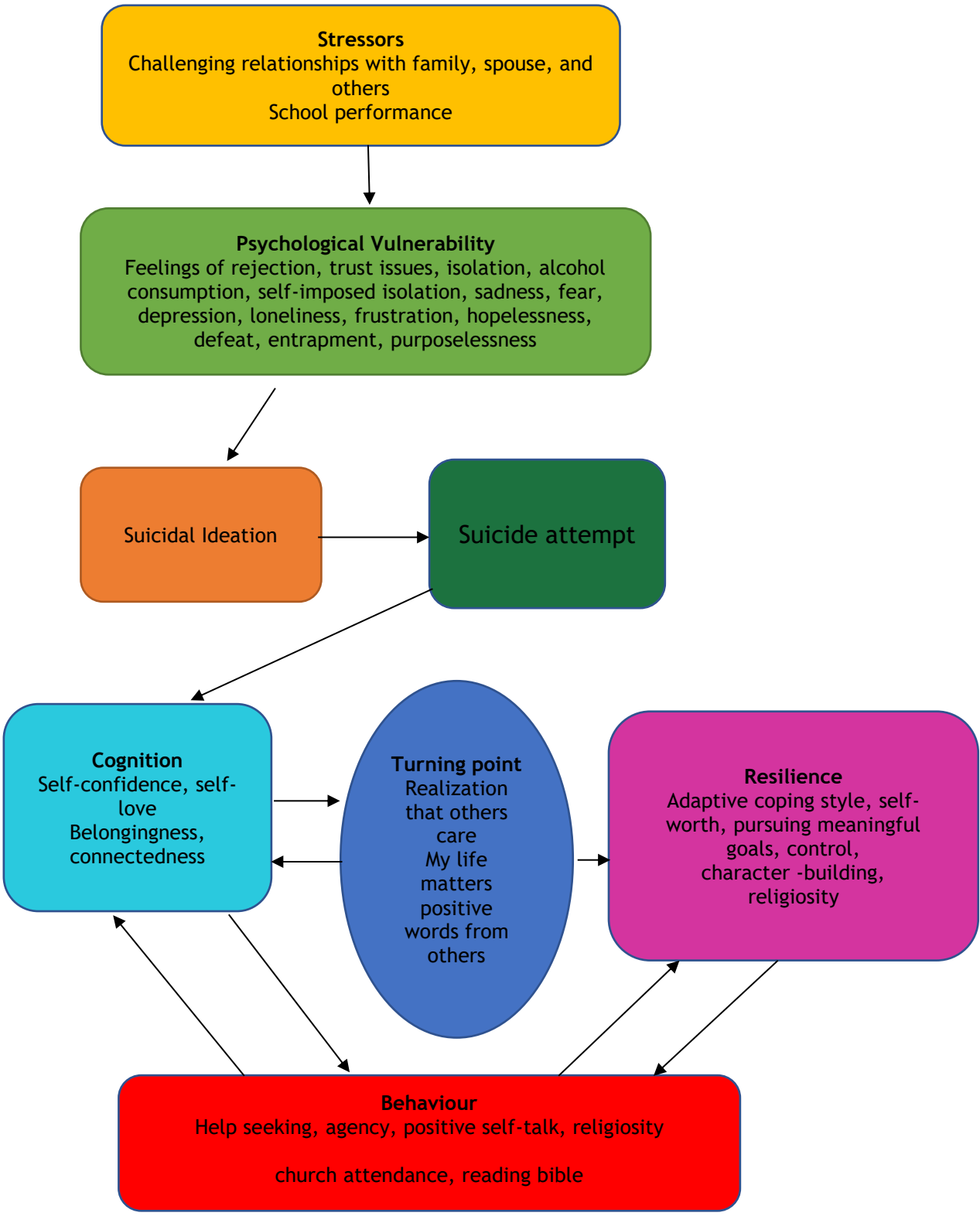


Figure 16. **Concept map showing the complexity of suicidal behaviour**

6.8.1 Stressors

Several stressors were identified across interviews. One of the primary stressors that helped to undermine the participants' self-esteem and further led to suicidal ideation was having a challenging family relationship. This was applicable to all participants. This is in keeping with quantitative studies that have found that persons who have more frequent contact with extended family are less likely to report suicidal ideation than those in less frequent contact (Thompson, Kaslow, Short, & Wyckoff, 2002).

Closely tied with challenging relationships with one's family is challenging relationships with others including one's intimate partner. All the females in the study attributed problems with their partner as the main reason for their attempt. The findings are consistent with those found by other authors such as Nguyen, et al 2017. Their research revealed that respondents who experienced a close relationship with their family or had frequent contact with friends had lower odds of a suicide attempt (Nguyen et al., 2017). Indeed, suicide attempts among ideators was associated with having neither social support nor positive interactions with others (Nguyen et al., 2017).

All three females in this study identified challenges in their relationships as the main trigger for their suicide attempt. This is supported by evidence from several studies including a systematic review of longitudinal studies by Devries, et al., (2013). The authors of the review reported that being exposed to intimate partner violence increases the risk of depressive symptoms and of suicide attempts among women (Devries et al., 2013) . Similarly, more recent evidence shows that women who experienced emotional and/or economic IPV combined with physical and/or sexual IPV exhibited high levels of depressive symptoms and suicidal ideation than their counterparts who were not exposed to similar adverse experiences (Gibbs, Dunkle, & Jewkes, 2018).

6.8.2 Psychological Vulnerabilities

Depression in men is viewed differently than in women. For example, it is difficult for many men to even admit to suicidal symptoms as they may be viewed as weak and or vulnerable. As such, we find that there is some amount of antipathy to tell others about their symptoms and to seek help. As such, it is not unusual for men who are feeling depressed to find other ways of coping as will be discussed later. It is true that two of the women, Ellie and Fanny also overused alcohol as did the sole male participant, Danny.

Before the attempt persons utilised primarily maladaptive coping methods to deal with their stressors. These included the abuse of alcohol for three of the four participants, and avoidance of others to the point of what could be considered self-imposed isolation on the part of all. In a large-scale prospective study (n=7,556) an association was found between coping, drinking motives and suicide attempts among young men (Grazioli et al., 2018).

6.8.3 Resilience

We saw a sharp contrast in the methods of coping with stressors pre- and post-attempt. Before the attempt persons utilised primarily maladaptive coping methods. These included the abuse of alcohol for three of the four participants, and avoidance to the point of what could be considered self-imposed isolation on the part of all. After the attempt it is as though there was an awakening and a recognition of the value of life, as not only did all participants express regret at making the attempt but they found more adaptive ways of coping or perceiving the stressful situations they faced. Two of the main methods of coping will be discussed in this section.

6.8.3.1 Help seeking behaviour

Before the attempt one participant thought the only way out of the abusive relationship was to take her life. Up to that point she felt powerless to do anything else. This is not unusual for someone in her situation. Research shows that women who are in abusive relationships with their partners are at an increased risk for attempting suicide if they also perceive that they have low levels of social support from friends and family (Nguyen et al., 2017). Victims of domestic abuse also view themselves as being unable to effectively or successfully get the requisite help to get out of their abusive relationships because of the lack of social support (Nguyen et al., 2017). However other studies show that some may not seek help before nor after the suicide attempt (Shaw, Beans, Comtois, & Hiratsuka, 2019), but of those who do, they benefit from the help they receive and that support also decreases their inclination to engage in future attempts (Shaw et al., 2019).

After the attempt, participants tapped into the resources available to them such as from a church pastor and others in the church community for social support. Having an opportunity to have a support network in congregation members and clergy has been found to be protective against suicidal behaviour (Gearing & Alonzo, 2018). All these combined gave one participant the courage within days after her attempt to leave her abusive partner. This showed that she recognised she had agency and that the power in fact was in her hands (Nguyen et al., 2017).

6.8.3.2 Protective Factors

Social Support

This study supports prior research that having social support serves as a robust protective factor across different cultures against suicide attempts (Kleiman & Liu, 2013). For three of the four participants in our study, they indicated that after their attempt and after receiving social support they had not attempted suicide again. However, it is important to note that interviews were conducted with participants approximately one year post

attempt. One study among a clinical population revealed that it may take up to seven years on average to become suicide attempt free (Perry et al., 2009). This therefore points to the need for prospective studies exploring recovery of persons who have attempted suicide in the long term.

It is important for persons who are at risk of suicide to make use of the social support available in the community (Chi et al., 2014). Having social support and making use of the available resources help to reduce the risk of suicide attempt by over 30% (Kleiman & Liu, 2013). Findings from our study revealed that participants' self-confidence, and self-esteem had improved after the attempt partially because they realized that persons did care for them. Once their perception of social support changed and they had evidence that they had mistakenly believed that they "didn't have anyone to turn to", that contributed significantly to their recovery and that became a significant deterrent against future attempts.

Religiosity

Many participants described how prayer, reading the Bible and church involvement helped them to feel better about themselves and to see life through a different lens. These findings are supported at least in part by others including a relatively recent systematic review that acknowledged that there is a complicated relationship between religiosity and suicidality (Gearing & Alonzo, 2018). For the most part, religion serves as a protective factor again suicide but it may also be a risk factor for some (Gearing & Alonzo, 2018). Those participants who returned to their religious beliefs and practices reported that they did not intend to make another suicide attempt in the future and that they regretted making the attempt.

Reasons for living

In their unique ways, at least three of the participants identified reasons for living that they otherwise did not appear to have seen before making the attempt. These included either simply one's religious beliefs, recognizing

the value of one's life, the realization that people care for them or the importance of being present physically, emotionally and socially as a parent for one's child. Systematic reviews of the literature have shown that reasons for living (RFL) serve a protective role against suicidal ideation and attempts, even after adjusting for depression and hopelessness (Bakhiyi, Calati, & Guillame, 2016). It is unclear, however, exactly how reasons for living are protective. One of the reasons suggested is that RFL may act as a buffer against both the emergence of suicidal thoughts and suicidal behaviour (Bakhiyi et al., 2016). Another possibility is that high levels of reasons for living may help to decrease depression (Bakhiyi et al., 2016). A third explanation may be that RFL may be associated with resilience (Bakhiyi et al., 2016). It would be beneficial to further explore this, utilising qualitative research in order to uncover these reasons among persons who have attempted or are contemplating suicide.

6.8.4 Clinical Implications

These findings provide useful insight for professionals who provide intervention for persons who have attempted to take their lives. One important consideration is that treatment plans should include crisis management skills for persons who are at risk of suicide attempts. We saw that participants lacked the necessary skills to handle crises and life's stressors and thus succumbed to their suicidal thoughts by eventually deciding to act on those thoughts.

We saw that participants had a low sense of agency and low self-efficacy, believing that they were unable to cope with the stressful situations they faced. As such, those in the helping professions who provide therapy and treatment for persons who are either seriously considering suicide or those who have already attempted should ensure that they challenge these negative thoughts and feelings of victimhood among these patients and replace them with help-seeking skills and skills that will help to improve their self-esteem.

Another important perception among participants was that they lacked social support and thus became isolated from others. This suggests that they would benefit from improving their social skills and problem-solving skills which will enable them to reconnect with persons with whom meaningful relationships can be formed.

Finally, those who work with persons who are at risk of suicide attempts would themselves benefit from being aware and patient with these individuals as the healing process may be long and clients may regress to previous stages of recovery and healing.

6.8.5 Strengths and Limitations

The research adds to the growing body of literature on the evolution of suicidal behaviour in three main ways. First, we have gotten an insider's view into participants thoughts, feelings and behaviours along the way and charted their path through various phases of suicidal behaviour. We have also given a voice to those who otherwise would not be heard thus providing insight not only for practitioners and policymakers but for those who may be experiencing similar struggles. Third, the use of the IPA has allowed for a unique, detailed and original exploration of these experiences which to the best of our knowledge is unprecedented in the landscape of research in Jamaica. This important perspective is further discussed in chapter 7, of this thesis where the general findings will be evaluated.

This study may be deemed a good quality IPA if one should use the four criteria set out in Smith's IPA quality evaluation guide of IPA papers or theses (Smith, 2010). As discussed in the method section of this chapter, we adhered quite rigidly to all six steps suggested for doing an IPA. Secondly, we used a transparent approach showing step by step what was done and how we arrived at our final product (Smith, 2010). A third criterion to recognizing a good quality IPA study is determining whether the analysis that is plausible, logical and coherent (Smith, 2010). We believe that the quotes presented in this study correspond to the themes, and this was

substantiated with having a balance of convergence and divergence of participants' experiences. We also sought to maintain a balance in the data presented from the participants thereby illustrating that we sampled sufficiently from the corpus for each theme.

We were at pains to ensure that the analysis was not merely descriptive but interpretative (Smith, 2010). To this end, we not only presented excerpts from the interviews, but for each of those excerpts presented, we provided an interpretative commentary from the lens of the researcher (KPB). This is reflective of the double hermeneutic which is one of the distinguishing features of an IPA (Smith, 2010).

In order to achieve a balance between the language and meaning of the participants and the researcher's interpretation of what was said, the results section of this chapter went through several iterations and drafts until consensus was reached among the team and the IPA specialist- AD deemed it not only acceptable but *very good*. The main reason for this was to ensure that we remained true to what was originally being conveyed. In sum, we demonstrated how this study is phenomenological, hermeneutic and idiographic. When combined, these are all hallmarks of a good quality IPA according to Smith who is the 'father of IPA' (Smith, 2010).

Although we managed to achieve a high standard in the quality of this IPA, some may argue that having a small sample size is a limitation. However, this is not necessarily the case, as one of the distinguishing features of IPA is that it prioritizes depth over breadth which is better afforded with small samples. It is true that one cannot generalize from these findings to the wider population, but this was not an intention of IPA. More importantly, the rich, detailed data provided by the participants has enabled us to gain better insight into the phenomenon of suicidal behaviour. These results are therefore suggestive rather than conclusive.

Additionally, given the research culture in Jamaica among potential participants, especially in the social Sciences, future research on sensitive topics such as suicide, should not be confined to only one hospital or institution as the population is already very small (as a benchmark, an estimated 60 persons die by suicide per year in Jamaica). Hence, in order to ensure that one gets a more robust sample size, of ten persons on average for purposes of an IPA, for example, one must draw from a wider sample. These considerations will be taken into account for future research.

6.9 Conclusion

The study set out to identify factors the led to the emergence of suicidal ideation and what factors may have led persons to act on those thoughts. Another aim was to explore the lived experiences of persons who attempted to end their lives. The findings have highlighted the complex and multi-faceted nature of suicidal behaviour. Results showed that challenging relationships, feelings of loneliness, lack of trust of others, facing stressful situations, lack of social support and feeling trapped are among the main factors in the process of transitioning between thinking about suicide and acting on those thoughts.

7 General Discussion

7.1 General Overview

This chapter syntheses and interprets the main findings from the empirical studies presented in this thesis. As stated in Chapter 1, a mixed methods approach enabled a more thorough analysis and evaluation of the research questions raised. Findings from the quantitative studies (Chapters 3, 4 and 5) and from the qualitative study (Chapter 6) are presented using joint displays, a method by which one may integrate the results from both quantitative and qualitative research by depicting them graphically or in the form of a table. Such representation has become increasingly popular in presenting mixed methods results (Guetterman, Fetters, & Creswell, 2015). The findings are also discussed critically in relation to theoretical models and to the wider research literature that formed the backdrop for this thesis. Key strengths and limitations of the studies are also examined while recommendations for future research directions are discussed.

This doctoral thesis addressed the following research questions:

1. What are the risk and protective factors for suicidal behaviour among the youth in Jamaica?

2. What factors differentiate those adolescents in Jamaica who think about suicide or self-harm from those who act on these thoughts?

3. How do persons make sense of their lived experiences of making a suicide attempt?

Table 27 summarizes the main findings of all studies undertaken for this thesis. A total of five studies were conducted and include a systematic review of the literature, followed by four empirical studies. The systematic review highlights certain significant gaps in the literature as well as the weaknesses of many studies published prior to September 2020. Not only does on face a paucity of research but such material is predominantly descriptive. The work reported here addresses some of these research gaps.

7.2 Summary of Key Findings

Table 27 Summary of key findings

Chapter	Study	Key Findings
2	Systematic Review	This is the first systematic review and critical appraisal of the literature concerning risk and protective factors of suicidal behaviour in Jamaica. The review revealed that interpersonal conflict, including domestic disputes as well as financial challenges were the main risk factors for suicide. Those individuals ages 25-44 and 65-74 were at greatest risk of suicide. Mental health problems, having a history of physical or sexual abuse, being bullied and being in a relationship were risk factors for those who attempted suicide.
3	Quantitative cross-sectional study – Secondary data analysis	The main risk factors for suicidal ideation and suicide attempts among adolescents in Jamaica include sleep problems, loneliness, being bullied while the main protective factor against suicidal ideation and suicide attempts is having parents who show affection to the adolescents.
4	Quantitative cross-sectional study - Pilot	The instrument used in the survey was found to be suitable but lengthy for use among looked-after and cared for adolescents. It was therefore shortened for the main study. Approximately 83% of the sample reported a suicide attempt and 64% reported having a history of self-harm. This pointed to the urgent need for a large-scale study to be conducted in this vulnerable population.
5	Quantitative cross-sectional study – Main	A little more than a half (51%) of the looked-after and cared-for adolescents had a lifetime prevalence of suicidal ideation; 45% had attempted suicide; 36% had self-harm ideation and 41% had self-harmed. Perceived stress and emotional distress distinguished persons with a history of suicidal ideation from controls. All variables independently differentiated those in the enactor group from controls. However, when all variables were entered into a multivariable model only adverse childhood experiences (ACEs) remained statistically significant in differentiating those in the enactor group from controls. Child sexual abuse in LAACs was associated with a four times increased likelihood of a suicide attempt compared to those LAACs who have no sexual abuse history. ACEs and emotional distress distinguished between those with a history of self-harm ideation and those without univariately. Apart from gender, no predictor was able to distinguish persons who either seriously considered self-harm or persons who self-harm from controls.
6	Qualitative semi-structured interviews	Findings from this study highlighted the complexity of the factors implicated in suicidal behaviour. Exposure to stressors such as challenging relationships including with family of origin and romantic partners are important factors associated with the emergence of suicidal ideation. These may then be associated with psychological vulnerabilities such as shutting people out, depression, sadness and frustration and a lack of trust in others. These may in turn be associated with loneliness, hopelessness, despair and feelings of defeat and entrapment. These feelings may become intense and unbearable causing persons to attempt to end their lives. For the participants, having made the attempt was a life changing experience as they realized that their life mattered, that people cared, they could get social support.

The research undertaken in this thesis examines both the risk and protective factors for suicidal behaviour among Jamaica's young people, an under-researched topic in Jamaica. Table 28 illustrates these risk and protective factors as revealed by studies that were conducted for this thesis. This evidence illuminates the complex and multifaceted nature of suicidal behaviour in Jamaica.

Table 28 Risk factors across studies for each outcome under investigation in this thesis

Variable	Suicidal Ideation	Suicide Attempt	Self-Harm Ideation	Self-Harm
Adverse Childhood Experiences (Combined)	R (4)	R (1,4)	R (4)	R (4)
Alcohol Consumption	R (2, 5)	R (2, 5)		
Being in a relationship	R (5)	R (1,2,5)		
Body Dissatisfaction		R (1)		
Bullied	R (1, 2,5)	R (1,2, 5)		
Challenging relationships	R (1,5)	R (1,5)		
Coping	R (4,5)	R (4,5)	R (4)	
Defeat	R (4,5)	R (4,5)	R (4)	R (4)
Early Sexual Encounter (≤ 14 years)	R (2)	R (2)		
Emotional Abuse	R (4)	R (4)		
Emotional Distress (Depression and Anxiety)	R (4,5)	R (1, 4,5)	R (4)	R (4)
Entrapment	R (4,5)	R (4,5)	R (4)	R (4)
Family member physically abused	R (1)	R (1)		
Family member sexually abused	R (1)	R (1)		
Gender female	R (1,2,4)	R (1,2,4)		
Grief & Loss	R (5)	R(5)		
Lack of Close Friends	R (2, 5)	R (2, 5)		
Lack of Trust of Others	R (5)	R (5)		
Loneliness	R (2, 5)	R (2,5		
Marital Status (single)		R (1)		

Migration of Parents	R (1)			
Variable	**Suicidal Ideation**	**Suicide Attempt**	**Self-Harm Ideation**	**Self-Harm**
Parents Showed them affection	P (2)	P (2)		
Perceived Social support		R (5), P(5)		
Perceived Stress	R (1, 4,5)	R (4,5)	R (4)	R (4)
Physical Abuse	R (4)	R (1,4)		
Religious Beliefs	P (5)	P (5)		
School Performance		R (5)		
Self-Esteem	P (4, 5)	P (4, 5)	P (4)	R (4)
Sexual Abuse	R (1, 4)	R (1, 4)		
Sleep problems	R (2, 5)	R (2)		

Notes:

R - risk factor (Study #)

P- protective factor (Study #)

* Study 3 was a Pilot; no risk and protective factors were investigated

Study 1 - Systematic Review

Study 2 – Secondary Data Analysis

Study 3 – Pilot

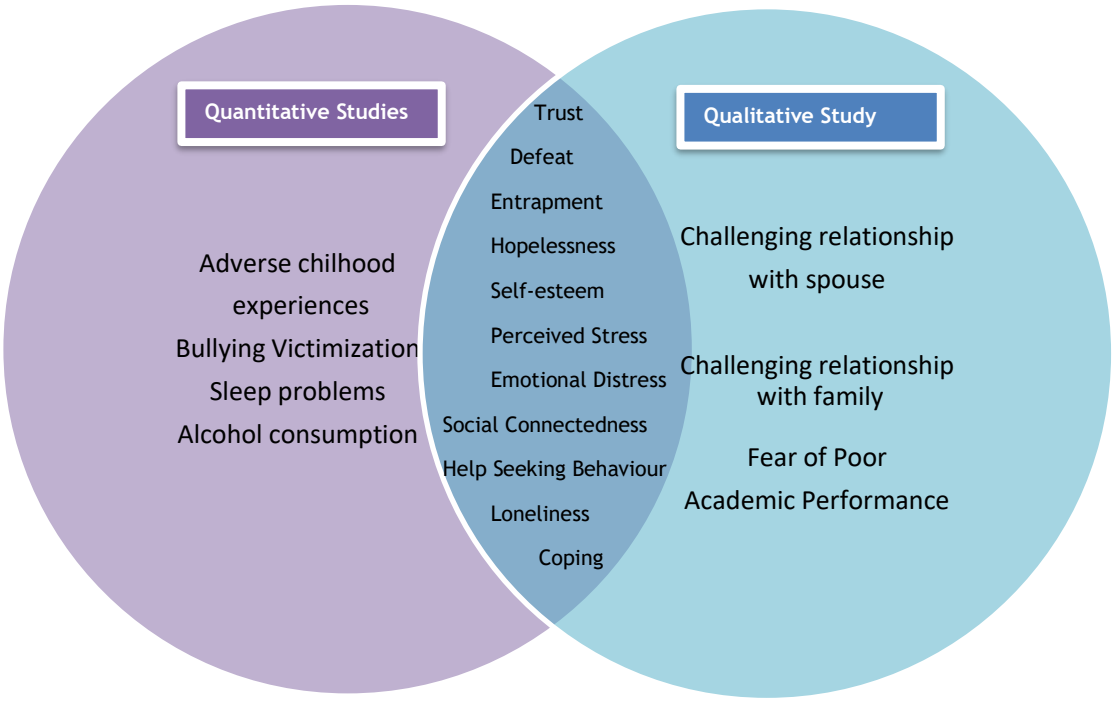
Study 4 – Survey among LAACs

Study 5 - IPA

7.2.1 What are the risk and protective factors for suicidal behaviour among the youth in Jamaica?

Suicidal behaviour (especially among adolescents) has elicited attention worldwide. Such global concern has arisen because suicide stands out as the second leading cause of death among young people between the ages of 15 and 29 years of age, while globally self-harm is one of the strongest predictors for suicide (Hawton & Harriss, 2007; Hawton, Zahl, & Weatherall, 2003). This chapter is a summary of the key findings, while Figure 17 illustrates findings from all studies combined, showing the overlap of evidence between the quantitative and qualitative studies.

