The Relationship between Expectations of Positive and Negative Future Events and Social Support in Depressed Older Adults

AND CLINICAL RESEARCH PORTFOLIO

PART I

(Part II bound separately)

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Chapter 1: Systematic Literature Review

What is the Evidence Base for the Role of Social Support in Depression?

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Abstract

Purpose: To systematically review the literature relating to the ameliorating effect of social support in depression in older adults.

Methods: Electronic databases were searched to identify relevant studies. The reference sections of identified articles were searched for potential relevant articles.

Results: Studies investigating social support in depressed adults show that social support mitigates the effects of depression. In particular, social support is found to be as important as other clinical factors (such as use of ECT, past history of depression, comorbidities and antidepressant medication) in predicting shorter time to remission. The buffering effects of depression are strongest in the most severely depressed older adults.

Conclusions: Because of the currently limited available literature, this review is prone to distortions regarding conclusions. Nonetheless, it is helpful to guide clinicians' decision making processes as it represents a synthesis of the currently available literature. Although it is acknowledged that the identified literature is limited, all the studies identified point to the conclusion that social support is an important protective factor in older depressed adults, and as such warrants further investigation.

Key words: Systematic review, older adults, social support, depression.

Introduction

Social factors which are associated with depression in older adults include having a limited social network (i.e. friends, family, helpful others, confidants and living arrangements; Yip, Chi & Chiu, 2003), fewer contacts with friends and relatives and having fewer close friends and relatives (Bartels, Coakely & Oxman, 2002), lack of a confidant (Clarke, Colantonio & Heslegrave, 2004), and a perceived lack of social support (Awata, Seki & Koizumi, 2005). Rowe, Conwell, Schulberg & Bruce (2006) found that lower social interaction patterns and lower perceived social support were significantly related to suicidal ideation in older adults receiving home healthcare services.

A lack of social support can clearly be linked to social impairment, although the direction of this relationship is not clear. Hammen & Brennan (2002) presented evidence that interpersonal impairment is a stable feature of depression, and may reflect underlying vulnerability to the onset and recurrence of depressive symptoms. They looked at women with a current major depressive disorder, formerly but not currently depressed women, and never-depressed women. Their results were consistent with the hypothesis that interpersonal difficulties are not just the consequence of depressive symptoms, since formerly but not currently depressed women were significantly more impaired than never-depressed women. They found that the depressed and formerly-depressed groups reported more problematic relationships with their children, friends and extended family, reported more stressful life events with interpersonal conflict and were more insecure in their beliefs about other people. Rudolph, Hammen and Burge (1994, 1997) found similar

results in children: depressive symptoms were found to be related to difficulties in multiple areas of social competence, including maladaptive social problem-solving styles, conflict-negotiation and peer rejection, and that these deficits led to lower levels of social support. As yet, these findings have not been replicated in older adults; however, it seems probable that deficits in interpersonal problem solving are likely to be associated with depression in this group. This may be particularly significant since older adults typically have a less robust social network than younger adults, as they have typically lost friends through bereavement, and find it more difficult to maintain social contacts because of physical health problems (Beyer, Kuchibhatia, Looney, Engstrom, Cassidy & Krishnan, 2003).

This literature review aims to address the following research questions:

(i) Is social support associated with depression in older adults?

(ii) If so, are lower levels of social support associated with higher levels of depression in older adults?

Methodology

To identify the potentially relevant literature, a database search was conducted. Table 1 represents the incorporated databases.

Table 1: Databases and Search Interval

Database	Time Interval
Ovid MEDLINE	1993 to 01/06/08
Journals@Ovid Full Text	1993 to 01/06/08
All EBM Reviews, Cochrane DSR, ACP Journal Club, DARE and CCTR	1993 to 01/06/08
PsychINFO	1993 to 01/06/08
CINAHL	1993 to 01/06/08

Where a study is reported in more than one article, data was to be extracted from the most recent report. Reference sections of eligible papers were checked for possible relevant articles. Where there are uncertainties about the data, the investigator approached the authors for clarification. Identified studies were screened for suitability.

The final list of identified studies was rated for quality according to the SIGN guidelines' recommendations for systematic literature reviews. The completed evidence table is available in Appendix 2. The coding scheme entails examining the method of sampling,

whether a sample size justified by adequate power calculations, assessments are independent of treatment, the assessment measures standardised, whether methods of rater blinding are adequately described and verified, and the quality of the analysis.

Table 2: Search Terms

Search Item	Search Term
#1	'Older OR Elderly'
#2	'Duke Social Support Index'
#3	'Depres$'

The search terms will be combined as follows:

#1 AND #2 AND #3

Because "social support" is so broadly defined, a specific measure of social support has been used as a search term, namely the Duke Social Support Index (DSSI; Koenig, Westlund & George, 1993). The DSSI operationalises the definition of social support proposed by Rowe, Conwell, Schulberg and Bruce (2006) as including directly measurable aspects such social network size, social interaction patterns and social support, and also subjective aspects such as the perception of being supported. There are a number of measures available which purport to measure social support, however, the DSSI was selected for the following reasons. In a large-scale study with 12, 939

participants, Powers, Goodger and Byles (2004) concluded that the DSSI is the most appropriate measure of social support with an older population, because of its brevity and validity. High completion rates were observed, indicating that it was easy to complete and acceptable to older people, and good reliability and construct validity were seen. Furthermore, the DSSI is widely used in research, and is the only social support measure to be validated for use in an older adult population (DSSI-23; Koenig *et al.* 1993; Rowe *et al.*, 2006).

Inclusion and Exclusion Criteria

Studies which discussed the relationship between social support and depression were included. Studies which examined the relationship and found no association were to be included. Studies that sought to delineate the influence of the social support variable from other variables in depression were included. Studies which adhere to the definition of "social support" as defined by Rowe and colleagues (2006) were included. Rowe and colleagues refer to social support as including directly measurable aspects such social network size, social interaction patterns and social support, and also subjective aspects such as the perception of being supported.

Of studies which reported correlations between depression and social support, only those studies which reported the method employed to calculate correlations were included. However, in cases where the required information could not be retrieved from the paper, authors were contacted. Only papers reporting original data were included in the review to control for biases in studies. Studies which appeared to conflate social support and

related concepts, e.g. interpersonal functioning, and which did not allow for the delineation of the effect of the social support variable from others within the analysis, were not be included. Finally, only studies describing outcomes relevant to clinical psychology were included. In the case of studies where it was not clear if the inclusion criteria were met, the ambiguity was resolved in discussion with an independent researcher. The inclusion and exclusion criteria are summarised below.

Inclusions

1. Studies which explore the relationship between social support and depression.
2. Studies which seek to delineate the influence of social support from other variables in depression.
3. Studies where the age of the sample is 65 years or older.

Exclusions

1. Studies which do not utilise the definition of social support provided by Rowe and colleagues (2006), for example by including related variables such as interpersonal functioning within the analysis.
2. Studies which do not report the method employed to calculate correlations.
3. Studies which are not relevant to clinical psychology.

As the available literature is limited, all studies which meet minimum criteria will be considered.

Analysis

To address the first research question, the quality of the included studies will be assessed using a quality grid (SIGN 50, 2004). The completed evidence table is available in Appendix 2. The method used to integrate data across studies will be "qualitative descriptive", as the SIGN 50 grading scale expresses qualitative rather than quantitative differences.

The second research question will be addressed classifying the identified literature into disjunct categories of studies purporting evidence suggesting a link between social support and depression and those which do not.

Results

The search strategy yielded sixty-eight studies, of which ten potentially met eligibility criteria. After scrutinising the studies, two were excluded. Of the remaining eight studies, seven were cohort studies and one was a case-control study. All eight used the Duke Social Support Index as the primary outcome measure. Of the eight identified studies, four key studies were of most relevance to the research questions.

1. Social Support and Time to Remission from Depression

The search strategy identified three studies which looked at social support and time to remission from depression. Firstly Bosworth, McQuoid, George and Steffen (2002) conducted a prospective cohort study looking at a wide range of clinical factors that may influence time to remission in depressed older adults, including social support, use of ECT, past history of depression, comorbidities and antidepressant medication. This was a large-scale study in which 239 depressed older adults were recruited. The Duke Social Support Index was used to measure both objective and subjective domains of social support. Although the investigators were not blind to the status of subjects, in other respects this study met the quality criteria. Bosworth and colleagues concluded that a lack of both objective and subjective social support were predictors of longer time to remission from depression. They concluded that social support variables are as important in predicting shorter time to remission from depression as the other clinical factors they measured. Furthermore, they concluded that therefore the use of interventions directed

towards increasing social support, in addition to clinical interventions, is indicated for this population.

Although there is literature linking medical illness and depression in older adults (Williamson and Schulz, 1992; Katz, 1996), Bosworth and colleagues (2002) did not support the hypothesis that medical illness will influence time to remission from depression. They suggest that in predicting remission, medical illness is not as important as psychosocial factors like social support.

In the second identified study, Koenig, George and Peterson (1998) looked at the relationship between religiosity and time to remission from depression in medically ill older patients. "Religiosity" was defined as "religious beliefs (intrinsic religiosity) and activities (prayer and Bible reading, church attendance)" on time to remission from depression. Although the definition of religiosity is somewhat vague, this study scored highly on quality criteria. There were 87 depressed older adults in the experimental group, and all variables known to predict the course of depression were controlled for. Koenig and colleagues (1998) found that religiosity was significantly related to time to remission from depression. Church attendance may be presumed to be a form of social support, however, this is less relevant to the main research question, as social support is not directly measured, only one aspect of it.

2. Social Support and Functional Decline in Depression

The search strategy identified two studies which looked at social support and functional decline in people diagnosed with depression. Firstly, Hays, Steffen, Flint, Bosworth and George (2001) looked at the buffering effects of social support on functional decline in older depressed adults. Functional decline was measured in terms of participants' ability to carry out activities of daily living. 113 older adults with a diagnosis of depression were followed for twelve months while they were undergoing treatment. The authors found that (i) social support mitigates against the effects of depression severity on functional declines at one year, and (ii) the buffering effects of social support against functional decline are strongest in the most severely depressed participants. The finding that the effects of social support are strongest in the most severely depressed participants is a novel finding, not seen in Hays, Saunders, Flint, Kaplan, and Blazer's (1997) longitudinal study of depressed older adults.

The study fails to report how many people approached chose not to take part, nor is the number of participants who dropped out before the study was complete reported. Those who declined to take part or chose to drop out may have been experiencing more severe functional decline, which may have led to an over-estimation of the effects of social support. Nonetheless, this study provides evidence for the importance of social support as a factor that influences functional decline in depressed older adults.

