Examining the Perceptions of Stigma in Self-Harming Clients in General Hospital Settings And Clinical Research Portfolio

Valerie F. McKenna
Doctorate in Clinical Psychology

University of Glasgow
Section of Psychological Medicine
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Chapter 1. Systematic Review:

A Systematic Review of Psychosocial Interventions for Co-morbid Post Traumatic Stress Disorder (PTSD) and Substance Misuse

Valerie F. McKenna[1]

Prepared in accordance with guidelines for submission to *Addiction* (Appendix 1.1)

[1] Section of Psychological Medicine, University of Glasgow

Address for correspondence:
Section of Psychological Medicine
Academic Centre
Gartnavel Royal Hospital
1055 Great Western Road
Glasgow
G12 0XH

Word Count: 5666

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Submitted in partial fulfillment of the requirements for the degree of doctorate in clinical psychology (D.Clin.Psy)

Aims: Given the association between Post Traumatic Stress Disorder (PTSD) and substance misuse, research efforts have focussed on developing psychosocial interventions for these co-morbid conditions. The purpose of this systematic review was to examine the efficacy of these interventions for individuals with co-morbid PTSD and substance misuse. Specifically, this review aimed to identify whether there is evidence that the psychosocial interventions which have been used with this population improve PTSD, substance misuse, and both PTSD and substance misuse outcomes.

Methods: This review included any Uncontrolled or Controlled Trials of psychosocial interventions for adults with co-occurring PTSD and substance misuse published from 2005 to 2010. The search strategy involved electronic databases, hand-searching of reference lists and the website of one expert on co-morbid PTSD and substance misuse. In total, ten studies were included and the methodological quality of each study was assessed using a purpose-designed Quality Assessment Tool.

Results: The review identified improvements in PTSD outcomes using both trauma focussed and non-trauma focussed interventions, specifically Seeking Safety, and Contingency Management and Behavioural Therapy. The evidence suggested that psychosocial interventions which have been developed for other psychological problems, such as Behavioural Couples Therapy, can improve substance misuse outcomes. Finally, a number of interventions, namely Cognitive Behavioural Therapy and Seeking Safety, were shown to improve both PTSD and substance misuse outcomes.

Conclusions: While this review concluded that a number of psychosocial interventions can improve a range of PTSD and substance misuse outcomes, it also highlighted variation in the methodological rigour of the studies supporting these interventions.

1. Introduction

1.1 Overview of Post Traumatic Stress Disorder

Post Traumatic Stress Disorder (PTSD) is characterised by the intrusive and unwanted re-experiencing of traumatic events, hyper-arousal, emotional numbing and the avoidance of trauma-related stimuli [1]. For individuals to meet diagnostic criteria for PTSD, DSM-VI [2] states that a person must have been exposed to a traumatic event that involved actual or threatened death, or serious injury to the self or other people, with their responses involving intense fear, hopelessness or horror. While individuals with PTSD frequently experience difficulty in intentional recall of the traumatic event, which is often fragmented with missing details and is poorly organised in terms of the exact temporal order of events [3], involuntarily triggered intrusive memories occur with high frequency and events are re-experienced in a vivid and distressing way [1]. A range of psychological problems are reported to co-occur with PTSD, including depression, anxiety and substance use disorders, with estimates of between 75% and 90% of individuals with PTSD also meeting diagnostic criteria for other psychological problems [4, 5].

1.2 Co-morbid PTSD and Substance Misuse

When considering the impact of PTSD on psychological functioning, substance misuse has been reported as playing a role in assisting individuals to regain control over distressing emotions and intrusive reliving of experiences [6]. This suggests that substance misuse serves a short-term protective function for individuals wishing to dampen down their heightened arousal and to continue their avoidance of PTSD triggering events and memories [7].

Using substances also increases the risk of exposure to traumatic events which could lead to the development of PTSD, and it has been suggested that a higher number of traumatic events are experienced by those who use substances [8]. For example, a

greater risk of assault among substance users compared to non-substance using individuals has been identified [9]. Additionally, drug use in previously non-victimised women has been related to an increased risk of new assault over and above other socio-demographic variables such as age, race and education level [10].

Clearly, there is an association between experiencing trauma and using substances, with estimates of the prevalence of co-morbid PTSD and substance misuse ranging from 1% to 7.8% [11]. As research has indicated that experiencing co-occurring PTSD and substance misuse compromises the effectiveness of psychosocial intervention for both problems [12] and that these individuals encounter higher rates of hospitalisation, greater rates of relapse and higher ongoing, poly-substance use than either PTSD or substance misuse alone [13, 14], recent research efforts have focussed on developing specific interventions for these co-morbid conditions. Given the evidence suggesting that individuals in clinical populations such as psychosis use substances to self-medicate [15] and report expectations that substance use will decrease negative emotions [16], many of these interventions aim to reduce negative affect and to increase coping skills.

1.3 Reviews of Psychosocial Interventions for Co-morbid PTSD and Substance Misuse

A recent article [17] reviewed the application of one psychosocial intervention which is effective for PTSD, Exposure Therapy [18], to individuals with co-morbid PTSD and substance misuse. The authors report that the available research indicates the usefulness of this type of intervention in reducing both PTSD and substance misuse symptoms in individuals with co-morbid problems, but they advise that more rigorous research is needed. These authors also state that existing interventions for PTSD should be adapted when working with this population, rather than developing new interventions for co-occurring PTSD and substance misuse. Moreover, a summary of the research on a

number of time-limited interventions for co-morbid PTSD and substance misuse [19] suggested that there is preliminary evidence for these interventions reducing symptoms of both conditions. The authors likewise conclude that more research, with longer follow-up periods, is required.

As both of these review articles provide a summary of the research to date and surmise that more research with increased methodological rigour is required, it was decided that using a systematic approach to reviewing subsequent evidence for psychosocial interventions for co-occurring PTSD and substance misuse would be appropriate.

1.4 Aims

This systematic review aims to examine the efficacy of psychosocial interventions for individuals with co-morbid PTSD and substance misuse. Specifically, this review plans to identify whether there is evidence that the psychosocial interventions which have been used with this population:

i) Improve PTSD outcomes

ii) Improve substance misuse outcomes

iii) Improve both PTSD and substance misuse outcomes

1.5 Terminology Used in this Review

It should be noted that a range of terms are used to describe substance misuse. The phrase “substance misuse” is used throughout this review as a descriptor of problematic substance use and is considered to capture a range of substance-using behaviours.

When reporting the findings of each of the studies included in this review, however, the terms used are those of the study authors, e.g. “substance use disorder.”

1.6 Types of Studies

This review included any trials of psychosocial interventions for co-occurring PTSD and substance misuse published from 2005 to 2010. This timescale was identified as being appropriate, given that the literature reviews published in 2006 [17, 19] clarified the need for more research into interventions for this client group. Only peer-reviewed, published, English language studies were included. Review papers and book chapters which represented expert view were excluded, as were unpublished dissertations and conference papers.

1.7 Types of Participants

Participants were adult males and females with a diagnosis of PTSD and co-morbid substance misuse, including both alcohol and illicit drug misuse. Trials where participants did not meet diagnostic criteria for PTSD were not included in this review. Studies which did not include PSTD or substance misuse related outcomes, such as clinician views on the interventions or dissemination articles which did not report outcomes, were also excluded.

1.8 Types of Interventions

All Uncontrolled or Controlled Trials of psychosocial interventions versus standard care (i.e. treatment as usual) or other psychosocial interventions were included.

1.9 Types of Outcome Measures

The main outcome measures used to assess the efficacy of psychosocial interventions for co-morbid PTSD and substance misuse were reported PTSD and substance misuse

symptoms. Many studies also included other psychological and social outcomes; however, these were not the main focus of this systematic review.

2. Methods

2.1 Overview of the Search Strategy

The search strategy involved the following sources:

2.1.1 Electronic Databases

Text Word searching of Ovid MEDLINE, All Evidence-Based Medicine Reviews, British Nursing Index, Embase, ERIC, PsychINFO, Social Work Abstracts, and Social Policy and Practice, together with Title and Topic searching of the Web of Science database were undertaken. The search terms consisted of:

- PTSD or post traumatic stress disorder* or trauma* or traumatic life event*
- co-morbid* or dual-diagnos* or dual diagnos*
- substance depend* or substance misus* or substance abus* or substance addict* or drug depend* or drug misus* or drug abus* or drug addict* or alcohol depend* or alcohol misus* or alcohol abus* or alcohol addict* or alcohol* or alcohol dependence syndrome or alcohol dependence disorder or substance dependence syndrome or substance dependence disorder
- psychological intervention* or psycholog* intervention* or CBT or cognitive behavio?r therap* or cognitive therap* or behavio?r therap* or cognitive adj3 therap* or behavio?r adj3 therap* or cognitive adj3 therap* or exposure therap* or exposure adj3 therap* or seeking safety or seeking adj3 safety

2.1.2 Reference Lists

The reference lists of relevant papers drawn from the electronic databases were hand-searched in order to test the sensitivity of the search strategy.

2.1.3 Internet Searching

The website (www.seekingsafety.org) of one expert in the field of co-morbid PTSD and substance misuse, Dr. Lisa Najavits (Professor of Psychiatry, Boston University School of Medicine; Lecturer, Harvard Medical School; Clinical Psychologist, Veteran's Association Boston; and Clinical Associate, McLean Hospital), was accessed to highlight any additional published trials relevant to the review.

3. Data Collection and Analysis

3.1 Selection of Trials

A total of 11 English language articles were initially identified by searching Ovid MEDLINE, All Evidence-Based Medicine Reviews, British Nursing Index, Embase, ERIC, PsychINFO, Social Work Abstracts, and Social Policy and Practice electronic databases using appropriate publication year limits. The titles and abstracts of these articles were reviewed for suitability, and applying the inclusion and exclusion criteria identified two suitable articles.

A Web of Science Title Search revealed no suitable articles, whereas a Topic Search identified 30 possible articles, which were reduced to six articles after reviewing the abstracts and applying the inclusion and exclusion criteria.

Hand-searching reference lists identified a further five possible studies which were ultimately excluded from the review, suggesting that the electronic search strategy was appropriate for the review topic.

Reviewing the website of one expert in the field identified a further two suitable articles from a possible nine articles, resulting in a total of ten articles being assessed in this review. Of these ten articles, two utilised the same data. Figure 1 provides an overview of the outcome for the search strategy.

[Insert Figure 1]

The selection of suitable trials was undertaken by one reviewer, and where there was ambiguity about the eligibility of a trial for inclusion in the review, this was discussed with an independent reviewer using the inclusion and exclusion criteria. This was in fact only necessary for one potential study [20], which was ultimately excluded from the review.

3.2 Data Extraction

Data were extracted from each eligible trial involving the population characteristics of participants, details of the interventions used and outcome measures used to evaluate the efficacy of the intervention studies.

3.3 Quality Assessment

The methodological quality of each of the studies was assessed using a purpose-designed Quality Assessment Tool. This tool was devised using both the SIGN methodology for critical appraisal of research [21] and the Clinical Trials Assessment Measure [22] for Randomised Control Trials (RCTs). Employing this tool involved rating different aspects of each study in seven areas, as below:

Objectives and Study Type

Aims, questions or hypotheses clearly stated or described; study type (Randomised Controlled Trial, Controlled Trial or Uncontrolled Trial).

Sampling

Sample type (geographic cohort, convenience sample or highly selective); baseline demographics and clinical characteristics of groups clearly stated; inclusion and exclusion criteria specified and used for both groups; sample size adequate (i.e. 27 in each group, as defined by the Clinical Trials Assessment Measure) or based on power calculation; well-matched control group used or attempts to control for confounding variables; diagnostic criteria for PTSD and substance misuse applied, e.g. DSM-IV.

Allocation

Process of allocation to groups adequately described; allocation carried out independently of trial research team.

Assessment of Outcomes

Assessment carried out independently of therapists; standardised measures of PTSD and substance misuse applied (i.e. reliability and validity data specified).

Intervention

Intervention adequately described or intervention protocol used; adherence to intervention protocol used or intervention quality assessed.

Data Analysis

Data analysis appropriate to study design and type of outcome measure; intention to treat analysis used; attrition rates specified; results clearly stated and related to research aim or hypotheses; confidence intervals, effect sizes, p-values etc. provided where appropriate.

Discussion

Recommendations for clinical practice and future research identified from results; limitations of study clearly identified.

Each aspect of these seven areas was rated on a three-point scale, specifically Adequate, Partial and Inadequate (or equivalent descriptors), and allocated a possible score of 2 (=Adequate), 1 (=Partial) or 0 (=Inadequate), giving a total possible score of 44. The final score for each trial was calculated as a percentage, which was then converted into a descriptive quality rating. These descriptors encompassed Excellent (>75%), Good (>60%), Fair (>50%) and Poor (<49%).

A copy of the Quality Assessment Tool used to assess each study in this review is provided in Appendix 1.2.

Each of the articles was again reviewed by an independent reviewer in order to assess the reliability of the Quality Assessment Tool. There was complete agreement with this reviewer as to the descriptive quality rating given to all ten of the papers.

4. Results

4.1 General Findings

A summary of each of the ten studies is provided in Table 1.1 to clarify the clinical heterogeneity of the trials in this review. Studies were grouped together and presented in relation to the types of interventions used. These were then categorised as studies which examined broad classifications of psychosocial interventions (i.e. considered a range of interventions together) [23, 24], trials which considered one specific psychosocial intervention, Seeking Safety [25, 26, 27, 28, 29], trauma-informed educational interventions [30], Behavioural Couples Therapy [31] and Contingency Management and

Behaviour Therapy [32]. For categories of studies involving a number of different trials, i.e. Seeking Safety interventions, trials are presented in order of publication date.

[Insert Table 1.1]

In general, the majority of the studies [24, 25, 26, 27, 28, 29, 30, 31, 32] described clear aims and research hypotheses, and all the above studies related their results to these hypotheses, with seven [23, 24, 25, 28, 29, 31, 32] doing this well. Additionally, limitations of the studies were clearly [23, 24, 25, 28, 29, 30, 31, 32] or partially [27] identified in the majority of the trials.

4.1.1 Study Type

Of the ten studies, three [25, 26, 30] were Uncontrolled Trials, a further three [24, 27, 31] were Controlled Trials and the remaining four [23, 28, 29, 32] were Randomised Controlled Trials (RCTs). Of these four RCTs, two [28, 29] utilised the same data set.

4.1.2 Sample Characteristics

Study participants were most frequently recruited from community or outpatient settings (eight in total) [23, 25, 26, 27, 28, 29, 31, 32], with one [30] recruiting from a residential setting and one [24] recruiting participants from both settings. Half of the trials [24, 27, 28, 29, 30] involved women only, with a further two [25, 31] comprising men only or men and their non-substance using female partners, and the remaining three [23, 26, 32] involving both men and women. Of note, three of the trials [26, 27, 31] considered veterans and seven [23, 24, 25, 28, 29, 30, 32] examined non-veterans, while two [27, 32] focussed on homeless populations, compared to eight [23, 24, 25, 26, 28, 29, 30, 31] which did not focus on this population.

Of the ten studies, two [25, 26] used highly selective samples, such as study volunteers who responded to recruitment flyers. A further five [23, 27, 30, 31, 32] used convenience samples, including outpatient clinic attendees and individuals in a residential setting, and the remaining three [24, 28, 29] utilised geographical cohort samples.

Sample sizes ranged from as few as five study participants to 450 participants, with seven of the studies [23, 24, 27, 28, 29, 30, 32] utilising an adequate sample size (i.e. 27 per group). None, however, reported a power calculation on which sample size was based.

The baseline characteristics and clinical characteristics of participants were reported for all studies, with inclusion and exclusion criteria being clearly or partially stated for eight of the trials [23, 24, 25, 26, 27, 28, 29, 32]. Additionally, diagnostic criteria for PTSD and substance misuse were used at baseline for eight of the studies [23, 24, 25, 28, 29, 30, 31, 32].

4.1.3 Interventions Used

Psychosocial Interventions

Of the ten studies, one [23] examined a range of psychological interventions (Cognitive Therapy, Individual Supportive-Expressive Therapy, Psychodynamic and 12-step individual and 12-step group counselling) in the context of cocaine-dependent participants with substance use disorder, with and without co-occurring PTSD. A further trial [24] included two separate interventions, Seeking Safety and Relapse Prevention, under the umbrella of Cognitive Behavioural Therapy (CBT), and compared this to a non-intervention control group. Relapse Prevention has been described as a self-control programme, involving behavioural skills training, cognitive interventions and lifestyle change procedures [33], while the Seeking Safety intervention is outlined overleaf.