Figure 17 Concordance of findings from quantitative and qualitative studies related to risk factors for suicide attempt



7.2.1.1 Suicidal Ideation

The studies in this thesis that examined suicidal ideation revealed an inverse relationship between self-esteem and suicidal ideation. In other words, high

self-esteem is a protective factor against suicidal ideation, while low self-esteem enhances the risk of contemplating suicide. These insights support previous findings that low self-esteem is strongly associated with suicidal behaviour (Evans et al., 2004; Thompson, 2010). In this thesis, other risk factors found to be associated with suicidal ideation include defeat; coping; loneliness; sleep problems due to worry; consumption of alcohol; perceived stress; emotional distress; and victimization caused by bullying, as illustrated in Table 28.

7.2.1.2 Suicide Attempts

As anticipated, the findings revealed a wide variety of factors to be associated with vulnerability to making a suicide attempt. Adverse childhood experiences place LAACs at significantly greater risk for suicidal attempts than those LAACs without a history of a traumatic past (chapter 5). In order to disentangle the relationship between adverse childhood experiences and attempting to take one's life, we examined the relative contribution of each type of abuse as well as neglect. When physical abuse, sexual abuse and neglect were entered into the hierarchical model, sexual abuse emerged as the greatest risk factor for suicide attempt among LAACs. This finding is consistent with previous research, including longitudinal studies (Brown, Cohen, Johnson, & Smailes, 1999), where the risk of repeated suicide attempts has been found to be up to 8 times greater for those youths with a history of sexual abuse, far outstripping other variables (Brown et al., 1999).

Given this important finding, it was somewhat surprising that Study 2 failed to show child sexual abuse (CSA) as a risk factor in the general population of adolescents, although previous studies have revealed similar null results. Further, in their meta-analysis Klonsky and Moyer (2008) found insufficient evidence to support the claim that child sexual abuse plays a primary role in the emergence of suicidal behaviour (Klonsky & Moyer, 2008). However, a more recent meta-analysis offers evidence to the contrary. Indeed, Serafini and colleagues found that - irrespective of gender - child sexual abuse plays an important role in suicidal behaviour (Serafini et al., 2017). It is important to note however, that in the GSHS study deployed a mere proxy for CSA: sexual encounter. Such events may not be perceived as abuse by the respondent even

though sexual encounter with a minor (anyone under the age of 16 years) constitutes child sexual abuse according to the Child Care and Protection Act (Government of Jamaica, 2004).

Another key factor for suicide attempts that emerged from findings in this thesis was victimization via bullying. As discussed in chapter four, adolescents who had a history of being bullied were twice as likely to have attempted suicide than their peers who were not bullied. This corroborates previous findings including global cross-national studies that pointed to significantly increased odds for suicide attempts among adolescents with a history of being bullied (Kim & Chun, 2020).

As previous research has shown (Evans et al., 2017; Kearns et al., 2020; Mars et al., 2019; Russell et al., 2019), we also found that sleep problems were associated with suicide attempts. Sleep problems may be a predictor of suicidal thoughts and behaviours among the youth in particular (Kearns et al., 2020), however more research is needed in this area to determine what are the pathways between sleep problems and suicidal thoughts and behaviours. The implication of the current findings is that clinicians should routinely screen for sleep disturbance among the youth in order to ascertain level of risk. In addition, the presence of the following other risk factors should also be explored: consumption of alcohol; social isolation manifested as not having close friends; challenging relationships with partner; potential of failure at school and low self-esteem to name a few (see Table 28).

7.2.1.3 Self-Harm Ideation

More than a third of adolescents who contemplate self-harm go on to act on those thoughts (Nock et al., 2013). One study in this thesis (Chapter 4) was conducted investigating the correlates of self-harm ideation among looked-after and cared-for adolescents in Jamaica. This study found that the prevalence rate for lifetime suicidal ideation was 41%. This rate is almost double that which was reported (26.5%) in the study among LAACs by Harkess-Murphy et al (2013). This finding is alarming and implies that self-harm is a hidden phenomenon that warrants further investigation especially in this vulnerable population. It is likely that this may be a cry for help (Williams, 2014) as in some of the facilities, there

is evidence of violation of the UN Convention of the Rights of the Child (UNCRC), which has been manifested in inadequate provisions for education, inhumane treatment and risk of physical, psychological and sexual abuse within the childcare facilities themselves (McLean, 2009; UNICEF, 2018a)

Findings from this thesis showed that self-esteem, perceived stress, defeat, entrapment, emotional distress, adverse childhood experiences and coping all independently distinguished between those who seriously contemplate self-harm and those without a history of self-harm behaviour. When all factors were entered in a model together, two factors emerged as being associated with self-harm ideation: emotional distress and adverse childhood experiences. These findings extend those of Harkess-Murphy et al. (2013) who found that self-criticism distinguished between LAAC young people who lived in residential care with self-harm thoughts versus self-harm behaviours (Harkess-Murphy, Macdonald, & Ramsay, 2013). The information gleaned from this study can assist in the development of tailor-made intervention for LAACs targeting the risk factors for self-harm ideation specifically.

7.2.1.4 Self-Harm

Adolescents who self-harm are up to four times more likely to die by suicide than those who have never self-harmed (Hawton et al., 2020; Hawton et al., 2015). In Chapter 5, we explored key correlates of self-harm among LAACs. A little over one third (36%) of LAACs who participated in this study reported engaging in self-harm at some point during their lifetime. This is slightly lower than findings from a study among LAACs in Scotland where 45% of the sample had self-harmed (Harkess-Murphy et al., 2013). Self-harm prevalence rates in the general population have been notably high in the UK which has among the highest rates of self-harm in Europe (Carr et al., 2016). Scotland's rates of self-harm are also higher than those in England (Carr et al., 2016) and may therefore account for the higher rates than those in Jamaica. The fact that the rates of self-harm among this clinical population in Jamaica are only slightly lower than those in Scotland is therefore a cause for concern. Another factor that may have influenced the high rates of self-harm among the LAACs is the duration of time in care. This fell outside the scope of the thesis but is worth investigating if

there is a dose-response relationship between risk of suicidal behaviour and duration in care.

The looked-after and cared for population is a vulnerable group, as they are six times more likely to have a mental disorder than their non-LAAC peers (Meltzer, 2003). Rates of self-harm among LAACs reported in this current thesis in the week prior to taking part in the study was 13%. This is in keeping with those reported by Cousins et al. (2008) of 12.7%. The findings from this thesis have helped us to better understand key risk and protective factors for self-harm. Interventions that are specifically designed for adolescents (such as teaching them adaptive coping skills for dealing with negative emotions) may prove effective in preventing the onset of self-harm, thereby reducing the elevated rates of self-harm that were found among LAACs. Such findings emphasize that in Jamaica self-harm is an important issue requiring urgent attention. Sustainable Development Goal three (SDG #3) sets out to "ensure healthy lives and promote well-being for all at all ages" (*World Health Statistics 2017 Monitoring Health for the Sustainable Development Goals*, 2017). More specifically, indicator 3.4.2 refers to the suicide mortality rate. It is imperative that a comprehensive suicide prevention plan of action be developed in order to achieve this goal by 2030.

7.2.2 What factors differentiate those adolescents in Jamaica who only think about suicide or self-harm from those who act on these thoughts?

We conducted two studies in order to seek answers as to what factors differentiate those adolescents who only think about suicide or self-harm from those who act on these thoughts. The first study (Chapter 5) was a quantitative study utilising a representative sample of looked after and cared for adolescents. One of the key findings of this thesis was that child sexual abuse and physical abuse were the main risk factors for both suicidal ideation and suicide attempts among LAACs. This finding confirms the established association between higher rates of suicidal ideation and physical and/or sexual abuse (Evans et al., 2017).

We found that univariately, self-esteem, perceived stress, defeat, entrapment, emotional distress, adverse childhood experiences, and coping all differentiated those who only thought about suicide from those who acted on those thoughts. There is a strong association between self-esteem and suicide risk (Thompson, 2010). However, such a relationship has received little attention among LAACs. Despite the low rate of attention to their plight, children in foster-care have indeed been found to be at greater risk of low self-esteem. The main reasons are many, but two take precedence: they experience both the stigma of being in care and that of being delinquent. They are also more likely to have experienced child maltreatment and multiple losses of family, friends and community (Farineau et al., 2013).

It has been recommended that suicide prevention programmes for adolescents should have self-esteem as an important area of focus (Hawton, Saunders, et al., 2012). The findings in this thesis underscore this recommendation. Defeat and entrapment were also key factors that distinguished LAACs who think about suicide from those who act on those thoughts. This finding is in keeping with previous narrative reviews that showed adolescents who had higher scores on defeat and entrapment were more likely to experience suicidal behaviour (Siddaway et al., 2015; Taylor et al., 2011). Our findings therefore expand our knowledge of an under researched group: adolescents who are looked after and cared for, yet whose plight remains little understood. This new knowledge

provides an important contribution to our understanding of suicidal behaviour among this doubly vulnerable group.

We also found that when all those variables were placed in a model simultaneously, none of the predictors were able to distinguish between LAACs who think about suicide from those who attempt to take their lives.

With regard to self-harm, our results revealed that by themselves, perceived stress, defeat, entrapment, emotional distress and adverse childhood experiences were able to distinguish between those LAACs who only thought about self-harm from those who engaged in self-harm. However, when all those variables were entered into a model, only adverse childhood experiences and gender were able to distinguish between the two groups. This finding was somewhat surprising to us and warrants further investigation as the number of participants per group (ideation group, enaction group and controls) may not have been adequate to reveal meaningful differences. Another possible explanation is that of the homogeneity of the groups: all participants had shared similar histories of adverse childhood experiences or of exposure to some psychological trauma. It is likely that if this population were compared with their peers who are not in care, the differences would have been more apparent.

Another study sought answers to whether there is a distinction between the factors that lead persons to think about suicide and those that lead them to act on these thoughts (the IPA study in Chapter 6). This study was confined to suicidal ideation and suicide attempts not to self-harm. We were able to identify relational and environmental stressors that seemed to act as precursors for suicidal ideation. These included loneliness, challenging family relationships especially during childhood, and a lack of trust of others. These appeared to lead to psychological vulnerabilities such as lack of social support, depression, sadness, loneliness, defeat, entrapment, substance use and a lack of social connectedness. The main triggers for the suicide attempt, as reported by the participants, were challenging romantic relationships for females and potential failure in school for the males.

We were able to make inferences about protective factors from what participants shared in the interviews about their experiences post attempt. The factors that were identified as being protective were having a reason for living, a sense of belongingness, a sense of self-confidence and self-love, social support and religious beliefs and practices. We now know that adolescents whose parents showed them affection were less likely to attempt to take their lives. One of few studies that have examined the association between parental involvement and suicidal behaviour showed that adolescents who reported greater parental involvement were less likely to have made a suicide attempt than their peers who had less parental involvement. The implication of this is that having a close parent-child relationship will most likely promote psychological well-being among adolescents.

7.2.3 Comparison of risk factors for adolescents and adults

The main risk factors of suicidal behaviour that reported in this thesis includes exposure to adverse childhood experiences such as physical and sexual abuse; bullying and sleep disturbances related to worry. These findings are similar to what has been established by previous research in high-income countries (Liu, Huang, & Liu, 2018; Nock, 2009a; Taliaferro & Muehlenkamp, 2014). These results, however, lie in contrast to those for adults. In keeping with other international studies, factors that emerged from this thesis which were shown to be risk factors for suicidal behaviour were mainly related to feelings of loneliness (Qualter et al., 2015; Stickley & Koyanagi, 2016), challenging relationships - especially with one's intimate partner (Devries et al., 2013); and lack of social support (Kleiman & Liu, 2013).

There are several possible reasons for these differences. First, the differences in perspectives may arise as a result of developmental stages. Another possible reason that may account for the variations in findings relates to the different methodological approaches. A qualitative approach was taken with the adults, allowing for a less structured approach, and using primarily open-ended questions. This feature led to a wider variety of responses. In sharp contrast, was a more rigid approach as seen in the quantitative studies that utilized surveys, where questions were closed ended and responses were fixed and limited to only what was provided by the researchers. A third reason for the

contrast in the findings between the two age-groups is that all three populations were markedly different: one was the general adolescent population, the second was a sub-population of cared for adolescents; and the third consisted of an adult clinical population of persons who had attempted to take their lives and who subsequently went to hospital as a result of making the attempt. It is of little surprise, therefore, that there were obvious differences exist between the risk factors for each age-group.

7.2.4 How do persons make sense of their lived experiences of making a suicide attempt?

In order to get a deeper understanding of how persons make sense of their lived experiences of making a suicide attempt, an IPA study was undertaken. The IPA study (Chapter 6) underscores the fact that suicidal behaviour is a complex phenomenon. Findings revealed clear evidence that relational and environmental stressors such as challenging relationships with family during childhood, loneliness, a lack of trust of others and multiple losses especially the death of a loved one act as precursors for suicidal ideation.

The stressors mentioned were associated with individuals reporting becoming emotionally fragile and seemed to eventually lead them to buckle under life's pressures. The psychological vulnerabilities included a perceived lack of social support, intense feelings of loneliness, and a lack of social connectedness. Depression, sadness and hopelessness were also common among participants and appeared to contribute to feelings of defeat and entrapment. One way of coping was the consumption of potentially harmful substances such as alcohol. This finding is consistent with other research that has shown an association between coping, alcohol consumption and suicide attempts, especially among men (Grazioli et al., 2018).

There was a marked difference between the main triggers for the suicide attempt that females identified compared to the lone male in the study. For females, having a challenging relationship with their spouse was what tipped the balance and acted as the main catalyst for their suicidal attempt. Previous research has shown that challenging relationships with one's spouse increases the risk of suicidal ideation (Gibbs et al., 2018) as well as suicide attempts

(Devries & Seguin, 2013) among women. By contrast, for the male, the perception of imminent failure academically seemed to prompt his suicidal attempt. This gender difference is instructive but given that there was only one male interviewed, such differences warrant additional study.

It is interesting to note that all four participants expressed regret at making an attempt to end their lives and made a resolve not to make such an attempt in the future. There are some significant factors that seemed to combine to place them on the path to recovery and healing; these include having a reason for living (Bakhiyi et al., 2016), a return to and embracing of former religious beliefs and practices (Gearing & Alonzo, 2018), having a sense of belongingness and a sense of self-confidence and self-love. The lack of social support was also a critical factor that emerged in the IPA study as being associated with making a suicide attempt. This finding was not surprising as having social support is critical in helping to reduce the risk of suicide attempt by over 30% (Kleiman & Liu, 2013). Once respondents recognised that they had social support and made use of the resources available to them, they reportedly were less inclined to make a suicide attempt in the future.

7.3 Theoretical Implications

There was evidence to support Joiner's Interpersonal Theory of Suicide as our findings in Chapter 6 showed that loneliness or social connectedness and low belongingness or social isolation were key components that led persons to act on their suicidal thoughts (Joiner et al., 2005). We did not find evidence to support the assertion that perceived burdensomeness is also a risk factor for suicidal attempts, because this was not clearly measured as the study was qualitative and exploratory in nature. Similarly, for Klonsky & May's Three Step Theory, we did find evidence that when persons' psychological pain exceeded their social connectedness and once this persisted over time, this led to suicidal ideation (Klonsky & May, 2015a). Persons who acted on their suicidal thoughts apparently chose means that were not lethal or received intervention early enough to avoid dying by suicide. The evidence was inconclusive however as to whether or how persons might have acquired the capability for suicide or whether they may have been habituated. The sample size for this study was very small, and therefore we lack sufficient evidence to make firm claims about the extent to which this

model is applicable in the Jamaican context. Further research with a more robust sample is necessary in order to determine the usefulness of these models in the Jamaican context.

The studies in this thesis are unique as the variables examined such as bullying, self-esteem, sleep problems and adverse childhood experiences have been either seldom included, or for the first time has the IMV model been tested within a Jamaican context. There is still room for further research however, to explore the pathways between sleep problems, loneliness bullying, and self-esteem and their relationship with defeat and entrapment among the Jamaican population.

The study among LAACs (Chapter 5) is the first study that we are aware of in which components of the IMV model were tested in the LAAC population and the findings show significant potential. Findings from this thesis confirm in part that the IMV is useful in explaining suicidal behaviour among adolescents as previous studies have shown (Dhingra et al., 2015; O'Connor, Cleare, et al., 2016; O'Connor, Rasmussen, & Hawton, 2012; O'Connor, Rasmussen, & Hawton, 2014; O'Connor, Rasmussen, Miles, & Hawton, 2009). A limited number of studies in LMICs have examined the utility of the IMV model in helping to explain suicidal behaviour in either non-Western settings or countries that are not high-income countries. Two of those studies that have provided early evidence of the applicability of the model in LMIC contexts were conducted in South Korea and sub-Saharan Africa (O'Connor & Kirtley, 2018). The South Korean study was conducted among college students and found that entrapment was a mediator between defeat and suicidal ideation, which the IMV suggests.

The other study was a case study in which the IMV was used to help examine the circumstances that led to that death by suicide (O'Connor & Kirtley, 2018). To our knowledge, this is the first time that the IMV model has been examined among the Jamaican population. Our studies suggest that the IMV model seems to be applicable in LMICs such as Jamaica. This evidence therefore helps to bolster its applicability across diverse cultures. However, further interrogation is needed among this and other populations in the Caribbean and elsewhere, examining other variables in the IMV variables such as social problem-solving, ruminative processes, exposure to suicide and fearlessness about death, the pathways between feelings of defeat/humiliation and entrapment, and the

underlying factors involved in the process of ideation to enaction in order to fully test the model (O'Connor & Pirkis, 2016; O'Connor, Cleare, et al., 2016; O'Connor & Kirtley, 2018).

The IMV model is arguably one of the most comprehensive models of suicidal behaviour. Evidence from studies in this thesis suggest that multiple factors in combination, are associated with greater risk of self-injurious behaviour. While there is the need for further research, these findings imply that there is the need for further interrogation of the IMV model and the Ideation to Action framework. More rigorous research may likely help to further elucidate the cycle between suicidal ideation and intent and suicidal behaviour and back. For example, chapter six lends support to the postulation that the concept of ideation to action is not a simple linear process, as some persons contemplate suicide, but may not act on the thoughts if they have social support or feel loved and cared for, especially by family members. Additionally, it is likely that some sociocultural beliefs such as religious beliefs that suicide is a sin for which one will not gain any redemption may sometimes act as a buffer against acting on suicidal thoughts. Those results from chapter six have to be viewed with caution however, as the sample size was small. It is imperative therefore that similar studies be conducted among larger sample sizes.

Despite all the research that has been conducted, our knowledge about the transition from suicidal ideation to attempts is still inadequate. The Ideation-to-action theories used in this thesis are relatively new and only with more rigorous research in various settings and populations will we be able to determine their true value, or we may have to revisit how we conceptualize the factors that lead to making a suicide attempt. Notably, although we did not find evidence to differentiate those who think about suicide and those who act on those thoughts, as set out in the Ideation to enaction theories, this was not unusual as we did not slavishly adhere to any of the models. Another important consideration is that there may be other factors outside of those identified in any of the three models that are at play, that we simply have missed, because those are not yet under scrutiny (Klonsky, Qiu, et al., 2017). For example, in the IMV, at present the emphasis has been on volitional factors which are limited to access to means, impulsivity, physical pain sensitivity among others (Klonsky,

Qiu, et al., 2017; O'Connor & Pirkis, 2016; O'Connor & Kirtley, 2018).Similar to what has been found previously, findings from this thesis have not been able to predict those who will attempt suicide among ideators (Klonsky, Qiu, et al., 2017).

7.4 Clinical Implications

This thesis has helped to shed some light on the nature and extent of suicidal and non-suicidal behaviour among young people, an under-researched topic in Jamaica. Evidence from Chapters 3, 4 and 5 show alarming rates of suicidal and non-suicidal behaviour among young people. In a representative sample of looked after and cared-for adolescents (LAACs) we found that the prevalence rates for suicide attempt was 45% and for self-harm it was 36%. These rates suggest that we have a public health emergency that demands an urgent response.

Many of the looked after and cared-for adolescents who are placed in residential care have already experienced significant psychological trauma and are more vulnerable psychologically than their peers who are not in care. Lessons from this thesis underscore the need for specific training for staff who work at these residential care facilities and by extension for all workers (including hospital staff, police, teachers, and others) who come in contact with children and adolescents who may experience psychological trauma. Such training should include knowledge and skills required to provide timely, meaningful support in a sensitive manner. A useful programme, the Trauma Training Programme, has been developed by the Scottish Government and replicated in several countries around the world (NHS, 2018). It is equally important for child and youth care workers to understand the critical role they play in the lives of these young people and the ways in which their job can negatively impact upon their wellbeing. Therefore, the findings from this thesis imply that staff in residential care facilities and all frontline workers who encounter young people who are at risk of suicidal behaviour behaviours should be taught the importance of self-care and strategies they can employ in preventing burnout. The Trauma Training Programme also provides training in this area as well (NHS, 2018).

The current findings also have implications for a revision and possible modification in the curriculum for teachers and guidance counsellors in training in risk factors for suicidal behaviour and how to detect students who may be at risk. Previous studies conducted outside of Jamaica have shown that teachers and even Guidance Counsellors feel ill-equipped to properly respond to incidents of suicidal attempt and self-harm among students in their care (Ross, Kõlves, & De Leo, 2017). We were unable to find local research conducted on the topic in Jamaica, however, this is an area worth exploring in future research. Nonetheless, it may be safe to extrapolate that there may be similar sentiment among a comparable population in Jamaica.

7.5 Further Implications

As discussed in Chapter 1 of this thesis, Jamaica's mental health policy was last updated in 1997, and is likely in need of revision. For example, the existing policy does not speak to the mental health of children and adolescents specifically. However, the findings from our research can help to shape such a revision in policy and points to the urgent need to include the prevention of suicide among this vulnerable population.

Notably, Jamaica does not have a national suicide prevention policy neither does it have a crisis hotline to call if persons are emotionally distressed and want urgent intervention before seeing a clinician. While efforts have been made in the past for such services to be provided, neither is in place at present.