Secondly, Travis, Jeffrey, Lyness, Shields, King and Cox (2004) reported a similar finding. They looked at 305 depressed primary-care participants, aged 60 years or older,

and asked whether social support and depression are independently associated with functional disability. The potential role of social support as a moderator in the depression-functional disability association was investigated. They found that depressive symptoms and all dimensions of social support were independently associated with more functional disability. Social support was seen to be a moderator in a depression-functional disability cross-sectional analysis.

3. Social Support and Suicide

The search strategy identified three studies which looked at social support and suicide. These studies were included as relevant to the research questions, as suicidal thinking is a component of depression, and measures of depressions such as the Beck Depression Inventory (Beck, Steer & Brown, 1996) and the Geriatric Depression Scale (Yesavage, Brink, Rose, Lum, Huang, Adey, & Leirer, 1983) include subsections about suicidal thoughts or wishes. There has been a limited amount of research conducted on suicide in older adults, despite the fact that this group contains the demographic most at risk of suicide in the UK: males over 75 year of age (Dennis & Lindesay, 1995). Epidemiological data also suggest that the number of female suicides continues to rise with age (Dennis & Lindesay, 1995).

Firstly, in a psychological autopsy study, Duberstein, Conwell, Conner, Eberly, Evinger and Caine (2004) looked at the relationship between social integration, "mental illness" and completed suicide. Data was gathered from the deceased's next of kin. The deceased adults in question were all aged over 50 years at the time of death, with a median age of

68.3 years. Therefore, the study included data on people who would not usually be considered "older", in terms of the usual criteria of over-65 years conventionally used in the NHS. However, given the median age and the relevance of the findings, this study was included. Controls were matched to suicides on the basis of age and other relevant demographics.

The study showed that the relationship between indicators of social integration and suicide is not merely an artefact of undiagnosed "mental illness". The finding that social interaction was associated with lower suicide risk is consistent with findings from other studies of suicide, e.g. Rubenowitz, Waern, Wilhelmsson and Allebeck (2001); Turvey, Conwell, Jones, Phillips, Simonsick, Pearson and Wallace (2002).

The weakness of Duberstein and colleagues' (2004) study is that the number of controls approached who declined to participate is not reported. Controls who declined to take part may have been more likely to experience adverse social relations, which may have led to an overestimate of the effects of social integration.

Secondly, the search strategy yielded a study by Conner, Conwell and Duberstein (2001). In a study which scored highly on quality criteria, they showed a significant correlation between reports by subjects and proxy-respondents about the degree of intent to die associated with attempted suicide. Although not directly relevant to the research questions, this finding supports the strategy of seeking data from the next-of-kin adopted by Duberstein and colleagues (2004) described above.

Thirdly, Rowe, Conwell, Schulberg and Bruce (2006) conducted a large scale study, in which 522 older participants who had recently started using a home healthcare service were assessed on measures of suicidal ideation. They found that those reporting a lack of social support were more likely to report suicidal ideation. Specifically, the two components of social support that were associated with suicidality were: (i) not being satisfied with relationships, and (ii) not feeling useful to others. The number of participants who declined to participate in the study was completed is not reported. However, this study nonetheless supports the conclusion that lower levels of social support are associated with higher levels of depression in older adults.

4. Objective and perceived social support

The search strategy identified one study which sought to delineate objective and perceived social support and suicide. Beyer, Kuchibhatla, Looney, Engstrom, Cassidy, and Krishnan (2003) used the Duke Social Support Index to look at perceived social support in older and younger adults with bipolar disorder. This was a small scale study with 29 subjects in the older bipolar group and 23 in the older control group. No power calculation reported, although to achieve a medium affect size with progressive testing, 50 participants in total would be required, which is met (Faul & Erdfelder, 1992). Beyer and colleagues (2003) report the relevant finding that older adults with bipolar disorder perceive their social support to be inadequate, although they are comparable to controls on objective factors. In this they differ from younger adults with bipolar disorder, who

perceive their social support to be inadequate, and do in fact differ from controls in having fewer objectively measured social interactions.

This finding suggests that depressed older adults may report lower levels of perceived social support than controls, in the absence of lower objective social support than controls. However, it is not clear whether this finding would generalise to older adults with unipolar depression.

Discussion

This review is, to our knowledge, the first to systematically appraise the role of social support in depression in older adults. The first question the review sought to answer was: what is the association between social support and depression in older adults? The literature varies in quality and all of the studies identified had certain flaws. The review is limited in that the available literature is limited and therefore any conclusions may be prone to distortion. However, taken together, the studies identified can be seen to indicate a relationship between depression and social support, and specifically that social support is a protective factor in depression. Bosworth and colleagues (2002) showed that social support predicts shorter time to remission from depression in older adults, and that in predicting time to remission social support was as important as other clinical factors. Hays and colleagues (2001) showed that social support mitigates the effect of depression severity on functional decline after one year, and that the buffering effects are strongest in the most severely depressed participants. Social support was also seen to be important in one of the dimensions of depression: suicidality. Rowe and colleagues (2006) showed that among older adults receiving home healthcare, those reporting a lack of social support were more likely to endorse suicidal ideation. Specifically, the two components of social support that were associated with suicidality were: (i) not being satisfied with relationships, and (ii) not feeling useful to others. Lack of social support is identified as a suicide risk factor. Duberstein and colleagues (2004) showed that the relationship between social integration and suicide is not merely an artefact of unmeasured "mental illness".

The second question was whether lower levels of social support were associated with higher levels of depression in older adults. Based on the evidence presented, this may seem like a reasonable assumption. However, none of the studies identified addressed this question directly, and it would not be possible to draw conclusions.

It can be said that social support appears to be an important protective factor in depressed older adults, and as such warrants further investigation.

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Chapter 2: Major Research Project

The Relationship between Expectations of Positive and Negative Future Events and Social Support in Depressed Older Adults.

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Abstract

Objectives: Within the cognitive model of depression proposed by Beck (1979), it is hypothesised that older depressed participants will differ from controls in reporting less perceived, but not actual, social support. Secondly, if older depressed participants perceive themselves to have less social support than controls, it is hypothesised that they will likewise generate fewer positive future expectancies than controls, as they see themselves as having less to look forward to. Finally, since one is thought to influence the other, it is hypothesised that the generation of positive future expectancies will be correlated with a higher level of perceived social support across both groups.

Design: A cross-sectional comparison of older adults with depression and those without depression.

Methods: Two groups of participants aged over sixty-five were recruited: (i) those being treated by services for depression (n=25), and (ii) a community control group without depression (n=25). For the purposes of matching the experimental and control groups, demographic questionnaires were completed.

Results: The depressed group had significantly lower perceptions of their social support, and significantly fewer positive future expectancies than the control group. Across groups, there was a significant positive correlation between number of positive future expectancies and perceptions of social support, and a significant negative correlation between the number of negative future expectancies and perceptions of social support. This highlights the importance of cognitive distortions and vulnerable social networks.

Introduction

Background

The global population of people aged over 60 is approximately 605 million, accounting for 10% of the world's people. It is expected that this percentage will more than double by 2050 to 22%, when the number of older people will be nearly 2 billion, exceeding the world's population of children (United Nations, 2006). In the United Kingdom, approximately 19% of the population is over 65, and projected to increase nearly 20% over the next two decades (Office for National Statistics, 2008). This age range includes those with the highest rate of suicide in the UK: males over 75 (Dennis & Lindesay, 1995). Epidemiological data also suggests that the number of female suicides continues to rise with age (Dennis & Lindesay, 1995). Depression in older people is widespread, with at least 16% of patients in primary care and a higher percentage in hospitals and nursing homes exhibiting symptoms of depression (Reynolds & Kupfer, 1999). Around 15-20% of the general older population experience depression (Kaplan & Sandock, 1998). One study in the USA put the prevalence of depression in older adults at 4.4% for women and 2.7% for men, higher than previous estimates in the United States (Steffans, Skoog, Norton, Hart, Tschanz, Plassman, Wyse, Welsh-Bohmer & Breitner, 2000).

The psychological factors underlying depression in older adults are likely to be similar to those in younger adults, but there may also be certain differences. Limited future expectancies have been proposed by many clinicians and researchers as important in understanding depression (Petrie, 1988; Beck, Brown & Steer, 1989). This may be

particularly relevant in understanding depression in older adults: given that older adults have a more limited life expectancy compared with younger adults, it may be the case that older adults will have more limited expectations about the future. Similarly, there is reason to believe that the effects of social support on depression may be particularly important in older people. Hammen (2005) proposes a bidirectional relationship between social support and depression: interpersonal consequences of depression contribute to further symptomatology, and deficits in social behaviours set the stage for circumstances that lead to depression. This may be especially true of older people, who typically have a less robust social network than younger adults, irrespective of their mental health (Beyer, Kuchibhatia, Looney, Engstrom, Cassidy & Krishnan, 2003). Beyer and colleagues report that this is because older adults lose their social contacts through bereavement with greater frequency than do younger adults, and have less opportunity to make new friends and contacts. Therefore, future thinking and social support are two variables of particular interest when attempting to understand depression in older adults.

Future Thinking

In attempting to elucidate the concept of future expectancies, MacLeod, Rose and Williams (1993) developed the Future Thinking Task, an adaptation of the traditional Verbal Fluency Task (Lezak, 1976). They found that both depressed individuals and individuals with an episode of attempted suicide were characterised by a view of the future in which there was decreased anticipation of positive future events, in the absence of any increase in the anticipation of negative future events. The initially counter-intuitive finding that there was no corresponding increase in negative future expectancies

was explained by the authors as demonstrating that most people, including those who are not depressed, have events in their life that they are not looking forward to. What differentiates the depressed from the non-depressed groups is that those who are depressed find it difficult to generate positive future expectancies.

Conaghan and Davidson (2002) amended the methodology of MacLeod and colleagues (1993, 1998) to make it more applicable to a group of older participants. The task was shortened to make it more acceptable to a group of older participants. Conaghan and Davidson's results confirmed that both older parasuicidal and older depressed participants showed a decrease in positive future thinking, but no increase in negative future thinking, in comparison with a community control group. The present study was in part to attempt to replicate this finding of a decrease in positive future thinking, but no corresponding increase in negative future thinking, in the depressed group.