Seeking Safety

Seeking Safety [34] is a manualised, trauma-focussed intervention and was used in five of the studies. Of these studies [25, 26, 27, 28, 29], one did not utilise a comparative control group [26], one compared Seeking Safety to treatment as usual [27] and two studies [28, 29] used the same data set to compare Seeking Safety with Women's Health Education. A further Uncontrolled Trial [25] examined Seeking Safety with an additional component, Exposure Therapy-Revised, an adapted version of Exposure Therapy for PTSD [18].

Trauma-Focussed Interventions

A further study [30] looked at the impact of two trauma-focussed interventions, Helping Women Recover [35] and Beyond Trauma [36]. The first of these, Helping Women Recover, is primarily psycho-educational in nature, while Beyond Trauma aims to assist with the expression and containment of emotive responses to trauma.

Behavioural Couples Therapy

Of the ten studies, one [31] examined Behavioural Couples Therapy for clients with PTSD and substance misuse. This intervention used a Recovery Contract to promote abstinence from substance use, and counselling techniques to increase positive activities and to improve communication between couples [37].

Contingency Management and Behavioural Treatment

Finally, one study [32] compared Contingency Management to Contingency Management and Behavioural Treatment. The Contingency Management intervention involved abstinence-contingent housing and vocational training, while the additional Behavioural Treatment included goal development, review and attainment reinforcement, individual counselling and recreational outings.

When assessing how well these interventions were described in the study, only one [23] did not give adequate or partial information relating to intervention type. Furthermore, six of the studies [23, 24, 26, 28, 31, 32] did not report if intervention adherence or quality was assessed.

4.1.4 Domains of Outcomes

A range of outcomes for the trials was employed in the articles, including intensity and frequency of PTSD symptoms, and indices of substance misuse. Of the ten trials, two [26, 32] considered PTSD symptoms without substance misuse, two [23, 31] involved substance misuse measures without PTSD symptom changes and the remaining six [24, 25, 27, 28, 29, 30] considered both PTSD and substance misuse outcomes.

Of the studies, two [28, 29] measured only PTSD or substance misuse symptoms, with the remaining eight encompassing a range of interpersonal and intrapersonal outcomes. Intrapersonal outcomes included measures of psychological functioning (such as depression, anxiety, dissociation and self-esteem), sexual functioning and self-reported quality of life, while intrapersonal outcomes comprised of family, relationship and interpersonal functioning, alongside perceived social support. Additional measures included the number of days abstinent from substances, number of days worked and number of sessions attended. Of the eight studies which involved additional outcomes to PTSD or substance misuse symptoms [23, 24, 25, 26, 27, 30, 31, 32], three [26, 30, 32] utilised only intrapersonal outcomes, and the remaining five [23, 24, 25, 27, 31] considered both interpersonal and intrapersonal outcomes together.

4.1.5 Assessment of Outcomes

The studies employed a range of assessment measures for substance use, including standardised self-report measures for substance use and PTSD symptoms in all ten of the

studies, and physical assessment measures involving urine toxicology screens in three of the studies [25, 26, 32]. When examining the use of measures in the trials, standardised measures were characterised by those for which information on psychometric properties, namely validity and reliability, were available. Where this information was not adequately described in the studies themselves, attempts were made to identify this information through reference lists and electronic searching. All of the studies utilised at least two standardised measures, four [25, 27, 28, 30] involved some measures which were not well validated or had no published information on psychometric properties, with the remaining six [23, 24, 26, 29, 31, 32] using standardised tools only or including an additional physical assessment measure. It should also be noted that only three [28, 29, 32] of the ten studies included assessment of outcomes which were undertaken independently of the therapists delivering the intervention.

4.2 Exploration of Methodological Heterogeneity

An overview of the methodological heterogeneity of the trials is outlined in Table 1.2, which highlights large variability in the methodological quality of the trials.

[Insert Table 1.2]

4.2.1 General Findings

Of the ten studies, five [23, 24, 25, 26, 30] employed a pre-post intervention measurement design, with the remaining five [27, 28, 29, 31, 32] reporting follow-up data. Follow-up periods ranged from one week to twelve months and, of the five studies which included follow-up, the most frequent follow-up period was twelve months (N = 3).

4.2.2 Quality Criteria Assessment

Of the ten studies, only two [29, 32] were rated as “Excellent,” a further four [23, 24, 27, 28] were characterised as “Good,” two [25, 31] were classified as “Fair” and the remaining two studies [26, 30] were given a rating of “Poor” with the Quality Assessment Tool.

4.2.3 Allocation to Intervention

Although allocation to intervention was not applicable to over half of the studies included in the review, of the four RCTs identified in this review [23, 28, 29, 32] only one [29] specified appropriate allocation to intervention group, where the process of allocation was adequately described and carried out independently of the research team. Of the three remaining RCTs, only one [28] - which shared the same data set as the RCT clarifying allocation procedures - gave partial information relating to allocation, and the remaining two [23, 32] did not provide any details about allocation.

4.2.4 Data Analysis

Of the ten studies, most [23, 24, 26, 27, 28, 29, 31, 32] reported appropriate data analysis and presented data adequately. Attrition rates were stated for all ten of the trials, with three [25, 26, 31] reporting an attrition rate of zero. Of the seven trials which involved attrition [23, 24, 27, 28, 29, 30, 32], three [23, 27, 32] included statistical analysis on attrition rates between groups. Additionally, for the studies which specified attrition rates, four [23, 24, 27, 32] employed some form of intent to treat analysis.

All of the studies reported statistically significant changes in identified outcomes. However, none reported effect sizes, and only one [29] considered results in the context of clinical significance. In order to fully assess the clinical implications of the significant results reported in each of the studies, effect sizes were calculated using appropriate

methodology [38] where possible. Table 1.3 provides an overview of reported results and corresponding effect sizes in each trial, indicating heterogeneity of results.

[Insert Table 1.3]

5. Discussion

5.1 General Findings

This review represents a first attempt at employing a systematic approach to identifying the published literature on psychosocial interventions for co-morbid PTSD and substance misuse. The review expands on previous narrative reviews in this area [17, 19] by undertaking standardised assessment of the quality of the evidence presented in the articles, with the aim of comparing these interventions. However, when considering this evidence for the efficacy of these psychosocial interventions on, it should be noted that the studies employed a range of study designs and outcome measures, making comparisons between studies difficult. For example, the studies which examined broad categories of psychosocial interventions [23, 24] focussed on different aspects of functioning post-intervention. Nevertheless, in general, each of the studies provided some evidence that a number of psychosocial interventions can improve PTSD, substance misuse, and both substance misuse and PTSD outcomes.

5.2 Improvement in PTSD Outcomes

Four studies [26, 27, 30, 32] reported improvements in PTSD outcomes, using both trauma focussed and non-trauma focussed interventions.

For the studies which involved trauma focussed interventions [26, 27, 30], there is some evidence that psycho-education around trauma and recovery from trauma improved PTSD outcomes. While the results presented [30] yielded small to medium effect sizes across

each of the domains of outcome, the poor methodological quality of this study should not be ignored.

Of the remaining studies which examined trauma focussed interventions to improve PTSD outcomes [26, 27], both utilised Seeking Safety interventions. The earlier study [26] identified improved post-intervention PTSD symptoms and quality of life, as well as self-reported communication and problem-solving skills. Some of the clear methodological difficulties of this study were subsequently addressed in a study which again detailed improvements in PTSD symptoms, particularly related to avoidance, intrusive thoughts and hyper-vigilance, during a twelve month follow-up period [27]. Moreover, the authors identified significant improvements in other psychological and social aspects of functioning during the follow-up period; however, the calculated effect sizes revealed that the magnitude of this improvement to be small across each of these domains.

Additional high quality evidence [32] suggested that non-trauma focussed interventions, namely Contingency Management and Behavioural Therapy, can be effective in reducing the number and intensity of PTSD symptoms, as well as increasing levels of reported coping. Unfortunately, it was not possible to calculate the corresponding effect sizes, given the available data.

5.3 Improvement in Substance Misuse Outcomes

There is reasonable evidence that interventions which are effective in managing substance misuse can also improve substance use outcomes for individuals with co-morbid PTSD and substance misuse problems. One study [31] indicated that a non-trauma focussed intervention, specifically Behavioural Couples Therapy, can improve both substance misuse and general psychological functioning in this client group, with effect sizes ranging from small in substance use outcomes to medium in psychological

functioning. While this study identified improvements over a twelve month follow-up period, caution should be used when considering these results due to the small sample size used in this study; an increased sample size would allow greater clarification of the effectiveness of this promising intervention.

When comparing the utility of a number of psychosocial interventions for participants with co-morbid PTSD and substance use disorder with individuals affected by substance use disorder only [23], the authors noted that both groups improved across a range of substance misuse, psychological and interpersonal functioning outcomes during the intervention period and at six months follow-up, with a range of small to large effect sizes. However, those with co-occurring PTSD and substance misuse did not demonstrate the same level of improvement in substance misuse outcomes as those in the substance use disorder only group, and reported more severe problems across psychological and interpersonal domains at baseline and again at follow-up. This finding suggests that clients with co-morbid PTSD and substance misuse experience higher levels of functional impairment, which may require more specialist intervention than would be typical with substance misuse alone.

5.4 Improvement in Both PTSD and Substance Misuse Outcomes

Attempts to determine whether specialist intervention for co-morbid PTSD and substance misuse is more effective than treatment as usual [24] identified improved outcomes in PTSD and alcohol use symptoms with Cognitive Behavioural Therapy (CBT), with consistently medium effect sizes across these domains. While the umbrella term of CBT was applied, two distinct interventions which focussed on trauma (Seeking Safety) and substance misuse (Relapse Prevention) were employed in the trial. This study did not identify any changes in measures of intrapersonal (i.e. depression and dissociation) functioning or interpersonal (i.e. social and sexual) functioning. This result is not

surprising, given that the CBT interventions employed in these studies did not focus solely on these aspects of functioning. However, if the hypothesis that individuals use substances to reduce negative affect is accurate [6, 7], this finding suggests that more comprehensive interventions may need to be developed and applied to this particular client group.

Of the remaining studies which reported improvements in both PTSD and substance misuse symptoms [25, 29], both utilised Seeking Safety. While clear methodological difficulties exist in the first study identifying improvements in both aspects of co-morbid PTSD and substance misuse [25], these difficulties have since been addressed by a study employing an RCT design and following up participants at one week and three, six and twelve months post-intervention [29]. With both of these studies, there was insufficient data to calculate effect sizes for these improvements.

The later study [29] indicated that PTSD-related changes impact on substance use outcomes, with PTSD severity reductions being associated with substance use disorder improvements. The authors also reported that Seeking Safety was more effective at achieving substance use disorder improvements than the psycho-educational control intervention, but only for individuals who reported heavier substance misuse at baseline and who achieved reductions in PTSD severity. This finding indicates that trauma-focussed interventions may only be of significant benefit to clients with more severe PTSD and substance misuse symptoms at baseline. In addition to the reported improvements across substance misuse and PTSD domains in the studies which examined Seeking Safety, it has been reported that this type of trauma-focussed intervention is well tolerated by participants [28], as the study identified no additional intervention-related adverse psychological or substance use outcomes compared to a non-trauma focussed control intervention.

5.5 Mechanisms of Change

While the studies included in this review identify a number of psychosocial interventions which can improve PSTD and substance misuse outcomes in individuals with these co-morbid conditions, only one study [32] attempted to explore the mechanisms of change through which this improvement may occur. While this study [32] did not include interventions which were specifically designed to address PTSD, the authors explored different coping styles (approach, negative and positive distraction coping) in relation to PTSD outcomes. They reported that positive distraction coping predicted PTSD symptom and severity reductions, suggesting that interventions which aim to improve positive coping strategies may be of value for this client group. This finding fits with the current evidence base for Cognitive-Behavioural interventions aimed at improving both PTSD [39] and substance misuse [40], independently of each other, and may explain why the interventions which move beyond psycho-education about trauma in an attempt to develop coping skills, such as Seeking Safety, provide the most compelling evidence for improving outcomes with this client group. While the weight of the evidence in favour of Seeking Safety is likely to be influenced by the number of studies identified in this review (N=5), the methodological quality of studies examining this intervention type has improved from 2005 onwards, with the inclusion of RCTs and appropriate follow-up periods, allowing greater confidence in the evidence for this type of trauma-focussed intervention.

5.6 Applying the Evidence

Although this review has been able to identify a number of effective psychosocial interventions for co-occurring PTSD and substance misuse, some issues remain relating to the applicability of the results presented. All of the research studies were undertaken by research groups in the USA, which has a unique healthcare system and is likely to have a different profile of substance misuse than other countries. While reported prevalence rates of lifetime PTSD (30-58%) [41] and current PTSD (20-38%) [42] in

substance use disorder populations in the USA are comparable with those reported in a recent UK study (with lifetime PTSD 38.5% and current PTSD 51.9%) and a similar pattern of impairment exists in this population, it has been suggested that more research is needed on PTSD in substance misusing populations in the UK [8]. Undertaking additional research in countries outside the USA would allow greater worldwide applicability of the effective psychosocial interventions identified in this review.

Additionally, when considering the evidence presented in this review, there should be some acknowledgement of the limitations of the methods employed. These relate largely to the inclusion and exclusion criteria used, particularly the timescale for publication selected. Although the search strategy identified no subsequent research on three of the interventions identified as promising in previous narrative reviews [17, 19] – Exposure Therapy [18], Substance Dependence Posttraumatic Stress Disorder Therapy [43], and Concurrent Treatment of PTSD and Cocaine Dependence [44] – there may have been value in assessing the quality of these earlier studies. Furthermore, including only peer-reviewed journal articles may have resulted in the omission of a number of potential studies, such as those published in book chapters. This exclusion criterion was initially considered a useful screen for the quality of the articles selected; however, any evidence presented in these potential studies would have ultimately been weighted according to the Quality Assessment Tool. Finally, as the Quality Assessment Tool focussed solely on information presented in the articles, the quality rating descriptor given may be the result of an absence of information, rather than the presence of methodological weaknesses in the studies.

6. Conclusions

While there is evidence that psychosocial interventions designed to address co-morbid PTSD and substance misuse improve a range of PTSD-related and substance misuse

outcomes, as well as a number of additional psychological and social functioning outcomes, this review emphasises the large variation in the methodological rigour of the studies which support these interventions. As it was not possible to combine calculated effect sizes across the studies in light of this variability, it is difficult to specify clear conclusions about the relative efficacy of the interventions presented in this review. Despite this, the review supports the findings of previous literature reviews in this area [17, 19] that a number of psychosocial interventions which are adapted from interventions for these problems occurring independently are effective for these co-morbid conditions. This review also lends further weight to the hypothesis that substances are often used as a means of coping with PTSD-related experiences [7], as it highlights the increased efficacy of coping-based interventions relative to interventions with an emphasis on psycho-education.

In general, for trauma-focussed interventions [23, 24, 25, 26, 27, 28, 29, 30], the evidence for interventions which aim to develop coping skills [23, 24, 25, 26, 27, 28, 29] is of better quality than that presented in the study utilising psycho-educational interventions [30]. Moreover, the research consistently indicates that this type of intervention can improve both PTSD and substance misuse outcomes, occurring independently and together, and is well tolerated by individuals. This fits the evidence which demonstrates that improving coping strategies can improve PTSD outcomes [32]. Furthermore, the evidence for non-trauma focussed interventions [31, 32] suggests that the application of interventions which have not been developed solely for this co-morbid population can improve PTSD and substance misuse outcomes independently; however, whether these interventions could improve PTSD and substance misuse outcomes together has yet to be tested. Given that there is some evidence, albeit of varying quality, for each of these interventions in relation to co-morbid PTSD and substance misuse, additional research is likely to increase confidence in the effectiveness of these interventions for this client group. Since the

studies for some of these interventions, specifically Behavioural Couples Therapy, and Contingency Management and Behaviour Therapy, present first attempts to apply these interventions to co-occurring PTSD and substance misuse, it is plausible that subsequent research will improve on study design and quality, as is apparent in the increased number of studies with greater methodological rigour for Seeking Safety interventions.