Given the elevated risk of suicidal behaviour in the general population of adolescents as shown in chapter 4 of this thesis, having a knowledge of some key risk factors is useful in helping to mitigate the risk of them engaging in future suicide attempts. It has been established that suicide attempt is one of the greatest predictors of future suicide (Hawton, Saunders, et al., 2012; Hawton et al., 2003; O'Connor et al., 2012). The findings from this thesis point to the need for the development of school-based suicide prevention strategies in order to help decrease the risk of suicidal thoughts and behaviours among this vulnerable group. Research conducted in high income countries has shown that school-based suicide prevention strategies have been beneficial in helping to reduce the

prevalence of these behaviours among adolescents (Singer, Erbacher, & Rosen, 2018).

Findings from this thesis also imply that there may be a need for modification in the training of medical doctors in Jamaica to include routine suicide risk assessment and screening especially among adolescents and young adults even if self-harm is unsuspected. This is critical as sometimes individuals consider and have hidden plans to harm themselves and this could be prevented if it comes to the attention of health care professionals.

The tools used in these assessments should focus on prominent risk factors such as bullying victimization, adverse childhood experiences, and loneliness. By extension, general practitioners and paediatricians are also strongly encouraged to undertake suicide risk assessment as part of their routine care of children and young adults. Research findings show that many persons who die by suicide visit their doctor within 12 months of taking their lives (Stene-Larsen & Reneflot, 2019).

There is also a significant need for training of frontline workers in hospitals to be aware and sensitive to an individual's living arrangements before discharge from hospital. The concern is that after discharge they may return to a potentially dangerous or harmful environment that led them to attempt suicide in the first place as happened with one of the participants in the IPA study.

7.6 Reflexivity and Research Practices

The safety of participants was central to the development of the planning of the studies in this current thesis. Appropriate measures were taken to achieve that objective, as evidenced in chapters 4-7 of this thesis. For example, participants' anonymity was preserved using ID numbers for quantitative studies and pseudonyms for the qualitative study.

Another set of steps that were taken was to ensure that prior to the start of the studies participants were made aware of the nature of the research; they were given the opportunity to decide if they wanted to voluntarily participate; and they were reminded that they had the option of withdrawing from the study at

any time; they were also given a Directory of Support services that they could access, most of them *pro bono* in the event that they became emotionally distressed as a result of their participation in the study. It was also of paramount importance to properly screen and assess the risk of suicide prior to inviting persons to be a part of the qualitative study and even before the interviews began as well as at the end of the interview, as for some persons, simply talking about their thoughts and feelings related to past events can be a trigger for future suicide attempts or self-harm. These are practices that will continue to be applied in carrying out future research.

One observation that was made by the researcher (KPB) is that during the studies when primary data was collected, although many individuals expressed gratitude for being given the opportunity to explore their feelings for the first time, there were a few who showed signs of emotional distress while data collection was taking place. This was expected, and plans were put in place before the commencement of data collection to deal with these eventualities. Nevertheless, from all indications, there was no evidence that participants were seriously negative impacted because of their participation in any of the studies.

Knowing that persons seriously consider or engage in self-injurious behaviour with or without an intent to die can be emotionally distressing. It became apparent even before data collection commenced, that there is a need for support to be in place for researchers as one is not immune to the negative effects of having to be fully immersed for prolonged periods in content that is challenging to process at the emotional level. Despite having the benefit of courses such as Mental Health First Aid and others where emphasis is placed on self-care, it can still be difficult to adequately manage one's emotions and to be aware of when it is important to take a break from working on the current research project. Doctoral students in the field of mental health, especially those who examine topics such as suicide should be provided with clinical supervision and routine support in order to protect their own mental health.

A mixed methods approach was employed to answer the research questions that prompted these studies. This was the best approach as, stated in chapter 1, the advantages and disadvantages of quantitative and qualitative methods by themselves, were balanced out when combining the strengths and limitations of

each approach had any one approach been used by themselves. As, demonstrated throughout the thesis, a mixed methods research design has yielded rich, detailed data that could not otherwise have been possible.

7.7 Strengths, Limitations and Future Directions

The five studies that form a part of this thesis, together contribute significantly to the existing literature on the risk and protective factors for Self-harm. The results contained herein help us better understand a range of key factors that may lead young people in Jamaica to engage in Self-harm. It also gives limited insight into some protective factors against these self-destructive behaviours.

The systematic review in Chapter two of this thesis revealed that prior to this research, predominantly convenience sampling was used, including retrospective studies of police or hospital records. Whereas the empirical studies contained in this thesis used large representative sample sizes. One study recruited participants from the general population of adolescents covering the entire island (Chapter 3). Another focused on looked-after and cared-for adolescents, sampling from almost all eligible facilities across the island (Chapter 5). It is with a greater degree of confidence therefore, that we can generalize our results to the respective populations.

As seen in the systematic review in Chapter 2, several of those studies were limited to the use of descriptive statistical analyses. The quantitative studies in this thesis utilised a combination of descriptive and inferential statistical analyses. Therefore, we were able to better understand and explain the phenomena of Self-harm than merely provide summaries of the data.

The overall findings from this thesis furnish us with richer and more meaningful answers to the research questions that would not have been possible using either quantitative or qualitative methods by themselves. That approach known as mixed methods research, has become increasingly more popular in the social sciences and other disciplines.

In the case of the two main quantitative studies in this thesis, namely the secondary analysis of data in Chapter 3 and the main study of looked-after and

cared-for adolescents in Chapter 5, statistical power was achieved. In order to accomplish this, the studies were designed *a priori,* to determine an adequate sample size according to Cohen's recommendations in order to yield statistically detectable results (Tabachnick, 2014). This is not always achieved even when researchers plan. Thus, we can be fairly certain that the main findings were not due to chance.

Notwithstanding the strengths of this thesis, the results must be interpreted within the context of the studies' limitations. All four empirical studies were cross sectional and therefore it was not possible to examine changes in participants' thoughts, feelings or behaviour over time. We propose that prospective designs be considered for future research. Another important limitation is that a qualitative study was not done with the looked-after and cared for adolescents given that levels of self-injurious behaviour were elevated. This was not feasible however, as there was no way to identify which of the participants were more at risk as the surveys were completed anonymously. Another reason this was not further explored is that these very elevated prevalence rates were unexpected and there were time constraints in getting data collection complete.

Given that there was limited time to complete data collection and given that there were already delays experienced in gaining ethics committee approval in Jamaica, the research team did not think it was prudent to undertake any studies that would cause any further delays. One approach that should be considered in the future is for a mixed methods sequential research design to be utilised where quantitative research is done, then this informs qualitative research done among the same population.

Suicidal behaviour is multifaceted and complex making it difficult to study and measure. As discussed in all empirical study chapters, the reliance on self-report measures can be problematic for several reasons including recall bias and social desirability responding. Self-report measures are also relatively subjective, and there is the likelihood that participants may interpret the same item in different ways, especially given cultural differences. These issues are difficult to overcome, and it is widely accepted limitation in research in psychology, despite the measures being valid and reliable. It is likely that suicidal behaviour has

been underreported among the participants as has been acknowledged by other researchers.

Another limitation of the studies is that all the same variables were not examined across studies. This was due to the evolution of how the overall structure of the studies emerged. At first, when the research team was deciding on the nature of research designs to employ, it was agreed that there would be a combination of qualitative and quantitative studies with at least one study being conducted among looked after and cared-for adolescents. Another consideration was to conduct one of the studies in a clinical setting in collaboration with one of the lead researchers and psychiatrists in Jamaica. When we approached him, he suggested that no qualitative studies had been done to date among that population and therefore, the decision was later made to undertake an IPA study among persons who had presented to hospital who had attempted suicide. This was a unique study in Jamaica.

Later, by a fortunate stroke of serendipity, the researcher (KPB) was offered the GSHS data for analysis. The team subsequently decided on the breadth of studies that would have been undertaken for purposes of fulfilling the requirements for this thesis. In retrospect, perhaps there could have been greater cohesion between studies for more in-depth exploration of the issues confined to one specific population. Nonetheless, it is believed that the strengths of the thesis outweigh the limitations.

7.8 Conclusion

Suicide is the second leading cause of death globally among young people 15 to 29 years of age. Although Jamaica's overall prevalence rate of 2.1 per 100,000 population seems low and is indeed among the lowest in the world; Jamaica has among the fastest rates of growth of suicide globally. The pace at which suicides are rising in Jamaica suggests that the phenomenon of suicidal behaviour presents a public health emergency and demands urgent attention.

All five studies that form part of this thesis have helped to expand the existing body of knowledge regarding the risk and protective factors of suicidal behaviour. The findings underscore the fact that suicidal behaviour consists of a

complex interplay of several factors involving an overwhelming sense of emotional pain coupled with a constriction in thinking that together convince individuals that the only option is to take their lives. Once such persons' perspectives change and they learn new ways of thinking, more adaptive coping, coupled with social support, the desire to die diminishes. Another significant contribution is that this body of work, the first to explore the topic in detail in the context of Jamaica, has helped us better understand the correlates of suicide risk and self-harm. The findings have provided some support and possible expansion for models of suicidal behaviour such as the IPTS, 3ST and the IMV and demonstrates the models' applicability to the Jamaican population. In all probability, findings from this study will be benefit the design of culturally relevant support systems; a suicide prevention policy; and strengthen the existing Mental Health plan in Jamaica so as to include adolescents in general yet with specific reference to looked-after adolescents who contemplate suicidal behaviour.

Appendices

Appendix 1

Data Analysis Plan

Topic: Investigating the Risk & Protective Factors of Suicide and Self-harm in Jamaica

Overarching research question for thesis: What are the risk and protective factors for suicide and self-harm among the youth in Jamaica?

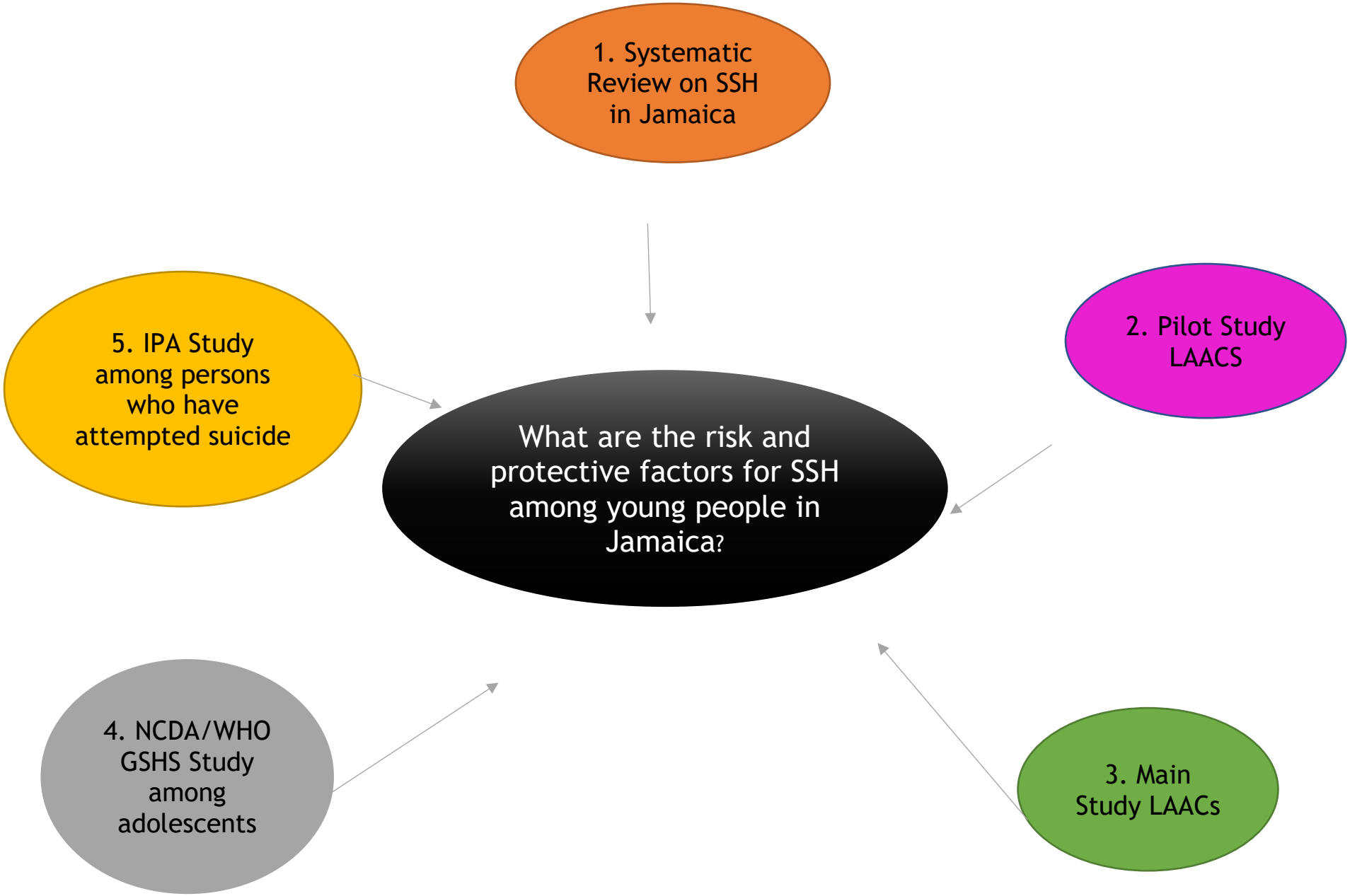
Aims of thesis:

1. To better understand what are the risk and protective factors for suicide and self-harm among young people in Jamaica.
2. To explore how do persons make sense of their lived experiences of attempting suicide.

List of empirical studies:

1. WHO/NCDA - secondary data analysis of 2017 survey n = 1667
2. CDA - pilot among Looked After and Cared for Adolescents n = 36
3. CDA - survey among Looked After and Cared for Adolescents n = 221
4. IPA - how persons make sense of the experiences of making a suicide attempt n=4.

Studies in this thesis



Topic	Research Questions	Objectives	Variables	Statistical Analysis
2. CDA Pilot Study.	1) Is the survey instrument easily understood by participants? 2) What are some of the logistical challenges that may arise in the preparation and administration of the survey? 3) To what extent do LAACs think about and/or attempt suicide or self-harm? 4) Is there a relationship between coping, self-esteem, child maltreatment, defeat and entrapment, perceived stress, emotional distress, social connectedness, and suicide and self-harm among a sample of LAACs in a Place of Safety in Jamaica?	1) to determine the suitability of items in the survey to see if they are easily understood by respondents. 2) to identify and address any potential challenges that may arise with respect to the administration of the survey. 3) to explore the emotional wellbeing of LAACs in a childcare facility in Jamaica.	Items in survey Instructions in survey	Missing Data Analysis Descriptive Statistics Frequencies Mean SD

Topic	Research Question	Objectives	Variables	Statistical Analysis
4. SSH Among Adolescents in Jamaica (UNICEF/ NCDA/MoH/	1. What factors distinguish between Jamaican adolescents who think about suicide (suicidal ideation group), those who attempt suicide (suicide attempt group) and those who have never been suicidal (control group)? 2. Which factors are greatest risk for suicidal behaviour? 3. Which factors are protective against suicidal behaviour?	1. To examine the extent to which emotional factors distinguish between adolescents who are ideators, enactors or controls.	IV i. Parental involvement ii. School performance iii. Future Thinking iv. Substance Use a) Marijuana b) Tobacco c) Alcohol	Multinomial Logistic Regression

	4. Do any of the protective factors act as moderators between suicidal ideation and suicide attempt?		**DV (nominal)** **Suicidal behaviour** **3 Levels/Groups** - Suicide attempt - Suicidal ideation - Controls	

Topic	Objectives	Statistical Analysis
d) "I don't have anyone to talk to": the lived experiences of persons who have attempted suicide. An IPA.	1. To better understand the lived experiences of Jamaicans who attempt suicide. 2. To identify the factors that may have led Jamaicans to have thoughts of suicide. 3. To explore what may have led them to act on these thoughts. 4. To analyse how those who have attempted suicide view their experience since attempting to take their life.	Interpretative Phenomenological Analysis

Appendix 2

Search terms for Systematic Review on Suicide and Self Harm in Jamaica

Database	Search Strategy
EMBASE (Ovid)(1947-28/09/2020)	#1 exp suicide/ or exp suicidal ideation/ or suicide attempt/ or suicidal behaviour/ #2 exp automutilation/ #3 exp drug overdose/ #4 Jamaica.m_titl. #5 1 or 2 or 3 #6 4 and 5
Ovid MEDLINE (R) (1946 to Sept. week 4 2020)	#1 exp Drug Overdose/ #2 Jamaica. m_Titl. exp #3 exp Suicide/ or exp Suicide, Attempted/ or Suicidal Ideation #4 1 or 3 #5 2 and 4
PsychINFO EBSCOhost (1967-September week 4, 2020)	S1 KW suicide OR KW suicide attempt OR KW suicide ideation OR KW (self harm or self injury or deliberate self harm or self mutilation or self injurious behaviour) S2 TI Jamaica

	S3 S1 AND S2 S4 PL Jamaica S5 S2 OR S4 S6 S1 AND S5
SCOPUS	Suicide OR self harm OR self injury OR suicide attempt OR suicidal ideation OR self harm ideation OR self injury ideation (title, abstract or keyword) AND Jamaica limiter (title, abstract or keyword): Country: Jamaica.
Web of Science All databases (1864-2020)	**TOPIC:** (suicid*) *OR* **TOPIC:** (self near/2 harm*) *OR* **TOPIC:** (self near/2 injur*) *OR* **TOPIC:** (self hear/2 poison*) *OR* **TOPIC:** (overdos*) *OR* **TOPIC:** (self near/2 cut*) *OR* **TOPIC:** (parasuicid*) **Refined by: COUNTRIES/REGIONS:** (JAMAICA) *Databases= WOS, BCI, BIOSIS, CABI, CCC, DRCI, DIIDW, KJD, MEDLINE, RSCI, SCIELO, ZOOREC Timespan=All years* *Search language=Auto*

Appendix 3

Data Extraction Sheet for Systematic Review

Review Title:	Risk and Protective Factors for suicide and self-harm among Jamaicans

Study ID:	Study Title:
Reference ID:	Year of publication:
Notes:	Author(s):

General Information

Date of data extraction:dd/mm/yyyy

Name of person extracting data: KPB

Report title

Report author contact details: Email: _____

University of Glasgow, College of Medical Veterinary & Life

Sciences, Suicide Behaviour
Research Lab.

Publication type:

Study funding source:
none

Possible conflicts of interest (for study authors): none

Eligibility	Eligibility criteria met? Yes No Unclear Not reported
1. Data collected in Jamaica.	
2. Paper written in English.	
3. Participants have engaged in self-harm or who have suicidal ideation.	
4. Participants must be Jamaican/Caribbean.	
5. Empirical study.	
Type of study: Randomised controlled trial	

Quasi-randomised controlled-
trial trial

Non-randomised controlled
trial

Cohort
study

Case controlled
study

Cross-sectional
study

INCLUDE EXCLUDE

Reason (s) for exclusion:

Notes:

DO NOT PROCEED IF STUDY EXCLUDED FROM REVIEW

Study Design

Population and Setting

Population description:

Population

Control
group

Describe setting
(include location and
social context:

Inclusion
criteria:

Exclusion
criteria:

Methods of recruitment of
participants:

Methods

Aim of
study.

Design.

Unit of allocation if relevant (e.g. by
individuals, cluster/groups)

Start date:

End Date:

Duration of participation (from recruitment to last follow-up):

How suicidal ideation was measured

How suicidal attempt was measured

Notes:

Risk of Bias assessment

Participants

Total #

Withdrawals and exclusions

Age	Range	Mean	Std. Dev.
Gender	Male	Female	
Race/Ethnicity			
Other relevant socio-demographics			

Subgroups measured

Subgroups reported

Notes:

Outcomes

Suicide	Attempted	# Previous attempts	Completed	Is Suicide attempt measured?	Measure(s)	Author did not provide info
	Yes No		Yes No	Yes No		
Suicidal ideation	Present	Absent			Measure(s)	Author did not provide info

Risk factors studied

Notes:

Main findings

Notes:

			Exclusion after data extraction		
Reasons for exclusion:	Study design	Participants	Outcomes	Attrition bias	Other (Specify)

Name of person who checked: Date: (dd/mm/yyyy)

Appendix 4

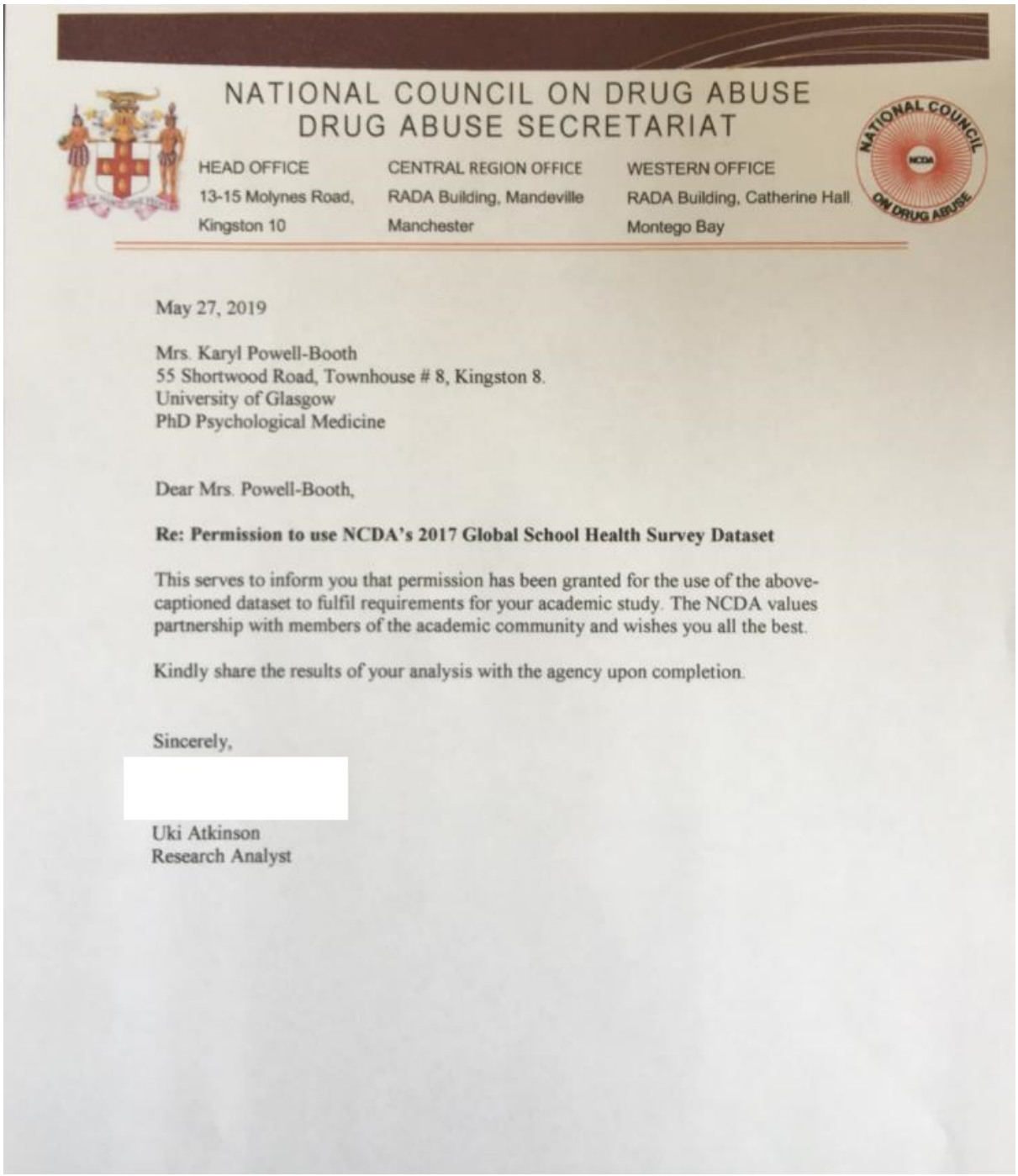
Quality Assessment Tool for Systematic Review

Criteria	0	1	2	3
Aims/Objectives	No mention of study aim or objectives.	Study aim/objectives unclear.	Study aims/objectives clearly stated.	-
Design	Cross-sectional & retrospective	Case-comparison. *Groups not adequately matched*	Case-control. *Age and gender matched*	Prospective cohort. *Requires details of follow-up procedure*
Power	No mention of power calculation	Power calculation reported, but unclear if power was achieved	Power calculation reported, but sufficient power not achieved.	Power achieved
Sample representativeness	No description of sample representativeness	Selected group *e.g. particular disease group/ pupils attending single or few schools*	Somewhat representative of the general population	Truly representative of the general population

Suicide assessment	No description of how suicide behaviour was assessed.	Non-validated/weak scale or other means of self-report *e.g. single question*	Suicide behaviour items from a validated diagnostic/ mood rating scale	Clinical interview, validated suicide scale, psychological autopsy, death certificate/ cause of death register.
Comparison group	No study/analytical group free from suicidal behaviour.	At least one study/analytical group free from suicide.	-	-
Confounding variables	No attempt to account for potential confounding variables in recruitment or analysis.	Accounts for basic confounding variables either during recruitment or analysis *e.g. Age, Gender*	Accounts for basic and additional confounding variables either during recruitment or analysis (particularly mood disorder), *e.g. depression, substance use, physical illness, family factors*	

Appendix 5

Permission from National Council on Drug Abuse for Secondary Analysis of Data Global School Health Survey 2017



NATIONAL COUNCIL ON DRUG ABUSE
DRUG ABUSE SECRETARIAT

HEAD OFFICE
13-15 Molynes Road,
Kingston 10

CENTRAL REGION OFFICE
RADA Building, Mandeville
Manchester

WESTERN OFFICE
RADA Building, Catherine Hall
Montego Bay

May 27, 2019

Mrs. Karyl Powell-Booth
55 Shortwood Road, Townhouse # 8, Kingston 8.
University of Glasgow
PhD Psychological Medicine

Dear Mrs. Powell-Booth,

Re: Permission to use NCDA's 2017 Global School Health Survey Dataset

This serves to inform you that permission has been granted for the use of the above-captioned dataset to fulfil requirements for your academic study. The NCDA values partnership with members of the academic community and wishes you all the best.