Social Support

There are number of ways in which social support has been linked with depression in older adults, including limited social network (Yip, Chi & Chiu, 2003), few contacts with friends or relatives, few close friends and relatives (Bartels, Coakely & Oxman, 2002), lack of a confidant (Clarke, Colantonio & Heslegrave, 2004), and living in a rural area or in an institution (Lin, Yen & Fetzer, 2008). This raises the question as to the direction of the relationship between social support and depression. Hammen and Brennan (2002) suggest that interpersonal impairment can be a predisposing factor in the development of depression, as well as a consequence of depression. They present evidence that

interpersonal difficulties reflect underlying vulnerability to the onset and recurrence of depressive symptoms. The subjects were women with a current major depressive disorder, formerly but not currently depressed women, and never-depressed women. Hammen and Brennan's results were consistent with the hypothesis that interpersonal difficulties are not merely the consequence of depressive symptoms, since formerly but not currently depressed women were significantly more impaired than never-depressed women. They found that the depressed and formerly-depressed groups reported more problematic relationships with their children, friends and extended family which were more frequently characterised by conflict, more stressful life events, and more insecurity in their beliefs about other people. Rudolph, Hammen & Burge (1994, 1997) found similar results in children: depressive symptoms were found to be related to difficulties in multiple areas of social competence, including maladaptive social problem-solving styles, conflict-negotiation and peer rejection, and that these deficits led to lower levels of social support. As yet, these findings have not been replicated in older adults; however, it seems probable that deficits in interpersonal problem solving would also be associated with depression in this group. This may be particularly significant since, as discussed above older adults typically have a less robust social network than younger adults (Beyer *et al.*, 2003).

The present study also examined the question of whether the two groups differ in their levels of perceived, but not objective social support. There is no one accepted definition of social support, and different authors have defined it in their own ways. One way of broadly classifying the definitions found in the literature is in terms of perceived social

support and objective social support. "Perceived" approaches are those defining social support qualitatively, in terms of the individual's perception of social support and its quality (e.g. House, 1981). "Objective" approaches are those defining social support quantitatively, in terms of the number and availability of interpersonal contacts (e.g. Nuckolls, Casey & Kaplan, 1972). Many authors have used a combination of these definitions in their attempts to define and measure social support (e.g. Sarason, Levine, Basham & Sarason, 1983; Koenig, Westlund & George, 1993).

A lack of perceived social support has been linked to depression in older adults. Awata, Seki and Koizumi (2005), looked at depressed Japanese subjects aged over 70, and found that a lack of perceived social support was significantly correlated with depressive symptoms. An elderly person's perception that no-one would be able to take care of them (for example, during a time of being confined to bed due to illness) was said to reflect a lack of perceived social support, which is equivalent to feelings of isolation and helplessness. However, this study did not compare perceived with objective measures of social support, such as social network size. Rowe, Conwell, Schulberg and Bruce (2006) looked at social support in people aged over 65 who used a home healthcare service in the USA. They found that lower social interaction patterns and lower perceived social support were both significantly related to suicidal ideation. This study used the Duke Social Support Index (DSSI-23; Koenig *et al.*, 1993), which divides social support into objective components (i.e. social network size, social interaction patterns and social support) and subjective components (i.e. perceptions of social support). Once adjusting for confounding variables, Rowe and colleagues (2006) found that only lower *perceived*

social support remained significantly associated with depression. This result can be related to the cognitive model of depression, as described by Beck (1979), which proposes that depressed people will perceive that they have low levels of social support due to distorted thoughts and negative beliefs, but not lower objectively lower social support. The links between these concepts are expressed in Figure 1.

Insert Figure 1 about here

The aims of the current research are: firstly, to examine the role of future thinking in depression by replicating Conaghan and Davidson's (2002) finding that depressed older adults will differ from community non-depressed controls in generating fewer positive future expectancies, but will not differ in terms of their generation of negative future expectancies. Secondly, to examine whether there are differences between the groups in terms of their social support, and whether differences relate to their perceived or objective social support. Thirdly, to examine whether positive future thinking is associated with higher level of perceived social support across both groups. Finally, the studies cited above were conducted in culturally disparate countries, (e.g. Yip *et al.*, 2003, Hong Kong; Bartels *et al.*, 2002, the USA; Lin *et al.*, 2008, Taiwan, Hammen & Brennan, 2002, Australia; Awata *et al.* 2005, Japan). It is of interest to establish whether the findings can be replicated in a UK sample.

The following hypotheses are made:

(i) Depressed participants will differ from community non-depressed controls in generating fewer positive future expectancies but will not differ in terms of their generation of negative future expectancies.

(ii) Depressed participants will differ from community controls in reporting less perceived but not actual, social support.

(iii) Higher numbers of positive future expectancies thinking will be correlated with a higher level of perceived social support across all groups.

Methodology

Participants

Two groups of participants were included in the study:

(i) Older adults being treated for depression by psychologists, psychiatrists and CMHTs in two NHS sites in the West of Scotland.

(ii) A community control group without depression, recruited from various sources within the same geographic area.

Individuals diagnosed with a psychotic illness or dementia were excluded, as they may suffer from cognitive impairment, limited insight and impaired ability to give informed consent. All participants were screened for cognitive impairment using the Mini Mental State Examination (MMSE; Folstein, Folstein & McHugh, 1975).

The depressed and non-depressed groups were matched on demographic factors such as marital status, living situation, socio-economic class, health and gender. There is evidence to suggest that these factors may have an influence on social support and depression (Dennis & Lindesay, 1995).

Design & Procedure

All psychologists and psychiatrists working with older adults in the regions identified were briefed as to the inclusion and exclusion criteria by the researcher. Once clinicians identified eligible participants, they distributed information sheets. The information sheet

stated that: if potential participants chose not to take part this would in no way affect their care, whether they opted in or out would not be recorded in their medical file or any other type of record, they may opt out at any time, and they did not have to decide immediately. It also provided a brief explanation of the purpose of the study, the researcher's contact details, and an invitation to contact the researcher for further information should they so wish. If, having read the information sheet, the potential participant later expressed an interest in taking part, the member of staff then contacted the researcher. The researcher met with the potential participant to explain the consent form. All participants completed the consent form before beginning participation, and particular care was taken to ensure that participants understood the information and that informed consent was given. The information and consent forms are based on the template provided by the NHS Research Ethics Committee, and are available in Appendices 4 and 5 respectively.

A prearranged protocol was agreed for handling any disclosure of suicidality or distress made during the interview by participants in either group. For participants in the control group, should there be any indication that they required ongoing involvement or access to services, this was to be facilitated by the researcher. It was to be made clear to the participant that they were likely to benefit from treatment, and they were to be encouraged to contact their GP. For participants in the experimental group, the researcher liaised closely with staff involved in the participants' care throughout. Should a participant disclose any serious exacerbation of symptoms, the researcher was to seek permission to discuss this with a member of staff involved in the participant's care. The

researcher was aware from the outset who the participant's psychiatrist was and how to contact them, as well as the name and contact details of the duty psychiatrist at any given time. Any participant who expressed suicidality was to be referred using procedures employed in routine clinical practice. This would include, if necessary, contacting the duty psychiatrist to consider immediate hospital admission. This procedure was made clear to participants before commencing the interview. The researcher (as a Trainee Clinical Psychologist) is trained to deal with any distress that participants may experience during the study. In the event, no participant expressed suicidality, unexpected symptoms or distress caused by the interview.

The community control group was recruited from an organisation providing stepped care accommodation for retired people in Lanarkshire. The member of staff who managed the independent living part of the complex provided assistance. A brief presentation about the research was given to potential participants, and at the end the information sheet was distributed.

Power Calculation

The research examines whether there is a difference between depressed and community control groups in generating fewer positive future expectancies. Based on the findings of Conaghan & Davidson (2002), to detect a statistically significant difference between groups at the 5% level of significance with a power of 0.8, a total sample size of n=50 would be required, i.e. 25 participants per group. This power calculation was carried out using the methodology proposed by Cohen (1992).

Measures

The following measures were administered in this order:

(i) Mini Mental State Examination: all participants were screened for cognitive impairment using the Mini Mental Status Examination (MMSE; Folstein, Folstein & McHugh, 1975). Participants scoring below the cut-off point of 23 were excluded, as they may suffer from cognitive impairment, limited insight and impaired ability to give informed consent. The cut-off point of 23 was chosen on the basis that it is usually considered to be at the lower end of normal performance for an older adult population, although it is acknowledged that there are a number of possible cut-off points depending on the characteristics of the participants (see Ridha and Rossor, 2005, for a discussion of this issue). The psychometric properties of the MMSE have been validated in terms of acceptable sensitivity, specificity and reliability for use in an older adult population (O'Keefe, Mulkerrin, Nayeem, Varughese & Pillay, 2005).

(ii) Geriatric Depression Scale: the level of depression was assessed using the 15-item version of the Geriatric Depression Scale (GDS-15; Yesavage, Brink, Rose, Lum, Huang, Adey & Leirer, 1983). Participants in the depressed group who scored below the cut-off point of 5 were excluded. Participants in the community control group who scored above 5 were excluded. This measure consists of a series of yes/no questions, and is a widely used instrument for the screening of depression in elderly populations. The psychometric properties of the GDS have been validated in terms of acceptable sensitivity, specificity and

Results

Statistical Analysis

The Kolmogorov-Smirnoff test was used to test normality of distribution. All data was normally distributed, except for scores on the Scottish Index of Multiple Deprivation (Scottish Executive, 2006). Where data was normally distributed, the following tests were used: chi-square, t-tests and Pearson's correlations. Where data is non-normally distributed, the non-parametric Mann-Whitney test was used.

Demographic Characteristics

Analysis indicated that there was no significant difference between groups in terms of the ratio of males to females ($t = .1$, $df = 1$, $p = .76$). The groups did not differ in terms of the proportion who were married or living with partner versus living alone ($t = .94$, $df = 1$, $p = .33$), living in their own home or not ($t = .1$, $df = 1$, $p = 1$), their self-reported health ($= t = .97$, $df = 1$, $p = .15$), their Scottish Index of Multiple Deprivation score ($t = -.47$, $df = 46.8$, $p = .64$), or their Mini Mental State Exam score ($t = 1.86$, $df = 48$, $p = .07$).

There was a statistically significant difference between the groups in terms of age: with a mean age of 75.16, the depressed group was significantly younger than the control group, which has a mean age of 79 ($t = -2.6$, $df = 48$, $p = .01$).

Insert Table 1 about here

Experimental Measures

In the Future Thinking Task, the mean number of positive future expectancies for the depressed group is 1.64, while the mean of the control group is 3.56. Analysis indicated that this is a statistically significant difference between groups ($t = -3.37$, $df = 1$, $p = .00$).

The mean number of negative future expectancies for the depressed group is 3.4, while the mean number for the control group is 0.68. Analysis indicated that this is a statistically significant difference between groups ($t = 7.88$, $df = 1$, $p = .00$).

On the Duke Social Support Index, the mean network size for the depressed group is 3.6, while the mean for the control group is 7.36. Analysis indicated that this is a statistically significant difference between groups ($t = -3.96$, $df = 1$, $p = .00$).

The mean score on objective support for the depressed group is 7.6, while the mean for the control group is 8.53. Analysis was carried out, which indicated that this is *not* a statistically significant difference between groups ($t = -1.10$, $df = 1$, $p = .95$).

The mean score on subjective support for the depressed group is 7.8, while the mean for the control group is 12.32. Analysis was carried out, which indicated that this is a statistically significant difference between groups ($t = -5.01$, $df = 1$, $p = .00$).