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Figure 1. Overview of Search Strategy

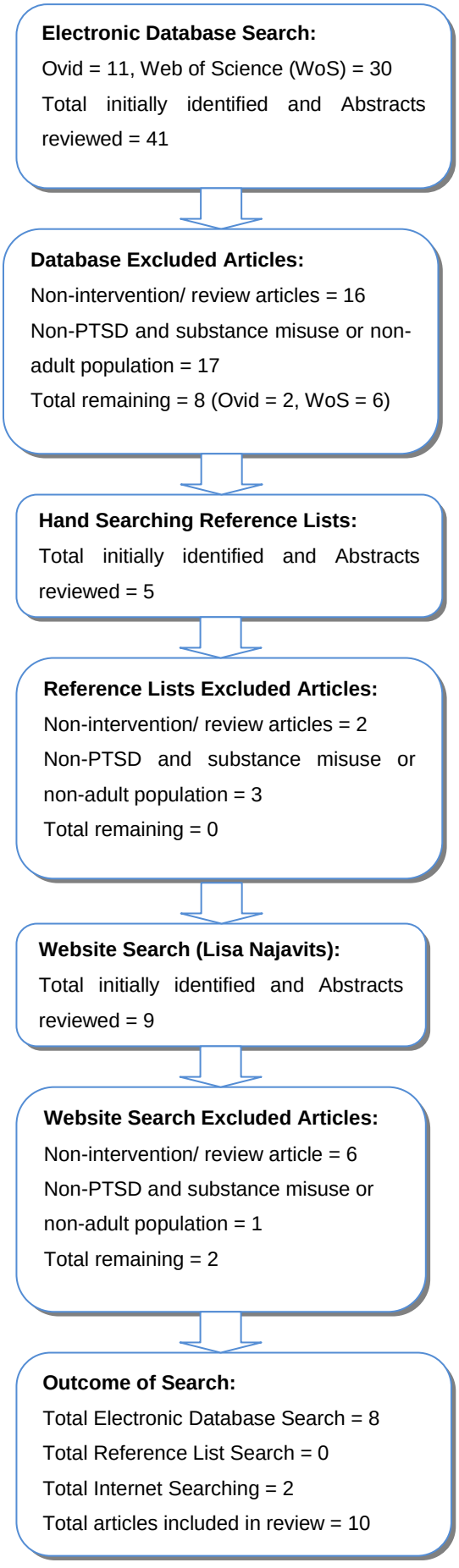

Table 1.1 Overview of Clinical Heterogeneity

Study	Study Type	Population	Sample Size	Intervention	Outcome Domains	Outcome Measures
Najavits, 2007 [23]	Randomised Controlled Trial	Cocaine-dependent men and women in community settings	Total N = 428 (PTSD-SU = 34, SUD = 394)	Psychosocial interventions (Cognitive Therapy, Individual Supportive-Expressive Therapy, Psychodynamic and 12-step counselling) for PTSD and Substance Use (PTSD-SU) vs. Substance Use Disorder only (SUD)	SUD symptoms Psychological functioning Interpersonal problems	*ASI *BSI *IIP
Cohen, 2006 [24]	Controlled Trial	Women in residential and community settings	Total N = 107 (CBT = 75, TAU = 32)	Cognitive-Behavioural Therapy (Seeking Safety and Relapse Prevention)(CBT) vs. Treatment as Usual (TAU)	PTSD symptoms SUD symptoms Depression Dissociation Social functioning Sexual functioning	*CAPS *ASI *HDRS *DES *DSBH (TSI)
Najavits, 2005 [25]	Uncontrolled Trial	Men in community setting	Total N = 5	Seeking Safety and Exposure Therapy Revised	Attendance SUD symptoms Beliefs about SU and	No. of attended sessions

					PTSD Psychiatric problems Family and social functioning PTSD symptoms	Urine toxicology *TSC-40 SBQ *BSI *GAF TSR *ASI WAS SAS *CGIS BASU *CQS SSFQ *HAQ-II PPQ CCQ ET-RFQ
Cook, 2006 [26]	Uncontrolled Trial	Male and female veterans, Veteran Association outpatient setting	Total N = 18	Seeking Safety	PTSD symptoms Quality of Life	*PTSDC-M *QOLI Urine toxicology
Desai, 2008 [27]	Controlled Trial (pre-post non-equivalent)	Female, homeless veterans, Veteran Association outpatient settings	Total N = 450 (SS = 91, TAU = 359)	Seeking Safety (SS) vs. Treatment as Usual (TAU)	PTSD symptoms SUD symptoms Physical and mental functioning	*SCL-21-R *SF-12 *ASI *PTSDC Self-esteem

					Self-esteem Social support	measure Social support No. of days worked Housing status Employment status
Killeen, 2008 [28]	Randomised Control Trial	Women in community settings	Total N = 353 (SS = 176, WHE = 177)	Seeking Safety (SS) + standard substance abuse treatment vs. Women's Health Education (WHE) + standard substance abuse treatment	Adverse Effects (AE): increased PTSD symptoms, increased depression symptoms, and increased or more severe alcohol or substance use. AEs categorised as "mild", "moderate" or "severe."	*CAPS *ASI SUI AEQ *PSS-SR
Hien, 2010 [29]	Randomised Control Trial	Women in community settings	Total N = 353 (SS = 176, WHE = 177)	Seeking Safety (SS) vs. Women's Health Education (WHE)	Improvements categorised: No response, Substance Use response, PTSD	No. of days substances used in past

					response or Global response (both Substance use and PTSD improvement).	30 days *CAPS *SUI *ASI-Lite
Covington, 2008 [30]	Uncontrolled Trial	Women in residential setting	Total N = 73 (41 for analysis)	Trauma-informed curricula: Helping Women Recover (HWR) and Beyond Trauma (BT)	PTSD symptoms Drug and alcohol usage Mental Health Criminal History	*TSC-40 *BDI *ASI CQS
Rotunda, 2008 [31]	Controlled Trial	Male veterans and non-substance using female partners, outpatient setting	Total N = 38 (PTSD-SU = 19, SUD = 19)	Behavioural Couples Therapy for PTSD and Substance Use (PTSD-SU) and Substance Use Disorder only (SUD)	Alcohol use Relationship functioning Psychological distress	% days abstinent *CTS *DrInC *MAST *ADS * DAS *SCL-90-R
Lester, 2007 [32]	Randomised Control Trial	Cocaine-dependent homeless men and women, outpatient setting	Total N = 118 (CM+= 57, CM = 61)	Contingency Management and Behaviour Treatment (CM+) vs. Contingency Management (CM)	Coping Behaviours PTSD symptoms	*Brief COPE *PDS Urine toxicology

Key: * Standardised assessment measure

ADS – Alcohol Dependence Scale
AEQ – Adverse Events Questionnaire
ASI – Addiction Severity Index
ASI-Lite – Addiction Severity Index-Lite
BASU – Beliefs About Substance Use
BDI – Beck Depression Inventory
Brief COPE – Coping Orientations to Problems Experienced
BSI – Brief Symptom Inventory
CAPS – Clinician Administered PTSD Scale
CCQ – Core Components Questionnaire
CGIS – Clinical Global Impressions Scale
CSQ – Client Satisfaction Questionnaire
CTS – Conflicts Tactics Scale
DAS – Dyadic Adjustment Scale
DES – Dissociative Experience Scale
DrInC – Drinker Inventory of Consequences
DSBS – Dysfunctional Sexual Behavior Scale
ET-RFQ – Exposure Therapy-Revised Feedback Questionnaire
GAF – Global Assessment of Functioning
HAQ-II – Helping Alliance Questionnaire II
HDRS – Hamilton Depression Rating Scale
IIP – Inventory of Interpersonal Problems
MAST – Michigan Alcoholism Screening Test
PDS – Post-Traumatic Diagnostic Scale
PPQ – Patient Preferences Questionnaire
PSS-SR – Post-Traumatic Stress Disorder Symptom Self-Report
PTSDC – PTSD Checklist
PTSDC-M – PTSD Checklist-Military
QOLI – Quality of Life Inventory
SAS – Social Adjustment Scale
SBQ – Suicidal Behaviors Questionnaire
SCL-21-R – 21-Item Symptom Checklist-Revised
SCL-90-R – Symptom Checklist 90-Revised
SF-12 – 12-Item Short-From Survey
SQ – Safety Questionnaire
SSFQ – Seeking Safety Feedback Questionnaire
SUI – Substance Use Inventory
TSC-40 – Trauma Symptom Checklist-40
TSI – Trauma Symptom Inventory
TSR – Treatment Services Review
WAS – World Assumptions Scale

Table 1.2 Overview of Methodological Heterogeneity

Study	Follow-Up Changes	Quality Criteria Assessment	Allocation	Attrition Rates Specified	Intention to Treat Analysis	Clinical Significance
Najavits, 2007 [23]	Pre- and 1-6 months intervention assessment (pre- and post-intervention assessment)	Good	Not specified	Yes – SUD-PTSD 76.5 %, SUD only 68% No significant difference between groups	Yes – Mixed pattern analysis	No
Cohen, 2006 [24]	Pre- and post-intervention assessment	Good	N/A	Yes – 25% drop out	Yes – Last Observation Carried Forward	No
Najavits, 2005 [25]	Pre- and post-intervention assessment	Fair	N/A	No attrition	N/A	No
Cook, 2006 [26]	Pre- and post-intervention assessment	Poor	N/A	No attrition	N/A	No
Desai, 2008 [27]	Pre- and post-intervention, and 3, 6, 9 and 12 months follow-up	Good	N/A	Yes – 15-20% at 3 months, 33-37% at 6 months, 44-60% at 9 months and 47-73% at 12 months No significant difference between groups	Adjustment for participants lost to follow-up made with	No

				at 6 and 9 months	interaction between baseline measure and time	
Killeen, 2008 [28]	Baseline, weekly questionnaires and 1 week follow-up	Good	Partially specified	Yes – 18% dropped out before intervention, 13% dropped out due to any AEs, 15% due to study-related AEs and 3 patients due to clinician-rated deterioration	No	No
Hien, 2010 [29]	Baseline, weekly questionnaires and 1 week, 3 months, 6 months and 12 months follow-up	Excellent	Stratified by prescription psychotrophic medication and substance use diagnosis	Yes – 56% Completers (+ 6 sessions)	No	Yes – improvement defined as 30% greater from baseline to each intervention phase

Covington, 2008 [30]	Assessment at 5 time points: intake, stabilisation period of 45 days, completion of HWR, completion of BT and exit (pre- and post-intervention assessment)	Poor	N/A	Partial – data available to analyse: Baseline (N = 195-199), exited programme (N = 79-84), post-intervention (N = 40-44)	No	No
Rotunda, 2008 [31]	Pre- and post-intervention, and 12 months follow-up	Fair	N/A	No attrition	N/A	No
Lester, 2007 [32]	Pre-intervention, 2 months and 6 months follow-up	Excellent	Not specified	Yes – at 6 months, attrition 30% for CM vs. 26% CM+ group No significant difference between groups	Yes – Expectation-Maximisation algorithm for missing data	No

Table 1.3 Overview of Reported Results and Calculated Effect Sizes

Study	Results: p-values and Calculated Effect Sizes (ES)	Interpretation of Results
Najavits, 2007 [23]	**Significant effect for PTSD status:** ASI Family-Social (ES=0.9, large), Medical (ES=0.39, small) and Psychiatric (ES=0.66, large) BSI Global Severity (ES =1.52, large) IIP (ES=0.96, large) **Significant effect for Time:** ASI Drug (ES=3.32, large), Alcohol (ES=1.23, large), Family-Social (ES=1.44, large), Employment (ES=0.52, medium) and Psychiatric (ES=1.11, large) BSI Global Severity (ES=1.63, large) IIP (ES=0.68, medium) **Significant PTSD x Time interaction:** ASI legal (ES=0.45, medium) *Estimates of ES for within-group changes not possible*	SUD-PTSD group with greater impairment across domains than SUD-only group over time. Patients improved across 7 domains over 6 month period. SUD-PTSD group with worse psychological and interpersonal functioning at baseline and follow-up, also reported more addiction-related medical problems.
Cohen, 2006 [24]	**Significant effect for Treatment:** CAPS (ES=0.6, medium) ASI Alcohol (ES=0.61, medium)	CBT interventions significantly reduced PTSD and alcohol use disorder symptoms.

	Significant effect for Severity: CAPS (ES=1.18, large) ASI Alcohol (ES=2.06, large), Drug (ES=1.92, large) and Social (ES=1.54, large) HAM-D (ES=1.4, large) DES (ES=1.54, large) TSI-DSB (ES=1.26, large)	
Najavits, 2005 [25]	**Significant improvements:** ASI Drug (p=0.05) and Social-Family (p=0.05) TSC-40 Trauma Symptoms (p=0.03), Anxiety (p=0.04), Dissociation (p=0.03) and Sexual Abuse Trauma (p=0.04) GAF Overall Functioning (p<0.02) BSI Hostility (p<0.04) WAS Meaningfulness (p<0.01) SQ Safety Feelings (p<0.04) and Thoughts (p<0.000) Urinalysis consistent with self-report measures *No control condition to calculate ES*	SS intervention with improvements in drug use, social and family functioning, trauma symptoms, anxiety, dissociation, sexual abuse index, overall functioning, hostility, meaningfulness, and feeling and thoughts relating to safety. Level of satisfaction, alliance, attendance and retention strong.
Cook, 2006 [26]	**Significant improvements:** PTSD C-M (p<0.001)	PTSD and QOL improved, with reported improvements in communication and

	QOL (p<0.05) *No control condition to calculate ES*	problem-solving skills.
Desai, 2008 [27]	**Significant effect for Seeking Safety:** Days worked in past 30 days (ES=0.37, small) Social support (ES=0.26, small) SCL-21-R (ES=0.25, small) PTSD Checklist (ES=0.26, small), Avoidance (ES=0.32, small) and Hyper-vigilance (ES=0.24, small) ASI psychiatric (ES=0.26, small) **Significant effect for Time:** Number of days in past 30 days: worked (ES=0.62, medium), homeless ES=0.23, small), drug use (ES=0.19, small) and alcohol use (ES=0.49, medium) Social support (ES=0.63, medium) SCL-90-R (ES=0.5, medium) PTSD Checklist (ES=0.49, medium), Avoidance (ES=0.54, medium), Intrusive Thoughts (ES=0.56, medium) and Hyper-vigilance (ES=0.48, medium) ASI Psychiatric (ES=0.42, medium), Drug (ES=0.47, medium) and Alcohol (ES=0.49, medium) SF-12 Mental (ES=0.43, medium) and Medical (ES=0.59, medium)	Over 12 months follow-up, SS group with significantly greater improvement in psychiatric and PTSD symptoms and social support.

Killeen, 2008 [28]	**Significant effect for Attended Sessions:** Adverse Events (p=0.01) **Fewer study-related AEs associated with:** More cocaine (p<0.002) and alcohol (p<0.003) use in 30 days prior to baseline Higher total CAPS, C and D at baseline (p<0.0001) Past 30 day cocaine use post-intervention(p=0.03) **Significant intervention x study-related AEs interaction:** Past 30 day opiate (p=0.03) and marijuana (p-0.04) use at post-intervention *Insufficient raw data to calculate ES*	SS intervention no difference in treatment-related AEs to WHE intervention, so addressing trauma well tolerated. In both group, more treatment sessions related to more study-related AEs.
Hien, 2010 [29]	**Significant Effect of PTSD Improvement:** Change in CAPS from baseline to each follow-up point (p<0.005) **Three-way treatment group x baseline substance use x PTSD improvement interaction:** PSTD improvement impact on substance use at follow-up significantly differed by treatment group and baseline level of drug use (maximum days use p=0.02; drug composite p=0.03) **Two-way CAPS improvement x baseline alcohol use interaction:** For baseline heavy substance users, impact of improved CAPS scores differed significantly by treatment group (p=0.003) *Insufficient raw data to calculate ES*	PTSD severity reduced significantly and improved substance use outcomes. Seeking Safety improved substance use outcomes in heavy substance users with reduced PTSD outcomes.