Kindly share the results of your analysis with the agency upon completion.

Sincerely,

Uki Atkinson
Research Analyst

Appendix 6

Global School Health Survey outcome measure with 5-point Likert-type scale

2017 GLOBAL SCHOOL-BASED STUDENT HEALTH SURVEY RESULTS

Jamaica Survey

Codebook

Data Location	Standard Variable Name	Country Variable Name	Question Code and Label		Unweighted Frequency	Weighted Percentage
47-47	Q23	Q19	During the past 12 months, how often have you been so worried about something that you could not sleep at night?			
			1	Never	693	42.4
			2	Rarely	339	20.4
			3	Sometimes	398	24.3
			4	Most of the time	146	8.8
			5	Always	70	4.1
				Missing	21	
48-48	Q24	Q20	During the past 12 months, did you ever seriously consider attempting suicide?			
			1	Yes	422	24.9
			2	No	1,178	75.1
				Missing	67	
49-49	Q25	Q21	During the past 12 months, did you make a plan about how you would attempt suicide?			
			1	Yes	408	24.7
			2	No	1,227	75.3
				Missing	32	
50-50	Q26	Q22	During the past 12 months, how many times did you actually attempt suicide?			
			1	0 times	1,322	82.1
			2	1 time	155	8.8
			3	2 or 3 times	86	4.7
			4	4 or 5 times	31	2.0
			5	6 or more times	42	2.4
				Missing	31	
51-51	Q27	Q23	How many close friends do you have?			

Appendix 7

University of Glasgow

Institute of Health & Wellbeing

Survey Packet Pilot Study

Ministry of Health

Understanding the Emotional Well Being of Jamaican Looked-After Adolescents

Participant ID # 13_50_40_1_7701 Date:_____

Dear participant,

Thank you for agreeing to take part in this study. On the following pages, you will find some questionnaires about your thoughts, feelings and behaviour. For each section, please read each set of instructions carefully and answer the questions as truthfully as you can. If you have any questions, or concerns, let the researcher know and she will assist you as best as possible. Remember that your responses will be kept confidential and it will not be possible to identify who you are in any research reports that may be written.

Demographic Questionnaire

Instructions: Answer each of the following questions by placing a tick (Ã) in the box that best describes you, or writing the answer on the line provided.

1. What grade are you in? 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐
2. How old are you? _____ years
3. What is your gender? Male ☐ Female ☐
4. Which of the following best describes you?

In Residential Facility ☐ Reintegrated in Family Care ☐

In Living in Family Environment (Foster Care etc.) ☐ Under Supervision Order ☐

5. Have you ever been hospitalized? Yes ☐ No ☐
6. Have *you* ever been diagnosed with any of the following psychological conditions?
    a. Emotional problems ☐
    b. Behavioural problems ☐
    c. Learning Problems ☐
    d. Hyperactivity ☐
    e. Other (Specify) _____

7. Have you ever received counselling or therapy for any challenges/issues you've experienced?

   Yes ☐ No ☐

8. Has *anyone in your family* ever been diagnosed with any of the following?

   a. Emotional problems ☐

   b. Behavioural problems ☐

   c. Learning Problems ☐

   d. Hyperactivity ☐

   e. Other (Specify) _____

Please continue to the next section.

ACE

Instructions: Each of the following questions refer to experiences that may or may not have happened to you while you were growing up. If any of them apply, tick Yes, if none applies, tick No.

While you were growing up:

	Yes (1)	No (0)
1. Did a parent or other adult in the household often … Swear at you, insult you, put you down, or humiliate you? OR Act in a way that made you afraid that you might be physically hurt?		
2. Did a parent or other adult in the household often … Push, grab, slap, or throw something at you? OR Ever hit you so hard that you had marks or were injured?		
3. Did an adult or person at least 5 years older than you ever … Touch or fondle you or have you touch their body in a sexual way? OR Try to or actually have oral, anal or vaginal sex with you?		
4. Did you often feel that …		

No one in your family loved you or thought you were important or special? OR Your family didn't look out for each other, feel close to each other, or support each other?		
5. Did you often feel that … You didn't have enough to eat, had to wear dirty clothes, and had no one to protect you? OR Your parents were too drunk or too high to take care of you or take you to the doctor if you needed it?		
6. Were your parents ever separated or divorced?		
7. Was your mother or stepmother: Often pushed, grabbed, slapped, or had something thrown at her? OR Sometimes or often kicked, bitten, hit with a fist, or hit with something hard? OR Ever repeatedly hit over at least a few times or threatened with a gun or a knife?		
8. Did you live with anyone who was a problem drinker or alcoholic or who used street drugs?		
9. Was a household member depressed or mentally ill or did a household member attempt suicide?		

10. Did a household member go to prison?		

Please continue to the next section.

ACS

Instructions: For each of the following items below there are a list of ways in which people cope with concerns or problems. Usage: Record how you respond to things that concern you in general. For each item, circle the number to the left of the statement to indicate how often you use this response to cope with your concerns or worries. Helpfulness: When people try to cope with their concerns, some responses may seem helpful but others are not. Please circle the number to the right of each statement to show how often each response is helpful when you use it. If you never use that response, do not circle any number. Example: If you sometimes cope with your concerns by organising a group to deal with the concern, you would circle 3, as shown on the left. If you very often find it helpful, you would circle 5, as shown on the right.

1 = Never 2 = Seldom 3 = Sometimes 4 = Often 5 = Very Often

How often do I use it? (Usage)	Ways of Coping	How often is it helpful when I use it? (Helpfulness)
1 2 ③ 4 5	E.g. Organise a group to deal with the concern.	1 2 3 4 ⑤
1 2 3 4 5	1. Look for support and encouragement from others.	1 2 3 4 5
1 2 3 4 5	2. Work hard.	1 2 3 4 5
1 2 3 4 5	3. Worry about what will happen to me.	1 2 3 4 5

1	2	3	4	5	4. Blame myself.	1	2	3	4	5
1	2	3	4	5	5. Don't let others know about my problem.	1	2	3	4	5
1	2	3	4	5	6. Pray for God to look after me.	1	2	3	4	5
1	2	3	4	5	7. Act up and make life difficult for those around me.	1	2	3	4	5
1	2	3	4	5	8. Keep fit and healthy, e.g. play a sport.	1	2	3	4	5
1	2	3	4	5	9. Spend more time with a good friend.	1	2	3	4	5
1	2	3	4	5	10. Find a way to let off steam, e.g. cry, scream, drink, take drugs.	1	2	3	4	5
1	2	3	4	5	11. Shut myself off from the problem so I can try and ignore it.	1	2	3	4	5
1	2	3	4	5	12. Look on the bright side of things and think of all that is good.	1	2	3	4	5

Please continue to the next section.

SITBI

Instructions: The following questions are about suicidal thoughts and behaviours that may or may not apply to you. Please read each item carefully. For items A and B, please circle the number that indicates your response. For items C and D please write the answer in the space provided, if it applies to you.

1	A	Have you ever seriously **thought** of taking your life, but not actually attempted to do so?	1	Yes
			2	No *(if no, go to item 2A)*
			3	Would rather not say
	B	When did you last **think** about taking your life?	1	The past week
			2	The past year
			3	More than a year ago
			4	Would rather not say
	C	How many times has this occurred?		Answer:
				Would rather not say
	D	How old were you the first time you had this thought?		Answer:
				Would rather not say

2	A		1	Yes

		Have you ever **made an attempt** to take your life, by taking an overdose of tablets or in some other way?	2	No *(if no, go to item 3A)*
			3	Would rather not say
	B	When did you last **attempt** to take your life?	1	The past week
			2	The past year
			3	More than a year ago
			4	Would rather not say
	C	How many times have you **made an attempt** to take your life?		Answer:
				Would rather not say
	D	How old were you the first time you **made an attempt**?		Answer:
				Would rather not say

3	A	Have you ever seriously **thought** about trying to deliberately harm yourself but not <u>with the intention</u> of killing yourself but not actually done so?	1	Yes
			2	No *(if no, go to item 4A)*
			3	Would rather not say
	B	When did you last **think** about trying to harm yourself in this way?	1	The past week
			2	The past year
			3	More than a year ago

			4	Would rather not say
	C	How many times has this occurred?		Answer:
				Would rather not say
	D	And, how old were you the first time you had this **thought**?		Answer:
				Would rather not say

4	A	Have you ever <u>deliberately harmed yourself</u> in any way but not with the intention of killing yourself? (i.e., self-harm)	1	Yes
			2	No *(if no, go to next section)*
			3	Would rather not say
	B	When did this last occur?	1	The past week
			2	The past year
			3	More than a year ago
			4	Would rather not say
	C	How many times has this occurred?		Answer:
				Would rather not say
	D	How old were you the first time you harmed yourself?		Answer:
				Would rather not say

SDES

Instructions: For each of the following statements indicate the extent to which you think it represents your own view of yourself. Read each item carefully and place a tick (Ã) in the box to the right of the statement that best describes how you feel the statement reflects how you have felt during the past seven days, using the scale below. Please do not omit any item.

	0= Not at all	1 = A little bit	2 = Moderately	3 = Quite a bit	4 = Extremely Likely
1. I can see no way out of my current situation.					
2. I feel defeated by life.					
3. I would like to get away from other more powerful people in my life.					
4. I feel powerless.					
5. I would like to escape from my thoughts and feelings.					
6. I feel that there is no fight left in me.					
7. I would like to get away from who I am and start again.					
8. I feel that I am one of life's losers.					

PSS

Instructions: The questions in this scale ask you about your feelings and thoughts **during the last month**. Indicate by placing a tick (Ã) in the box to show *how often* you felt or thought a certain way.

	0 = Never	1 = Almost Never	2 = Sometimes	3 = Fairly Often	4 = Very Often
1 In the last month, how often have you been upset because of something that happened unexpectedly?					
2 In the last month how often have you felt that you were unable to control the important things in your life?					
3 In the last month, how often have you felt nervous and 'stressed'?					
4 In the last month, how often have you felt confident about your ability to handle your personal problems?					

5	In the last month, how often have you felt that things were going your way?					
6	In the last month, how often have you felt that you could not cope with all the things that you had to do?					
7	In the last month, how often have you been able to control irritations in your life?					
8	In the last month, how often have you felt that you were on top of things?					
9	In the last month, how often have you been angered because of things that were outside of your control?					
10	In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?					

Please continue to the next section.

ROSENBERG SELF-ESTEEM SCALE

Instructions: Please place a tick in the appropriate box to say whether you strongly agree, agree, disagree, or strongly disagree with the statements below.

	Strongly Agree	Agree	Disagree	Strongly Disagree
1. On the whole I am satisfied with Myself.				
2. At times I think I am no good at all.				
3. I feel I have a number of good qualities.				
4. I am able to do things as well as most other people.				
5. I feel I do not have much to be proud of.				
6. I certainly feel useless at times.				

7. I feel that I am a person of worth at least on an equal plane with others.				
8. I wish I could have more respect for myself.				
9. All in all I am inclined to feel that I am a failure.				
10. I take a positive attitude towards myself.				

Please continue to the next section.

PI-ED

Instructions: The following items refer to various symptoms of well-being. Tick (Ã) the box that best describes how you are feeling.

	(0) Not at all	(1) Sometimes	(2) A lot of the time	(3) Always
1. I feel happy.				
2. I feel sluggish/slowed down.				
3. I look forward to fun things.				
4. I cry/feel like crying.				
5. I get annoyed easily.				
6. I feel good about myself.				
7. I am lonely.				
8. I feel shaky or 'wound up'.				

9. I get sort of frightened feeling as if something bad is about to happen.				
10. I worry about things.				
11. I can chill-out and feel relaxed.				
12. I get a sort of frightened feeling, like 'butterflies' in my tummy.				
13. I feel restless/fidgety as if I have to be on the move.				
14. I get panicky.				

SCS

Instructions: This scale assesses the degree to which youth feel connected to others in their social environment. Circle the number that shows how much you agree or disagree with each of the following statements.

	1Strongly	2 Disagree	3 Mildly	4 Mildly	5 Agree	6Strongly
1. I feel disconnected from the world around me.	1	2	3	4	5	6
2. Even around people I know, I don't feel that I really belong.	1	2	3	4	5	6
3. I feel close to people.	1	2	3	4	5	6
4. I fit in well in new situations.	1	2	3	4	5	6
5. I feel so distant from people.	1	2	3	4	5	6
6. I have no sense of togetherness with my peers.	1	2	3	4	5	6
7. I don't feel related to anyone.	1	2	3	4	5	6
8. My friends feel like family.	1	2	3	4	5	6
9. I catch myself losing all sense of connectedness with society.	1	2	3	4	5	6

10. Even among my friends, there is no sense of brother/sisterhood.	1	2	3	4	5	6
11. I see people as friendly and approachable.	1	2	3	4	5	6
12. I see myself as a loner.	1	2	3	4	5	6
13. I feel understood by the people I know.	1	2	3	4	5	6
14. I am able to relate to my peers.	1	2	3	4	5	6

Please continue to the next section.

GHSB

1. John has been feeling unusually sad and down-hearted for most of the day for nearly two weeks. He doesn't feel like eating and has lost weight. He can't keep his mind on his studies and his marks have dropped. He has put off making decisions and feels that even day-to-day tasks are too much for him. To him, life feels meaningless and he doesn't feel he is worth much as a person.

If you were feeling like John, how likely is it that you would seek help from the following people?

Tick (Ã) the box that best describes your intention to seek help from each help source that is listed.

	Extremely unlikely		Unlikely		Likely		Extremely unlikely
Girlfriend/boyfriend							
Friend							
Parent							
House mother/ house father							
Other relative/family member Mental health professional (e.g. Psychologist, social worker, counsellor)							
Phone helpline							
Doctor							
Minister or religious leader							

Doctor							
Minister or religious leader							
I would not seek help from anyone							

What, if anything is wrong with John? _____

Do you think John needs help? Yes ☐ No ☐

2. In the last four (4) weeks Jess has found herself thinking about how easy it would be to end it all, and she knows that at least once a week during this time she has thought about how and when she could kill herself.

If you were having thoughts like Jess, how likely is it that you would seek help from the following people?

Tick (Ã) the box that best describes your intention to seek help from each help source that is listed.

	Extremely unlikely		Unlikely		Likely		Extremely unlikely
Girlfriend/boyfriend							

Friend							
Parent							
House mother/ house father							
Other relative/family member Mental health professional (e.g. Psychologist, social worker, counsellor)							
Phone helpline							
Doctor							
Minister or religious leader							
Doctor							
Minister or religious leader							
I would not seek help from anyone							

What, if anything is wrong with Jess? _____

Do you think John needs help? Yes ☐ No ☐

Thank you for taking the time to answer these questions. 😊

Appendix 8

Parish	Institution	Service	Tel. #
Kingston	Kingston Public Hospital	Emergency Health Care	922-0210
St. Andrew	University Hospital of the West Indies	Emergency Health Care	927-1620
St. Catherine	Spanish Town Hospital	Emergency Health Care	984-3031
Manchester	Mandeville Public Hospital	Emergency Health Care	962-2067
St. James	Cornwall Regional Hospital	Emergency Health Care	952-5100-9
St. Ann	Annotto Bay Hospital	Emergency Health Care	996-2222
St. Thomas	Princess Margaret Hospital	Emergency Health Care	982-2304
St. Andrew	RISE Life Management Services	Counselling	967-3777

St. Andrew	Choose Life International	Counselling	920-7924
St. Andrew	Mico C.A.R.E. Centre	Counselling	929-7721
St. Andrew	Jamaica Theological Seminary	Counselling	925-7358
St. Andrew	Family Life Ministries	Counselling	926-8101
St. Andrew	Bethel Baptist Church	Counselling	960-5658
St. Catherine	Family Life Ministries	Counselling	939-7917
Manchester	Ridgemount United Church	Counselling	962-2392
Manchester	NCU Community Counselling and Restorative Justice	Counselling	963-7820-1
St. Andrew	Caribbean Graduate School of Theology	Counselling	969-8659
St. Andrew	Webster Memorial United Church	Counselling	926-6127

Appendix 9

List of Facilities for Data Collection

Name of Facility	Region	Parish	Miles to Facility from Kingston	Government/Private Owned	Population
1. Homestead Place of Safety	Southeastern	Stony Hill, St. Andrew	14	G	50
2. Walkers Place of Safety				G	
3. St. Augustine		Chapelton, Clarendon	81	P	25
4. Maxfield Park Children's Home		Maxfield Park, St. Andrew	8.5	G	46
5. Jamaica National Children's Home		Hope Estate, St. Andrew	0.1	G	35
6. Sunbeam Boys Home		Old Harbour, Clarendon		P	15

7. SOS Children's Village, Stony Hill		Stony Hill, St. Andrew	14	P	62
8. Elsie Beamond		Havendale, St. Andrew		P	15
9. Strathmore Gardens		Spanish Town, St. Catherine		P	20
10. Manning Boys'Home	Southern	Southfield, St. Elizabeth	124	P	35
11. Windsor Lodge		Mandeville, Manchester	88	P	40
12. St. John Bascoe		Manchester	97	P	25
13. Mt. Olivet		Walderston, Manchester	101	P	25
14. Summerfield Children's Home		Summerfield, Clarendon	83	P	30
15. Clifton		Darliston, Westmoreland	174	P	25
16. Granville Place of Safety	Western	Trelawny	193	G	50

17. SOS Children's Village, Barrett Town		Barrett Town, St. James	175	P	60
18. The Father's House		Westmoreland		P	20
19. Pringle	Northeastern	St. Mary	136	P	15
20. Others as necessary					

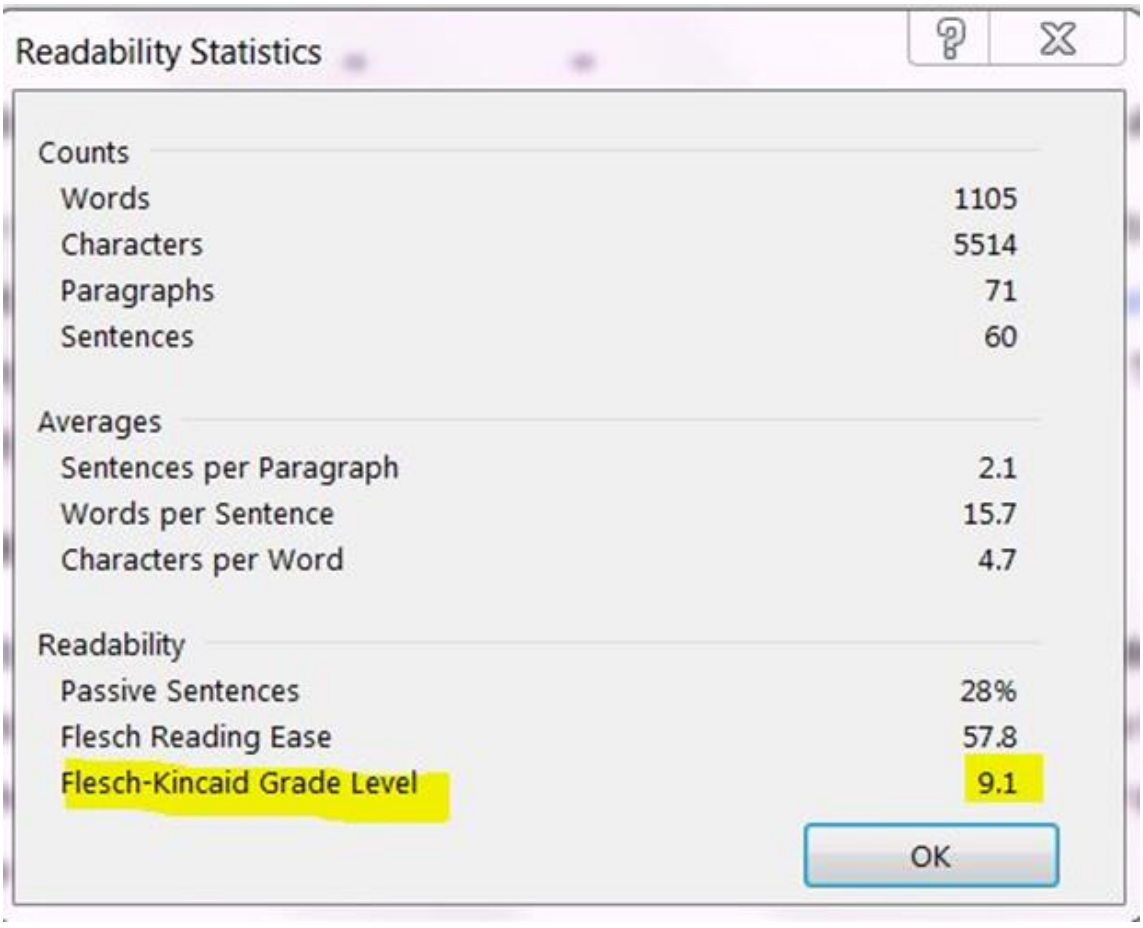
Appendix 10

Reliability for Scales

Scale	Reliability (α)
Social Connectedness	.92
Adverse Childhood Experiences	.71.6
Adolescent Coping Scale	.83
General Help Seeking Questionnaire	.91
Self-Injurious Thoughts and Behaviours Interview	.71
Rosenberg Self Esteem Scale	.77
Short Defeat and Entrapment Scale	.88
Paediatric Index of Emotional Distress	.83
Perceived Stress Scale	.78

Appendix 11

Flesch-Kincaid Grade Level Pilot Study



Appendix 12

Flyer for Study among Looked After and Cared for Adolescents

University of Glasgow
Institute of Health & Wellbeing

Ministry of Health

Confidential Emotional Wellbeing Research Study

Be a part of an important research study.