Insert Table 2 about here

Pearson's correlation was carried out to examine the association between scores on the Future Thinking Task and the Duke Social Support Index across both groups. There is a significant positive correlation between the number of positive future expectancies and perceptions of social support (Pearson's correlation = .44, df = 47, p = .00). There is a significant negative correlation between the number of negative future expectancies and perceptions of social support (Pearson's correlation = -.50, df = 47, p = .00). There is no significant correlation between number of positive future expectancies and objective social support (Pearson's correlation = .06, df = 47, p = .68).

Insert Table 3 about here

As the groups differ significantly in age, the above analysis was repeated with age controlled for as a covariate (ANCOVA, Partial Pearson's correlation). Controlling for age made no difference to the results.

Discussion

Depressed older adults differ from the control group in generating significantly fewer positive future expectancies. This supports the findings of Conaghan and Davidson (2002). However, Conaghan and Davidson's finding that there was no difference between the depressed and control groups in generating negative future expectancies was not replicated. In this sample, the depressed group generated significantly fewer positive future expectancies than the control group. There may be unknown sources of bias and results could be explained by chance. Alternatively, it may be the case that the groups were not the same. For example, Conaghan & Davidson's experimental group may have been more depressed than the present sample, and depression is associated with greater cognitive impairment in older adults (Potter, G. & Steffens, D., 2007). If Conaghan and Davidson's group were more cognitively impaired, they would find it harder to generate a large number of either positive or negative future expectancies. This explanation is not entirely satisfactory however, as the present experimental group scored well above the cut-off point for depression. Another possibility would be that the populations from which participants were drawn were not comparable. The participants in Conaghan and Davidson's study were drawn mainly from an urban area (Glasgow), whereas the participants in the present study were drawn predominantly from a more rural area (Lanarkshire). This issue is discussed further below under the heading "limitations". Interestingly, although our result does not tie in with that of Conaghan and Davidson, it does tally with that of Guliz and Krespi (1999), who found that clinically depressed dialysis patients report both fewer positive life events and appraised life events more

negatively than non-depressed participants. It may be that there is a discrepancy emerging in the literature between those studies which indicate that depressed older adults generate fewer positive expectancies than non-depressed older adults, and those studies which do not. This discrepancy would warrant further investigation. While there is a danger of overstating conclusions on the basis of a limited number of studies, it may be tentatively proposed that the relationship between depression and social support is not best explained as a simple correlation. Rather, the relationship may be moderated by a third variable, such for example as social support.

The hypothesis that depressed participants will differ from community controls in reporting less perceived but not objective social support is partially supported. The depressed group reported an objectively smaller social network size. However, there was no significant difference between groups on any of the other objective social support items, such as number of visits per week from a friend or relative, and no difference between the groups in their over all level of objective social support. The depressed group also differed from the control group in reporting significantly less perceived support, as measured by less endorsement of items such as feeling as though there was someone to talk to about one's deepest problems. The hypothesis that the depressed group would report less perceived social support was made on the basis that, given the cognitive distortions often seen in depressed people, as described by Beck (1979), it may be the case that depressed participants perceive that they have lower levels of social support when in fact they are seen to be comparable to controls on measures of objective social support. Overall our findings support this supposition, the exception to the pattern

being the report of an objectively smaller network size. Therefore, the present study partially replicates the finding of Rowe and colleagues (2006), who saw that *only* lower perceived social support was significantly associated with depression. The findings also support those of Hammen and Brennan (2002), who found that depressed people generally find difficulty in maintaining social networks. This type of interpersonal impairment is a stable feature of depression, and may reflect an underlying vulnerability to the onset and recurrence of depressive symptoms. Hammen and Brennan found that depressed and formerly-depressed groups reported more problematic relationships with their children, friends and extended family, reported more stressful life events with interpersonal and conflict content, and were more insecure in their beliefs about other people. The vulnerability towards having a limited network of social contacts caused by depression, as reported by Hammen and Brennan, may be exacerbated further by age. Beyer and colleagues (2003) reported that older adults typically have a less robust social network than younger adults, irrespective of their mental health. They reported that this is because older adults lose their social contacts through bereavement with greater frequency than do younger adults, and have less opportunity to make new friends and contacts. Our finding that depressed older adults perceive themselves to have less social support is supported by the literature.

The results support the hypothesis that number of positive future expectancies is correlated with a higher level of perceived social support across all groups. It was also seen that number of negative future expectancies was correlated with a lower level of perceived social support across all groups. There were no significant associations

between objective social support and positive or negative future expectancies. In this sample, the ability to generate positive future expectancies is seen to be associated with having a higher level of perceived social support. This may be because those with a more robust social network had a greater number of positive events to look forward to, which involved that network. This is a novel finding and one which warrants further investigation.

Because there is a statistically significant difference in the average ages of the experimental and control groups, age was controlled for in all of the results reported above. However, it is worth noting that the results remained the same whether age was controlled for or not. Therefore, the results are not accounted for by age.

Our findings can be understood within the cognitive model proposed by Beck (1979). A higher level of perceived social support is correlated with a higher number of positive future expectancies, and negatively correlated with negative future expectancies. No correlations were found between objective social support and future thinking. Therefore, it seems that the perception of social support is more important than objectively measured social support in determining how participants saw their future. This suggests that for depressed participants, cognitive distortions and negative biases influenced their view of the future.

Limitations

There are a number of limitations to the present study. While it has been demonstrated the sample size is large enough to achieve sufficient power, it is still a small sample. It may be considered desirable to replicate the study with a larger sample size.

There were a small number of potential participants for both groups who were invited to take part, but declined to do so. It could be argued that the groups were self-selecting, and did not represent the underlying population. There was no immediately obvious difference between those who chose to take part and those who did not, but it was not considered ethical to gather any data that could be used for a formal comparison given their expressed wish not to take part. It must therefore be acknowledged as a limitation that the groups may not be fully representative.

The researcher was not blind as to the experimental group of the participants. This should not have influenced results as the researcher simply administered the questionnaires and recorded participants' responses. Nonetheless, it possible that the researcher's non-blinded status unexpectedly influenced scoring.

There may be limiting factors relevant to this specific population. The majority of subjects were recruited from working class communities in towns and rural areas of Lanarkshire. It is not clear that these results would reflect those of the UK as a whole, or even Scotland as a whole. Furthermore, some of the measures used may not be suitable for this population. The Geriatric Depression Scale (Yesavage, *et al.* 1983) was selected

as it is a measure that has been specifically developed to measure depression in older adults, and has been validated in terms of acceptable sensitivity, specificity and reliability (Torres *et al.*, 2004; Weintraub, *et al.*, 2006). However, it is a measure that was initially developed in the USA. Although it has been validated for use in the UK (D'Ath, Katona, Mullan, Evans & Katona, 1994) some of the language used may retain an American bias. For example, question 9 asks: "Do you think it is wonderful to be alive now?" A negative answer is thought to be indicative of depression. Few participants in either group endorsed this item, suggesting that culturally this population would not endorse the statement regardless of their mood.

The Duke Social Support Index (Koenig *et al.*, 1993) was selected on the basis that it has been validated in terms of acceptable sensitivity, specificity and reliability, and it is one of the few measures of social support to be validated for use in an older adult population (Koenig *et al.*, 1993; Rowe *et al.*, 2006). In addition, it has the advantage of dividing social support into its perceived and objective components, allowing interesting comparisons to be made. However, as one participant pointed out, the DSSI may have a limitation in that it considers relationships with friends and family together when they may be best considered separately. For example, question 7 asks: "How satisfied are you with the relationships you have with your family and friends?" A participant may feel that while they are very satisfied with the relationship they have with their friends, they are not at all satisfied with the relationship they have with their family. There is no way to reflect this within the structure of the DSSI.

Finally, the study used a version of the Future Thinking Task, originally developed by McLeod and colleagues (1993; 1998), which was adapted for use with older adults by Conaghan and Davidson (2002). The original version looks at additional time frames and also asks participants to rate the likelihood of events actually occurring. The Conaghan and Davidson version is shorter and therefore has greater acceptability to an older adult population. However, the measure has not been formally validated, and it may be argued that the results are an artefact of the measure.

Conclusions

These findings have a number of clinical and theoretical implications. Clinically, by understanding the variables associated with depression in older people, clinicians can utilise interventions to alleviate depression. In the present study, the importance of cognitive distortions and vulnerable social networks is highlighted. This suggests two possibilities for intervention. Firstly, cognitive techniques to challenge perceptions of limited support and the likelihood of negative outcomes is likely to be beneficial. Behaviourally, helping individuals engage in goals and activities that give them a greater quantity and quality of future positive events to anticipate is likely to be helpful. Theoretically, perceived and not actual social support is seen to be of importance in thinking about the future, and the results are best understood within the cognitive behavioural model as proposed by Beck (1979).

The study also points to potential discrepancies in the literature that warrant further investigation.

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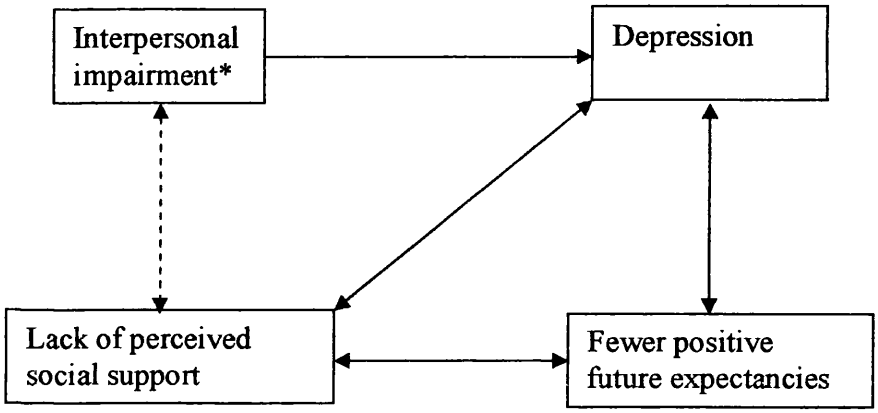
Fig. 1 Relationship between Depression, Future Thinking, Social Support & Interpersonal Difficulties



Arrows represent hypothesised relationships.

* "Interpersonal impairment" is defined as more problematic relationships with their children, friends and extended family which were more frequently characterised by conflict, more stressful life events, and more insecurity in their beliefs about other people (Hammen & Brennan, 2002).

