Depression in older adults: exploring the relationship between goal setting and physical health

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SUMMARY
Depression in older adults is associated with a decreased quality of life, increased physical and emotional suffering and an increased risk of death and is often associated with declining physical health. Older people with physical illness have higher rates of depression and studies have also noted the particularly high rate of co-morbidity between depressive disorder and general medical conditions. However, other studies have shown those suffering from poor physical health do not necessarily become depressed and, in particular, the goal setting style of the individual impacts on the relationship between poor physical health and depression. This study argues that those who are conditional goal setters and suffer from poorer physical health will be more prone to depression as their perceived ability to achieve their goals is negatively impacted. One hundred and eighty-seven participants were recruited for this study. The participants completed the Centre for Epidemiological Studies Depression Inventory and the physical health subscale of the SF-12 Health Survey. Participants were asked to rank their three most important goals and to give the main reason for setting each of their top three goals. The results showed that poorer physical health is associated with higher depression scores. Correlations revealed significant negative associations between physical health and depression, physical health and progress towards goal and progress towards goal and depression. A partial correlation between physical health and depression scores controlling for progress demonstrated that the relationship between physical health and depression is mediated through perceived progress. Implications for clinical practice are highlighted. Copyright © 2007 John Wiley & Sons, Ltd.

KEY WORDS — goal setting; depression; the elderly; Conditional Goal Setting; health

INTRODUCTION
Depression in older adults is associated with a decreased quality of life, increased physical and emotional suffering and an increased risk of death (Berkman et al., 1986; Blazer et al., 2001; Blazer, 2003; Blazer and Hybels, 2005). Prevalence of major depression in people over the age of 60 is said to be between 2–5% (Mottram et al., 2006). This is lower than the rates for younger age groups (Futterman et al., 1995; Australian Bureau of Statistics, 1998). However, it has been reported that between 12–20% experience symptoms of depression that do not meet the criteria for major depression (American Psychiatric Association, 1994). These depressive syndromes are not accounted for by current epidemiological studies and therefore there is ongoing controversy about the prevalence of depression in later life (Beekman et al., 1997).

Depression is often associated with declining physical health. Older people with physical illness have higher rates of depression (Murphy, 1982) and studies have also noted the particularly high rate of co-morbidity between depressive disorder and general medical conditions (Moldin et al., 1993). Other studies have shown those suffering from poor physical health do not necessarily become depressed (Street, 2003). For example, Street found that cancer patients were significantly more likely to be depressed if they...
exhibited the specific goal setting style of Conditional Goal Setting (Street, 2002) irrespective of the burden of illness (Street, 2003).

Goals have frequently been linked to the aetiology and maintenance of depression (Champion and Power, 1995; Martin, 1996). Researchers suggest that if an important goal is perceived as unobtainable then depression may ensue (Beck, 1976; Rehm, 1977; Arieti and Bemporad, 1980; Pyszczynski and Greenberg, 1987; Lam and Power, 1991; Brandstater and Rothermund, 1994; Lam et al., 1996). Goal progress theories have also been linked to the aetiology of depression although there is conflict within the literature on the mechanism (Kanfer and Zeiss, 1983; Higgins et al., 1986; Higgins, 1987; Pyszczynski and Greenberg, 1987). There is agreement that a vulnerability to depression may be created by perceived inability to make progress towards an important goal (Street, 2002). Street’s (2002) Conditional Goal Setting (CGS) theory further provides a basis for why certain individuals may be more vulnerable to depression when their goals become unobtainable. It states that individuals who are motivated to set and pursue an important goal in an unhealthy way because they believe that achievement of this goal will bring them the abstract goals of happiness and well being may be more vulnerable to depression (Street, 2002). Conditional goal setters perceive happiness and wellbeing to be high order achievable goals, therefore only achievable through the achievement of lower order goals that are usually more concrete. Therefore, the lower order goal becomes overvalued as the only way to achieve happiness and wellbeing. Non conditional goal setters still have higher order goals that require lower order goals to be met first but the ascertainment of happiness and wellbeing are not based on the achievement of these lower order goals.