Are you between 14 and 17 years of age?

If you answered **yes**, you may be eligible to participate in an emotional wellbeing research study.

The study involves completing some questionnaires about your experiences.

This study is being conducted at various CDA facilities island-wide.

Please let your house mother/father/supervisor know if you are interested in learning more about the study.

Appendix 13

Assent form

University of Glasgow | College of Medical, Veterinary & Life Sciences

Title of Project: Understanding the Emotional Well Being of Jamaican Looked-After Adolescents

Name of Researcher(s): Mrs. Karyl T. Powell-Booth

Prof. Rory O'Connor

Prof. Hamish McLeod

Prof. Wendel Abel

Please initial box

I confirm that I have read and understand the information sheet dated June 29, 2017, ☐

(version 3.0) for the above study and have had the opportunity to ask questions.

I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my legal rights being affected. ☐

I agree to take part in the above study. ☐

_____ _____ _____

Name of subject Date Signature

_____ _____ _____

Name of Person taking consent Date Signature

(if different from researcher)

_____ _____ _____

Researcher Date Signature

(1 copy for subject; 1 copy for researcher)

Appendix 14

Briefing Pack

The following items were in the Briefing Pack for Supervisors/ Managers/House Mothers or Fathers

1. Brief protocol sheet outlining
2. Participant Information Sheet
3. Flyer advertising the study
4. Proxy Consent Form

These documents were either sent via email to facility administrators (House Mothers/Fathers; Supervisors or Managers) or the hard copies were printed and delivered via courier ahead of the day of the survey. The researcher called to follow up to confirm receipt of the package and to discuss arrangements for the date and time the survey would be conducted. The telephone call also provided an opportunity for any clarification to be made regarding the logistics of the administration of the survey as well as to get directions to find the facilities as some were in remote areas (not found in GPS tools) and any final arrangements prior to arrival.

Appendix 15

Brief Research Protocol Sheet

Understanding the Emotional Well Being of Jamaican Looked-After Adolescents

Background

Adolescence can be a difficult period for any young person, let alone those who are looked-after and cared for. Studies have shown that this population is up to six times as likely to be at risk of emotional disturbances and mental disorders compared with their counterparts in the general population. Some research shows that this population is up to five times more likely to engage in suicidal behaviour than adolescents in the general population. No research has been conducted on the emotional wellbeing of Jamaican looked after Jamaican adolescents. This includes suicidal behaviour.

Aims

To examine the emotional wellbeing of Jamaican looked-after and cared for adolescents.

To investigate the risk and protective factors for suicidal behaviour among Jamaican looked-after and cared for adolescents.

Methods

Paper-and-pencil, self-administered questionnaires will be completed in participants' natural environment at their residential care facilities. Questionnaires contain a combination of open and closed-ended items. This should take approximately 25-35 minutes to complete. A debriefing session will occur after the participants complete the questionnaires. During this session, participants will be able to talk about their thoughts and feelings about the questions asked in the survey.

Significance of the Study

It is believed that findings from this study can assist in the design of culturally relevant support systems for looked-after adolescents who contemplate suicide and self-harm. This will help to inform policy as well as practice among the multi-disciplinary team, including front-line workers such as staff members and carers in the residential care facilities.

Organisations

The project is being conducted by Professor Rory O'Connor, Principal Investigator; Dr. Hamish McLeod, Co-Investigator and Mrs. Karyl Powell-Booth all from the University of Glasgow, UK, and Prof. Wendel Abel, University of the West Indies, Mona. It is also endorsed by the Child Development Agency, Jamaica.

Appendix 16

Participant Information Sheet

(Dated June 29, 2017 version 3.0)

University of Glasgow
Institute of Health & Wellbeing

Ministry of Health

Understanding the Emotional Well Being of Jamaican Looked-After Adolescents

We would like to invite you to take part in a research study. Please read the following information carefully and discuss with others if you wish, before deciding to take part. Feel free to ask us anything that is unclear, after you have read this information sheet. Take your time and think carefully if you would like to take part in this study.

Who is conducting the research?

The research is being carried out by Karyl Powell Booth, a Jamaican Associate Clinical Psychologist, who is completing a Doctorate in Psychological Medicine at the University of Glasgow, UK. The research is being supervised by Professor Rory O'Connor and Dr. Hamish McLeod from the University of Glasgow.

What is the purpose of the study?

We want to better understand the thoughts, feelings and behaviour including suicidal behaviour, of looked-after and cared-for adolescents, such as yourself. This will be helpful in providing help for persons like yourself in future.

Why have I been invited?

We are inviting 250 adolescents who are currently living in residential care facilities to be a part of the study. We believe that you may be able to take part. Even if you've never tried to hurt yourself, we're interested in your views and you are welcome be a part of the study.

What does participation involve?

If you decide to take part in the study:

1. You should let the house mother/father/supervisor know that you are happy to learn more about the study and they will pass your details to Karyl Powell - Booth who will visit your facility at a convenient time.

2. Karyl will give you more information about the study, answer any questions you may have and if you would like to take part, she will arrange a convenient time with all persons from your facility who have agreed to take part. The surveys will be done at the facility where you live.

3. Before you begin the survey, you will be asked to sign a Consent Form giving your agreement to take part in the study.

4. You will then be asked to complete a series of questionnaires about your thoughts, feelings and behaviour, including suicidal behaviour. You do not have to answer any questions that you do not want to.

5. This should last around 20- 30 minutes.

Do I have to take part?

No. Participation is up to you. After consenting to participate, you may decide to leave the study at any time. If so, your information will be removed from the study. The decision to leave will not affect the care or support you receive now, or in the future.

What happens to the information?

Your name will not be known to the researchers or anyone else. None of your individual responses will be shared with any authorities, including your house mother/father or supervisor. Instead, a summary of the results will be shared with the CDA and residential care facilities such as yours, as well as with the Ministry of Health's Adolescent Unit. At no point will your name or any information be included that will identify you in any way.

Your responses may be made available to other researchers for secondary analysis if they get permission from an ethics committee. However, at no point will your name or any information be shared that will identify you in any way. The results of this study may be published in academic journals, research reports, and at conferences. All information will be stored in accordance with the UK Data Protection Act, which means that we lock it securely and cannot reveal it to others without your permission.

The data will be kept for ten years and then destroyed. Persons from the Ministry of Health in Jamaica, may look at the research records to check that the study was conducted, as it should be.

Limits to confidentiality

There are limits to confidentiality. In the event that you become emotionally distressed while completing the survey, of if you tell the researcher that you have intentions to harm yourself,

you will be allowed to stop completing the questionnaire and be referred to speak with your house mother/father/supervisor. This is to ensure your safety. However, your responses to the questions will not be shared with them.

What are the possible benefits of taking part?

Your participation will help us understand the experience of Jamaican looked-after and cared-for adolescents, like yourself. This may be useful in providing help for persons who may need it. Some persons report feeling better after reflecting on their experiences.

What are the possible risks or disadvantages of taking part in the study?

You may find answering some of the questions to be distressing. If this occurs you may wish to stop and talk with someone about how you are feeling. You may talk to your house mother/father/supervisor. Otherwise, you will get a list of persons who you can contact who work independently of the CDA. After the interview, there will also be a session, where you can talk about your thoughts and feelings. If necessary, you will be able to explore those negative feelings further with trained clinicians.

Who has reviewed the study?

The study has been reviewed and approved by the University of Glasgow's College of Medical, Veterinary and Life Sciences Ethics Committee and the Ministry of Health Jamaica's Ethics Committee.

What if you have a complaint about any aspect of the study?

If you are unhappy about any aspect of the study and wish to make a complaint, please contact the researcher first or any of the contact persons indicated below. If would like to speak to someone who is not closely involved in the study, then you may contact either: (1) Mr. Newton Douglas, Director of the Research and Development department at the Child Development

Agency, at douglasn@cda.gov.jm or 1(876)948-6678, or (2) Prof. Owen Morgan, Chairman, Advisory Panel on Ethics and Medico-Legal Affairs, Ministry of Health, Jamaica, at 312-3176.

If you have any further questions

You will get a copy of this sheet and the Consent Form to keep. If you would like more information, the researcher's contact details are below:

Researcher(s) Contact Details:		
Professor Rory O'Connor Principal Investigator Institute of Mental Health & Wellbeing Administration Building, 2nd Floor Gartnavel Royal Hospital 1055 Great Western Road Glasgow United Kingdom G12 0XH Email:rory.oconnor@glasgow.ac.uk Tel: 011 44 141 211 3920	**Dr. Hamish McLeod** **Co-Investigator** Institute of Mental Health & Wellbeing Administration Building, 1st Floor Gartnavel Royal Hospital 1055 Great Western Road Glasgow United Kingdom G12 0XH **Email:** Hamish.mcleod@glasgow.ac.uk Tel: 011 44 141 211 3922	**Karyl Powell Booth** PhD Researcher Institute of Health & Wellbeing, University of Glasgow West House, 2nd floor Gartnavel Royal Hospital 1055 Great Western Road Glasgow United Kingdom G12 0XH Email: _____ Tel: +1(876)813-0301

Thank you for reading this Participant Information Sheet.

Appendix 17

Modified Survey Pack

University of Glasgow
Institute of Health & Wellbeing

Ministry of Health

Understanding the Emotional Wellbeing of Jamaican Looked-After Adolescents

Participant ID # _____ Date:_____

Dear participant,

Thank you for agreeing to take part in this study. On the following pages, you will find some questionnaires about your thoughts, feelings and behaviour. For each section, please read each set of instructions carefully and answer the questions as honestly as you can. If you have any questions or concerns, let the researcher know and she will assist you as best as possible.

Remember that your responses will be kept confidential and it will not be possible to identify who you are in any research reports that may be written.

Demographic Questionnaire

Instructions: Answer each of the following questions by placing a tick (Ã) in the box that best describes you, or by writing the answer on the line provided.

9. What grade are you in? 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐

10. How old are you? _____ years

11. What is your gender? Male ☐ Female ☐

12. Is this your first time being in a care facility? Yes ☐ No ☐

13. How long have you been in this current facility? _____

14. How many other care facilities have you lived in? _____

15. Have you ever been admitted to the hospital? Yes ☐ No ☐

16. Have *you* ever been diagnosed with any of the following psychological conditions?

    a. Emotional problems ☐

    b. Behavioural problems ☐

    c. Learning Problems ☐

    d. Hyperactivity ☐

    e. Other (Specify) _____

17. Have you ever received counselling or therapy for any challenges/issues you've experienced?

Yes ☐ No ☐

18. Has *anyone in your family* ever been diagnosed with any of the following?

a. Emotional problems ☐

b. Behavioural problems ☐

c. Learning Problems ☐

d. Hyperactivity ☐

e. Other (Specify) _____

Please continue to the next section.

RSES

Instructions: Please place a tick (Ã) in the appropriate box to say whether you strongly agree, agree, disagree, or strongly disagree with the statements below.

	Strongly Agree	Agree	Disagree	Strongly Disagree
1. On the whole, I am satisfied with myself.				
2. At times, I think I am no good at all.				
3. I feel I have a number of good qualities.				
4. I am able to do things as well as most other people.				
5. I feel I do not have much to be proud of.				
6. I certainly feel useless at times.				
7. I feel that I am a person of worth at least on an equal plane with others.				
8. I wish I could have more respect for myself.				
9. All in all, I am inclined to feel that I am a failure.				
10. I take a positive attitude towards myself.				

PSS – 4

INSTRUCTIONS: The following questions ask you about your feelings and thoughts during **the last month**. In each case, please indicate your response by placing a tick (Ã) in the box representing **HOW OFTEN** you felt or thought a certain way.

	Never	Almost Never	Sometimes	Fairly Often	Very Often
1. In the last month, how often have you felt that you were unable to control the important things in your life?					
2. In the last month, how often have you felt confident about your ability to handle your personal problems?					
3. In the last month, how often have you felt that things were going your way?					
4. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?					

Please continue to the next section.

SITBI Brief

Instructions: The following questions ask about suicidal thoughts and behaviours that may or may not apply to you.
Please answer as honestly as you can. Either circle the number of the response that applies, or write your answer
in the space provided.

1. Have you ever had **thoughts** of taking your life, but not actually done so?

0) no (*If no, go to item 5*) 1) yes

2. When did you last think about taking your life? 1) Past week 2) Past year 3) More than a year ago

3. How many times in the past year have you had these thoughts?

   _____

4. How old were you the first time you had thoughts of killing yourself? (age)

   _____

5. Have you ever **made an attempt** to take your life, in which you had some intent to die?

0) no (*If no, go to item 11*) 1) yes

6. When did you last attempt to take your life? 1) Past week 2) Past year 3) More than a year ago

7. How many times in the past year have you made an attempt?

   _____

8. How many times in your lifetime have you made an attempt to take your life?

_____

9. How old were you the first time you made an attempt to take your life? (age)

_____

10. What method did you use for your most recent attempt?

i.	Own prescription drugs	vi.	suffocation	xi.	Car
ii.	Hanging	vii.	Over-the counter drugs	xii.	someone else's drugs
iii.	Drowning	viii.	poison	xiii.	Other (specify)
iv.	Illicit drugs	ix.	gun		_____
v.	sharp object	x.	Jump from height	xiv.	Not applicable

11. Have you ever seriously **thought** about trying to **deliberately harm yourself**, not with the intention to die,

but not actually done so? 0) no (*If no, go to item 15*) 1) yes

12. When did you last think about deliberately harming yourself?

1) Past week 2) Past year 3) More than a year ago

13. How many times in the past year have you had these thoughts?

_____

14. How old were you the first time you had thoughts of harming yourself? (age)

_____

15. Have you ever **deliberately harmed yourself** in any way, but not with the intention to die?

0) no (*If no, go to the next section*) 1) yes

16. When last did you deliberately harm yourself? 1) Past week 2) Past year 3) More than a year ago

17. How many times in the past year has this occurred?

    _____

18. How old were you the first time you harmed yourself? (age) _____

19. How many times in your lifetime have you made an attempt to deliberately harm yourself?

Please continue to the next section

SDES

Instructions: For each of the following statements indicate the extent to which you think it represents your own view of yourself. Read each item carefully and place a tick (Ã) in the box to the right of the statement that best describes how you feel the statement reflects how you have felt during the past seven days. Please do not omit any item.

	0= Not at all like me	1 = A little bit like me	2 = Moderately like me	3 = Quite a bit like me	4 = Extremely Like me
9. I can see no way out of my current situation.					
10. I feel defeated by life.					
11. I have a strong desire to get away from where I am now.					
12. I feel powerless.					
13. I feel I'm in a deep hole I can't get out of.					

14. I feel that there is no fight left in me.					
15. I would like to get away from who I am and start again.					
16. I feel that I am one of life's losers.					

GHSB

In the last four (4) weeks Jess has found herself thinking about how easy it would be to end it all, and she knows that at least once a week during this time she has thought about how and when she could kill herself. **If you were having thoughts like Jess, how likely is it that you would seek help from the following people?** Tick (Ã) all that apply.

Friend ☐ Parent ☐ Other relative (aunt, uncle, grandmother, etc.)☐ House mother ☐ Doctor ☐

Minister ☐ Psychologist ☐ No one ☐ Other (specify) _____

Please continue to the next section

PI-ED

Instructions: The following items refer to various symptoms of well-being. Tick (Ã) the box that best describes how you are feeling.

	(4) Not at all	(5) Sometimes	(6) A lot of the time	(7) Always
15. I feel happy.				
16. I feel sluggish/slowed down.				
17. I look forward to fun things.				
18. I cry/feel like crying.				
19. I get annoyed easily.				
20. I feel good about myself.				
21. I am lonely.				

22. I feel shaky or 'wound up'.				
23. I get sort of frightened feeling as if something bad is about to happen.				
24. I worry about things.				
25. I can chill-out and feel relaxed.				
26. I get a sort of frightened feeling, like 'butterflies' in my tummy.				
27. I feel restless/fidgety as if I have to be on the move.				
28. I get panicky.				

Please continue to the next section

ACE

Instructions: Each of the following questions refers to experiences that may or may not have happened to you while you were growing up. If any of them apply, tick (Ã) Yes, if none applies, tick (Ã) No. While you were growing up:

	Yes (1)	No (0)
1. Did a parent or any other adult in the household often … Swear at you (curse you), insult you, put you down, or humiliate you? OR Act in a way that made you afraid that you might be physically hurt?		
2. Did a parent or other adult in the household often … Push, grab, slap, or throw something at you? OR Ever hit you so hard that you had marks or were injured?		
3. Did an adult or person at least 5 years older than you ever … Touch or fondle you (feel you up) or have you touch their body in a sexual way? OR Try to or actually have oral, anal or vaginal sex with you?		
4. Did you often feel that … No one in your family loved you or thought you were important or special? OR The people in your family didn't look out for each other, feel close to each other, or support each other?		
5. Did you often feel that …		

You didn't have enough to eat, had to wear dirty clothes, and had no one to protect you? OR Your parents were too drunk or too high to take care of you or take you to the doctor if you needed it?		
6. Were your parents ever separated or divorced?		
7. Was your mother, grandmother or stepmother: Often pushed, grabbed, slapped, or had something thrown at her? OR Sometimes or often kicked, bitten, hit with a fist, or hit with something hard? OR Ever repeatedly hit over at least a few times or threatened with a gun or a knife?		
8. Did you live with anyone who was a problem drinker or alcoholic or who used drugs?		
9. Was a household member depressed or mentally ill or did a household member attempt suicide?		
10. Did a household member go to prison?		

ACS

Instructions: For each of the following items below there is a list of ways in which people cope with concerns or problems. For each item, tick (Ã) the box to indicate how often you use this response to cope with your concerns or worries:

	Never	Seldom/A few times	Sometimes	Often	Very Often
1. Work hard.					
2. Worry about what will happen to me.					
3. Blame myself.					
4. Don't let others know about my problem.					
5. Pray for God to look after me.					
6. Act up and make life difficult for those around me.					
7. Keep fit and healthy, e.g. play a sport.					
8. Spend more time with a good friend.					
9. Find a way to let off steam, e.g. cry, scream, drink, take drugs.					

10. Shut myself off from the problem so I can try and ignore it.					

Thank you for taking the time to answer these questions. 😊

Appendix 18

Proxy Consent Form

University of Glasgow
Institute of Health & Wellbeing

Ministry of Health

Centre Number:

Title of Project: Understanding the Emotional Well Being of Looked-After and Cared-For Adolescents in Jamaica.

Name of Researcher(s): **Mrs. Karyl Powell-Booth**

Dr. Hamish McLeod

Prof. Wendel Abel

Prof. Rory O'Connor

I confirm that I have read and understand the Brief Research Protocol dated 26/06/2017 (version 2.0) for the above study and have had the opportunity to ask questions. ☐

I understand that the participation of my wards is voluntary and that they are free to withdraw at any time, without giving any reason, without my legal rights being affected. ☐

I agree for _____[Name of young person] to take part in ☐

the above study.