Table 1. Demographic characteristics of depressed and control groups

Variable	Depressed (n = 25)	Control (n = 25)	Statistic	*P*
Gender				
- male (n)	7	8	$\chi^2 = .76$	n.s.
- female (n)	18	17	df = 1	
Marital status				
- married / living with partner (n)	5	8	$\chi^2 = .33$	n.s.
- single / widowed / divorced (n)	20	17	df = 1	
Living situation				
- living in own home alone (n)	20	20	$\chi^2 = 1$	n.s.
- other (n)	5	5	df = 1	
Health				
- considers self to be healthy (n)	13	17	$\chi^2 = .15$	n.s.
- considers self to be unhealthy (n)	12	8	df = 1	
Age				
- mean (SD)	75.16 (5.9)	79 (2.3)	t = -2.6	s
			df = 48	
Scottish Index of Multiple Deprivation score				
- mean (SD)	2.92 (1.9)	3.20 (2.27)	t = -.47	n.s
			df = 46.80	
Mini Mental State Exam score				
- mean (SD)	28.44 (2.2)	26.96 (2.3)	t = 1.9	n.s.
			df = 48	
Geriatric Depression Scale score				
- mean (SD)	12.28 (1.5)	1.84 (1.7)	t = .00	S
			df = 46.80	

Table 2. Comparison between groups on the Future Thinking Task & Duke Social Support Index

Variable	Depressed (n=25)	Control (n=25)	Statistic	*P*
Future Thinking Task				
- total positives: mean (SD)	1.64 (1.9)	3.56 (2.2)	t = -3.37 df = 46.98	s
- total negatives: mean (SD)	3.4 (1.4)	0.68 (.99)	t = 7.88 df = 42.92	s
Duke Social Support Index				
- network size: mean (SD)	3.6 (1.9)	7.36 (4.4)	t = -3.96 df = 32.52	s
- objective support: mean (SD)	7.6 (3.5)	8.52 (2.3)	t = -1.10 df = 42.02	n.s.
- perceived support: mean (SD)	7.8 (3.7)	12.32 (2.6)	t = -5.01 df = 43.71	s

Table 3. Correlations between number of positive future expectancies and perceptions of social support

Variable	Future Thinking Task - total positives	Future Thinking Task - total negatives
Duke Social Support Index - subjective social support	Correlation = .44 **	Correlation = -.50**
Duke Social Support Index - objective social support	Correlation = .18	Correlation = .06

** $p < .001$

Chapter 3: Advanced Clinical Practice I Reflective Critical Account Abstract

Reflections on a Challenging Case

Address for Correspondence:

Steven Livingstone

Department of Psychological Medicine

University of Glasgow

Gartnavel Royal Hospital

1055 Great Western Road

Glasgow G12 8NZ

Submitted in partial fulfilment of the requirements for the degree of Doctorate in Clinical Psychology.

The complete Account is bound separately in Part II

Abstract

The reflective account explores a current case which I am finding challenging. I have considered the case in terms of Gibbs model of reflection. The case entails working with an older lady with a long-standing history of depression. Initially I experienced transference of the belief that her depression was intractable and her situation hopeless. This made me feel lacking in competence, since I believed that I was unable to help her. In evaluating my feelings, I realised that I felt this way because this was a projection of the client's beliefs onto me. In analysing the experience, it occurred to me that I found it easy to empathise with this client partly because I saw us as being similar. There were certain details in her experience that had particular resonance for me. The conclusion I reached was that it was necessary for me to pay attention to the process issues, but also that it is sometimes necessary to take a step back in order to be more objective. In future, I plan to use reflective practice and reflection within supervision to guide my intervention with clients. I also intend to use transference as a way of understanding feelings the client may not be expressing verbally.

Chapter 4: Advanced Clinical Practice II Reflective Critical Account Abstract

Reflections on Providing Consultation as a Trainee Clinical Psychologist

Address for Correspondence:

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Glasgow G12 8NZ

Submitted in partial fulfilment of the requirements for the degree of Doctorate in Clinical Psychology.

The complete Account is bound separately in Part II

Abstract

This reflective account describes my experiences as a trainee clinical psychologist providing consultation to a team and developing an understanding of this role. It is structured according to the model of reflection proposed by Gibbs (1998).

Initially, I felt uncertain as to how to go about providing consultancy to the team. My feeling was one of anxiety as to whether I would be able to do it properly. As I reflected on and evaluated the situation, I came to the conclusion that my anxiety related to two key issues. The first was my own anxiety about the team expecting me to be an expert, and then my failing to meet this expectation. The second was that within this consultancy role I was asked to provide feedback on team dynamics, and I felt uncomfortable exploring this while at the same time being a member of the team. Through analysing my feelings in supervision, I was able to reach certain conclusions which helped me to take my consultancy forward. Firstly, I found that a key task in consultation was freeing myself from the feeling that I needed to be an "expert" within my consultation role. This came when I adopted a model of consultancy whereby the aim is to develop the skills and draw out the expertise of the group with whom I was working, rather than a model in which the consultant provides expert advice and solutions. Secondly, although I was initially tempted to offer a psychological perspective on the team dynamics, on reflection I felt that this posed the danger of casting myself in the role of "expert" and of placing myself in a position of neutrality I was unlikely to truly have. Finally, in my future practice, I would like to take the consultancy role forward by utilising contracting, direct supervisor observations of consultation sessions and peer supervision.

Appendices: Table of Contents

Appendix 1: Publication Guidelines

Downloaded from: http://www.bps.org.uk/publications/journals/bjcp/notes-for-contributors.cfm on 26/06/08

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 page. 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.

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.

Appendix 2: Systematic Review Completed Evidence Table

SIGN 50: A guideline developers' handbook
Completed Evidence Table

Evidence table for cohort studies

Question: What is the evidence base for the role of social support in depression in older adults?

Bibliographic citation	Study type	Ev lev	Number of patients	Patient characteristics	Intervention	Factor under investigation	Length of follow up	Outcome measures	Effect size	Source of funding
1. Bosworth, H., McQuoid, D., George, L. & Steffen, D. (2002). Time to Remission from Geriatric Depression. *American Journal of Geriatric Psychiatry, 10:5.*	Cohort Study	+	239	Clinically depressed older adults		Time to remission from depression	4.5yrs	Duke Depression Evaluation Schedule NIMH Diagnostic Interview Schedule Montgomery-Asberg Depression Rating Scale Duke Social Support Inventory Basic Activities of Daily Living Instrumental Activities of Daily Living Global Assessment Scale Mini Mental State Exam	See Table 2	NIMH Grants & Dept of Veterans Affairs
General comments: Main finding is that both objective and subjective social support are as important as clinical factors in predicting shorter time to remission as clinical factors. Risk of confounding variables and blinding is inadequate.										
2. Hays, J., Steffen D., Flint, E., Bosworth, H & George, L. (2001). Does social support buffer functional decline in elderly patients with Unipolar Depression? *American Journal of Psychiatry, 158, 11.*	Cohort Study	+	133	Clinically depressed older adults		Buffering effects of social support on depression in older adults.	12 months	Duke Depression Evaluation Schedule Hamilton Depression Rating Scale NIMH Diagnostic Interview Schedule Mini Mental State Examination Duke Social Support Inventory Idiosyncratic measures of perceived health and tasks of daily living	See Table 1	NIMH & National Institute on Aging Grants
General Comments: Relevant conclusions are: (i) that social support mitigates the effect of depression severity on functional declines at one year, and (ii) that the buffering effects of social support against functional decline are strongest in the most severely depressed patients. A number of factors relating to internal consistency are not reported or poorly addressed, specifically, how many of the people approached refused to do so and what percentage recruited dropped out before the study was completed.										
3. Duberstein, P., Conwell, Y., Conner, K., Eberly, S., Evinger, J. & Caine, E. (2004). Poor social integration	Case-control Study	+	Cases: 86 Controls:	Case: completed suicides. 50 yrs+ at time of death, 97.6% white, 63 men and 23	None	Level of social support, measured in terms of (i) social interaction, (ii) instrumental social	N/A	Level of social support	Not reported.	United States Public Service Grants

and suicide: fact or artifact? A case-control study. *Psychological Medicine, 34,* 1331-1337.			86	women.		support, (iii) organisational participation, and (iv) religious practice,				
General comments: Presents evidence that the relationship between social integration and suicide is not merely an artifact of unmeasured mental illness. Confounding factors, such as health and economic status, are noted but poorly controlled for, and failure to report effect sizes										
4. Beyer, J., Kuchibhatia, M., Looney, C, Engstrom, F. & Krishnan, K. (2003). Social support in elderly patients with Bipolar Disorder. *Bipolar Disorders, 5,* 22-27.	Cohort Study	++	Younger Bipolar subjects: 56 Younger controls: 33 Older Bipolar subjects: 29 Older controls: 23	Older and younger adults with a primary diagnosis of Bipolar Disorder	None	Social support.	Not reported	Structured Clinical Interview for DSM-IV Duke Social Support Index.	Not reported	NIMH Grant
General comments: The relevant conclusions are: (i) Older adults with bipolar perceive their social support to be inadequate, although they were comparable to controls on objective measures. (ii) Younger adults with bipolar perceive their social support to be inadequate. Compared to controls, they have few fewer social interactions, although they are comparable on other objective measures. (iii) Older and younger bipolar subjects have a similar perception of inadequate social support. (iv) There was no difference in social support scales between the early and late onset bipolar groups. The study suffers from a failure to report how many subjects approach did so, how many dropped out, and how long participants were followed up for. There is a failure to report effect sizes.										
5. Rowe, J, Conwell, Y., Schulberg, H & Bruce, M. (2006). Social Support and Suicidal Ideation in Older Adults using Home Healthcare Services, *American Association for Geriatric Psychiatry, 14,* 758-766.	Cohort Study	++	522	Age 65 or older New admission to a home healthcare agency Capacity to provide informed consent (MMSE score of =>18) Ability to speak English or Spanish	None	Social Support	Not reported	Structured Clinical Interview for DSM-IV Hamilton Rating Scale for Depression Charlson Comorbidity Index Mini Mental State Exam Duke Social Support Index	See Tables 1 & 2	NIMH Grants
General comments:										
6. Koenig, H., George, L. & Peterson, B. (1998). Religiosity and remission of depression in mentally ill older patients. *American Journal of Psychiatry, 155: 4.*	Cohort Study	+ / ++?	87 patients 77 controls	Patients: depressed older adults (aged 60+) Controls: non-depressed comparison group	None	Religiosity	50 weeks	Centre for Epidemiological Studies - Depression Scale Mini Mental State Exam Hamilton Depression Rating Scale Duke Social Support Index Idiosyncratic religiosity assessment	Not described	National Institute for Mental Health Academic Award National Institute on Aging Grant John Templeton Foundation Grant
General comments: Tangentially related to my main question unfortunately. The main finding is that intrinsic religiosity is significantly related to time to remission from depression, even when virtually all known causes of depression course are controlled for. However, neither church attendance nor private religious practice predicts faster resolution of depression course. Church attendance may be assumed to be a form of social support, although this tells us little about my main question, as social support is only measured as it is a potential confounding measure to be controlled for. In overall assessment, a good study in which the main confounders are well controlled for. Suffers only from a poor description of the control group and failure to report effect size.										