Covington, 2008 [30]	**Baseline to HWR:** **Significant effect** – TSC-40 Depression (ES=0.4, medium) and Sleep Disturbance (ES=0.41, medium) **HWR to BT:** **Significant effect** – TSC-40 Anxiety (ES=0.3, small), Dissociation (ES=0.34, small), Depression (ES=0.52, medium) and Sleep Disturbance (ES=0.51, medium)	Scores on TSC-40 significantly improved after completing HWR and BT. HWR & BT with greater improvement than BT alone.
Rotunda, 2008 [31]	**Significant effect for Time:** % days abstinent (ES=0.23, small) Drinker Inventory of Consequences (ES=0.25, small) Dyadic Adjustment Scale (ES=0.26, small) SCL-90-R (ES= 0.47, medium)	Each measure indicated improvement from pre- to post-intervention, and at 12 months follow-up. Pattern of change similar for PSTD and non-PTSD group.
Lester, 2007 [32]	**Approach coping:** **Gender main effect** ($p<0.05$) - women with more approach coping **Negative avoidance coping:** **Significant time x gender interaction** ($p<0.05$) - men declining faster **Positive distraction:** **Group main effect** ($p<0.05$) - CM+ reporting higher levels of coping **Gender main effect** ($p<0.05$) - women reporting higher level of coping	CM+ with fewer PTSD symptoms and less severity than CM. CM+ with higher levels of reported coping.

Time x group interaction (p<0.05) - CM+ showing decline in positive distraction and CM group showing increase in positive distraction

PTSD:

Group main effect (p<0.05) - CM+ with fewer and less severe PTSD at 6 months

Baseline negative avoidance, positive distraction and change in negative avoidance predictive of PTSD symptoms at 6 months (ps<0.05)

Insufficient raw data to calculate ES

Chapter 2. Major Research Project:

Examining the Perceptions of Stigma in Self-Harming Clients in General Hospital Settings

Valerie F. McKenna[1]

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(Appendix 2.1)

[1] Section of Psychological Medicine, University of Glasgow

Address for correspondence:

Section of Psychological Medicine

Academic Centre

Gartnavel Royal Hospital

1055 Great Western Road

Glasgow

G12 0XH

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Objectives: Previous research has identified negative staff attitudes towards patients who self-harm, as well as stigma towards mental health problems in general hospital settings. This study extended this existing research to patients who present to general hospital settings with self-harm by measuring their perceptions of stigma in comparison with a control group of other hospital patients. The study also examined whether perceived stigma was related to aspects of current psychological distress.

Method: Ten patients who were admitted to hospital following an episode of self-harm and ten hospital control patients completed a demographic questionnaire, the SCL-90-R measure of current psychological distress and a purpose-designed measure of perceived stigma.

Results: Mann-Whitney U-tests revealed significant differences on SCL-90-R Interpersonal Sensitivity ($U=17.50$, $p=0.011$), Paranoid Ideation ($U=21.00$, $p=0.029$) and Psychoticism ($U=23.00$, $p=0.043$), together with marginally significant differences on Depression ($U=24.50$, $p=0.052$) and Hostility ($U=24.50$, $p=0.052$), between the two groups. A significant difference in perceived stigma scores ($U=16.00$, $p=0.009$) was also identified. One-tailed Spearman's correlations highlighted positive associations between perceived stigma and SCL-90-R Interpersonal Sensitivity ($\rho=0.685$, $p=0.014$) and Depression ($\rho=0.723$, $p=0.009$) in the self-harm group, and SCL-90-R Depression ($\rho=0.596$, $p=0.035$) and Phobic Anxiety ($\rho=0.595$, $p=0.035$) in the control group.

Conclusions: The results suggested that patients who self-harm perceive higher levels of stigma in general hospital settings compared to patients presenting with other types of injury. These differences appeared to relate to aspects of current psychological distress. Further research employing larger samples would help clarify this association.

1. Introduction

1.1 Mental Health Stigma in Healthcare Settings

Stigma has been defined as “an attribute that extensively discredits an individual, reducing him or her from a whole and usual person to a tainted or discredited one” (Goffman, 1963, p. 3). Stigma has been identified in individuals with a number of physical health conditions which are considered to: cause behaviours perceived as unusual or frightening (including epilepsy and Tourette’s Syndrome); reflect personal inadequacy (such as drug dependence and obesity); result from perceived immoral behaviour (for instance, HIV and AIDS); and impact on private or embarrassing body parts (including urological conditions and faecal incontinence) (West & Hardy, 2007). The experience of stigma has been investigated in those with mental health problems, particularly in the context of healthcare settings, as mental ill-health is often considered to hold a shameful quality (Pompili, Girardi, Ruberto, Kotazalidis & Tatarelli, 2005). There is also considerable evidence that the physical health problems of those with mental health problems are frequently under-diagnosed and inappropriately treated (Kuey, 2008), and that the identification of a mental health problem influences clinical-decision making in healthcare settings. For example, a recent study (Peris, Teachman & Nosek, 2008) examined implicit and explicit biases towards people with mental health problems in healthcare professionals with different levels of mental health training. These authors used a vignette-based method to explore clinical decision-making and reported that biases predicted clinical decision-making, with explicit bias acting as a significant predictor of negative prognosis, and implicit bias relating to over-diagnosis.

1.2 Healthcare Staff and Mental Health Stigma

In their study exploring the stigmatising experiences of patients with mental health problems in general hospital settings, Liggins and Hatcher (2005) identified a number of salient stigma-related themes from staff relating to fear, hopelessness, labelling and

disbelief in illness. These researchers noted that these themes are pervasive in the general population and suggest that in general medical settings there exists an additional perception that the patient is not genuinely ill.

Ross and Goldner (2009) undertook a comprehensive review of the role of nursing staff in mental health stigma and again identified negative staff attitudes and pervasive themes of fear, blame and hostility towards those with mental health problems, stating that these attitudes have a significant impact on the quality of care provision. When considering the reasons underlying these attitudes, the authors suggested that fear of these patients may relate, in part, to stereotypes common within the general population. Moreover, these authors noted that staff often feel de-skilled and ill-equipped to manage and support these individuals. They concluded that nursing staff can play a valuable role in de-stigmatising these patients and acting as advocates on their behalf.

1.3 Understanding Self-Harm

An act of self-harm is one which involves deliberately inflicting pain or injury to one's own body; it is usually an attempt to stay alive in the face of great emotional pain (Arnold & Magill, 2001). While research consistently indicates an elevated risk of suicide for individuals who frequently self-harm, with estimates of up to 30 times greater risk of suicide (Cooper et al., 2005), self-harm is frequently characterised by an absence of suicidal intent. To illustrate, a recent survey of adolescent self-harm in Scottish populations reported similar prevalence rates to those found in England, despite Scotland having a suicide rate twice as high as England (O'Connor, Rasmussen, Miles & Hawton, 2009). Although there are a range of descriptive terms used for different kinds of self-inflicted injury, NICE (2004, pg 16) conceptualises self-harm as "self-poisoning or self-injury, irrespective of the apparent purpose of the act." These guidelines again highlight that acts of self-harm are often expressions of personal distress.

A review of risk factors for self-harm (Gratz, 2003) highlighted a number of factors relating to childhood trauma, including childhood sexual and physical abuse, neglect and a disruption in the quality and security of attachment relationships. This review also clarified some of the functions of self-harm, such as representing a strategy for affect regulation. In this respect, self-harm may play a role in reducing anxiety, externalising emotional pain and regaining control over problematic thoughts and feelings. The link between adverse childhood experiences and self-harming behaviour in later life was again identified in a prospective study on the consequences of childhood sexual abuse by Yates, Carlson and Egeland (2008), who noted that childhood trauma results in impoverished ways of managing emotion and affect. In addition to the use of self-harm as a strategy to regulate affect, it has been suggested that those who self-harm frequently use their body as a mode to communicate emotional pain to others (Potter, 2003). This strategy, however, often has a paradoxical effect on both clinicians and members of the general public, as self-harming behaviour frequently arouses hostile and negative reactions in others (Barstow, 1995).

1.4 Healthcare Experiences for Individuals who Self-Harm

The Royal College of Psychiatrists (2006) recently undertook a national audit, service evaluation and quality improvement initiative for individuals who self-harm, and reported a high variation in the quality of care provision for these patients. This report also advised that general medical staff often feel unskilled and poorly informed as to how to support these patients (Blackwell & Palmer, 2008). Recent NICE Guidelines (2004) on the short-term management and secondary prevention of self-harm state that self-harming patients have the same right to healthcare as all other patients. Nevertheless, individuals who attend healthcare services with self-harm frequently report that they perceive rejection, hopelessness and an absence of empathy in clinicians (Harris, 2000). McAllister, Creedy, Moyle and Farrugia (2002) noted that in Accident and Emergency (A&E) departments

where cases are prioritised according to life threat, those who self-harm are frequently ignored and made to wait for long periods. These authors suggested that these patients frequently recognise rejection during their contact with healthcare staff, which can lead to further self-harming behaviour. In addition to both objective and perceived differences in health care provision, a large body of research has identified negative attitudes towards self-injury from healthcare staff.

1.5 Staff Attitudes to Self-Harm

Misunderstandings about purpose of self-harm are common in healthcare settings. For example, Shaw (2002) suggested that healthcare staff frequently view self-harm as a form of psychological blackmail, rather than as an attempt by the individual to control their distress. Additionally, Friedman et al. (2006) examined the factors which predict the attitudes of A&E staff to patients who self-harm, and reported that staff recognised self-harm as a significant problem, but felt unskilled and under-resourced when dealing with this issue. Moreover, a large proportion of A&E staff respondents (80%) conceptualised self-harm as attention-seeking and manipulative behaviour, rather than as individuals seeking appropriate medical attention.

Since many healthcare professionals believe that individuals who self-harm do so from a specific volition to die (Ross & Goldner, 2009), these patients are often perceived as having a reduced entitlement to medical care. Furthermore, Hopkins (2002) reported that nursing staff frequently believe self-harming individuals to be impeding the functioning of medical admissions units due to the complexity of their presentations and time-consuming needs.

When considering the reasons for negative staff attitudes towards self-harm, Johnston and Cowman (2008) noted a shift in the provision of psychiatric services to community

settings and suggested that the increased numbers of mental health patients presenting to general hospital settings has resulted in changing roles and functions for general healthcare staff. Moreover, Summers and Happell (2003) described a clash of cultures between traditional staff roles where the emphasis has previously been on caring for acutely physically unwell patients, and new expectations of working with individuals who would previously have been seen within psychiatric services. In their study of patient satisfaction with psychiatric services provided by hospital emergency departments, these authors reported that staff felt overwhelmed by expectations that they provide acute psychiatric services, while patients felt unwelcome because their presenting needs were not prioritised.

While this shift in service provision and expectations of medical staff in hospital settings may partially explain the negative staff attitudes towards self-harming patients in emergency medical settings, a recent review by Pompili et al. (2005) linked these responses to underlying stigma. The authors suggested that healthcare staff fear patients who self-harm, as they are involved in a self-annihilation process which runs counter to the nature of medical training and usual clinical practice where healthcare staff interact with patients desiring the maintenance of health.

1.6 Study Aims and Hypotheses

1.6.1 Study Aims

The present study aimed to extend previous research on mental health stigma in general medical settings to patients who present to these settings with self-harm. Given the evidence which indicates that these patients perceive negative responses from staff, and the suggestion that these responses may relate to stigma, this study specifically attempted to measure the perception of stigma in individuals presenting with self-harm.

This study also compared the perceptions of stigma in individuals presenting with self-harming behaviour with a control group of other hospital patients. Finally, this study examined whether perceptions of stigma were related to current level of psychological distress, since Klonsky, Oltmanns and Turkheimer (2003) identified a greater presence of personality disorders and related personality traits, particularly a tendency towards intense emotions and a heightened sensitivity to rejection, in a non-clinical sample of self-harming military recruits.

1.6.2 Study Hypotheses

It was hypothesised that:

1) Patients presenting with self-harm would report greater levels of perceived stigma than hospital control patients on a purpose-designed measure of perceived stigma.

2) Greater perceptions of stigma would correlate with self-reported levels of psychological distress, as measured by the SCL-90-R.

3) Positive correlations would exist between perceived stigma and Primary Symptom Dimensions of Paranoid Ideation and Interpersonal Sensitivity on the SCL-90-R.

2. Methods

2.1 Design

The study used a cross-sectional, between-groups design to compare patients presenting with self-harm with a control group of other hospital patients. The independent variable was self-harm status, i.e. admitted to hospital for self-harm versus admitted to hospital for any other reason. The dependent variables were current psychological distress, as

measured by the SCL-90-R, and perceptions of stigma on a purpose-designed measure. The primary dependent variable was perceived stigma.

2.2 Power Calculation

During the development of the research study, a power calculation was performed using data from research with people who self-harm using the SCL-90-R measure (Sarno, Madeddu & Gratz, 2009). This study reported significant differences for three groups of participants on the global distress index, Positive Symptom Total (PST), of SCL-90-R between: 1) those who do not self-harm (No Self-Harm); 2) those who self-harm episodically (Episodic Self-Harm); and 3) those who self-harm repeatedly (Recurrent Self-Harm). Effect sizes of 0.46 for the No Self-Harm and Episodic Self-Harm groups, and 1.07 for the No Self-Harm and Recurrent Self-Harm groups were calculated. As the present study did not distinguish between episodic and repeated self-harm, an average effect size of 0.76 was calculated. Setting the alpha level at 0.05 and power at 0.8, the power calculation indicated that a total sample of 46 participants – with 23 in each group – was required.

2.3 Inclusion and Exclusion Criteria

Participants were eligible to take part in the study if they were aged over 16 years and admitted to the emergency receiving ward at a general hospital following an incident of self-harm or any other physical health problem or non-deliberate injury. Participants were excluded from the study if unfit for interview due to their current physical or psychological state, unable to give informed consent, or did not speak English as a first language.

2.4 Ethics

This study was carried out following the Guidelines for Minimum Standards of Ethical Approval in Psychological Research (British Psychological Society, 2004). NHS Research

Ethics Committee approval was obtained for four hospital sites within NHS Greater Glasgow and Clyde. However, unanticipated NHS managerial constraints at these sites meant that recruitment was only undertaken at one of the proposed hospital sites.

2.5 Procedure

2.5.1 Recruitment

Participants were recruited from the emergency receiving ward through the local Liaison Psychiatry Service (LPS). The principal researcher contacted the LPS team to enquire whether they had received any referrals for self-harm at the identified hospital base. Staff from LPS identified appropriate individuals who were then approached by the principal researcher after completing a "treatment-as-usual" routine risk assessment with LPS. Individuals in the control group were matched by gender, age and socio-economic status, as closely as possible, to those in the self-harm group and were approached directly by the principal researcher. All participants were fully informed about the purpose and process of the research, both verbally and in writing through the Participant Information Sheet (Appendix 2.2), and gave their written consent to participate prior to data collection (Appendix 2.3).

2.5.2 Data Collection

Both groups of participants were given a questionnaire pack to be returned directly to the principal researcher, by posting questionnaires in a sealed box on the ward or by using a freepost envelope with which they were provided.

2.6 Measures

2.6.1 Demographic Questionnaire

All participants completed a demographic questionnaire (Appendix 2.4) which collected standard demographic information, including age, gender, ethnicity, employment status

and years in full-time education. Socio-economic status was subsequently determined by using the Standard Occupational Classification (SOC2000) (Great Britain Office for National Statistics, 2000) for stated job title.

Information was also collected on the reason for attending hospital and on whether the injury was sustained whilst intoxicated. Individuals who attended hospital for self-harm completed two further self-harm specific questions relating to the method of self-harm, and previous hospital attendance for self-harm.

2.6.2 Symptom Checklist-90-R (SCL-90-R) (Derogatis, 1994)

Current psychological state was measured by the SCL-90-R, which evaluates nine Primary Symptom Dimensions: Somatisation, Obsessive-Compulsive, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation and Psychoticism. This measure also examines three indices of global distress: Global Severity Index (GSI); Positive Symptom Distress Index (PSDI); and Positive Symptom Total (PST).

Internal consistency of the SCL-90-R is satisfactory, with coefficients ranging from low (r=0.77) to high (r=0.90), and test-retest reliability is high (Cronbach's α=0.80-0.90) for symptom constructs (Derogatis, Rickels and Rock, 1976). The SCL-90-R has normative data for adult non-patients, psychiatric outpatients and inpatients, and adolescent non-patients.