(See Over leaf)

Please initial each box

_____ _____ _____

1. Name of House Mother/Father/Supervisor Date Signature

_____ _____ _____

2. Name of Person taking consent Date Signature

(if different from researcher)

_____ _____ _____

3. Researcher Date Signature

(1 copy for subject; 1 copy for researcher)

List of Names of Participants in the Study

	Surname	First Name	Middle Initial
1.			
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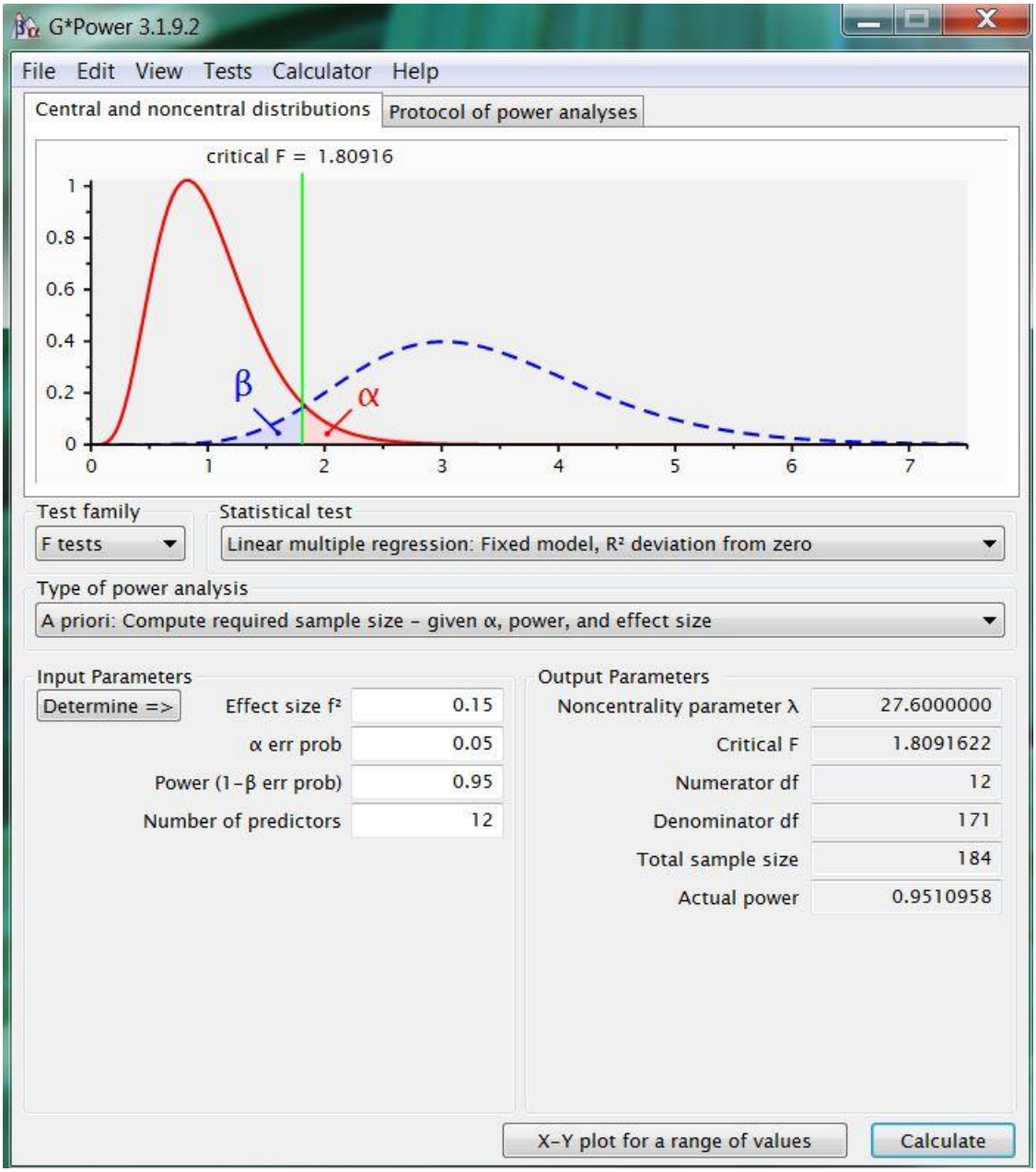
Appendix 19

Power Calculation for twelve predictors



Appendix 20

Ethical Approval from University of Glasgow's Ethics Committee

University of Glasgow

1st June 2017

Dear Prof O'Connor,

MVLS College Ethics Committee

Project Title: Understanding the Emotional Wellbeing of Looked-After and Cared-For Adolescents in Jamaica
Project No: 200160120

The College Ethics Committee has reviewed your application and has agreed that there is no objection on ethical grounds to the proposed study. It is happy therefore to approve the project, subject to the following conditions:

- Project end date: End July 2017
- The data should be held securely for a period of ten years after the completion of the research project, or for longer if specified by the research funder or sponsor, in accordance with the University's Code of Good Practice in Research: (http://www.gla.ac.uk/media/media_227599_en.pdf)
- The research should be carried out only on the sites, and/or with the groups defined in the application.
- Any proposed changes in the protocol should be submitted for reassessment, except when it is necessary to change the protocol to eliminate hazard to the subjects or where the change involves only the administrative aspects of the project. The Ethics Committee should be informed of any such changes.
- You should submit a short end of study report to the Ethics Committee within 3 months of completion.

Yours sincerely

Jesse Dawson
MD, BSc (Hons), FRCP, FESO
Clinical Reader / Honorary Consultant
NRS Stroke Research Champion / Clinical Lead for Scottish Stroke Research Network
Chair MVLS Research Ethics Committee

Institute of Cardiovascular and Medical Sciences
College of Medical, Veterinary & Life Sciences
Room M0.05
Office Block
Queen Elizabeth University Hospital
Glasgow
G51 4TF
Tel – 0141 451 5868
jesse.dawson@glasgow.ac.uk

Appendix 21

Jamaica's Ministry of Health ethics committee

Co-Investigator and Local Supervisor
Prof. Wendel Abel
Department of Psychiatry, University of the West Indies, Mona
Email address: wendel.abel@uwimona.edu.jm

Prof. Rory O'Connor, Principal Investigator and Primary Supervisor, is a Health Psychologist who has extensive experience working in suicide research over the past 20 years. He is the current past president of the International Academy of Suicide Research, he leads the Suicidal Behaviour Research Lab at the University of Glasgow, the leading suicide and self-harm research group in Scotland. (CV attached – Appendix T1).

Karyl Powell-Booth, is a Jamaican and PhD candidate in the Institute of Mental Health and Wellbeing, at the University of Glasgow. She will be conducting the research under the supervision of Professor Rory O'Connor and Dr Hamish McLeod. Karyl will conduct the data collection. Data analysis will be done under the supervision of both Prof. Rory O'Connor and Dr. Hamish McLeod. Karyl is an Associate Clinical Psychologist, (with an M.Sc. in Clinical Psychology) and has more than 10 years experience, working individually and in a multi-professional health team with adolescent and young people with mental disorders and mental health challenges in Jamaica. (CV attached – Appendix T2).

Dr. McLeod, is a Clinical Psychologist with over 20 years of experience in clinical practice, research, and post-graduate professional training. He is currently the Programme Director for the Glasgow University's Doctorate in Clinical Psychology, Senior Lecturer in the Mental Health and Wellbeing Research Group, and an Honorary Consultant Clinical Psychologist with NHS Greater Glasgow and Clyde. (CV attached – Appendix T3).

Prof. Wendel Abel is a Consultant Psychiatrist and head of the Department of Community Health & Psychiatry University of the West Indies, Mona. He has numerous publications in peer reviewed journals, as well as over 25 technical reports prepared for the Jamaican government and is a weekly contributor to the Daily Gleaner. His work focuses on mental health in general, including substance use, as well as suicide in Jamaica. In addition Dr. Abel is a member of Medical Association of Jamaica, Jamaica Psychiatric Association, Researcher Cochrane Mental Health Research Group and American Psychiatric Association.

MOH ETHICS COMMITTEE
Date Approved June 22, 2017
Epires December 22, 2017

Appendix 22

Email endorsing study from CDA

Proposal for Doctoral Dissertation

You replied on Wed 17/08/2016 14:16

douglasn@cda.gov.jm
Mon 11/01/2016 20:26

To: kapow7000@yahoo.co.uk; Karyl Tawina POWELL
Cc: Rosalee Gage Grey <gagegreyr@cda.gov.jm>; Randell Bailey <baileyr@cda.gov.jm>; Audrey Budhi <budhia@cda.gov.jm>

Karyl,

Good afternoon and let me use the opportunity to wish you a Happy New Year and continued success in your studies. I am pleased to inform you that we have considered the research study concept "Suicidial Ideation Among Adolescents in State Care" you had submitted and the Agency and it has our endorsement.

We believe that the findings will be beneficial to us as we (CDA) seek to find practical and effective means by which we can educate our care staff to identify and respond to the situations of sucidial ideation and self harm.

The necessary provisions to ensure the confidentiality and the minimization of any risk or negative exposure to our clients is to be kept at the forefront of any action. Some of these we woud have talked about prior.

We anticipate that you will proceed with taking steps to receive ethical approval before proceeding. We will need to see the evidence of said approval.

Once all the variables are cleared, we will take steps to inform our clients and the care staff of the research and the team involved. This is necessary as they will need to be informed that the study is approved by the CDA.

Mr. Randell Bailey, Manager for Research and Development is copied on this mail. He will work with you hereafter in mobilizing with Ms. Budhi (also copied) in facilitating.

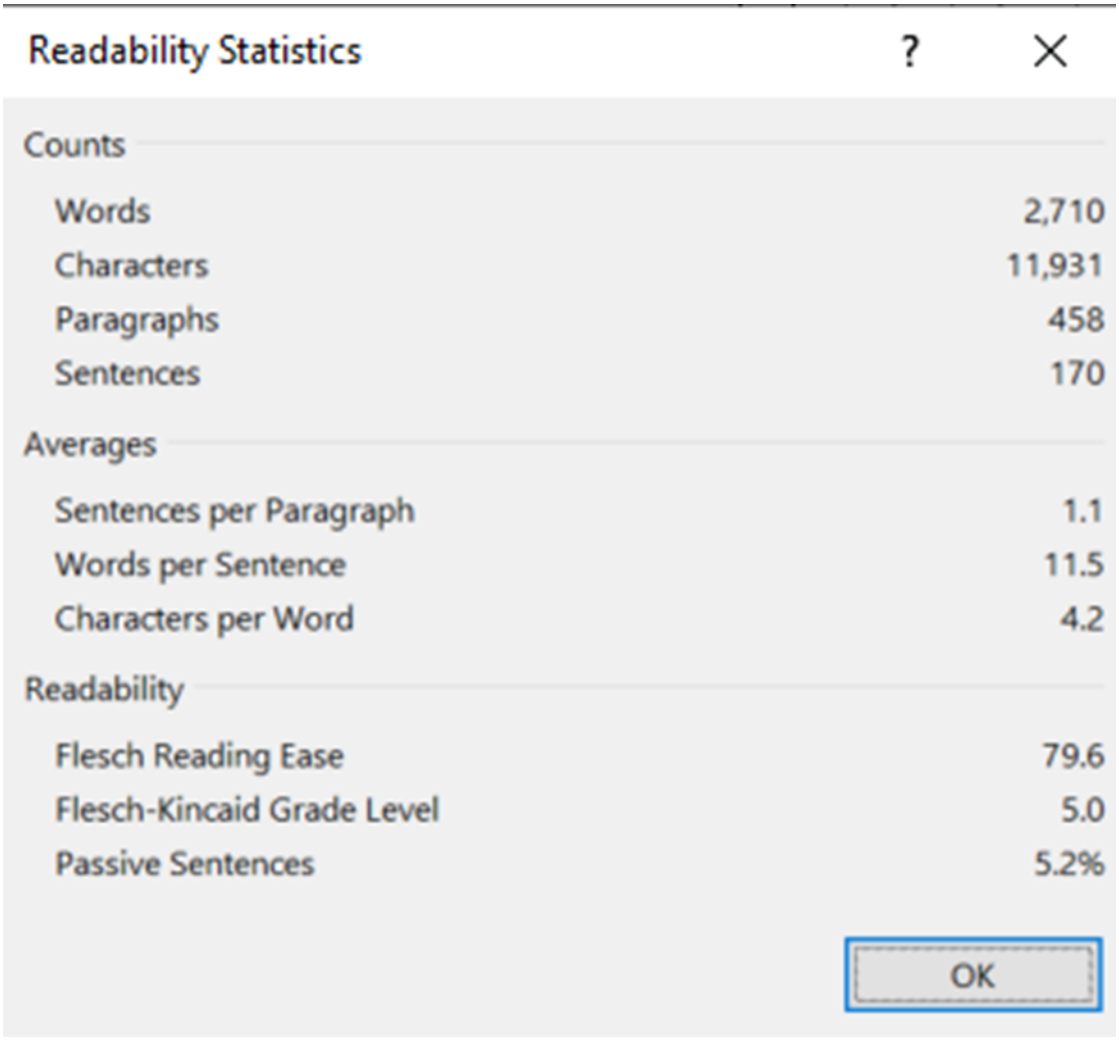
Please continue to keep us abreast of further development regarding this matter.

Regards.

Newton Douglas
Director
Policy Planning & Evaluation
Child Development Agency
48 Duke Street, Kingston
876-967-3747
876-469-4108

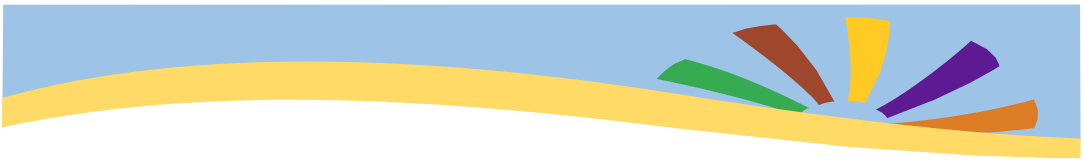
Appendix 23

Flesch-Kincaid Grade Level Main Study



Appendix 24

Flyer for IPA Study



Confidential Mental Health

Research Study

Be a part of an important research study.

Are you 18 year or older?

Have you attempted to take your own life within the past 12 months?

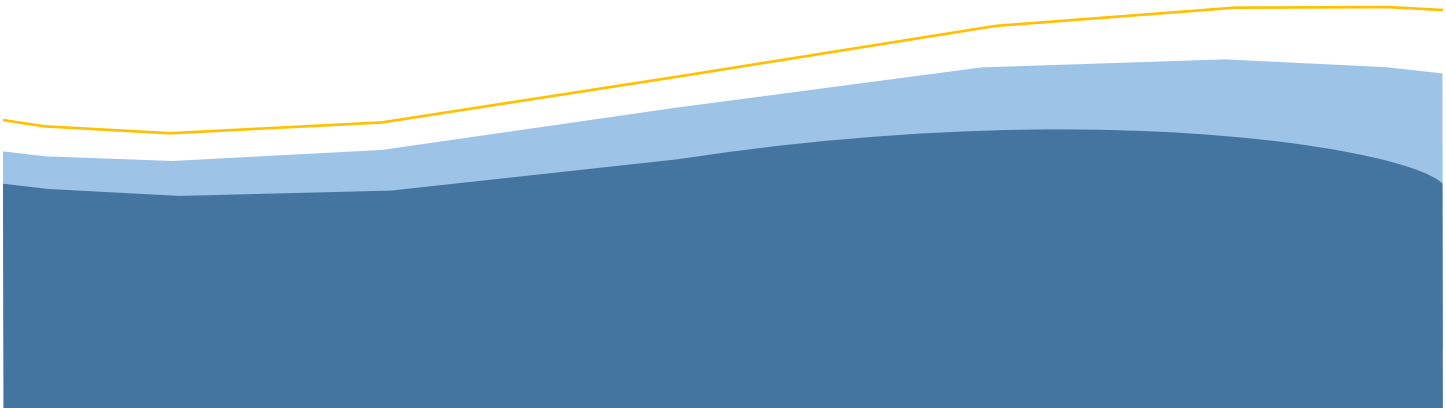
If you answered ***YES** to these questions, you may be eligible to participate in a mental health research study.

The study involves asking you confidential questions about your experiences.

Participants will receive an incentive payment to help offset travel expenses to attend the interview. No medications will be given.

This study is being conducted at the University Hospital of the West Indies, Mona.

Please let your doctor know if you are interested in learning more about the study, or contact us on 813-0301



Appendix 25

Directory of Hospitals and Support Services for IPA

Parish	Institution	Service	Tel. #
Kingston	Kingston Public Hospital	Emergency Health Care	922-0210
St. Andrew	University Hospital of the West Indies	Emergency Health Care	927-1620
St. Catherine	Spanish Town Hospital	Emergency Health Care	984-3031
Manchester	Mandeville Public Hospital	Emergency Health Care	962-2067
St. James	Cornwall Regional Hospital	Emergency Health Care	952-5100-9
St. Ann	Annotto Bay Hospital	Emergency Health Care	996-2222
St. Thomas	Princess Margaret Hospital	Emergency Health Care	982-2304
St. Andrew	RISE Life Management Services	Counselling	967-3777
St. Andrew	Choose Life International	Counselling	920-7924
St. Andrew	Mico C.A.R.E. Centre	Counselling	929-7721

St. Andrew	Jamaica Theological Seminary	Counselling	925-7358
St. Andrew	Family Life Ministries	Counselling	926-8101
St. Andrew	Bethel Baptist Church	Counselling	960-5658
St. Catherine	Family Life Ministries	Counselling	939-7917
Manchester	Ridgemount United Church	Counselling	962-2392
Manchester	NCU Community Counselling and Restorative Justice	Counselling	963-7820-1
St. Andrew	Caribbean Graduate School of Theology	Counselling	969-8659
St. Andrew	Webster Memorial United Church	Counselling	926-6127

Appendix 26

Ethical Approval from University of Glasgow for IPA Study

University of Glasgow | College of Medical, Veterinary & Life Sciences

20th February 2017
Dear Professor O'Connor

MVLS College Ethics Committee
Project Title: Understanding Suicidal Behaviour Among Jamaicans

Project No: 200160081

The College Ethics Committee has reviewed your application and has agreed that there is no objection on ethical grounds to the proposed study. It is happy therefore to approve the project, subject to the following conditions:

- Project end date: 31 July 2017
- The data should be held securely for a period of ten years after the completion of the research project, or for longer if specified by the research funder or sponsor, in accordance with the University's Code of Good Practice in Research:

(http://www.gla.ac.uk/media/media_227599_en.pdf)

- The research should be carried out only on the sites, and/or with the groups defined in the application.

- Any proposed changes in the protocol should be submitted for reassessment, except when it is necessary to change the protocol to eliminate hazard to the subjects or where the change involves only the administrative aspects of the project. The Ethics Committee should be informed of any such changes.

- You should submit a short end of study report to the Ethics Committee within 3 months of completion.

Yours sincerely

Dr Dorothy McKeegan

College Ethics Officer

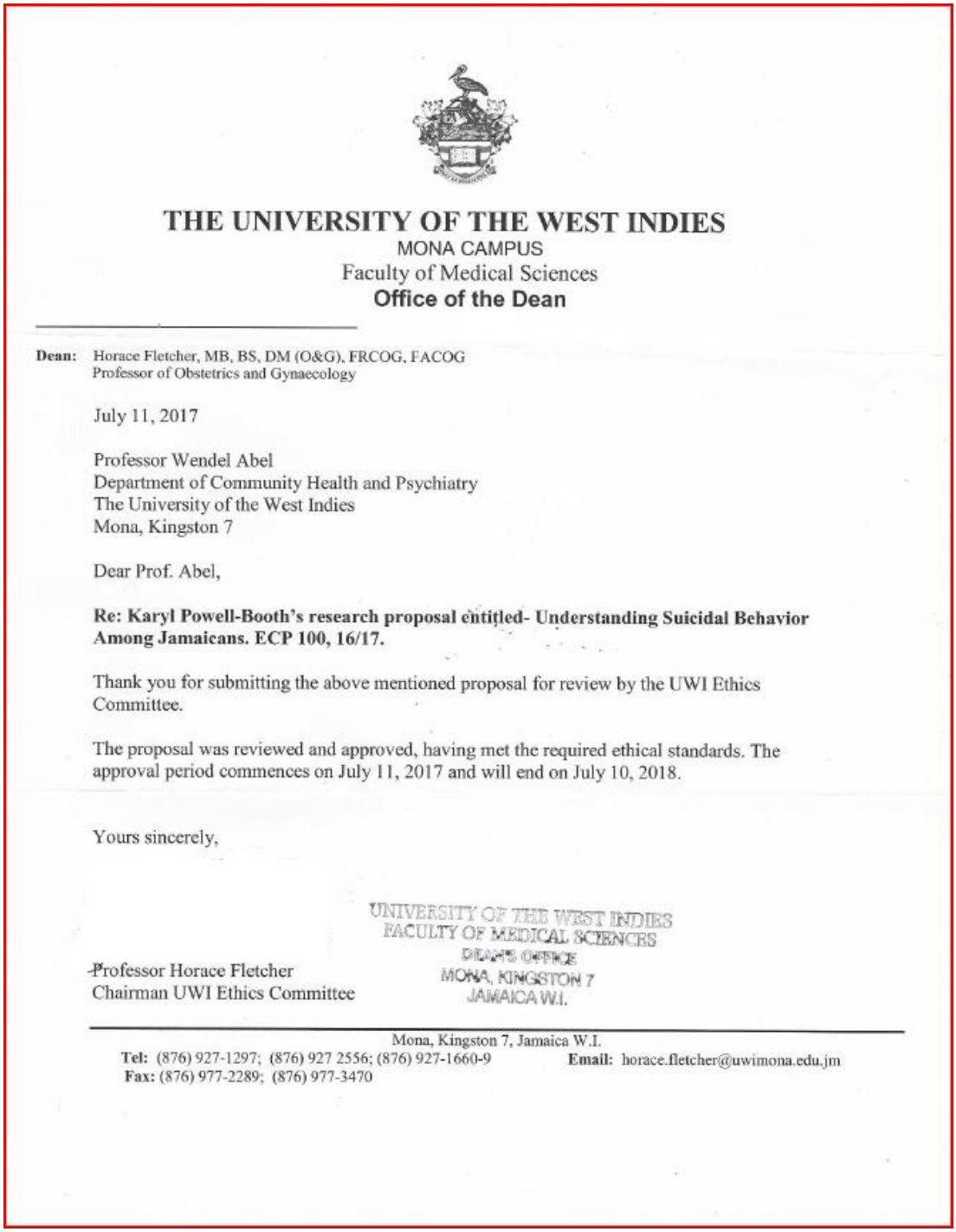
Senior Lecturer

R303 Level 3
Institute of Biodiversity Animal Health and Comparative Medicine
Jarrett Building
Glasgow G61 1QH Tel: 0141 330 5712

E-mail: Dorothy.McKeegan@glasgow.ac.uk

Appendix 27

Ethical Approval for IPA Study UWI



THE UNIVERSITY OF THE WEST INDIES
MONA CAMPUS
Faculty of Medical Sciences
Office of the Dean

Dean: Horace Fletcher, MB, BS, DM (O&G), FRCOG, FACOG
Professor of Obstetrics and Gynaecology

July 11, 2017

Professor Wendel Abel
Department of Community Health and Psychiatry
The University of the West Indies
Mona, Kingston 7

Dear Prof. Abel,

Re: Karyl Powell-Booth's research proposal entitled- Understanding Suicidal Behavior Among Jamaicans. ECP 100, 16/17.

Thank you for submitting the above mentioned proposal for review by the UWI Ethics Committee.

The proposal was reviewed and approved, having met the required ethical standards. The approval period commences on July 11, 2017 and will end on July 10, 2018.

Yours sincerely,

UNIVERSITY OF THE WEST INDIES
FACULTY OF MEDICAL SCIENCES
DEAN'S OFFICE
MONA, KINGSTON 7
JAMAICA W.I.

Professor Horace Fletcher
Chairman UWI Ethics Committee

Mona, Kingston 7, Jamaica W.I.
Tel: (876) 927-1297; (876) 927 2556; (876) 927-1660-9 **Email:** horace.fletcher@uwimona.edu.jm
Fax: (876) 977-2289; (876) 977-3470

Appendix 28

Telephone Screening Tool for IPA Study

University of Glasgow | College of Medical, Veterinary & Life Sciences

PART A:

Thank you for expressing an interest in participating in this study.

Just so you know, this screening should take about about 5-10 minutes. I'll first describe the study and then, if you are interested, I'll ask a few questions to see if you are eligible for participation. Is that ok?

(If, yes, continue. If no, arrange to call back at a more convenient time).

Ok, great! Before I explain the study to you, I should let you know that the questions I'm going to eventually ask you are about sensitive topics so you might want to be in a private room. Everything that you tell me during this phone call is confidential; However, I must let you know that if you tell me that you are thinking of harming yourself or that you are in any danger, I must take the necessary steps to ensure your safety, such as contacting emergency services. Is this OK with you?

In case we get disconnected, could I take down your contact information at this point, please?

Name:_____Participant Code:_____

Phone #s: 1) home: _____

2) work: _____

3) mobile: _____

Ok great. Let me tell you a little bit about the study, but, please stop me along the way if you have any questions.

The study aims to try to understand the factors associated with suicidal thinking and behaviour, by asking people who have attempted suicide in the past about their experiences. I should let you know that a crucial part of the study is that you are able to meet me for about 1 hour at UHWI, or another suitable place of your choice. So far does this sound like something you could do? [If yes, continue].