7. Connor, K., Conwell, Y. & Duberstein, P. (2001). The validity of proxy-based data in suicide research: a study of patients 50 years of age and older who attempted suicide. Life events, social support, and suicidal behaviour. *Acta Psychiatrica Scandinavica, 104,* 452-457.	Cohort Study	++	80	Aged 50-91 (mean 62.8) Admitted to NY General Hospitals following attempted suicide 58.8% female 96.3% white	Social support	The validity of proxy-based versus subject-based report of social support in older adults who attempted suicide.	N/A	Idiosyncratic life events scale (which is reproduced as an appendix) Duke Social Support Index Suicidal Intent Scale Measure of number of previous suicide attempts	Not applicable. Level of concordance is reported, see table 2.	Not reported
General comments: The main conclusion is that there is moderate agreement between subjects and proxy-based respondents about the degree of intent to die, and whether or not there were previous suicide attempts. This finding supports the validity of psychological autopsy studies. However, this is not directly relevant to the question currently under investigation. This is a well conducted study suffering only from a failure to report drop-out.										
8. Travis, L., Lyness, J., Shields, C., King, D. & Cox, C. (2004). Social support, depression and functional disability in older adult primary care patients. *American Journal of Geriatric Psychiatry, 12,* 265-271	Cohort Study	+	305	Over 60 years old. Primary diagnosis of depression	Social Support	Examines whether social support and depression are independently associated with functional disability, and examines social support as a potential moderator of the depression-functional disability association.	1 year	Structured Clinical Interview for DSM-III-R Hamilton Rating Scale for Depression Instrumental Activities of Daily Living Scale Physical Self Maintenance Scale Medical Outcomes Health Survey Duke Social Support Inventory	See results	NIMH Grant
General comments: The main finding is that: depressive symptoms and all dimensions of social support were independently associated with more functional disability. Social support was a moderator in a depression-functional disability cross-sectional analysis. However, this study suffers from a number of methodological weaknesses.										

Appendix 3: Letter of Ethical Approval

West Glasgow Ethics Committee 2
Western Infrimary
Dumbarton Road
Glasgow
G11 6NT

Telephone: 0141 211 6238
Facsmile: 0141 211 1920

15 November 2007

Steven Livingstone
Trainee Clinical Psychologist
Dept of Psychological Medicine
Gartnavel Royal Hospital
1055 Great Western Road
G12 0XH

Dear Mr Livingstone,

Full title of study: The Relationship between Expectations of Positive and Negative Future Events and Social Support in Depressed Older Adults.

REC reference number: 07/S0709/88

The REC gave a favourable ethical opinion to this study in 16 October 2007.

Further notification(s) have been received from local site assessor(s) following site-specific assessment. On behalf of the Committee, I am pleased to confirm the extension of the favourable opinion to the new site(s). I attach an updated version of the site approval form, listing all sites with a favourable ethical opinion to conduct the research.

R&D Approval

The Chief Investigator or sponsor should inform the local Principle Investigator at each site of the favourable opinion by sending a copy of this letter and the attached form. The research should not commence at any NHS site until approval from the R&D office for the relevant NHS care organisation has been confirmed.

Statement of Compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK

07/S0709/88 Please quote this number on all correspondence

Sharon Jenner
Committee Co-ordinator

Email: sharon.jenner@northglasgow.scot.nhs.uk

Appendix 4: Information Form

INFORMATION FORM

Depression in older people: is it related to view of the future and social support?

We would like to invite you to take part in a research study. Before you decide whether or not you want to take part, it is important for you to understand why the research is being done and what it would involve. Please take your time and read the following information carefully, and talk to your friends and family about it if you like.

The information in this leaflet is in 2 parts:

- **Part 1** tells you about the purpose of the study and what we would like you to do if you decide to take part
- **Part 2** gives you more detailed information about the study

Please ask if there is anything that is not clear or if you would like more information. Take as much time as you need to decide whether or not you would like to take part in the study.

Part 1

What is the purpose of the study?
Our study is looking at factors that may be related to depression in older people. It might be the case that amount of social support and expectations about the future have a relationship with depression. "Expectations about the future" means the number of positive things people are looking forward to and the number of negative things they are not looking forward to. Our study aims to find out if there is any link between depression, this type of expectation and the level of social support older people receive. If we find a link, this will add to the information doctors and other healthcare staff have to help them support older people with depression. This study is being carried out as part of completion of the main researcher's degree of Doctorate in Clinical Psychology.

Why have I been chosen to take part in this study?
We are asking lots of people in Glasgow and Lanarkshire if they would like to take part in our study. Everyone we ask is over 65. Half of the people are being treated for depression, and the other half are not.

Do I have to take part?
NO – you do not need to take part in the study.
It is up to you whether or nor you want to take part. If you decide to take part you will be given this information sheet to keep, and we will ask you to sign a consent form which says that you understand about the study and agree to take part in it. Even if you agree to take part, you can still pull out of the study at any time without having to give a reason. This would have no effect in any way on the care you receive either now or in the future.

What will I have to do if I take part?
If you agree to take part, one of the researchers will contact you and make an appointment for you to visit us at the clinic, in your own home, or at a social work department lunch club: whichever is more convenient for you.
At your appointment at the clinic, a researcher will go through a series of questionnaires with you, which will take about an hour.
Most of the questions you will be asked are ones that have been specifically designed for older people. Some of them are like puzzles where you will be asked to try and figure something out. Some of them will be about the amount of social support you receive, e.g. how many people you typically see in a week, etc. Some of them will be about how you feel about the future, e.g. how many events you are looking forward to in the next week and how many you are not looking forward to.

Will I get any expenses if I take part?

There will no payment for participation. However, if you chose to attend an appointment at the clinic, and you receive a state pension, you will be eligible for a refund of your travelling expenses to and from the clinic.

Are there any risks or disadvantages to taking part in the study?
The only risk in taking part in this study is that you might find some of the questions upsetting. This is not expected to be the case; however, if you do find this, there will be an opportunity to talk about this and see if there is anything you could do that might help. Also, you will need to give up some time to take part.

Are there any benefits to taking part in the study?
As we will not be changing your treatment in any way, we not expect you to gain any benefit from taking part in the study. However the information we get might help to improve the treatment of older people with depression in the future.

What happens once the study is finished?
Once the study is finished we want to make the results available to other healthcare staff by publishing it in a journal and talking about it at presentations or conferences.

What if there is a problem?
We will address any complaints you have about the study. There is more detail about this in Part 2.

Will my taking part in the study be kept confidential?
Yes. All the information you give us will be kept confidential. There is more detail about this in Part 2.

How can I contact the researchers?
If you would like to contact us about this study, the lead researcher is:

Steven Livingstone
Trainee Clinical Psychologist
Department of Psychological Medicine
Academic Centre
Gartnavel Royal Hospital
1055 Great Western Road
Glasgow G12 0XH

If you are interested in the study and considering taking part, please read the extra information in Part 2 before making your decision.

Part 2

What if relevant new information becomes available?
If any new information becomes available which affects your involvement in this study you will be contacted by one of the researchers who will discuss with you whether or not to continue.

What if there is a problem?
If you have a concern about any part of this study, speak to Steven Livingstone, the lead researcher, who will do his best to answer your questions. His contact details are in Part 1 of this leaflet.
You are free to withdraw from the study at any time without giving a reason, and all the information you give us will be destroyed if you ask.
If you are still concerned after talking to the researchers and wish to complain formally you can do this through the NHS Complaints Procedure. You can get details of how to do this from your local hospital.

Is the information I give you confidential?
All the information you give us is entirely confidential. It will be stored securely on NHS premises. When the information is used it will be anonymised. Only authorised people will have access to this information.
Your GP will not be sent any information, but if you would like your GP to have some details please speak to the researchers.
We hope to publish the results of this study, but it will not be possible for anyone to identify you from the results.

Who is organising this study?
The study is being organised by Steven Livingstone who is a Trainee Clinical Psychologist. He is being supervised by Professor Kate Davidson, who is a psychology professor at Glasgow University.

Has this study been approved?
This study has been reviewed and approved by the NHS research and ethics committee.

How long do I have to decide?
If you would like to take part, please contact the researcher within six months.

Appendix 5: Consent Form

Centre Number:
Study Number:
Patient Identification Number for this trial:

CONSENT FORM

Title of Project: The Relationship between Expectations of Positive and Negative Future Events and Social Support in Older Adults

Name of Researcher: Steven Livingstone

Please initial

1. I confirm that I have read and understand the information sheet dated ..... for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. (initial)

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my medical care or legal rights being affected. (initial)

3. I agree to take part in the above study. (initial)

Name of Patient	Date	Signature

Name of Person taking consent (if different from researcher)	Date	Signature

Researcher	Date	Signature

Appendix 6: Geriatric Depression Scale

MOOD SCALE
(short form)

Choose the best answer for how you have felt over the past week:

1. Are you basically satisfied with your life? YES / **NO**

2. Have you dropped many of your activities and interests? **YES** / NO

3. Do you feel that your life is empty? **YES** / NO

4. Do you often get bored? **YES** / NO

5. Are you in good spirits most of the time? YES / **NO**

6. Are you afraid that something bad is going to happen to you? **YES** / NO

7. Do you feel happy most of the time? YES / **NO**

8. Do you often feel helpless? **YES** / NO

9. Do you prefer to stay at home, rather than going out and doing new things? **YES** / NO

10. Do you feel you have more problems with memory than most? **YES** / NO

11. Do you think it is wonderful to be alive now? YES / **NO**

12. Do you feel pretty worthless the way you are now? **YES** / NO

13. Do you feel full of energy? YES / **NO**

14. Do you feel that your situation is hopeless? **YES** / NO

15. Do you think that most people are better off than you are? **YES** / NO

Answers in **bold** indicate depression. Although differing sensitivities and specificities have been obtained across studies, for clinical purposes a score > 5 points is suggestive of depression and should warrent a follow-up interview. Scores > 10 are almost always depression.

Appendix 7: Future Thinking Task

FUTURE THINKING TASK

FUTURE POSITIVE

Can you think of anything you are looking forward to over:

The next week

The next year

The next 5-10 years

FUTURE NEGATIVE

Can you think of anything you are NOT looking forward to over:

The next week

The next year

The next 5-10 years

Appendix 8: Duke Social Support Index (23 Item Version)

Objective Social Support Measures

Social Network Size

1. (Other than persons living with you), how many of your family members live in this area, that is, within 1 hour's travel (of your home/from here)?