2.6.3 Measure of Perceived Stigma

As standardised measures of perceived mental health stigma (e.g. King et al., 2007) were deemed unsuitable for both groups of participants in the study, a purpose-designed measure based on current research evidence was developed. The measure examined

three broad areas relating to negative staff attitudes towards self-injury (McAllister et al., 2002): 1) emotional responses of staff (for example, feelings of anger, fear and frustration towards patients); 2) objective experiences (such as increased waiting times and painful treatment); and 3) professional conduct of staff (including making negative comments and not treating injuries as genuine). This Likert scale (Appendix 2.5) included five items from each of these three areas (a total of 15 items), which were counterbalanced by an equal number (15) of positive and neutral statements. Participants rated each of these 30 items on a five-point scale from "Strongly Disagree" to "Strongly Agree," with reverse scoring for the positive and neutral statements. The scoring range was 0-120, with a higher score indicating a higher level of perceived stigma.

After data collection, the internal reliability of this measure was assessed using Cronbach's Alpha (α=0.983).

2.7 Coding of SCL-90-R Data

It should be noted that different normative data were applied to the two groups of participants when converting raw scores to normative T-scores on the SCL-90-R measure. Although the study did not collect information on current contact with psychiatric services, norms for adult psychiatric outpatients were applied to individuals in the self-harm group, as the raw scores were consistently beyond the data available for adult non-patients. For individuals in the control condition, the T-scores used were those for non-patients and, where raw scores were greater than those available for this category, the highest available T-score was used. For example, a raw score of 3.17 for the Somatisation index was beyond the range of normative data for non-patients, and was consequently given the highest possible T-score of 81.

2.8 Data analysis

Preliminary data screening revealed that the data for two of the SCL-90-R Primary Symptom Dimensions (Somatisation and Anxiety), and two indices of global distress (GSI and PST) were skewed. The perceived stigma scores were also skewed. Apart from the problem of skewness, the small number of participants in both groups indicated that it was appropriate for non-parametric tests to be used.

Mann-Whitney U-tests were conducted on demographic variables of age and years in education in order to ensure that the groups were similar enough for comparisons to be made. Preliminary analyses revealed the data for employment status, SOC2000 category and socio-economic class violated assumptions for Chi-Squared analyses, meaning that these data were visually inspected for appropriate matching. A series of Mann-Whitney U-tests was also undertaken to compare the two groups on each index of the SCL-90-R measure and perceived stigma score. The SCL-90-R Global Severity Index (GSI) is cited as the best single indicator of current psychological distress, and was therefore used for one-tailed Spearman's Correlation analyses with perceived stigma score, along with each SCL-90-R Primary Symptom Dimensions, for those in both the self-harm and the control group.

3. Results

3.1 Demographic Characteristics of Participants

During the 18-week recruitment period, a total of 44 self-harming patients were referred to LPS after admission to the general receiving ward. After applying the exclusion criteria and discussing suitability with LPS staff, 15 individuals were approached and consented to participate in the study. Of these 15, four individuals did not complete the questionnaires provided and one withdrew consent during participation, leaving ten

participants in the self-harm group. Correspondingly, ten control participants were recruited to the study.

Demographic characteristics for all participants, and categorised by group, are shown in Table 2.1.

[Insert Table 2.1]

Table 2.1 also reports the Mann-Whitney U-tests which revealed no significant differences between the groups with regard to age ($U=36.5$, $p=0.315$) and years in education ($U=26.0$, $p=0.075$), indicating that the groups were appropriately matched on these variables. Visual inspection of the data for employment status, SOC2000 Classification and socio-economic class also suggested appropriate matching of the groups.

Additional information is presented in Table 2.2 relating to the reason for attending hospital or method of self-harm, to whether this injury occurred while the individual was intoxicated and, for those in the self-harm group, to whether they had previously attended hospital for self-harm.

[Insert Table 2.2]

It should be noted, however, that the reasons for attending hospital given by the control group could not be corroborated by accessing medical records or the opinions of attending medical staff due to confidentiality considerations.

3.2 Clinical Characteristics of Participants

The median scores and range for each of the SCL-90-R Primary Symptom Dimensions and indices of global distress are presented in Table 2.3.

[Insert Table 2.3]

In addition to issues relating to skew and to the small sample size, the standard deviations for the control group identified during preliminary data screening were much larger than for the self-harm participants, indicating greater variability in their responses. As such, a series of Mann-Whitney U-tests was used to compare each of the nine SCL-90-R primary and three indices of global distress between the groups. The results presented in Table 2.3 indicate significant differences on Interpersonal Sensitivity (U=17.50, p=0.011), Paranoid Ideation (U=21.00, p=0.029) and Psychoticism (U=23.00, p=0.043) between the self-harm and the control group. There were also marginally significant differences for Depression (U=24.50, p=0.052) and Hostility (U=24.50, p=0.052) between the two groups. No significant differences were identified on any of the global distress indices on the SCL-90-R between the groups.

3.3 Experimental Data

3.3.1 Differences in Perceived Stigma

Table 2.3 presents median scores and range for the two groups on the measure of perceived stigma. A further Mann-Whitney U-test identified a significant difference between the perceived stigma score for the groups (U=16.00, p=0.009), suggesting that those in the self-harm group reported greater levels of perceived stigma than those in the control group.

3.3.2 Correlations between SCL-90-R and Perceived Stigma

One-tailed Spearman's Correlations were undertaken between each of the SCL-90-R Primary Symptom Dimensions, SCL-90-R GSI and perceived stigma scores for the self-harm and the control groups, as presented in Tables 2.4 and 2.5.

[Insert Tables 2.4 and 2.5].

As indicated in these tables, perceived stigma was not correlated with current global psychological distress, as measured by the SCL-90-R GSI for either group. Perceived stigma was, however, positively associated with SCL-90-R Interpersonal Sensitivity (ρ=0.685, p=0.014) and Depression (ρ=0.723, p=0.009) in the self-harm group, as indicated in Table 2.4. This finding suggested that the third hypothesis, stating that perceived stigma would be associated with Interpersonal Sensitivity and Paranoid Ideation on the SCL-90-R, was partially upheld. Additionally, perceived stigma was correlated with Depression (ρ=0.596, p=0.035) and Phobic Anxiety (ρ=0.595, p=0.035) for the control group.

4. Discussion

4.1 Overview of Results

While a large body of research has focussed on staff attitudes to self-harm (e.g. Friedman et al., 2006), or explored patients' perceptions of their treatment in hospital (e.g. McAllister et al., 2002), this study was the first to attempt to measure perceived stigma in individuals who present to general hospital settings with self-harm in comparison with a control group of other hospital patients. The results reveal that participants in the self-harm group reported higher levels of perceived stigma than those in the control condition. This finding suggests that patients who present to general hospital settings with self-harm hold different perceptions of their healthcare experiences to other types of patients. Moreover,

perceptions of stigma were related to aspects of psychological distress for both self-harming and non self-harming patients. This relationship was more pronounced for individuals presenting with self-harm.

4.2 Representativeness of the Sample

The sample used in this research represents a similar profile to that reported in other research studies investigating self-harm within general hospital settings. Participants in this study overwhelmingly engaged in overdose as a method of self-harm, which is consistent with the 80% of self-harming patients presenting to hospital settings due to self-poisoning identified by Horrocks et al. (2003). A recent review of attitudes to clinical services among those attending hospitals for self-harm again highlighted that most individuals who present to these settings do so after an episode of self-poisoning (Taylor, Hawton, Fortune & Kapur, 2009), so it is unsurprising that the majority of study participants engaged in this form of self-harming behaviour.

Most participants were female, which again reflects the gender spread of individuals who self-harm (NICE, 2004). However, differences in the severity or possible physical consequences of self-harm for the individuals in this study may exist, as participants were ultimately admitted to hospital for further medical treatment or observation. Finally, research suggests that individuals who self-harm experience higher levels of depressed mood, anxiety, somatic complaints, anger and hostility than those who do not self-harm, (Guertin, Lloyd-Richardson, Spirito, Donaldson & Boergers, 2001), which was upheld in the present study.

4.3 Contextualising the Results

A number of practical explanations for negative staff attitudes towards patients presenting with self-harm have been identified in the literature, including a shift in caring expectations

for emergency medical staff (e.g. Johnston & Cowman, 2008), limited resources in emergency care settings (e.g. Hopkins, 2002), and a higher rate of return visits to A&E departments for patients who self-harm compared to other patients (Colman et al., 2004). Moreover, some authors (e.g. Scanlon & Adlam, 2009) suggest that professional attitudes reflect those prevalent in society, which are often judgemental and harmful, and are based on attributions of individual blame and intent to these acts. Although caution should be used when considering the positive associations identified between perceived stigma and aspects of psychological distress in the self-harm group due to the small amount of data available for analysis, the correlations are statistically significant. As such, it may be that research which emphasises the role of staff attitudes towards self-harm are too simplistic in explaining the negative perceptions of healthcare experiences for patients who self-harm. This is particularly pertinent given the identified correlation between perceived stigma and SCL-90-R Depression and Phobic Anxiety in the control group.

While the control participants did not report the same elevated levels of perceived stigma and significantly differed in aspects of psychological distress – specifically, SCL-90-R Interpersonal Sensitivity, Depression, Paranoid Ideation and Psychoticism – compared to the self-harm group, the identified correlations with Depression and Phobic Anxiety suggest that their perceptions of treatment in hospital were related to aspects of current mood state. This correlation between perceived hospital treatment and mood appears to represent a tendency for many hospital patients to interpret their healthcare experiences in a way that is congruent with their current mood state, regardless of their presenting problem. When considering the associations between perceived stigma and SCL-90-R Depression and Interpersonal Sensitivity for the self-harm group, the possible influence of mood state is also apparent, with stronger associations between perceived stigma and SCL-90-R Depression and Interpersonal Sensitivity being identified. Given the reported differences between the two groups in relation to current psychological distress, it seems

that this same pattern was amplified in the self-harm group in the context of their increased mood problems.

The association between mood state and self-reported perceived stigma can be partially explained by experimental research which has identified memory impairments in individuals with depressed mood (e.g. Burt, Zembar & Niederehe, 1995). In particular, a mood-congruent bias towards increased recognition and recall of negative-valenced or depression-related stimuli has been reported (Bower, 1981). Moritz, Glascher and Brassen (2005) compared the recognition and recall of depression-relevant words in depressed individuals with non-depressed controls, and noted that depressed individuals showed more bias towards emotionally charged words than neutral words. These authors attempted to elucidate the presence of false memories in those with depression, and reported an elevated production of pseudo-memories. They concluded that the responses of those in the depressed group were distorted in comparison with the control participants. Although the two groups of participants in the present study differed in terms of the severity of self-reported psychological distress, it may be that those in the control group differed in their mood state to the non depressed control participants in the Moritz et al. (2005) study who were recruited from the general population. Given that the control participants in the present study were recruited from hospital settings, it seems reasonable to suggest that their current emotional state may have been influenced by their physical health concerns and subsequent acute admission to hospital. As such, they may have shown a similar pattern of memory bias to depressed individuals, which may have impacted upon their responses on the perceived stigma questionnaire. Furthermore, the greater strength of the association between psychological distress and perceived stigma identified in the self-harm group may be the result of the correlation between severity of mood problem and extent of memory impairment identified by Bornstein, Baker and Douglass (1991). In addition to the presence of this possible memory bias in both

groups of participants, the elevated perceptions of stigma identified in the self-harm group may be partially explained by differences relating to more stable constructs than current mood state, such as the presence of maladaptive schemata in individuals who self-harm. Schemata are broad, pervasive themes relating to the self and relationships with others, and are considered to influence an individual's perceptions, interpretations, emotions and behaviours (Young, 1994). Castille et al. (2007) recently reported that individuals who self-harm differ from non self-harming controls on schema domains of Social Isolation/Alienation, as well as Insufficient Self-Control/Self-Discipline. This Social Isolation/Alienation schema relates to feeling isolated from the rest of the world, different from others and not part of any community. It is therefore possible that the presence and prevalence of this schema also influenced the perceptions and interpretations of the healthcare experiences reported by those in the self-harm group.

Alternatively, when considering self-harm in the context of early attachment relationships, Grocutt (2009) advises that self-harm serves both intrapersonal and interpersonal functions, soothing or punishing the individual at times of distress, and initiating interpersonal interactions. Given the problematic early experiences often found in those who self-harm – and the early maladaptive schemata which may develop from them – these interpersonal interactions often re-create early attachment experiences and invite negative responses from others. Furthermore, Motz (2001) suggests that the response of care-givers in relation to self-harming behaviour often reflects the fear and desperation of the individuals themselves, as well as the hostile and aggressive intentions behind this behaviour. As such, healthcare systems often mirror the mind of the person who has self-harmed by alternating between caring and punitive responses, which may be those perceived by patients who self-harm. When considered the greater severity of psychological distress identified in the self-harm group, it may be that their perceived

negative experiences, particularly in relation to their interactions with staff, reflected their current psychological state.

4.4 Clinical Implications of Results

McAllister et al. (2002) suggested that negative responses to self-harm from staff serve to further reduce the self-esteem of these individuals which, as one of the most frequent reasons cited for self-harm is a means to regulate problematic emotions, may perpetuate this type of behaviour. Since individuals who self-harm often seek out medical attention, reducing negative reactions towards self-harm may be an important first step for intervening with this behaviour. This is particularly relevant in light of the assertion by Roa, Pillay, Abraham and Luty (2009) that accessing healthcare services is one of the most appropriate pathways for stigmatised individuals to integrate into society.

One way in which this could be undertaken is to reduce the misunderstandings which exist about self-harm through the provision of training to medical staff working in general hospital settings. Indeed, NICE Guidelines (2004) recommend that appropriate training is provided to all staff coming into contact with individuals who self-harm, in order to improve clinical practice and with the aim of reducing or preventing further self-harming behaviour. Since Peris et al. (2008) identified that additional mental health training and increased contact with individuals with mental health problems reduced biases in clinical decision-making and improved positive responses from healthcare staff, it seems reasonable to suggest that providing training about self-harm could also reduce stigma towards and improve interactions with patients who present with this type of behaviour.

4.5 Limitations of the Study

The results presented should be viewed with some caution in light of the small number of participants in each group, which were substantially less than required by the power and

sample size calculations. Despite this limitation, it is notable that strong and significant correlations were found between the critical variables of interest. A further limitation was the uncorroborated self-report data for both groups that the study relied upon with respect to past medical history. Moreover, while the provision of A&E services in Glasgow is based on the availability of hospital beds rather than specific locality or catchment area, limiting recruitment for the study to one research site may have reduced the likelihood of obtaining a representative sample of self-harming patients in Glasgow.

When considering participants in the self-harm group, many individuals who were admitted to the emergency receiving ward did not meet the inclusion criteria of being able to consent to the study due to their current physical or psychological state. It is therefore possible that the responses of participants may reflect only a subset of self-harming individuals presenting to the research setting. Since these participants were admitted to hospital for further treatment, different data may have been collected from self-harming patients who were not admitted for further treatment. While it could be argued that the results from the study apply only to those who self-poison as a form of self-harm, it should be noted that clinical guidelines for healthcare experiences for those who self-harm (NICE, 2004) make no distinction between those who self-poison and those who engage in other types of self-injury.

There may, however, be important differences in the suicidal intent of the participants. Research has indicated that those who self-harm with suicidal intent differ in antecedent causes and outcome expectancies than those who undertake this behaviour without suicidal intent (Mangnall, 2008). Including suicidal intent as a co-variate in this study may thus have led to increased understanding of the clinical characteristics of this sample and the applicability of these results.

4.6 Areas for Future Research

Further research on the identified association between perceived stigma and aspects of psychological distress could be undertaken using larger samples than in this study, for both self-harming patients and patients with other presenting problems. Exploring the influence of current psychological state on perceptions of treatment in hospital could have implications for improving the healthcare experiences of patients in these settings, whether presenting with self-harm or otherwise. Increased understanding of the clinical characteristics of those who self-harm and the possible impact of these characteristics on perceptions of hospital experiences may identify areas for psychological intervention. For example, interventions could be developed which aim to improve pervasive negative interpretations of interactions with others which may influence their perception of stigma. Moreover, as one of the recommendations from NICE (2004) is for staff training to improve healthcare experiences for those attending hospital for self-harm, future research could focus on the impact of such training on patients' perceptions of stigma; this would also allow further elucidation of the role of staff attitudes and behaviour on perceived stigma in healthcare settings.