To give you a more specific description: You will be asked some asked questions about your background information and be interviewed. Due to the nature of this research, some of the questions will be related to thoughts and feelings around suicide. You will receive $2000 in cash for completing this study as compensation for your time and travel expenses. So far, does this sound like something you may be interested in? Do you have any questions?

[If not interested]: *Ok, well thank you for your time. Please don't hesitate to call me if you change your mind or have any questions.*

[If the person is interested]: *Great! As a research procedure, we ask all potential participants a few questions to see if they are appropriate for this study. Everyone is asked the same questions. Some questions will apply to some people and other questions will not. We are looking for people with specific traits to participate (for instance, people of a specific age, gender, and history of past experiences). There are no right or wrong answers, but we are asking them to see if you are a match with this particular study. Some of the questions will be related to any history of suicide attempt. Do you have any questions for me before we begin?*

How old are you? (must be 18 or older) _____

Do you have any special requirements, such as accessibility to buildings etc? Yes

No _____

Do you have a learning disability, intellectual disability or other cognitive impairment? Yes

No _____

PART B:

[Suicide Attempt]

* *Have you made at least one suicide attempt within the past 12 months?*

If so, when was the last time?

[If they have attempted suicide in the past then a Risk Assessment (Part E) must be completed]

[Current Suicidality]

* *Currently, how would you rate your desire to live, with "10" being you really want to be alive and "0" being you very much want to be dead?*

[If answered 3 or less, read small paragraph below, and then go on to risk assessment (Part E)]

* *Do you have any plan or intent to kill yourself at this time?*

[If yes, read small paragraph below, and then go on to risk assessment (Part E)]

IF DESIRE TO LIVE 3 OR LESS OR INTENT/PLAN TO KILL ONESELF: *I am concerned to hear that you are currently having these thoughts. In our study, we are going to ask you about some things that may be difficult to talk about. Given you are currently feeling like you want to die, what I would like to do is first make sure you have someone to talk to about getting help, and we can talk more about the study later on.*

[Go to risk assessment (Part E)]

[Experiencing a Psychotic Episode]

* *Do you sometimes see things that other people can't see or don't seem to see?* Yes No

* *Do you hear sounds or voices other people cannot hear? (In your head, or out of your head)?*

Follow-up:

* *Do you sometimes feel that other people are watching you or talking about you?*

* *What are people saying or taking about you?*

* *Do you have any unusual beliefs other people around you do not share?*

Follow-up if necessary:

* *Can you read other people's minds? Or do you feel you have special powers?*

PART C:

[If person does NOT qualify]: *Thanks so much for answering these initial questions and for your interest in our study. Unfortunately, based on your initial responses, it looks like you do not qualify to participate in this study. But I very much appreciate your taking the time to speak with me. Thank you very much for your time.*

[If person asks about reason for not qualifying]: *For this particular study we are actually looking for people of a certain age, gender, and history – so it was nothing wrong at all with anything that you reported. You are just not a match with the characteristics we are looking for in this study. OK, thanks again for your time.*

[If more persistent]: *Your scores on some of the questions were just slightly more variable than what we are looking for at this time. OK, thanks again for your time.*

PART D:

[If person qualifies, schedule the interview]

Thanks so much for answering these initial questions and for your interest in our study. I can let you know right now whether you qualify for this study. You do in fact qualify, so if you are still interested I would like to schedule a time for you to come in to participate in the study. Would you be available this week or next week?

Interview date: _____

Interview time: _____

Interview venue: _____

Thank you very much for agreeing to participate in this study! We look forward to your visit on _____ (date) at _____ (time).

PART E:

Suicide Risk Assessment Protocol

RISK FACTORS FOR SUICIDE (Interviewer complete known sections on own)

☐ Male gender (females more attempts, males more completions)

☐ Ethnicity (white attempt & complete more than others)

☐ Age ≥16 years?

☐ **Current psychiatric disorder?**

- ☐ Current mood disorder (MDD, Bipolar)
- ☐ Current substance use disorder (alcohol, drugs)
- ☐ Current psychotic disorder
- ☐ Current personality disorder (esp. BPD or ASPD)

☐ **Suicide history**

☐ Previous suicide attempt (yes/no)

☐ Family history of suicide attempts/completions (yes/no)?

☐ Current suicidal ideation (0-10 scale)?

☐ Current plan (yes/no)?

☐ Access to lethal means (firearm, drugs, etc)?

☐ Current intent (On scale 0 – 10, what is your current intent to kill yourself ? ___)

☐ Other risk factors

☐ Recent loss, separation/divorce/break-up?

☐ Impulsiveness?

☐ Hopelessness about the future?

☐ Current distress, irritability, agitation or other "abnormal" mental state

☐ Depressed mood (On scale 0 – 10 [0 = neg, 10 = pos] how would you rate your current mood? ___)

NOTES :

PROTECTIVE FACTORS & SAFETY PLAN:

☐ In treatment? If so, is clinician aware of risk? _____

☐ Family/roommate/friends aware of risk? _____

☐ Presence of children in the home, spouse/partner, or other positive relationships?

[IF YES TO ACCESS TO LETHAL MEANS]

☐ Means restriction (firearms, drugs, family/social support/monitoring)? _____

[STEPS TAKEN TO INCREASE SUBJECT SAFETY (CHECK ALL THAT APPLY)]:

LOW RISK == No past attempt or current SITB:

☐ Validated potential participant's feelings

☐ Encourage potential participant to contact clinician if distressed or in need of help in future

☐ Provide referrals as needed

MODERATE RISK == Past attempt, but intent ≤6

☐ (check all completed above)

☐ Potential participant articulated own safety plan (i.e., what to do if thoughts/urges increase)

☐ Provided potential participant with emergency contact numbers (find # of own clinician, or make recommendation from Directory of Support Services)

HIGH RISK == Current SI present, and intent 7-8, but no plan or access to lethal means

☐ (check all completed above)

☐ Encourage potential participant to immediately contact support(s) and clinician(s)/psychiatric emergency services to inform of risk.

☐ Call Prof. Wendel Abel/ Resident on duty (**must do**)

IMMINENT RISK == Current suicidal intent (7-8 with specific plan/access or 9-10 regardless of plan)

☐ (check all completed above)

☐ Call Prof. Wendel Abel// Resident on duty (**must do**).

☐ Tell/call clinician and/or people in support network to inform them of level of risk and enlist their assistance in getting subject to a clinician (preferable).

☐ Potential participant should not be left alone. They can leave with family member/friend. Researcher should accompany potential participant to Hospital Emergency Department (must do) if not already at the hospital.

☐ If on the phone: Subject should not remain at home alone. Researcher tells/calls clinician and/or people in support network to inform them of level of risk and enlist their assistance in getting the potential participant to a clinician (must do).

☐ If an ambulance is being sent, stay on the phone with the potential participant until the ambulance arrives.

☐ If potential participant refuses to do the above: call emergency services and inform of subject's location and risk level.

NOTES:

SAFETY PLAN FOR AFTER RISK ASSESSMENT:

Are you familiar with what a safety plan is? Do you mind if I go over this briefly with you as we usually do with other people over the phone? A safety plan is a list of steps you take if you do have suicidal thoughts. For example, if the thoughts are moderate in intensity, we usually recommend that you contact your doctor, or family or friends if you feel comfortable doing so. You can also call Choose Life International on 920-7924, or the UWIHELPS on 294-0042, which are both anonymous hotlines. If the thoughts increase in intensity, we recommend you call UWHI on 927-1621-9 or go to the nearest emergency room.

Assessor: _____ Date: _____

Appendix 29

PARTICIPANT INFORMATION SHEET IPA

(Dated June. 6, 2017 version 4.0)

University of Glasgow
Institute of Health & Wellbeing

University of the West Indies, Mona
Faculty of Medical Sciences

Understanding Suicidal Behaviour in Jamaica.

We would like to invite you to take part in a research study, **which has a moderate level of risk to you**. Before you decide if you would like to take part, it is important that you understand the nature of the study and what taking part would involve for you. Please read the following information carefully and discuss with others if you wish. Feel free to ask us anything that is unclear, after you have read this information sheet. Take your time and think carefully if you'd like to take part in this study.

Who is conducting the research?

The research is being carried out by Karyl Powell Booth, an Associate Clinical Psychologist, who is completing a Doctorate in Psychological Medicine at the University of Glasgow (Scotland). The research is being supervised by Dr. Hamish McLeod and Professor Rory O'Connor from the University of Glasgow, and Professor Wendel Abel from the University of the West Indies, Mona.

What is the purpose of the study?

We want to better understand the lived experiences of individuals who attempt to take their lives. The study will involve talking to people who have attempted suicide to find out more about their experiences. All participants will be asked about the factors that may have led

them to have thoughts about suicide and what led them to act on those thoughts. They will also be asked about how they view their experience since attempting suicide. It is hoped that the interviews will provide us with a better understanding of suicidal behaviour and how we can provide support for people after a suicide attempt in future.

Why have I been invited?

We are inviting people who are currently receiving outpatient treatment at the University Hospital of the West Indies, and who have a history of at least one suicide attempt within the last 12 months to take part in the study. We believe that you may be eligible to take part.

What does participation involve?

If you decide to take part in the study, participation will be as follows:

6. You should let the clinician know that you are happy to learn more about the study and they will pass your details to Karyl Powell Booth who will telephone/speak to you.

7. Karyl will give you more information about the study, answer any questions you may have and if you still would like to take part, she will arrange an appointment time with you. The appointments for interviews will all take place at the University Hospital of the West Indies, or somewhere where you feel comfortable to talk.

8. Before you begin the interview, you will be asked to sign this Informed Consent Form to confirm your agreement to take part in the study.

1. Karyl will ask you some questions about your experiences of attempting suicide. You do not have to answer any questions that you do not want to. Additionally, some **demographic data will be collected including background information such as age, gender, educational attainment, employment status and mental health history.**

9. The interviews will last around approximately 60 minutes and, with your permission, will be audio recorded.

If during the interview you tell the interviewer about wanting to hurt yourself or others, and if this appears imminent, then Karyl, has a duty to report this. Your safety and the safety of others is of utmost importance. However, Karyl will discuss this with you first.

Do I have to take part?

No. Participation is entirely up to you. If you agree to take part, you will be asked to sign this Informed Consent Form before you start your interview, so that there is a record of your consent.

After consenting to participate, you may decide to withdraw from the study at any time. The decision to leave will not affect the clinical care or support you receive now, or in the future.

What happens to the information?

The audio recordings and any written information will be recorded, transported, and stored on secure Glasgow University computers and network. Audio recordings will be destroyed once the interviews have been transcribed and all identifying information has been removed. The anonymised study data will be retained for ten years and then destroyed. All information will be stored and locked away in accordance with the UK Data Protection Act. Your name and any personal information will be known to the researchers but will be kept separately from research data. It is also possible that independent reviewers from the health service may review the anonymised research records to check that the study is being conducted safely and ethically.

The results of this study may be published in academic journals, conference proceedings and as part of a doctoral thesis in Psychological Medicine. Anonymised quotes from your interview may

be included in these reports/publications but it will not be possible to personally identify you from this information.

What are the possible benefits of taking part?

There is no direct benefit to the participant. However, your participation will help develop an understanding of suicidal behaviour among Jamaicans. This may be helpful in providing intervention and support for persons who engage in suicidal behaviour. Some people report feeling better after talking about their experiences of attempted suicide. It is hoped that you may find some benefit from having the chance to talk about your experiences.

What are the possible risks or disadvantages of taking part in the study?

It is possible that talking about past suicide attempts could be distressing. If this occurs during the interview and becomes severe and persistent, in the estimation of the researcher, who is an experienced Associate Clinical Psychologist, with over 10 years experience, the interview will be suspended. You will be given the option of either being seen by the Resident on duty at the UHWI, a clinician from the UWI Counselling Centre or your Family Doctor, to help keep you safe. After the interview, there will be a debriefing session, and if necessary you will be able to explore those feelings further with either a Psychiatrist or Psychologist from UWHI.

Who has reviewed the study?

The study has been reviewed and approved by the Ethics Committees of the University of Glasgow's College of Medical, Veterinary and Life Sciences and the University Hospital of the West Indies'/ University of the West Indies' (UHWI/UWI) Faculty of Medical Sciences.

Compensation

Upon completion of the interview, you will receive **a stipend to help offset your travel expenses to attend the interview.**

Contact Details for Researcher/Principal Investigator

If you have any questions regarding the research project, you may contact the Principal Investigator or Researchers at:

Professor Rory O'Connor	Prof. Wendel Abel	Karyl Powell Booth
Principal Investigator Institute of Mental Health & Wellbeing Administration Building, 1st Floor Gartnavel Royal Hospital 1055 Great Western Road Glasgow G12 0XH Email:rory.oconnor@glasgow.ac.uk Tel: 0141 211 3920	Researcher Department of Community Health & Psychiatry, University Hospital of the West Indies. Email : wendel.abel@uwimona.edu.jm Tel: +1(876)927-2556	Researcher Institute of Health & Wellbeing, University of Glasgow West House, 2nd floor Gartnavel Royal Hospital 1055 Great Western Road Glasgow G12 0XH Email : Tel: +1(876)813-0301

Rights as a Research Participant:

For independent advice on your rights as a research participant please contact Professor Horace Fletcher, Dean, Faculty of Medical Sciences, University of the West Indies, Mona, Kgn 7 (Tel: (876) 927-1297, e-mail: medsci@uwimona.edu.jm).

Thank you for taking the time to read this Participant Information Sheet.

INFORMED CONSENT FORM

Version 4.0 dated June 6, 2017

University of Glasgow
Institute of Health & Wellbeing

University of the West Indies, Mona
Faculty of Medical Sciences

Participant Identification Number:

Title of Project: **Understanding Suicidal Behaviour in Jamaica.**

Name of Researcher(s): **Prof. Rory O'Connor**

Mrs. Karyl Powell Booth

Dr. Hamish McLeod

Prof. Wendel Abel

Mrs. Patrice Whitehorne-Smith

Please initial each box

2. I confirm that I have read and understand the Participant Information Sheet, Version 4.0 dated June 6, 2017 for the above study and have had the opportunity to ask questions. ☐

3. I understand that my participation is voluntary and that I am free to withdraw at ☐

any time, without giving any reason, without my medical / legal rights being affected.

4. I agree for the interview to be recorded with a digital voice recorder. ☐

5. I agree for demographic data to be collected including background information su ☐

age, gender, educational attainment, employment status and mental health history.

6. I agree to take part in the above study. ☐

_____ _____ _____

Name of participant Date Signature

_____ _____ _____

Independent Witness Date Signature

_____ _____ _____

Researcher Date Signature

(1 copy for participant; 1 copy for researcher)

Appendix 30

DEMOGRAPHIC QUESTIONNAIRE

(1) Participant ID #: _____

(2) Date of Interview: DD/MM/YYYY __ __/__ __/__ __ __ __

(3) Age: _____

(4) **Gender**: (1) Male (2) Female (999) prefer not to answer

(5) **Parish of residence**:

1. St. Andrew
2. Kingston
3. St. Catherine
4. Clarendon
5. Manchester
6. St. Elizabeth
7. Hanover
8. Westmoreland
9. St. James
10. Trelawny
11. St. Ann
12. St. Mary
13. St. Thomas
14. Portland

(6) **Marital Status: Please circle the one that best applies to you from the list below:**

1. Never married
2. Married

3. Separated
4. Divorced
5. Widowed
6. Common-law marriage
7. Visiting relationship
8. Other
9. Unknown

(7) **What is your highest level of educational attainment?**

1. Elementary
2. Primary
3. Secondary
4. Tertiary
5. Postgraduate
6. Other (specify) _____

(8) **What is your employment status? Please circle the one that best applies to you currently.**

1. Employed
2. Unemployed and seeking work
3. Unemployed due to disability/incapacity
4. Stay at home parent
5. Retired
6. Student
7. Unknown

(9) **Do you take antidepressants (medication to treat depression) or anxiolytic (medication to control anxiety feelings)?** Please circle one below.

1. Yes
2. No

(10) **Have you ever been hospitalized for mental health problems?**

1. Yes
2. No

Thank you for your participation

Appendix 31

SITBI Brief

Instructions: These questions ask about your thoughts and feelings of suicide and self-injurious behaviours. Please listen carefully and respond as accurately as you can. Do you have questions before we begin?

Suicidal Ideation

1. Have you ever had thoughts of killing yourself? No
   Yes

2. How old were you the first time you had thoughts of killing yourself? (*age)*
   _____

3. How old were you the last time? (*age)*
   _____

4. When was the last time? _____

5. When you have thoughts of killing yourself, how long do they usually last?
   _____

   0) 0 seconds

   1) 1-60 seconds

   2) 2-15 minutes

   3) 16-60 minutes

4) Less than one day

5) 1-2 days

6) More than 2 days

7) Wide range (spans >2 responses)

8) Not applicable

_____

Hand respondent 0-4 rating scale

6. On the scale of 0 to 4, what is the likelihood that you will have thoughts of killing yourself in the future?

_____

<u>Suicide Attempt</u>

7. Have you ever made an actual attempt to kill yourself in which you had at least some intent to die?

No Yes

We will refer to this as a suicide attempt.

8. How old were you the first time you made a suicide attempt? (*age)*

_____

a. When was the **most recent** attempt?

_____

9. What method did you use for your most recent attempt?

(i) Own prescription drugs

(ii) Illicit drugs (not Rx)

(iii) Over-the counter drugs

(iv) Poison

(v) Firearm

(vi) Immolation

(vii) Hanging

(viii) Sharp object

(ix) Auto exhaust

(x) Other gases

(xi) Train/car

(xii) Jump from height

(xiii) Drowning

(xiv) Suffocation

(xv) Other's Rx drugs

(xvi) Other

(xvii) Multiple

(xviii) Not applicable

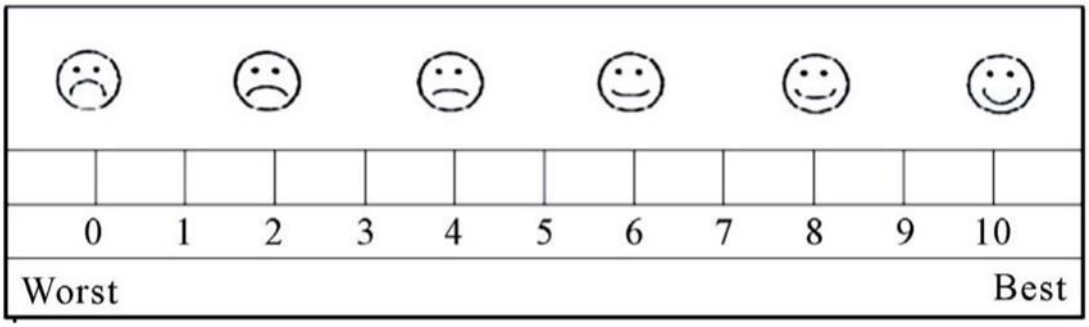
Rating Scale for SITBI

0	1	2	3	4
Low/little				*Very much/ Severe*

Appendix 32

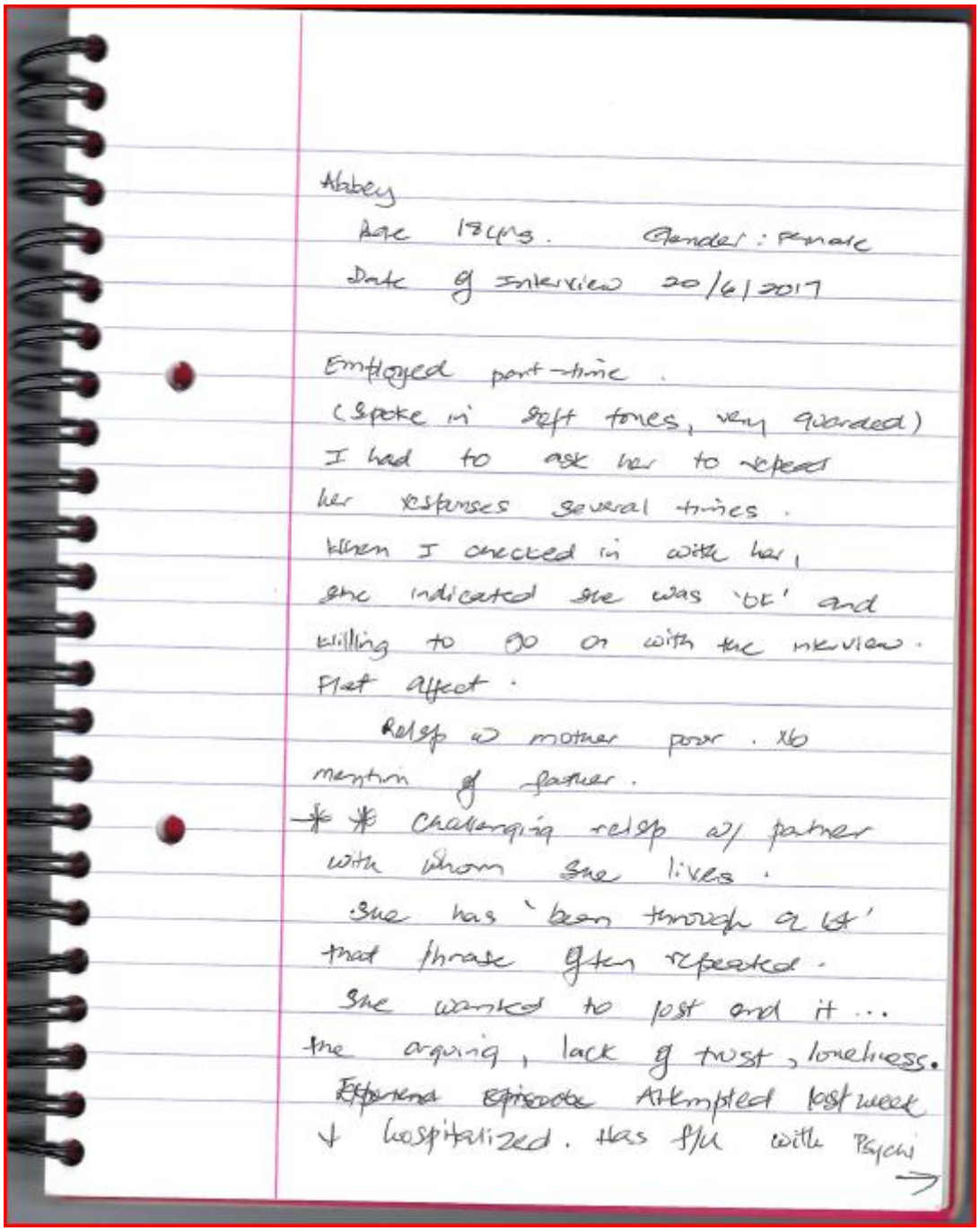
Visual Analog Scale

How are you feeling now?



Appendix 33

Field Notes IPA



Abbey

Age 18yrs. Gender: Female

Date of Interview 20/6/2017

Employed part-time.

(Spoke in soft tones, very guarded)

I had to ask her to repeat her responses several times.

When I checked in with her, she indicated she was 'OK' and willing to go on with the interview.

Flat affect.

Relsp w/ mother poor. No mention of father.

** Challenging relsp w/ partner with whom she lives.

She has 'been through a lot' that phrase often repeated.