Social Interaction Patterns

1. Other than members of your family, how many persons in this area within 1 hour's travel (of your home/from here) do you feel you can depend on or feel very close to?
2. Other than (at work, or) home care nurse/aids, how many times during the past week did you spend some time with someone who does not live with you, that is, you went to see them or they came to visit you, or you went out together?
3. Other than (at work, or) home care nurse/aids, how many times did you talk to someone - friends, relatives, or others—on the telephone in the past week (either they called you or you called them)?
4. (Other than at work), about how often did you go to meetings of clubs, religious meetings, or other groups that you belong to in the past week?

Instrumental Support

Does your family or friends ever help you in the following ways? (response: yes or no)

1. Do they help out when you are sick?
2. Do they shop or run errands for you?
3. Do they give you gifts (presents)?
4. Do they help you out with money?
5. Do they fix things around your house?
6. Do they keep house for you or do household chores?
7. Do they give you advice on business or financial matters?
8. Do they provide companionship for you?
9. Do they listen to your problems?
10. Do they give you advice on dealing with life's problems?
11. Do they provide transportation for you?
12. Do they prepare or provide meals for you?

Subjective Social Support Measure

Perceptions of Social Support

1. Does it seem that your family and friends understand you most of the time, some of the time, or hardly ever?
2. Do you feel useful to your family and friends most of the time, some of the time, or hardly ever?
3. Do you know what is going on with your family and friends most of the time, some of the time, or hardly ever?
4. When you are talking with your family and friends, do you feel you are being listened to most of the time, some of the time, or hardly ever?
5. Do you feel you have a definite role (place) in your family and among your friends most of the time, some of the time, or hardly ever?
6. Can you talk about your deepest problems with at least some of your family and friends most of the time, some of the time, or hardly ever?
7. How satisfied are you with the kinds of relation-ships you have with your family and friends? Satisfied, somewhat dissatisfied, or very dissatisfied?

Appendix 9: Demographic Information Questionnaire

1 Your gender:

- ❑ Male
- ❑ Female

2 Your age: _____

3 Your current marital status:

- ❑ Single (never married)
- ❑ Married
- ❑ Partnered (other than married)
- ❑ Separated/Divorced (not currently partnered)
- ❑ Widowed

4 Your highest education level achieved:

- ❑ Primary school
- ❑ High school
- ❑ Trade or technical certificate
- ❑ College diploma or degree
- ❑ University degree
- ❑ Other: Please Specify

_____

5 Living arrangements:

- ❑ Living at home (independently)
- ❑ Living with family but not in own home
- ❑ Living at home (supported by family/carer or partner)
- ❑ Living in residential care
- ❑ Living in sheltered housing/community care
- ❑ Living in nursing home
- ❑ Living in a long-stay patient ward (hospital)
- ❑ Other (please give details below)

6 Please tick **any** of the following statements which apply to you

- ❑ Employed full time
- ❑ Employed part time
- ❑ Permanently unable to work
- ❑ Attend college course / evening class
- ❑ Retired: how long is it since you last worked?

_____

7 Do you do regular voluntary work?

- ❑ Yes
- ❑ No

8 What was you last occupation?

_____

9 (a) In general do you consider yourself to be currently healthy or unhealthy?

- ❑ Healthy
- ❑ Unhealthy

9 (b) Please provide details of any medical condition(s) you have which you feel might affect your quality of life

10 If you have a medical condition, do you use any medication for it?

- ❑ Yes
- ❑ No

Appendix 10: Major Research Project Proposal

The Relationship between Expectations of Positive and Negative Future Events and Social Support in Depressed Older Adults.

Address for Correspondence:

Steven Livingstone

Department of Psychological Medicine

University of Glasgow

Gartnavel Royal Hospital

1055 Great Western Road

Glasgow G12 8NZ

Submitted in partial fulfilment of the requirements for the degree of Doctorate in Clinical Psychology.

Written in accordance with guidelines for submission to the British Journal of Clinical Psychology (see Appendix 1).

Abstract

This study aims to investigate the relationship between anticipation of positive and negative events and social support and in older adults who are depressed. 'Older' is defined as over 65, consistent with the typical remit of Older Adult Services in the NHS. Participants are considered to be depressed if they have a score greater than 5 on the Geriatric Depression Scale.

There is evidence to suggest that depressed individuals are characterised by a view of the future in which they show decreased anticipation of positive future expectancies, in the absence of an increase in anticipation of negative future experiences (MacLeod *et al.*, 1998). There is also evidence to suggest that lack of both objective social support (i.e. social network size, social interaction patterns and social support) and subjective social support (i.e. perceptions of social support) is a risk factor for suicide in later life (Rowe, Conwell, Schulberg & Bruce, 2006).

Two groups of older adult participants will be included in the study:

(i) Those being treated for depression by psychologists, psychiatrists and CMHTs within Lanarkshire and Glasgow.

(ii) A community control group without depression and no previous episodes of parasuicide.

The proposed research will examine any differences between the groups in terms of their ability to generate positive and negative expectations about the future, and whether any

differences in their future expectancies relates to the near or more distant future. It will also examine whether there are any differences between the groups in terms of their social support, and whether any differences relate to their perceived or objective social support.

Introduction

Hopelessness has been proposed by many clinicians and researchers as important in understanding depression and suicide (Petrie, 1988; Beck, Brown & Steer, 1989). In attempting to elucidate the concept of hopelessness, MacLeod, Rose & Williams (1993) have proposed that one of its central components is the anticipation of future events. Using the Future Thinking Task, an adaptation of the traditional Verbal Fluency Task (Lezak, 1976), they found that depressed and parasuicidal individuals were characterised by a view of the future which demonstrated decreased anticipation of positive future events, in the absence of any increase in the anticipation of negative future events. Parasuicide is defined as any non-fatal, serious, deliberate act of self-harm, irrespective of the suicidal intent (Williams, 1997). There has as yet been little research conducted on depression in older adults, despite the fact that this age range includes those with the highest rate of suicide in the UK: males over 75 (Dennis & Lindesay, 1995). Epidemiological data also suggest that the number of female suicides continues to rise with age (Dennis & Lindesay, 1995). Suicidal thinking is a component of depression, and measures of depressions such as the Beck Depression Inventory (Beck, Steer & Brown, 1996) and the Geriatric Depression Scale (Yesavage, Brink, Rose, Lum, Huang, Adey, & Leirer, 1983) include subsections about suicidal thoughts or wishes.

Conaghan and Davidson (2002) amended the methodology of MacLeod *et al.* (1993, 1998) to make it more applicable to a group of older participants. Their results confirmed that both older parasuicidal and older depressed participants showed a decrease in positive future thinking, but no decrease in negative future thinking, in comparison with a community control group. The proposed research will attempt to replicate this finding in the depressed group and will also attempt to address the question of whether any differences between the groups relate to the near or more distant future.

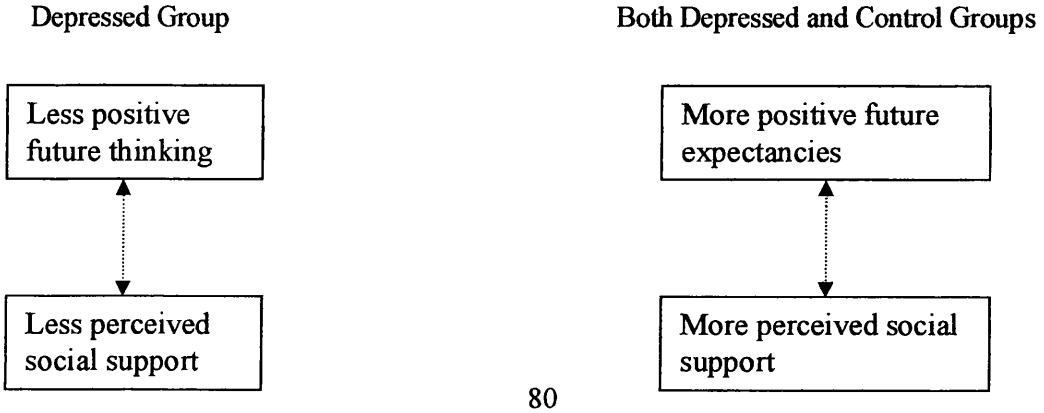
Social factors which are associated with depression in older adults include limited social network (i.e. friends, family, helpful others, confidants and living arrangements; Yip, Chi & Chiu, 2003; Hong Kong), few contacts with friends or relatives, few close friends and relatives (Bartels, Coakely & Oxman, 2002; the USA), lack of a confidant (Clarke, Colantonio & Heslegrave, 2004; the USA), and a perceived lack of social support (Awata, Seki & Koizumi, 2005; Japan). Rowe *et al.* (2006; the USA) found that lower social interaction patterns and lower perceived social support were significantly related to suicidal ideation.

A lack of social support can clearly be linked to social impairment, although the direction of this relationship is not clear. Hammen & Brennan (2002; Australia) present evidence that interpersonal impairment is a stable feature of depression, and may reflect underlying vulnerability to the onset and recurrence of depressive symptoms. They looked at women with a current major depressive disorder, formerly but not currently depressed women,

and never-depressed women. Their results were consistent with the hypothesis that interpersonal difficulties are not just the consequence of depressive symptoms, since formerly but not currently depressed women were significantly more impaired than never-depressed women. They found that the depressed and formerly-depressed groups reported more problematic relationships with their children, friends and extended family, reported more stressful life events with interpersonal and conflict content, and were more insecure in their beliefs about other people. Rudolph, Hammen & Burge (1994, 1997) found similar results in children: depressive symptoms were found to be related to difficulties in multiple areas of social competence, including maladaptive social problem-solving styles, conflict-negotiation and peer rejection, and that these deficits led to lower levels of social support. As yet, these findings have not been replicated in older adults; however, it seems probable that deficits in interpersonal problem solving are likely to be associated with depression in this group. This may be particularly significant since older adults typically have a less robust social network than younger adults (Beyer, Kuchibhatia, Looney, Engstrom, Cassidy & Krishnan, 2003).

The links between these concepts are expressed in Figure 1 below:

Figure 1: Diagrammatic Representation of Concepts



The aim of the current research is: firstly, to replicate Conaghan and Davidson's (2002) findings that depressed older adults will differ from community non-depressed controls in generating fewer positive future expectancies but will not differ in terms of their generation of negative future expectancies. Secondly, to investigate if positive future expectancies are related to perceived, rather than actual, social support in depressed older adults. Thirdly, to investigate whether positive future expectancies will be associated with a higher level of perceived social support.

The studies cited above were conducted in culturally disparate countries, and it would be of interest to establish whether the findings can be replicated in a UK sample.

Hypotheses

(i) Positive future expectancies thinking will be associated with a higher level of perceived social support across all groups.

(ii) Depressed participants will differ from community non-depressed controls in generating fewer positive future expectancies but will not differ in terms of their generation of negative future expectancies.

The null hypothesis will be discarded if and only if both alternative hypotheses are supported.

(iii) Depressed participants will differ from community controls in reporting less perceived but not actual, social support.