5. Conclusions

Despite a number of methodological limitations to this study, particularly in relation to the small sample size and representativeness of the sample recruited, the results suggest that individuals who self-harm report higher levels of perceived stigma in general hospital settings in comparison with patients presenting with other types of injury. Furthermore, the differences in perceived stigma appear to relate to elevated levels of psychological distress. While this study has identified a number of possible explanations for this association, it is difficult to ascertain whether the elevated perceptions of stigma reported are the result of systemic staff responses to self-harm behaviour in healthcare settings, or a function of the individual's current psychological state, or are the consequence of the

interaction of both. Further research could be undertaken to test some of these hypotheses in order to help clarify this relationship between current mood state and perceived stigma in hospital settings.

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Table 2.1 Demographic Characteristics of Participants

	All Participants (N = 20)	Self-Harm Group (N = 10)	Control Group (N = 10)	Mann-Whitney U	p
Gender	Female = 16, Male = 4	Female = 8, Male = 2	Female = 8, Male = 2	N/A	N/A
Age	Mean = 43.5, SD = 11.40	Mean = 40.6, SD = 11.28	Mean = 46.4, SD = 11.32	36.50	0.315
Years in Education	Mean = 12, SD = 1.81	Mean = 12.6, SD = 1.78	Mean = 11.4, SD = 1.71	26.00	0.075
Ethnicity	White Scottish = 20	White Scottish = 10	White Scottish = 10	N/A	N/A
Employment Status	Unemployed = 11 Employed = 7 Retired = 2	Unemployed = 6 Employed = 4 Retired = 0	Unemployed = 5 Employed = 3 Retired = 2	N/A	N/A
SOC2000 Classification	Intermediate, non-manual = 4 Semi-skilled manual = 2 Personal services worker = 1	Intermediate, non-manual = 3 Semi-skilled manual = 1 Personal services worker = 0	Intermediate, non-manual = 1 Semi-skilled manual = 1 Personal services worker = 1	N/A	N/A
Socio-Economic Class	S-E Class 2 = 4 S-E Class 4 = 3 Unknown = 13	S-E Class 2 = 3 S-E Class 4 = 1 Unknown = 6	S-E Class 2 = 1 S-E Class 4 = 2 Unknown = 7	N/A	N/A

Table 2.2 Additional Participant Information

	Self-Harm Group (N = 10)	Control Group (N = 10)
Reason for Attending Hospital/ Method of Self-Harm	Overdose = 9 Attempted drowning = 1	Chest pains = 6 Mini-stroke = 1 Alcohol-related problems = 1 Kidney problems = 1 Liver problems = 1
Injury while Intoxicated	Yes = 7 No = 3	Yes = 1 No = 9
Previous Attendance at Hospital for Self-Harm	Yes = 8 No = 2	N/A

Table 2.3 Clinical Characteristics of Participants

Measure	Self-Harm Group (N = 10)	Control Group (N = 10)	Mann-Whitney U	p
SCL-90-R Somatisation	Median = 63, Range = 17	Median = 64, Range = 51	44.00	0.684
SCL-90-R Obsessive-Compulsive	Median = 62.5, Range = 23	Median = 43, Range = 54	28.00	0.105
SCL-90-R Interpersonal Sensitivity	Median = 59.5, Range = 30	Median = 40, Range = 41	17.50	0.011*
SCL-90-R Depression	Median = 62.5, Range = 26	Median = 47.5, Range = 50	24.50	0.052*
SCL-90-R Anxiety	Median = 62, Range = 24	Median = 52.5, Range = 54	33.50	0.218
SCL-90-R Hostility	Median = 63.5, Range = 25	Median = 43.5, Range = 38	24.50	0.052*
SCL-90-R Phobic Anxiety	Median = 66.5, Range = 39	Median = 54.5, Range = 41	36.00	0.315
SCL-90-R Paranoid Ideation	Median = 59.5, Range = 22	Median = 40, Range = 48	21.00	0.029*
SCL-90-R Psychoticism	Median = 63, Range = 29	Median = 43.5, Range = 45	23.00	0.043*
SCL-90-R GSI	Median = 70, Range = 22	Median = 47, Range = 62	29.50	0.123
SCL-90-R PST	Median = 68, Range = 30	Median = 58.5, Range = 39	38.50	0.393
SCL-90-R PSDI	Median = 64, Range = 26	Median = 58.5, Range = 39	40.00	0.481
Perceived Stigma	Median = 49, Range = 96	Median = 15.5, Range = 58	16.00	0.009*

**Significant at one-tailed, 0.05 level*

Table 2.4 Correlations between SCL-90-R and Perceived Stigma – Self-Harm Group

Perceived Stigma	SCL-90-R Somatisation	SCL-90-R Obsessive-Compulsive	SCL-90-R Interpersonal Sensitivity	SCL-90-R Depression	SCL-90-R Anxiety
Spearman's Correlation ρ	-0.067	-0.079	0.685	0.723	0.293
Significance (One-tailed)	0.427	0.414	0.014	0.009	0.206

Perceived Stigma	SCL-90-R Hostility	SCL-90-R Phobic Anxiety	SCL-90-R Paranoid Ideation	SCL-90-R Psychoticism	SCL-90-R Global Severity Index (GSI)
Spearman's Correlation ρ	-0.018	0.224	0.407	0.480	0.228
Significance (One-tailed)	0.480	0.267	0.121	0.080	0.265

Table 2.5 Correlations between SCL-90-R and Perceived Stigma – Control Group

Perceived Stigma	SCL-90-R Somatisation	SCL-90-R Obsessive-Compulsive	SCL-90-R Interpersonal Sensitivity	SCL-90-R Depression	SCL-90-R Anxiety
Spearman's Correlation ρ	0.256	0.460	0.338	0.596	0.401
Significance (One-tailed)	0.283	0.090	0.169	0.035	0.125

Perceived Stigma	SCL-90-R Hostility	SCL-90-R Phobic Anxiety	SCL-90-R Paranoid Ideation	SCL-90-R Psychoticism	SCL-90-R Global Severity Index (GSI)
Spearman's Correlation ρ	0.329	0.595	0.336	0.497	0.396
Significance (One-tailed)	0.176	0.035	0.172	0.072	0.129

Chapter 3. Advanced Clinical Practice Reflective Account I:

Thinking about the Role of the Supervisory Relationship in Shaping Placement Experiences

Valerie F. McKenna[1]

[1] Section of Psychological Medicine, University of Glasgow

Address for correspondence:

Section of Psychological Medicine

Academic Centre

Gartnavel Royal Hospital

1055 Great Western Road

Glasgow

G12 0XH

Submitted in partial fulfillment of the requirements for the degree of doctorate in clinical psychology (D.Clin.Psy)

Abstract

This reflective account focuses on some of my experiences relating to clinical practice whilst on placement within a Community Mental Health Team (CMHT), giving particular consideration to the role of the supervisory relationship and interactions with other team members in shaping these experiences. By using Gibbs' Model of Reflection (1998) to structure my thinking and identifying some relevant literature on the developmental aspect of supervision, I attempt to highlight the ways in which my personal experiences are likely to reflect typical professional development at this stage in my training. I also consider how these placement experiences may assist me in making the successful transition to an independent practitioner when qualified, and draw parallels between the processes involved in clinical supervision and working therapeutically with clients. Finally, I reflect on the usefulness of writing this account as a source of internal supervision.

Chapter 4. Advanced Clinical Practice Reflective Account II:

Thoughts on Managing Psychological Systems, Services and Resources

Valerie F. McKenna[1]

[1] Section of Psychological Medicine, University of Glasgow

Address for correspondence:

Section of Psychological Medicine

Academic Centre

Gartnavel Royal Hospital

1055 Great Western Road

Glasgow

G12 0XH

Submitted in partial fulfillment of the requirements for the degree of doctorate in clinical psychology (D.Clin.Psy)

Abstract

In this reflective account I explore issues relating to the management of psychological systems, services and resources as specified by the Generic Key Role 6 of the National Occupational Standards for Psychology (British Psychological Society, 2002). Using Borton's Developmental Framework for Guiding Reflective Activities (1970), I draw mainly from my final year training experiences in a mainstream adult mental health service and specialist trauma service in order to understand the differences between a psychology-led and non-psychology-led service, as well as considering the influence of professional background on the way in which services develop and function.

I outline some of the practical applications of my research training in terms of improving ways to deliver services, and examine possible changes to my future practice in relation to my experiences of working in various services. I also discuss how some of my views on the nature of clinical psychology have evolved over the course of my training. Finally, I suggest that my training experiences of entering into new services, and thinking about the ways in which the service is delivered, indicates that I am beginning to broaden my understanding of what management within clinical psychology actually entails, and developing the role I may have in shaping the service at a personal level.

Appendix 1.1 Instructions for Authors for Submission to *Addiction*

Published since 1884 by the Society for the Study of Addiction to Alcohol and other Drugs

Instructions for Authors

1. GENERAL

Addiction is a monthly international journal read in over 60 countries and has been in continuous publication since the Society for the Study of *Addiction* was founded in 1884.

It welcomes unsolicited research reports, reviews, and letters relating to clinical, epidemiological, human experimental, policy-related and historical aspects of any behaviours that have addictive potential including, but not limited to, use of alcohol, opiates, stimulants, cannabis, tobacco, as well as gambling. The acceptance rate is currently about 20%. Research reports should present original findings and normally be limited to 3500 words excluding abstract, tables and references. There is no minimum length. Reviews should normally be 'systematic' (i.e. adopt standard systematic review procedures) and be no longer than 4000 words for the main text. Letters should normally be no more than 500 words.

We are willing to make exceptions to word length stipulations in rare cases but otherwise we encourage authors to make use of a facility we offer for supplementary material to be stored with the online version of the article.

To submit an article to *Addiction* please go to **http://mc.manuscriptcentral.com/addiction**. We aim to get a response to authors within 12 weeks.

Authors must not submit articles that have been published elsewhere or are under consideration for publication elsewhere.

Addiction also publishes invited editorials, articles 'for debate', commentaries on articles, interviews with leading figures in the field, and book reviews.

Authors who are interested in contributing one of the invited types of article may make a proposal to the commissioning editor (Peter Miller via **molly@addictionjournal.org**).

Authors submitting manuscripts intended for one of our series (e.g. Global Diversion of Pharmaceutical Drugs, Policy Case Studies, Vested Interests) should in the first instance contact the Commissioning Editor via **molly@addictionjournal.org** for a concept review. If invited to submit, please choose "Series" as the Manuscript Type, and be sure to select "Europe, Africa & Asia" as the Regional Office.

For a list of article types with definitions and word limits please click here:
http://www.blackwellpublishing.com/pdf/add_definitions.pdf.

2. REQUIREMENTS FOR SUBMITTED ARTICLES

For information on how to write articles for *Addiction*, authors should look at recent articles of the type they are proposing to submit. They should pay special attention to the following:

- Research report and review manuscripts must have the following parts in this order: front sheet including title, list of authors, affiliations and addresses, running head, word count,* **conflict of interest declaration** (see below), clinical trial registration details (if applicable); abstract, introduction, methods, results, discussion, acknowledgements, references, figures and tables with legends. Do not insert tables and figures into the main body of the text. Please key them in the text but place them at the end of the document.

- *A word count is required for the main body of the text only, ie. excluding abstract, references, tables, figures etc.
- *Addiction* will publish occasional monographs of up to 10,000 words including references. Monographs should be major pieces of writing. The kinds of papers that would qualify might be extensive systematic reviews of a major topic or a series of linked studies addressing a common research question. For full description please view our definition of all article types linked above.
- Abstracts must be structured using the following headings: Aims, Design, Setting, Participants, Measurements, Findings, Conclusions. For Review articles please use: Aims, Methods, Results, Conclusions. Abstracts should generally be no more than 250 words. Any numbers provided in the abstract must match exactly those given in the main body of the text or tables. The conclusion must be written in such a way as to make clear what is the main generalisable statement resulting from the study; i.e. the sentence(s) that someone citing the study might use to describe the findings.
- References should follow the basic numbered Vancouver style. Provide up to the first six authors and then follow by et al. Issue/part numbers are not required. Do not include citations to sources such as conference abstracts or unpublished work.
- Authors should cite exact p values for primary statistical tests. Addiction adopts the conventional 5% value for statistical significance and does not accept terms such as 'trend' for cases where p0.10.
- Authors are required to archive any web references before citing them using WebCite ® technology (**http://www.webcitation.org**). This is an entirely free service that ensures that cited webmaterial will remain available to readers in the future.
- Randomised controlled trials should be reported using the CONSORT guidelines available at **www.consort-statement.org**, and authors should include with their manuscript a completed checklist and flow diagram in accordance with the guidelines.
- We expect authors who wish to communicate results from cohort, case-control, cross-sectional, non-randomised evaluations, or systematic reviews and meta-analyses to review guidelines concerning their analysis and reporting. The Reporting of Observational studies in Epidemiology (STROBE; **http://www.strobe-statement.org**), the Transparent Reporting of Evaluations with Nonrandomized Designs (TREND; http://www.cdc.gov/trendstatement), or the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA; **http://www.prisma-statement.org**/) should be consulted. A completed checklist and flow diagram should be included as an appendix to the submitted manuscript following the appropriate guideline.
- Prevalence surveys - *Addiction* welcomes such studies but does not publish surveys that primarily focus on description of a phenomenon that is known to be common worldwide (or common in the drug sense, e.g. heroin use), that is to say, prevalence which is already known to a large degree. Studies that document the start of a new 'epidemic' of a particular drug use might be considered, but largely descriptive data on the prevalence of this or that drug use in this or that place is largely excluded. Not excluded would be surveys that use a cross-sectional study to describe an association with this or that risk factor where that association is not well established.
- *Addiction* normally requires that clinical trials are registered in a publicly accessible database. The name of the trial register and the clinical trial registration number on the front page of the manuscript. A full list of registers can be found via the WHO International Clinical Trials Registry Platform (ICTRP) **http://www.who.int/ictrp/en/**.
- Evaluations involving behavioural interventions must include full manuals or protocols, or at least very detailed descriptions, of those interventions as supplementary files to be included as supplementary material published with the online version of the article.
- If English is not the first language of authors, they are advised to have their manuscript edited by a native English speaker before submission. However, we will do our best to accommodate papers from authors in countries where the resources do not exist for this.

A manuscript that does not comply with journal requirements will be unsubmitted and returned to the author centre. A useful guide to writing up papers for journals such as *Addiction* can be found in **West R (2000) A checklist for writing up research reports. Addiction, 95, 1759-61**.

Appendix 1.2 Quality Assessment Tool

Objectives and Study Type	**Quality Rating**
1. Aims/ questions/ hypotheses clearly stated or described	2 Adequate 1 Partial 0 Inadequate
2. Study Type	2 Randomised control trial 1 Non-randomised control trial 0 Uncontrolled trial
Sampling	**Quality Rating**
3. Sample Type	2 Geographic cohort 1 Convenience sample 0 Highly selective
4. Baseline demographics and clinical characteristics of groups clearly stated to allow comparisons	2 Adequate 1 Partial 0 Inadequate
5. Inclusion and exclusion criteria stated and used for both groups, where appropriate	2 Adequate 1 Partial 0 Inadequate
6. Sample size adequate (i.e. 27 in each group) or based on power calculation	2 Adequate 1 Partial 0 Inadequate
7. Well-matched control group used or, if no control group, attempts to control for confounding variables in design	2 Adequate 1 Partial 0 Inadequate
8. Diagnostic criteria for PTSD and co-morbid substance misuse used, e.g. DSM-IV or ICD-10	2 Adequate 1 Partial 0 Inadequate
Allocation	**Quality Rating**
9. Process of allocation to groups adequately described	2 Adequate 1 Partial 0 Inadequate Not applicable to study
10. Allocation carried out independently of trial research team	2 Adequate 1 Partial 0 Inadequate Not applicable to study
Assessment of Outcomes	**Quality Rating**
11. Assessment carried out independently of therapists	2 Adequate 1 Partial 0 Inadequate

12. Standardised measures applied and validated for PTSD (i.e. reliability and validity data specified)	2 Adequate 1 Partial 0 Inadequate
13. Standardised measures applied and validated for substance misuse (i.e. reliability and validity data specified)	2 Adequate 1 Partial 0 Inadequate
Intervention	**Quality Rating**
14. Intervention adequately described or intervention protocol used	2 Adequate 1 Partial 0 Inadequate
15. Adherence to intervention protocol or intervention quality assessed	2 Adequate 1 Partial 0 Inadequate
Analysis	**Quality Rating**
16. Data analysis appropriate to study design and type of outcome measure	2 Adequate 1 Partial 0 Inadequate
17. Intention to treat analysis used (i.e. analysis includes all participants allocated to intervention)	2 Adequate 1 Partial 0 Inadequate
18. Attrition rates specified	2 Adequate 1 Partial 0 Inadequate
19. Results clearly stated and relate to research aims/ hypotheses	2 Adequate 1 Partial 0 Inadequate
20. Confidence intervals, effect sizes, p-values etc. provided where appropriate	2 Adequate 1 Partial 0 Inadequate
Discussion	**Quality Rating**
21. Recommendations for clinical practice/ future research identified from results	2 Adequate 1 Partial 0 Inadequate
22. Limitations of study clearly identified	2 Adequate 1 Partial 0 Inadequate

Quality Assessment Rating Key:

Excellent = >75%
Good = >60%
Fair = >50%
Poor = <49%

Total score = _____ **/ 44**
Percentage = _____ **%**
Quality Rating Descriptor = _____

Appendix 2.1 Instructions for Submission to *British Journal of Clinical Psychology*

British Journal of Clinical Psychology (BJCP) - Notes for Contributors

The **British Journal of Clinical Psychology** publishes original contributions to scientific knowledge in clinical psychology. This includes descriptive comparisons, as well as studies of the assessment, aetiology and treatment of people with a wide range of psychological problems in all age groups and settings. The level of analysis of studies ranges from biological influences on individual behaviour through to studies of psychological interventions and treatments on individuals, dyads, families and groups, to investigations of the relationships between explicitly social and psychological levels of analysis.