She wanted to just end it... the arguing, lack of trust, loneliness.

Extreme episode Attempted last week ↓ hospitalized. Has f/u with Psych →

Appendix 34

Participant Interview Schedule

Understanding suicidal behaviours in Jamaica

Preamble: Thank you for agreeing to participate in this study. Remember that how much you say is entirely up to you. Please feel free to stop me at any time if you're feeling uncomfortable about anything. Also, if you don't wish to answer a particular question, that's your right and entirely fine. Are you happy for us to continue?

1. I understand that some time ago you tried to end your life. I wonder if you could begin by telling me about the events that led up to this and about how you remember thinking and feeling at that time? If you've attempted suicide more than once, please tell me about the most recent attempt first.

2. How did thinking about suicide affect you? Prompts: How did it make you feel? In what ways (if at all) were those thoughts helpful/ beneficial/ a relief for you at that time? In what ways (if at all) did the feelings you had about having suicidal thoughts change over time?

3. Can you describe what you remember about the attempt itself? Prompts: Where were you? When was it? Did you plan it, or did you do it on impulse?

4. Can you tell me whether your thoughts and feelings changed at all during the course of the attempt? If so, how did they change?

5. Can you tell me about the method that you chose? Why do you think you chose to end your life that way? What other options did you consider and why did you eliminate these? What was important to you in making that decision?

6. Talk me through your experience after the attempt. What did you do after the attempt? Prompts: Did anyone find out? How did they find out? How did they react? How did their response make you feel?

7. Did you go to the hospital? How did hospital staff respond when they found out that you had tried to harm yourself?

8. What support services did you find to be (un)helpful? Prompts: What did you like about the services provided? What did you dislike about the services provided?

9. What benefit do you think harming yourself has for you as an individual?

10. What do you think, if any, factors would help to prevent you attempting to end your life again?

11. Is there anything else that you think is important for us to talk about?

Debrief

1. How are you feeling now?

2. How did you find talking about your experiences?

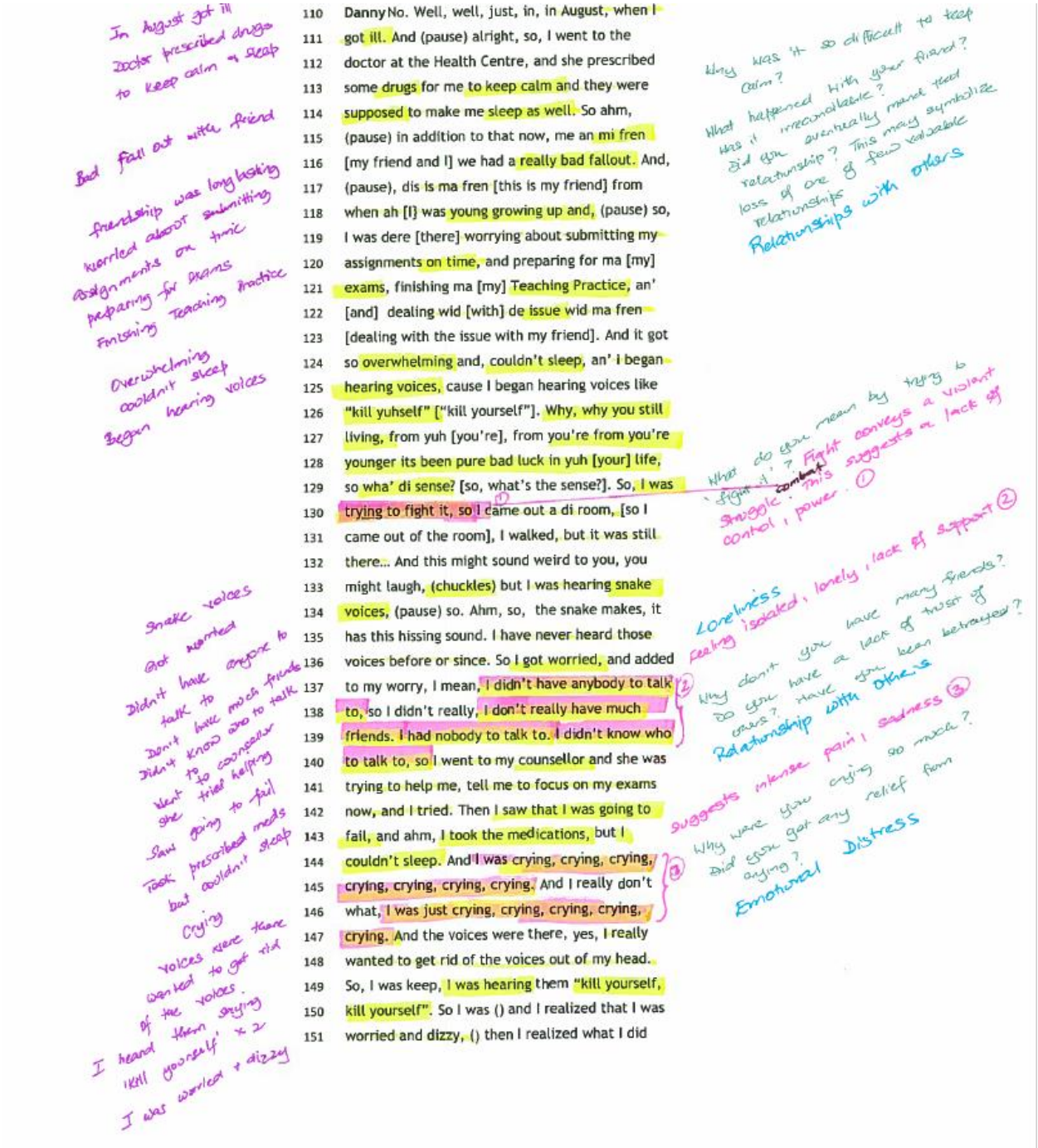
3. Do you think talking has helped to make you feel better or worse?

4. Do you feel you want to be referred to someone to help you work through your thoughts and feelings?

Thank you for your participation.

Appendix 35

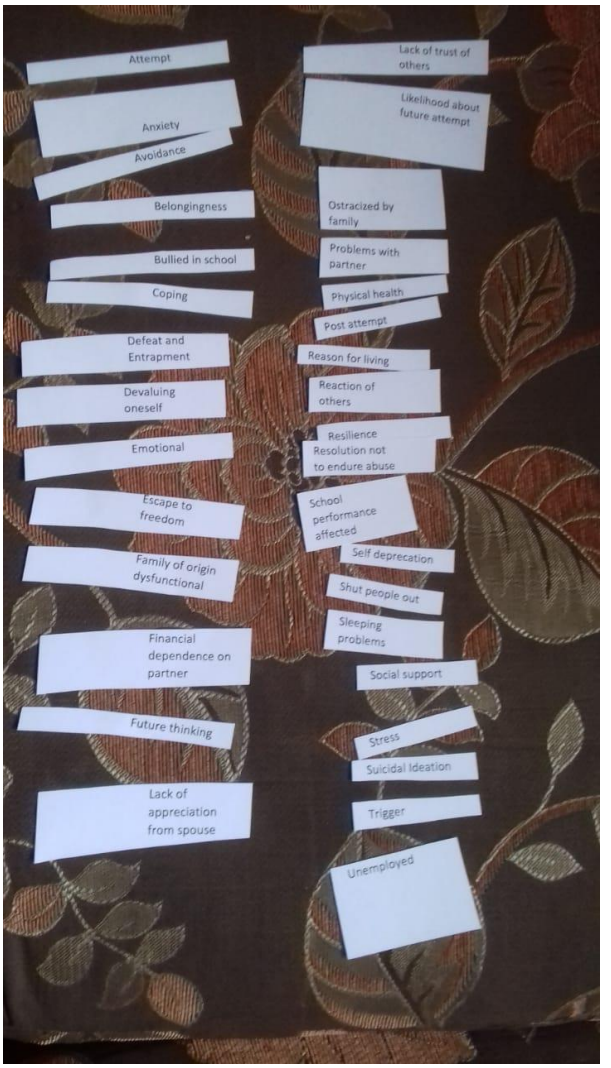
Sample of Coded Transcript for IPA



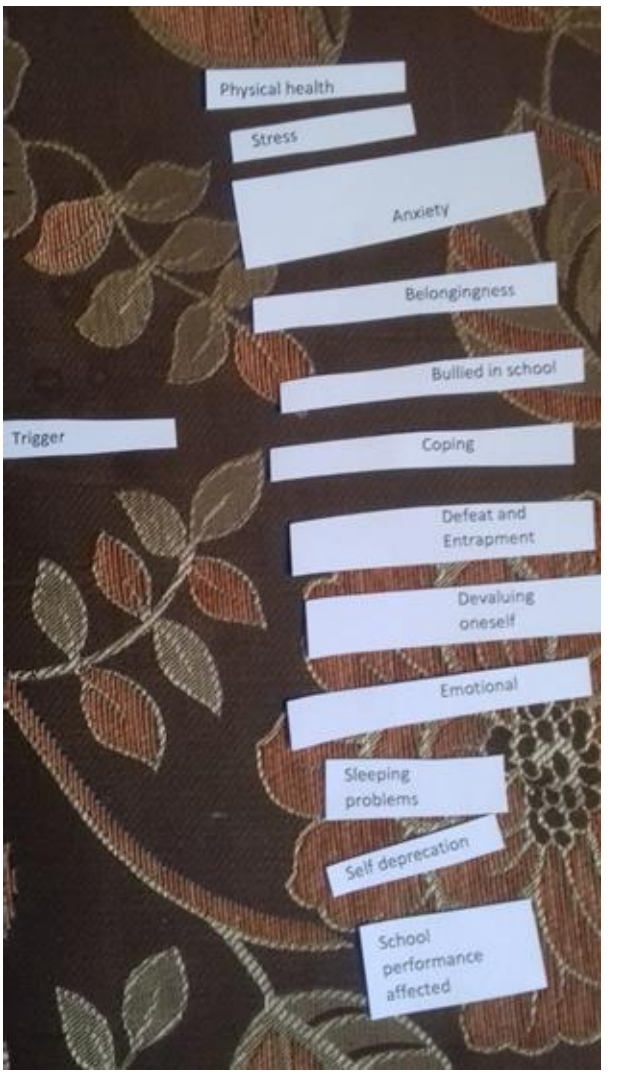
110 Danny No. Well, well, just, in, in August, when I
111 got ill. And (pause) alright, so, I went to the
112 doctor at the Health Centre, and she prescribed
113 some drugs for me to keep calm and they were
114 supposed to make me sleep as well. So ahm,
115 (pause) in addition to that now, me an mi fren
116 [my friend and I] we had a really bad fallout. And,
117 (pause), dis is ma fren [this is my friend] from
118 when ah [I] was young growing up and, (pause) so,
119 I was dere [there] worrying about submitting my
120 assignments on time, and preparing for ma [my]
121 exams, finishing ma [my] Teaching Practice, an'
122 [and] dealing wid [with] de issue wid ma fren
123 [dealing with the issue with my friend]. And it got
124 so overwhelming and, couldn't sleep, an' i began
125 hearing voices, cause I began hearing voices like
126 "kill yuhself" ["kill yourself"]. Why, why you still
127 living, from yuh [you're], from you're from you're
128 younger its been pure bad luck in yuh [your] life,
129 so wha' di sense? [so, what's the sense?]. So, I was
130 trying to fight it, so I came out a di room, [so I
131 came out of the room], I walked, but it was still
132 there... And this might sound weird to you, you
133 might laugh, (chuckles) but I was hearing snake
134 voices, (pause) so. Ahm, so, the snake makes, it
135 has this hissing sound. I have never heard those
136 voices before or since. So I got worried, and added
137 to my worry, I mean, I didn't have anybody to talk
138 to, so I didn't really, I don't really have much
139 friends. I had nobody to talk to. I didn't know who
140 to talk to, so I went to my counsellor and she was
141 trying to help me, tell me to focus on my exams
142 now, and I tried. Then I saw that I was going to
143 fail, and ahm, I took the medications, but I
144 couldn't sleep. And I was crying, crying, crying,
145 crying, crying, crying, crying. And I really don't
146 what, I was just crying, crying, crying, crying,
147 crying. And the voices were there, yes, I really
148 wanted to get rid of the voices out of my head.
149 So, I was keep, I was hearing them "kill yourself,
150 kill yourself". So I was () and I realized that I was
151 worried and dizzy, () then I realized what I did

Appendix 36

Emergent Themes



First round some emergent themes



Second round some emergent themes

Appendix 37

Complementary activities during the PhD

Conference Presentations and Publications

Year	Event	Title	
2020	ISPCAN International Child Protection Congress Qatar	Cries for help! Adverse Childhood Experiences Among Looked After and Cared for Adolescents in Jamaica	Oral Presentation
2020	ISPCAN International Child Protection Congress Qatar	The role of childhood sexual abuse in the lives of adult survivors: accounts from Jamaican survivors of child sexual abuse.	Oral Presentation
2020		"It Affects You For a Lifetime"! Perspectives on Child Sexual Abuse in Jamaica A Qualitative Study	Research Report

	-	Karyl Powell Booth; Kenisha Nelson; Roxanne Harvey; Christine Fray	
2020		Shifting the Burden: Promoting a Child-friendly, Collective approach to Child Sexual Abuse in Jamaica	Book chapter
	-	Authors: Kenisha V. Nelson; Karyl Powell-Booth; Roxanne Harvey; Christine M. Fray; Patrice A. Reid.	
2019	None In Three Research Centre's Summit, Mumbi, India	Accounts of Childhood Sexual Abuse in Jamaica	Oral Presentation
2019	IEALJ	Child Sexual Exploitation and Jamaican Children: Use of Technology to Teach Positive Behaviour.	Oral Presentation
2018	International Society for the Prevention of Child Abuse and	Adverse Childhood Experiences and the Risk of Suicidal Behaviour Among Looked After and Cared for	Oral Presentation

	Neglect Caribbean Regional Conference	Adolescents in Jamaica	
2019	Early and Mid-Careers Researchers Forum	Across the Atlantic: A Reflection of Navigating the Waters of Gaining Ethical Approval Remotely	Poster Presentation

Year	Event	Title	
2017 November 10	International Symposium on Suicide, Youth Violence & Professional Psychology Berbice Guyana	Enhancing Treatment of Suicide: Getting Back to Basics	Oral Presentation
2017 November 9	International Symposium on Suicide, Youth Violence & Professional	Enhancing Treatment of Suicide: Getting Back to Basics	Oral Presentation

	Psychology Georgetown, Guyana		
2017 June 9	Early Careers Forum 2017	Distinguishing between suicide ideators, attempters and non-attempters in Jamaica: A Preliminary Analysis	Poster Presentation
2016	MVLS First Year Student Conference	Risk & Protective Factors for Suicide and Self Harm Among Jamaicans	Oral Presentation

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Awards and Prizes

Helen Stewart Bursary 2017

Amazon Gift Voucher for one of the top First Year PhD student presentations 2016

Research Posts

Research Fellow, None in Three Research Centre, Jamaica Mar. 2018-present

Research Assistant, Suicide Behaviour Research Lab 2017-2018

Public Engagement

Signs of Self-Harm for Suicide Awareness Month Sept. 2019

Invited Speaker

Gender-based Violence Awareness 'Friends Talking' all male forum Oct. 2020

Unpacking the emotions of lecturers during the COVID-19 Pandemic

Sam Sharpe Teachers' College Aug. 2020

Signs and Types of Gender Based-Violence Kencot SDA Church, Women's Day Jun. 2020

Coping with Gender-based Violence Kencot SDA Church, Women's Day Jun. 2020

Signs and Symptoms of Domestic Violence Mind Your Health, EJC Virtual Jun. 2020

Parenting during the COVID-19 Pandemic Kencot SDA Church Aug. 2020

Coping with Sexual Harassment Kencot SDA Church, youth Aug. 2020

Suicide and Mental Health Awareness	Edinburgh SDA Church	Sept. 2018
Suicide and Depression Awareness	Georgetown SDA Church	Nov. 2017

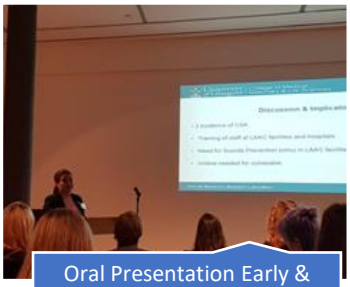
Appendix 38
Photos

Recipient of one of the top prizes for First YearPost Graduate Researcher Presentation 2016

International Symposium on Suicide, Youth Violence & Professional Psychology Georgetown, Guyana Nov 9, 2017

International Symposium on Suicide, Youth Violence & Professional Psychology Berbice, Guyana Nov 10, 2017

Poster Presentation Early & Mid-Career Researcher Forum 2019



Oral Presentation Early & Mid-Career Researcher Forum 2019

Appendix 39

Pooled Results with Multiple Imputation

Variables in the Equation

Imputation Number			B	S.E.	Wald	df	Sig.	Exp(B)	Fraction Missing Info.
Original data	Step 1[a]	Adverse Childhood Experiences Total Score	.356	.073	23.671	1	.000	1.427	
		Constant	-.969	.314	9.558	1	.002	.379	
1	Step 1[a]	Adverse Childhood Experiences Total Score	.359	.073	24.071	1	.000	1.432	
		Constant	-.996	.313	10.149	1	.001	.369	
2	Step 1[a]	Adverse Childhood Experiences Total Score	.350	.072	23.366	1	.000	1.419	
		Constant	-.970	.312	9.664	1	.002	.379	
3	Step 1[a]	Adverse Childhood Experiences Total Score	.364	.073	24.871	1	.000	1.439	
		Constant	-1.022	.313	10.647	1	.001	.360	
4	Step 1[a]	Adverse Childhood Experiences Total Score	.350	.072	23.507	1	.000	1.419	
		Constant	-.966	.310	9.674	1	.002	.381	
5	Step 1[a]	Adverse Childhood Experiences Total Score	.353	.072	23.749	1	.000	1.423	
		Constant	-.971	.310	9.808	1	.002	.379	
Pooled	Step 1[a]	Adverse Childhood Experiences Total Score	.355	.073			.000	1.426	.009
		Constant	-.985	.313			.002	.373	.007

a. Variable(s) entered on step 1: Adverse Childhood Experiences Total Score.

Variables in the Equation

Imputation Number			B	S.E.	Wald	df	Sig.	Exp(B)	Fraction Missing Info.	Relative Increase Variance
Original data	Step 1[a]	Coping Total Score	.110	.032	11.636	1	.001	1.116		
		Constant	-1.422	.544	6.821	1	.009	.241		
1	Step 1[a]	Coping Total Score	.109	.032	11.488	1	.001	1.115		
		Constant	-1.390	.543	6.551	1	.010	.249		
2	Step 1[a]	Coping Total Score	.111	.032	11.813	1	.001	1.117		
		Constant	-1.423	.545	6.810	1	.009	.241		
3	Step 1[a]	Coping Total Score	.107	.032	11.198	1	.001	1.113		
		Constant	-1.358	.540	6.313	1	.012	.257		
4	Step 1[a]	Coping Total Score	.108	.032	11.270	1	.001	1.114		
		Constant	-1.367	.541	6.374	1	.012	.255		
5	Step 1[a]	Coping Total Score	.110	.032	11.756	1	.001	1.117		
		Constant	-1.414	.544	6.755	1	.009	.243		
Pooled	Step 1[a]	Coping Total Score	.109	.032			.001	1.115	.003	.003
		Constant	-1.390	.544			.011	.249	.003	.003

a. Variable(s) entered on step 1: Coping Total Score.

Classification Table[a]

Imputation Number		Observed		Predicted: Suicidal history 2 levels: No suicidal history (controls)	Predicted: Suicidal history 2 levels: Suicidal history (ideators and enactors)	Percentage Correct
Original data	Step 1	Suicidal history 2 levels	No suicidal history (controls)	28	49	36.4
			Suicidal history (ideators and enactors)	20	97	82.9
		Overall Percentage				64.4
1	Step 1	Suicidal history 2 levels	No suicidal history (controls)	29	49	37.2
			Suicidal history (ideators and enactors)	20	97	82.9
		Overall Percentage				64.6
2	Step 1	Suicidal history 2 levels	No suicidal history (controls)	28	50	35.9
			Suicidal history (ideators and enactors)	20	97	82.9
		Overall Percentage				64.1
3	Step 1	Suicidal history 2 levels	No suicidal history (controls)	28	50	35.9
			Suicidal history (ideators and enactors)	20	97	82.9
		Overall Percentage				64.1
4	Step 1	Suicidal history 2 levels	No suicidal history (controls)	28	50	35.9
			Suicidal history (ideators and enactors)	20	97	82.9
		Overall Percentage				64.1
5	Step 1	Suicidal history 2 levels	No suicidal history (controls)	28	50	35.9
			Suicidal history (ideators and enactors)	20	97	82.9
		Overall Percentage				64.1

a. The cut value is .500

Appendix 40

Insurance Cover from University of Glasgow to conduct Data Collection in Jamaica

University of Glasgow

To:	**Mrs Karyl Powell-Booth**
Date:	**25/05/2017**
Subject:	**Insurance Cover – Business Travel**

Worldwide Travel Insurance has been arranged in connection with your forthcoming trip for the period **11/06/2017 to 06/09/2017.**

Please Note: You should ensure that you are up to date with the status of the area that you are travelling to and that you have familiarised yourself with the laws & customs of the country you are visiting. Information on these issues is available at – https://www.gov.uk/foreign-travel-advice.

Your cover includes the following benefits –

Medical & Emergency Repatriation Expenses (excluding UK Journeys)	**Unlimited**
Personal Liability	**£5,000,000**
Personal Property *(Where the value of any one article, pair or set exceeds £2,000 the claimant shall be liable for 25% of such excess amount)*	**£10,000**
Cancellation/Curtailment of Travel	**£10,000**
Money *(Where the amount of cash exceeds £2,000 the claimant shall be liable for 25% of such excess amount)*	**£5,000**

The Excess on this policy is nil, unless otherwise stated. Please be aware the cover is subject to Policy terms, conditions and exceptions. Staff and students should check the University's Travel Insurance web page for further details on benefits and conditions - http://www.gla.ac.uk/services/finance/staffsections/insuranceandrisk/travelinsurance

In the event of an Emergency: Please seek help from **AIG Europe Ltd** providing them with a contact address, telephone/fax number or telex reference, and the travel policy number (see below). You can call AIG Insurance on the following number:

Telephone: **+44 (0) 1273 552 922**

Address: **The AIG Building, 58 Fenchurch Street, London EC3M 4AB**

Insured: **University of Glasgow and/or Subsidiary Companies**

Policy No: **15900329**

NOTE:

If the Emergency is Medical, Insurers will then liaise directly with the Medical facility involved and settle all hospital expenses incurred, however you must notify the Insurance Section on your return to Glasgow. If you require Medical treatment of a minor nature you should settle the account personally and retain receipts. Claim forms can be obtained from this office.

FINANCE OFFICE
University of Glasgow, University Avenue, Glasgow G12 8QQ
Telephone: 0141 330 8659 Fax: 0141 330 6504
Email: Susan.Cruikshank@glasgow.ac.uk
The University of Glasgow, charity number SC004401

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