Methodology

Two groups of participants will be included in the study:

(iii) Older adults being treated for depression by psychologists, psychiatrists and CMHTs within Lanarkshire and Glasgow.

(iv) A community control group without depression or an episode of parasuicide will be recruited from social work department run lunch clubs in Lanarkshire and Glasgow.

Individuals diagnosed with a psychotic illness or dementia will be excluded from the study, as they may suffer from cognitive impairment, limited insight and impaired ability to give informed consent. All groups will be screened using the Mini Mental State Examination.

The depressed and non-depressed groups will be matched on demographic factors such as age, marital status, socio-economic status and gender. There is evidence to suggest that these factors may have an influence on social support, depression and suicidality (Dennis & Lindesay, 1995).

Jennifer Borthwick and Mia McLaughlin will facilitate access to clinical populations in Lanarkshire, and by Susan Cross and Niall Broomfield in Glasgow, who have indicated

their willingness to assist. All psychologists and psychiatrists working with older adults in Lanarkshire and Glasgow will be briefed as to the inclusion and exclusion criteria. Once they have identified eligible participants, they will distribute information sheets (see Appendix 4). The form explains: that if they choose not to take part this will in no way affect their care, whether they opt in or out will not be recorded in their medical file or any other type of record, they may opt out at any time, and that they don't have to decide immediately. It also provides a brief explanation of the purpose of the study. If they express an interest, the member of staff will contact the researcher. The researcher will then explain the consent form to the participant, ensuring informed consent, and will ask them to sign the form before they begin (see Appendix 5). Particular care will be taken to ensure that they understand the information and that informed consent is given. The information and consent forms have been based on the template provided by NHS Research Ethics Committee.

The depressed group will be seen in a private consulting room either at the ward they reside in or at their nearest clinic. Should they require ongoing involvement or access to services, the researcher will facilitate this. It will be made clear to them that they are likely to benefit from treatment and will be encouraged to contact their GP. The researcher will liase closely with staff involved in the participants care throughout, and will be aware from the outset who the participant's psychiatrist is and how to contact them, as well as the name and contact details of the duty psychiatrist at any given time. Any participants who express suicidal ideation will be referred using procedures employed in routine clinical practice. This will include, if necessary, contacting the duty

psychiatrist to consider immediate hospital admission. This will be made clear to participants before commencement. Although not anticipated, should any participant become distressed, the researcher (as a trainee Clinical Psychologist) is qualified to deal with this in the first instance.

The community control group will be recruited from social work department run lunch clubs in Lanarkshire and Glasgow. The social worker who facilitates these clubs has been contacted and has indicated a willingness to assist. A brief presentation about the research will be given at the lunch club, and at the end information leaflets will be distributed to potential participants. The information sheet contains the researchers contact details, and potential participants then have the option of contacting the researcher. Should any of the non-depressed community controls score above the cut-off point of 5 on the Geriatric Depression Scale, they will be invited to take part as members of the depressed group.

Design & Procedure

Hypothesis (i) examines whether there is a correlation between positive future expectancies thinking and perceived social support. There are no studies looking at perceived social support in this group, therefore, there is no previous basis for a power calculation.

However, hypothesis (ii) examines whether there is a difference between depressed and community control groups in generating fewer positive future expectancies. Based on the findings of Conaghan & Davidson (2002), to detect a statistically significant difference

between groups at the 5% level of significance with a power of 0.8, a total sample size of n=50 would be required, i.e. 25 participants per group. This power calculation was carried out using the PC-based package GPOWER (Faul & Erdflder, 1992).

When potential participants have been identified, they will be provided with the information sheet regarding the purpose and content of the study.

Measures

The following measures will be administered in this order:

(i) Mini Mental State Examination: all participants will be screened for cognitive impairment using the Mini Mental Status Examination (MMSE; Folstein, Folstein & McHugh, 1975). Participants scoring below the cut-off point of 23 will be excluded, as they may suffer from cognitive impairment, limited insight and impaired ability to give informed consent. The cut-off point of 23 has been chosen on the basis that it is usually considered to be at the lower end of normal performance for an older adult population, although it is acknowledged that there are a number of possible cut-off points depending on the characteristics of the participants (see Ridha & Rossor, 2005, for a discussion of this issue). The psychometric properties of the MMSE have been validated in terms of acceptable sensitivity, specificity and reliability for use

in an older adult population (O'Keefe, Mulkerrin, Nayeem, Varughese & Pillay, 2005).

(ii) Geriatric Depression Scale: the level of depression will be assessed using the 15-item version of the Geriatric Depression Scale (GDS-15; Yesavage, *et al.* 1983). Participants in the depressed group who score below the cut-off point of 5 will be excluded. Participants in the community control group who score above 5 will be excluded. This measure consists of a series of yes/no questions, and is a widely used instrument for the screening of depression in elderly populations. The psychometric properties of the GDS have been validated in terms of acceptable sensitivity, specificity and reliability (Torres, Miralles, Garcia-Caselles, Arellano, Aguilera, Pi-Figueras & Cervera, 2004; Weintraub, Oehlberg, Katz, & Stern, 2006).

(iii) Future Thinking Task (FFT): participants will be given sixty seconds to generate as many positive and negative future life events as they feel are likely to occur within three future timeframes (one week, one year and five to ten years). The FFT was developed by MacLeod *et al.* (1993; 1998), and this study will use the version modified for older adults by Conaghan & Davidson (2002).

(iv) Duke Social Support Index: social support will be assessed using a version of the Duke Social Support Index, abbreviated to 23 items for use in an elderly population (DSSI-23; Koenig, Westlund & George, 1993). This measure divides social support into objective components (i.e. social network size, social interaction patterns and social support) and subjective components (i.e.

perceptions of social support). Each of these domains is assessed by a series of questions (e.g. social network size is determined by the number of family members who live within one hour's travel of the older adult's home). Scores have a possible range of 0 to 14, with a higher score indicating more social support. The psychometric properties of the DSSI have been validated in terms of acceptable sensitivity, specificity and reliability, and it is one of the few measures to be validated for use in an older adult population (Koenig *et al.*, 1993; Rowe *et al.*, 2006). This measure is included in Appendix 8.

(v) Demographic Information Questionnaire: The depressed and non-depressed groups will be matched on demographic factors such as age, marital status, socio-economic status and gender. This questionnaire has been drawn up by the researcher based on the template provided by NHS Research Ethics Committee, and is included in Appendix 9.

The administration of the measures would take approximately sixty minutes including debriefing. The only costs involved will be the purchase of stationary, paper etc.

Data Analysis

Data gathered during the study will be anonymised and stored in SPSS for Windows on the researcher's password protected laptop computer.

Normality of distribution will be tested with the Kolmogorov-Smirnoff test. If normality can be assumed, hypothesis one will be tested with Pearson's correlation coefficient. This

will establish whether there is a relationship between perceived social support (PSS) and positive future thinking (+FFT). Hence, a correlational design will be adopted. This can be expressed as follows:

(1) H_0: $Corr_{+FFT,PSS} \leq 0$ H_1: $Corr_{+FFT,PSS} > 0$

If hypothesis one is accepted, the subsequent analyses will be carried with the residuals. Hypotheses two and three will be tested employing t-tests for independent samples using a between-groups design. This can be expressed as follows for hypotheses two and three respectively:

(2) $H_{0,+FFT}: t_D \geq t_{ND}$ $H_{0,-FFT}: t_D \neq t_{ND}$

$H_{1,+FFT}: t_D < t_{ND}$ $H_{1,-FFT}: t_D = t_{ND}$

(3) $H_{0,PSS}: t_D \geq t_{ND}$ $H_{0,ASS}: t_D \neq t_{ND}$

$H_{1,PSS}: t_D < t_{ND}$ $H_{1,ASS}: t_D = t_{ND}$

As we will be using two t-tests per hypothesis, the Bonferroni correction will employed. Further exploratory investigation will be conducted if indicated.

Timescale

Action point	Time
Submission to NHS Research Ethics Committee:	22nd August 2007
Ethical approval expected to be gained by:	1st October 2007
Recruitment of subjects begins:	1st October 2007
Data gathered by:	31st March 2008
Write-up:	April –May 2008

Practical Applications

The results of the proposed research could have implications for the identification and treatment of depressed older adults. Previous research (Conaghan & Davidson, 2002; MacLeod *et al.*, 1998) has suggested that depressed and parasuicidal subjects are characterised by specific biases in future directed thinking. Rowe *et al.* (2006) have suggested that they are also characterised by low perceived social support. If, as hypothesised, both of these variables are more pronounced in a depressed older adults population, it may be possible to target this for specific psychological intervention. A Cognitive-Behavioural Therapy approach addressing social problem solving skills and the management of negative thoughts may be indicated (Evans, Tyrer, Catalan, Schmidt, Davidson, Dent, Tata, Thornton, Barber, & Thompson, 1999). In combination with challenging negative perceptions, it may also be possible to target this with an intervention to improve social support, e.g. befriending in the community.

This study would also contribute to furthering our understanding of psychology of old age, which, as has been discussed, is an under researched area. This seems particularly relevant in the context of an ever-aging population.

Ethical Approval

There are three main ethical issues which arise.

(i) Obtaining informed consent:

One of the main ethical issues in this study is ensuring that informed consent is obtained from elderly participants. Specifically, potential participants will need to consider that if they consent to take part, they will be asked questions that may be quite personal, e.g. about their mood and their level of social support.

It will be made clear to the participant, both on the information sheet and when meeting with the principle investigator, that this information will be stored securely and anonymously. It will also be made clear that information is confidential and that interview and questionnaire completion will be conducted in a private environment.

The study will not include people who could be considered to lack the capability to provide consent. All potential participants will be screened for cognitive impairment using the Mini Mental Status Examination (MMSE; Folstein, Folstein & McHugh, 1975). Participants scoring below the cut-off point will be excluded, as they may suffer from

dementia, cognitive impairment, limited insight and impaired ability to give informed consent.

(ii) Confidentiality:

Handling of data will conform to current data protection legislation and recommendations. Participants will be informed both on the participant information sheet and before the research commences that confidentiality will be secured by anonymisation and personal information will be kept confidential to researchers only. Consent forms bearing the participants name will be stored securely and separately from their data, and questionnaires will be attributable to individuals only by means of a numerical code. Participants will be made aware of the limits of confidentiality, in that if severe distress/risk is reported it will be communicated to their G.P.

(iii) Distress cause by the interview process:

Interviews will last approximately 1 hour, but if participants find the process too tiring or stressful, it will be terminated, and another interview arranged. Participants will be informed of their option to withdraw from the study at any time, without giving a reason, emphasised on both the information sheet and prior to the commencement of the study. It is appreciated that participants may find completing some of the items difficult as they deal with mood and social support. The interviewer will seek to address this by spending time engaging with the participant prior to commencing the questionnaires. Participants are not expected to find the process in any way distressing.

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