The following types of paper are invited:

- Papers reporting original empirical investigations
- Theoretical papers, provided that these are sufficiently related to the empirical data
- Review articles which need not be exhaustive but which should give an interpretation of the state of the research in a given field and, where appropriate, identify its clinical implications
- Brief reports and comments

1. Circulation

The circulation of the Journal is worldwide. Papers are invited and encouraged from authors throughout the world.

2. Length

Papers should normally be no more than 5000 words (excluding abstract, reference list, tables and figures), although the Editor retains discretion to publish papers beyond this length in cases where the clear and concise expression of the scientific content requires greater length.

3. Submission and reviewing

All manuscripts must be submitted via our **online peer review system**. The Journal operates a policy of anonymous peer review.

4. Manuscript requirements

- Contributions must be typed in double spacing with wide margins. All sheets must be numbered.
- Tables should be typed in double spacing, each on a separate page with a self-explanatory title. Tables should be comprehensible without reference to the text. They should be placed at the end of the manuscript with their approximate locations indicated in the text.

- Figures can be included at the end of the document or attached as separate files, carefully labelled in initial capital/lower case lettering with symbols in a form consistent with text use. Unnecessary background patterns, lines and shading should be avoided. Captions should be listed on a separate sheet. The resolution of digital images must be at least 300 dpi.
- For articles containing original scientific research, a structured abstract of up to 250 words should be included with the headings: Objectives, Design, Methods, Results, Conclusions. Review articles should use these headings: Purpose, Methods, Results, Conclusions. Please see the document below for further details:

British Journal of Clinical Psychology - Structured Abstracts Information

- For reference citations, please use APA style. Particular care should be taken to ensure that references are accurate and complete. Give all journal titles in full.
- SI units must be used for all measurements, rounded off to practical values if appropriate, with the imperial equivalent in parentheses.
- In normal circumstances, effect size should be incorporated.
- Authors are requested to avoid the use of sexist language.
- Authors are responsible for acquiring written permission to publish lengthy quotations, illustrations, etc. for which they do not own copyright.

For guidelines on editorial style, please consult the **APA Publication Manual** published by the American Psychological Association.

5. Brief reports and comments

These allow publication of research studies and theoretical, critical or review comments with an essential contribution to make. They should be limited to 2000 words, including references. The abstract should not exceed 120 words and should be structured under these headings: Objective, Method, Results, Conclusions. There should be no more than one table or figure, which should only be included if it conveys information more efficiently than the text. Title, author name and address are not included in the word limit.

6. Publication ethics

All submissions should follow the ethical submission guidelines outlined the the documents below:

Ethical Publishing Principles – A Guideline for Authors

Code of Ethics and Conduct (2006)

7. Supplementary data

Supplementary data too extensive for publication may be deposited with the **British Library Document Supply Centre**. Such material includes numerical data, computer programs, fuller

details of case studies and experimental techniques. The material should be submitted to the Editor together with the article, for simultaneous refereeing.

8. Copyright

On acceptance of a paper submitted to a journal, authors will be requested to sign an appropriate assignment of copyright form. To find out more, please see our **Copyright Information for Authors**.

Appendix 2.2 Participant Information Sheet

PARTICIPANT INFORMATION

You are invited to take part in a research study being undertaken in hospitals throughout Glasgow. Please read the following information before deciding whether to participate in the study.

Reasons for the Study

This study aims to investigate the experiences of hospital patients throughout the city. Previous research suggests that patients receive different care in hospital depending on why they were admitted. This is particularly noticeable when comparing people who have been injured accidentally with people who have harmed themselves.

This study is being undertaken as part of a Doctorate Degree in Clinical Psychology for the Lead Researcher, Valerie McKenna (NHS Greater Glasgow & Clyde and University of Glasgow).

What does the study involve?

If you decide to take part in the study, you will be asked to complete a Consent Form with a member of the research team. You will then be given a questionnaire pack to complete in private and seal in the envelope provided. You can then return this envelope to the person who gave you the questionnaires or put it in the box marked "Research" on the ward. Your envelope will only be opened by a member of the research team.

The pack will contain 3 questionnaires asking about:

- Your background information (such as age, gender and ethnicity) and the reason why you attended A&E
- Your current mental health and well-being
- Your perceptions of the service you received in hospital

Completing these questionnaires will take around 30 minutes of your time and you will only have to do this on one occasion.

What are my rights?

Even if you agree to take part in the study, you are free to withdraw from the study at any time and without having to give a reason. If you choose not to participate or decide to withdraw your consent, this will not affect your right to the standard practice of healthcare provided in the ward.

If you agree to participate in the study, your involvement is **voluntary** (you are free to withdraw at any time) and **confidential.**

What will happen to the information collected in the study?

All information collected will be treated confidentially and any information which could identify you as a participant will be removed in any research reports. All records will be stored in accordance with the Data Protection Act and held in a secure data storage system which is protected by passwords.

If you have any questions about this study please contact:

Valerie McKenna

Trainee Clinical Psychologist

Department of Psychological Medicine

Gartnavel Royal Hospital

1055 Great Western Road

Glasgow

G12 0XH

Email: Valerie.McKenna@ggc.scot.nhs.uk

Thank you for taking the time to read this information.

Appendix 2.3 Participant Consent Form

Participant ID:

CONSENT FORM

PLEASE CIRCLE YOUR RESPONSE

Have you read and understood the Participant Information? YES/ NO

Have you been given an opportunity to ask questions about the study? YES/ NO

Have you received enough information about this study? YES/ NO

Do you understand that your participation is entirely voluntary? YES/ NO

Do you understand that you are free to withdraw from this study? YES/ NO

- At any time? YES/ NO
- Without having to give a reason for withdrawing? YES/ NO
- Without this affecting your right to routine healthcare? YES/ NO

Do you agree to take part in this study? YES/ NO

Signature: …….. ……. **Date:** ……

Name in capital letters: …….

Witnessed by: …… **Date:** ……

If you would like feedback on the results of this study when it is complete, please add contact details where the feedback can be sent:

I would like to receive feedback of the results of this study YES/ NO

I can be contacted at:

Address: ……..
……..
……..

OR Email: ……..

Appendix 2.4 Demographic Questionnaire

Participant ID:

BACKGROUND INFORMATION

Please complete the following:

1. Age: _____ **2. Gender:** Male ☐ Female ☐

3. Number of years in full-time education: ……

4. Ethnicity:

A. White

I) Scottish ☐ II) English ☐ III) Welsh ☐ IV) Irish ☐

V) Other ☐ Please describe……

B. Asian, Asian Scottish, Asian Welsh or other Asian British

I) Indian ☐ II) Pakistani ☐ III) Bangladeshi ☐ IV) Chinese ☐

V) Other ☐ Please describe……

C. Black, Black Scottish, Black English, Black Welsh, or other Black British

I) African ☐ II) Caribbean ☐

III) Other ☐ Please describe……

D. Mixed or other ethnic background

I) Mixed ☐ II) Other ☐ Please describe……

5. Current employment status:

I) Unemployed ☐ II) Retired ☐

III) Employed ☐ Job title ……

6A. Reason for attending hospital:

6B. Did this injury occur while you were intoxicated?

Yes ☐ **No** ☐

If this injury was non-accidental (i.e. self injury), please complete Question 7A and 7B:

7A. Method of self injury:

7 B. Have you attended hospital for self injury before?

Yes ☐ **No** ☐

Appendix 2.5 Perceived Stigma Questionnaire

Participant ID:

Your Treatment in Hospital

Please read the following 30 statements carefully and circle the response which most applies to **your recent experiences** during your current admission to hospital:

1. Staff were helpful to me

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

2. My waiting times were the same as other patients' waiting times

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

3. My treatment was deliberately painful

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

4. Staff were disappointed in me

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

5. Staff were friendly towards me

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

6. Staff did not respect me

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

7. Staff treated me the same as other patients

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

8. Staff treated my injuries as genuine

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

9. Staff were afraid of me

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

10. Staff made negative comments about me

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Please turn over

11. Staff empathised with my injuries

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

12. Staff ignored me

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

13. Staff were not concerned about me

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

14. My treatment was as good as it could have been

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

15. Waiting times were longer for me

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

16. Staff did not hold me responsible for my injuries

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

17. Staff were frustrated by me

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

18. Staff did their best to help me

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

19. Staff were professional during my treatment

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

20. Staff were angry at me

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

21. Staff treated me more negatively than other patients

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

22. Staff treated me with respect

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

23. My treatment was as good as other patients' treatment

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

24. Staff did not comment on my injuries

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

25. My injuries were not treated as genuine

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

26. Staff were kind to me

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

27. Staff blamed me for my injuries

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

28. My treatment was worse than other patients' treatment

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

29. Staff voiced disapproval about my injuries

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

30. Staff responded positively to me

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Appendix 2.6 NHS Ethical Approval Letter

WoSRES
West of Scotland Research Ethics Service

NHS
Greater Glasgow and Clyde

West of Scotland REC 5
Ground Floor,
Tennent Institute,
Western Infirmary,
38 Church Street,
Glasgow G11 6NT

Telephone: 0141-211-6270
Facsimile: 0141-211-1847

14 December 2009

Miss Valerie F McKenna
Trainee Clinical Psychologist
Psychological Medicine
Gartnavel Royal Hospital
1055 Great Western Road
Glasgow
G12 0XH

Dear Miss McKenna

Full title of study: **Examining the Perceptions of Stigma in Self-Harming Clients in General Hospital Settings**
REC reference number: **09/S1001/70**
Protocol number: **Version 2**

Thank you for your letter of 3rd December 2009. I can confirm the REC has received the documents listed below as evidence of compliance with the approval conditions detailed in our letter dated 18 November 2009. Please note these documents are for information only and have not been reviewed by the committee.

Documents received

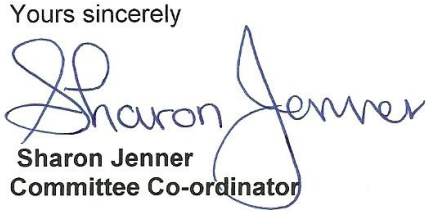
The documents received were as follows:

Document	*Version*	*Date*
Instructions for completing questionnaires	version 2	03 December 2009
REC application	amended	03 December 2009
Covering Letter		03 December 2009
Participant Information Sheet	version 2	03 December 2009

You should ensure that the sponsor has a copy of the final documentation for the study. It is the sponsor's responsibility to ensure that the documentation is made available to R&D offices at all participating sites.

09/S1001/70	Please quote this number on all correspondence

Yours sincerely



Sharon Jenner
Committee Co-ordinator

E-mail: sharon.jenner@ggc.scot.nhs.uk

Copy to: ***Dr Darren Gibson***

Appendix 2.7 NHS Research and Development Management Approval Letter

Coordinator/administrator: Darren Gibson/Elaine O'Donnell
Telephone Number: 0141 211 6208
Fax Number: 0141 211 2811
E-Mail: Darren.Gibson@ggc.scot.nhs.uk

NHS
Greater Glasgow and Clyde
R&D Management Office
Western Infirmary
Tennent Institute
1st Floor, 38 Church Street
Glasgow, G11 6NT

12 January 2010

Miss Valerie F McKenna
Trainee Clinical Psychologist
Gartnavel Royal Hospital
1055 Great Western Road
Glasgow G12 0XH

R&D Management Approval

Dear Miss McKenna,

Project Title: Examining the perceptions of stigma in self-harming clients in general hospital settings.
Chief Investigator: Miss Valerie F McKenna
R&D Reference: GN09CP595
Protocol: Version 2 05/10/09
GG&C Sites: Western Infirmary and Glasgow Royal Infirmary (A&E and Liaison Psychiatry)

I am pleased to confirm that Greater Glasgow & Clyde Health Board is now able to grant **Management Approval** for the above study.

As a condition of this approval the following information is required during the lifespan of the project:

1. SAES/SUSARS – If the study is a **Clinical Trial** as defined by the Medicines for Human Use Clinical Trial Regulations, 2004 (CTIMP only)
2. Recruitment Numbers on a quarterly basis (not required for commercial trials)
3. Any change of Staff working on the project named on the ethics form
4. Change of CI
5. Amendments – Protocol/CRF etc
6. Notification of when the Trial / study has ended
7. Final Report
8. Copies of Publications & Abstracts

Please add this approval to your study file as this letter may be subject to audit and monitoring.

Yours sincerely

Dr Darren Gibson
Research Co-ordinator

Cc: Dr John Sharp

Delivering better health
www.nhsggc.org.uk

Appendix 2.8 Major Research Project Proposal

Examining the Perceptions of Stigma in Self-Harming Clients in General Hospital Settings

Research Supervisors: Professor Keith Millar

Dr. Sarah Wilson

Date of Submission: 5th October 2009

Word Count: 3403

Background: Stigma research indicates that individuals with mental health problems report high levels of perceived stigma and differences in the quality of care they receive in general hospital settings. Research has also identified negative staff attitudes towards patients who self-harm in general hospital settings. No research to date has attempted to measure the perception of stigma in self-harm patients in general hospital settings in comparison to a control group of other hospital patients.

Aims: This project aims to examine perceived stigma in a sample of self-harm patients within general hospital settings by comparing their experiences to a control group of other hospital patients.

Methods: Participants will be 23 patients admitted to general hospital wards after presenting to Accident and Emergency (A&E) departments following an incident of self-harm and 23 hospital controls. These controls will be matched as closely as possible to the self-harming patients for age, gender and socio-economic status, and will be admitted to the same receiving wards for any other physical health problem or non-deliberate injury. Participants in each group will complete a purpose-designed measure of perceived stigma, as well as a measure of current psychological state (SCL-90-R) and a questionnaire containing demographic information, reason for admission and self-harm specific questions.

Applications: Should this study identify higher levels of perceived stigma in self-harm patients in comparison to hospital control patients, it may be appropriate for Liaison Psychiatry staff to undertake additional training with general hospital staff. This may be of particular importance given the potentially negative impact of stigma on self-esteem, which could have a maintaining role in self-harming behaviour.

1. Background

1.1 Concept of Stigma

Stigma has been defined as “an attribute that extensively discredits an individual, reducing him or her from a whole and usual person to a tainted or discredited one” (Goffman, 1963, p.3). Markers of stigma may vary in visibility and controllability, and can influence appearance, group membership and behaviour (Major & O’Brien, 2005). To illustrate, stigma has been identified in individuals with a number of physical health conditions which are considered to: cause behaviours perceived as unusual or frightening (including epilepsy and Tourette’s Syndrome); reflect personal inadequacy (such as drug dependence and obesity); result from perceived immoral behaviour (for example, HIV and AIDS); and impact on private or embarrassing body parts (such as, urological conditions and faecal incontinence) (West & Hardy, 2007). Moreover, the experience of stigma has been examined in those with mental health problems, particularly in the context of healthcare settings, as there is considerable evidence that the physical health problems of those with mental health problems are frequently under-diagnosed and inappropriately treated (Kuey, 2008).

1.2 Mental Health Stigma in Healthcare Settings

While research indicates that mental health stigma does not present a significant barrier to services (e.g. Golberstein, Eisenberg & Gollust, 2008; Cooper, Corrigan & Watson, 2003), Roa, Pillay, Abraham & Luty (2009) note that mental health stigma in health services is particularly concerning, as these services represent one of the most appropriate pathways for people with mental health problems to integrate into society. Their study utilised a vignette methodology and identified stigmatising attitudes towards those with mental health problems in healthcare staff. Additionally, Liggins and Hatcher (2005) explored stigmatising experiences of patients and staff in general hospital settings and identified a number of salient stigma themes relating to fear, hopelessness, labelling,

disbelief in illness and how the relationship between stigmatiser and stigmatised is communicated. These researchers note these themes relate to mental health stigma within the general population and suggest that there is an additional perception that the patient is not genuinely ill in hospital settings.

A recent study undertaken by Peris, Teachman and Nosek (2008) measured implicit and explicit biases towards people with mental health problems in individuals with different levels of mental health training and investigated the influence of stigma on clinical decision-making. These authors hypothesised that a higher level of training in mental health and greater exposure to individuals with mental health problems would result in less implicit and explicit biases. These hypotheses were upheld, with higher levels of training and increased contact with individuals with mental health problems resulting in more positive responses. This study also used a vignette methodology to explore clinical decision making and reported that bias predicted clinical decision making, with explicit bias as a significant predictor of negative prognosis and implicit bias relating to over-diagnosis. These authors suggest that this finding is particularly significant when considering the role that negative attitudes may have on care provision, even among professionals with training in mental health.

A comprehensive review on the role of nursing staff in mental health stigma (Ross & Goldner, 2009) applied Schulze's (2007) concept of healthcare staff occupying one of three positions: i) as *stigmatiser* of those with mental health problems, ii) as *stigmatised* by their association with and direct experience of mental health problems, and iii) as *de-stigmatiser* or advocates for those with mental health problems. When reviewing evidence for healthcare staff occupying the role of stigmatiser, these authors identify the presence of negative attitudes and themes of fear, blame and hostility as having a detrimental impact on the quality of care for these individuals. While the theme of fear

partially relates to stereotypes within the general population, the authors suggested it could also be explained by staff feeling deskilled and ill-equipped to manage and support these individuals. They suggested that blame relates to misattributing mental health problems to personal characteristics, while hostility arises from the belief that these patients are squandering healthcare resources which could be better utilised. These authors noted a general devaluing of psychiatric services, which they suggested places some staff in the second role of stigmatised by their association to these services, in addition to their personal mental health experiences. They concluded that nursing staff have a valuable role in the third position of de-stigmatiser of mental health problems.

1.3 Understanding Self-Harm

Self-harm has been defined as "any act which involves deliberately inflicting pain and/or injury to one's own body, but without any suicidal intent; it is usually an attempt to stay alive in the face of great emotional pain" (Arnold & Magill, 2001). While self-harm has traditionally been understood in the context of an on-going mental health problem or viewed as an attempt at suicide, research increasingly suggests that this is not the case. For example, O'Connor, Rasmussen, Miles and Hawton (2009) undertook a recent survey of self-harm in adolescents in Scotland and reported that the prevalence of self-harm in this population is similar to that of England, despite Scotland having a suicide rate twice as high as England. Research does, however, indicate significant differences between those who self-harm and those who do not on self-reported measures of psychological distress, such as the SCL-90-R (Sarno, Madeddu and Gratz, 2009).

A further study, Rasmussen et al. (in press), has examined the Cry of Pain Model of Self-Injury (Williams, 2001) which conceptualises self-harm as a behavioural response to a feeling of being trapped in a stressful situation which fulfils three criteria: the presence of defeat, no potential for escape and no potential for rescue. Within this model, a mediating

relationship exists between a sense of entrapment and the defeat-suicide ideation relationship, and rescue factors, such as positive future thinking, have a moderating role in the entrapment-suicidal ideation relationship. These researchers identified differences in anxiety, depression and suicidal ideation between the three groups, providing some empirical support for this Cry of Pain Model of Self-Injury. Despite this increased understanding of the purpose of self-harm, research indicates that misunderstandings about self-harm are pervasive in general hospital settings. For example, Ross and Goldner (2009) suggest that there is an implicit belief that patients who self-harm do so from a specific volition to die and there is little understanding of the purpose and function of self-injury.

1.4 Healthcare Experiences of Self-Harming Patients

While NICE Guidelines (2004) for the short-term physical and psychological management and secondary prevention of self-harm recommend that all self-harm patients have the right to the same quality of care as all other patients, some researchers suggest that this is often not the case. McAllister, Creedy, Moyle and Farrugia (2002) note that in A&E departments where cases are prioritised according to life threat, those who self-harm are frequently ignored and made to wait for long periods. These authors also suggest that clients frequently recognise rejection during their contact with healthcare staff, which can lead to further self-harming behaviour. In addition to objective differences in health care provision, a large body of research has identified negative attitudes to self-injury from healthcare staff.

Friedman et al (2006) attempted to examine the factors which predict the attitudes of A&E staff to those who self-harm by cutting and reported that staff recognised self-harm as significant problem, but felt unskilled and under-resourced when dealing with it. Additionally, a large proportion of respondents (80%) conceptualised self-harm as

attention-seeking and manipulation, rather than individuals seeking appropriate medical attention. They found high levels of staff frustration which did not relate to level of experience or training on self-injury. Despite the belief that de-stigmatisation occurs through increased contact with the stigmatised other (e.g. Kuey, 2008), these researchers found that negative staff views persisted in spite of the large amount of contact that A&E staff have with those who self-injure by cutting.

A recent audit, service evaluation and quality improvement initiative was undertaken by the Royal College of Psychiatrists in relation to their Quality Standards for Health Care Professionals for services for people who self-harm (Royal College of Psychiatrists, 2006). This comprehensive national programme again revealed that staff in general hospital settings feel unskilled and badly informed as to how to best support self-harming clients and that staff attitudes and behaviour are the best predictors of patients' experiences of the care they receive (Blackwell & Palmer, 2008). This programme also highlighted high variation in the quality of care provision for patients who self-injure.

Overall, the literature suggests that staff responses to patients with mental health problems or who engage in self-harm behaviour differ from those who present to hospital settings with physical health problems or accidental injury. While much of this research suggests that this difference relates, in part, to mental health stigma, no research to date has attempted to measure the existence of stigma towards patients who self-harm in hospital settings.

2. Aims and hypotheses

2.1 Aims

This project aims to extend pervious research on mental health stigma in healthcare settings and negative staff attitudes towards self-harm patients by measuring perceived

stigma of self-harm patients within general hospital settings and compare them with control group of other patients. Participants in each group (i.e. self-harmers and hospital controls) will complete measures of perceived stigma and current psychological state, as well as a general questionnaire collecting demographic information, reason for admission (i.e. self-harm or other physical health concern) and self-harm specific questions.

2.2 Hypotheses

It is hypothesised that self-harmers will report greater perceptions of stigma than hospital control patients. Additionally, it is hypothesised that greater perceptions of stigma will positively correlate to self-reported level of psychological distress, as measured by the SCL-90-R. Finally, positive correlations are predicted between perceived stigma and the subscales of Paranoid Ideation and Interpersonal Sensitivity on the SCL-90-R.

3. Plan of Investigation

3.1 Participants

Participants will be patients who have been admitted to acute receiving wards after presenting to Accident and Emergency (A&E) departments at hospitals in Glasgow - Western Infirmary, Southern General, Victoria Infirmary and Royal Infirmary - following an episode of self-harm. The provision of A&E services within Glasgow is based on the availability of hospital beds, rather than specific locality, so a representative sample of patients will be obtained from these four sites. This project will utilise a control group of individuals who will be matched by gender, age and socio-economic status, as closely as possible, to those in the self-harm group and who have been admitted to the same acute receiving wards as the self-harm patients for any other physical health complaint or non-deliberate injury.

3.2 Inclusion and Exclusion Criteria

Participants will be included in the study if they are admitted to an acute receiving ward in one of the four hospital sites following an incident of self-harm or are a matched control with any other physical health problem or non-deliberate injury and consent to participate. Patients will be excluded from the study if they: 1) are unfit for interview due to their current physical or psychological state; 2) are unable to give informed consent; and 3) do not speak English as a first language.

3.3 Recruitment Procedures

Participants in the self-harm group will be assessed by members of the Glasgow Liaison Psychiatry Service, as per standard clinical practice, prior to being approached about participation in the study. These assessments are undertaken in a general ward setting after patients have attended A&E and are used to identify appropriate follow-up care from the general ward setting. Potential participants in both groups (i.e. self-harm and hospital controls) will be given a Participant Information Sheet detailing the study before being invited to take part and their informed consent obtained. Both groups of participants will be recruited from the general receiving wards after attending A&E in each of the four sites identified. Participants in the control group will be recruited once information about participants in the self-harm group has been collated to maximise appropriate matching.

3.4 Measures

3.4.1 Demographic Questionnaire

Participants will complete a questionnaire which will collect standard demographic information (i.e. age, gender, ethnicity, employment status and level of education), reason for hospital admission (i.e. self-harm or other physical health complaint) and self-harm specific questions (e.g. previous history of self-harm and method of self-harm). Socio-

economic status will be identified using the Standard Occupational Classification (SOC2000) and level of education.

3.4.2 Measure of Perceived Stigma

As standardised measures of perceived mental health stigma (e.g. King et al, 2007), were unsuited to both groups of participants in the study, a purpose-designed measure based on current research evidence will be used. This will be a Likert scale consisting of 30 items focussing on three areas identified from published literature on mental health stigma and negative staff attitudes to self-injury, namely McAllister et al (2002). These three areas are: 1) emotional responses of staff (for example, feelings of anger, fear and frustration towards patients); 2) objective experiences (such as increased waiting times and painful treatment), and 3) professional conduct of staff (including making negative comments and not treating injuries as being genuine). The five items in each of these three areas (15 items in total) are counterbalanced by an equal number (15) of positive and neutral statements. Participants will be asked to rate their recent experiences in general hospital wards on a five-point scale ranging from "Strongly Disagree" to "Strongly Agree," with a scoring range of 0-120.

Due to time constraints, this measure will not be assessed for reliability or validity. However, the measure was piloted on a group of ten members of the public for ease of understanding. It is estimated that it will take up to ten minutes to complete.

3.4.3 Measure of current psychological state: Symptom Checklist-90-R (SCL-90-R) (Derogatis, 1994)

This tool is designed to measure a broad range of psychological problems and provide an overview of an individual's current level of psychological distress and the intensity of self-reported problems at a specific time point. The SCL-90-R test contains 90 items and

evaluates nine dimensions: *Somatisation*, *Obsessive-Compulsive*, *Interpersonal Sensitivity*, *Depression*, *Anxiety*, *Hostility*, *Phobic Anxiety*, *Paranoid Ideation* and *Psychoticism*. This measure has been appropriately normed for both groups in the study and can take up to 15 minutes to complete.

3.4.4 Design

This research will utilise a cross-sectional, matched control design.

3.4.5 Research Procedures

Participants will be recruited from the general receiving wards within the specified hospital sites through members of the Glasgow Liaison Psychiatry Service. Potential participants in the self-harm group will be approached by nursing staff and/or the principal researcher once they have attended a routine risk assessment appointment with Glasgow Liaison Psychiatry Service staff, as per routine care provision. They will be given a Participant Information Sheet at the end of this appointment and, if they agree to participate, they will complete a Consent Form with nursing staff and/or the principal researcher. Control participants will be approached from the same acute receiving wards by the principal researcher following these same procedures.

Both groups of participants will be given a questionnaire pack to be completed in private. They will then return the completed measures to the individual who administered them or place them in a box marked “Research” on the ward. This process will be outlined in the Participant Information Sheet and in the instruction sheet included in the questionnaire pack.

3.4.6 Justification of sample size

As the primary outcome measure proposed in this study has not been used in previous research, a power calculation was undertaken using data from research with people who self-harm on the SCL-90-R measure (Sarno, Madeddu & Gratz, 2009). This research revealed differences on this measure between three groups of participants: 1) those who do not self-harm (No Self-Harm); 2) those who self-harm episodically (Episodic Self-Harm); and 3) those self-harm repeatedly (Recurrent Self-Harm). Effect sizes were calculated on the global SCL-90-R scores between these three groups, with an effect size of 0.46 for the No Self-Harm and Episodic Self-Harm groups, and an effect size of 1.07 between those in the No Self-Harm and Recurrent Self-Harm group. As the proposed study will not distinguish between those who self-harm episodically and those who self-harm repeatedly, an average effect size of 0.76 was calculated on the basis of this previous research. Setting the alpha level at 0.05 and power at 0.8, the calculation revealed a total sample of 46, with 23 participants in each group. This sample size was also considered sufficient for the correlation analysis, assuming a medium to large effect size of 0.35.

3.4.7 Settings and Equipment

The research will take place on the acute receiving wards at each hospital site identified and will involve the completion of the measures specified.

3.4.8 Data Analysis

Data analysis will be undertaken using the Statistics Package for the Social Sciences for Windows (SPSS for Windows) software programme. Descriptive statistics will be reported for demographic factors and analysis will be undertaken to confirm that both groups are appropriately matched.

The main comparison will be between the two group of participants on perceived stigma and SCL-90-R global scores. If the data are normally distributed, statistical analysis will be undertaken using an independent samples t-test. If the data are not of sufficient parametric quality, Mann-Whitney U tests will be performed. Correlations will be carried out between perceived stigma scores and SCL-90-R global scores, and between perceived stigma scores and subscales of SCL-90-R.

4. Health and Safety Issues

As this research will be undertaken on different hospital sites within NHS Greater Glasgow & Clyde, local Health and Safety policies will be adhered to. In the event of any health and safety related incident, the appropriate health and safety procedures will be followed.

4.1 Researcher Safety Issues

Specific researcher safety issues have been carefully considered. Ward staff will be consulted to identify appropriate potential participants to be approached about the study. These staff members will be informed when the principal researcher is meeting with potential participants and these meetings will occur on suitable premises on the wards.

4.2 Participant Safety Issues

As the study does not involve invasive procedures or deception of any kind, there are no obvious risks to participant's integrity or well-being and no specific participant safety issues have been identified.

5. Ethical Issues

Ethical approval will be sought from the NHS Greater Glasgow & Clyde Ethics Committee and the project will be registered with the Research and Design Directorate. The British

Psychological Society's guidelines on ethical issues in research (British Psychological Society, 2004) will be adhered to during this project.

Given the possible vulnerable psychological state of individuals who have been admitted to general wards after an incident of self-harm, there are some ethical considerations about the potentially distressing aspect of undertaking this research. As these patients will remain on a hospital ward while completing measures, follow-up care can be provided by healthcare staff present, as required. Additionally, each participant in the self-harm group will be approached after a routine risk assessment appointment with the Glasgow Liaison Psychiatry Service, so any individuals who would be considered too vulnerable to participate will be excluded from the study. As this risk assessment appointment allows the identification of relevant services and agencies to support each individual, follow-up care can be provided by these services as appropriate. If participants in the control group disclose mental health problems or psychological distress, the principal researcher will signpost them to relevant sources of support, such as their GP. Ward staff will also be informed with their permission.

6. Financial Issues

There is a cost implication for the questionnaire packs in terms of photocopying and for purchase of the SCL-90-R measure. There is a further cost for envelopes in which to return the questionnaires. The estimated cost of the study is £33.49.

7. Timetable

Sept – Nov 2009:	Application for approval with NHS Greater Glasgow & Clyde Ethical Committee, and Research and Design Directorate Preparation of site and materials
Dec 2009 – April 2010:	Data collection

May 2010:	Data analysis
June – July 2010:	Research write-up

8. Practical Applications

This research aims to expand on current research on mental health stigma and negative staff attitudes towards those who self-harm. If high levels of perceived stigma are identified as occurring in those who engage in self-injury in comparison to hospital controls, it may be appropriate for Liaison Psychiatry staff to undertake additional training with general hospital staff to facilitate their understanding of the purpose and function of self-harm, as recommended by NICE guidelines. This may be of particular importance given the potentially negative impact of stigma on self-esteem, which could have a maintaining role in self-harming behaviour.

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