People in the elderly age bracket are subject to poorer physical health (Australian Bureau of Statistics 1998; AIHW, 2004) and those with poorer physical health have higher rates of depression (Murphy, 1982; Moldin et al., 1993; Katona and Livingston, 1997). Yet not all elderly people with poor physical health suffer from depression or depressive symptoms (Street, 2003). It is hypothesized that the goal setting style of the individual mediates part of the relationship between poor physical health and depression. In particular, those who are conditional goal setters and suffer from poorer physical health will be more prone to depression as their perceived ability to overall wellbeing is negatively impacted. Conditional goal setters associate the inability to achieve their goals with an inability to achieve happiness and wellbeing.

**METHOD**

**Participants**

One hundred and eighty-seven participants were recruited for this study. This was a convenience sample as participants were approached at aged care facilities and aged care recreation centres around the metropolitan area in Perth, Western Australia. This study was approved by the Edith Cowan University Human Research Ethics Committee.

**Procedure**

All participants were given an information sheet and completion of the questionnaire was considered consent for the study. Participants were required to complete the questionnaire in the presence of the research assistant who was also available to answer questions during completion.

**Measures**

**Depression inventory.** The Centre for Epidemiological Studies Depression Inventory (CES-D; Radloff, 1977) was used to assess depressive symptomatology. This instrument was designed to measure depression in the general population, and has been used to measure depression in adults 65+ years (Berkman et al., 1986). In line with (Street, 2003), only 18 of the 20 items were used, as two items referred to physical symptoms that may be related to depression and/or physical health problems. The remaining items considered the behavioural and emotional aspects of depressive symptomatology experienced in the previous week. The depression score was the total of the responses for the 18 items, with a possible range of 18–72, with a cut-off of 36 or above indicating that an individual may be experiencing depression.

**Physical health survey.** The physical health subscale of the SF-12 Health Survey (Ware et al., 1995, 1996) was used to assess physical health. The scale consists of four items relating to daily living and pain. These responses were summed to give a score between 5 and 20, with poorer health indicated by a lower total score.

**Goal identification and goal setting style**

Goals were defined as ‘the most important things, people or event in your life that you wish to gain or maintain’. Goals were identified by asking the participant to list the three most important personal goals in their life at that moment. Participants were
then asked to rank these goals, 1 being the most important goal; 2 the next most and then 3 the third most important goal. Participants were also asked to give the main reason for setting each of their top three goals. In addition to this, why their number 1 ranked goal was the most important.

To assess goal setting style, either conditional or non-conditional, participants were asked to rate how much they believed their ‘personal happiness depends on achieving’ their nominated goal as either ‘Extremely’, ‘Very’, ‘Fairly’, ‘Slightly’ or ‘Not at all’. They were also asked to rate their ‘current progress’ towards their goal using the same possible answers, to assess perceived progress towards their goals.

RESULTS

Respondent demographics ($n=187$, 40% men, 55% female and 5% gender unknown) are displayed in Table 1. Greater than 90% of those approached agreed to participate in the study and less than 15% required help filling out the questionnaire. As shown in Table 2, the variable of interest (total physical health score, total depression score, CGS rating and progress rating) did not differ between men and women, therefore gender was not used as a variable in any further analyses. Only physical health was dependent on age, with older people reporting poorer physical health.

Goals were categorised on the basis of the respondents’ motivation: categories were social (18.2%), health (21.9%), accomplishment (24.6%), hedonism (6.4%), independence (16%), spiritual (1.6%) or no reason given (11.2%). The one-way ANOVA with goal category as the between subjects factor found no difference in depression scores between the categories ($F<1$).

Relationship between progress towards goal, physical health and depression

The means and 95% Confidence Intervals for the depression inventory, physical health scale and perceived goal progress are shown in Table 3. Correlations revealed significant negative associations between physical health and depression ($r=-0.38$, $df=186$, $p<0.001$), physical health and progress towards goal ($r=-0.36$, $df=173$, $p<0.001$) and progress towards goal and depression ($r=-0.39$, $df=173$, $p<0.001$).

A partial correlation between physical health and depression scores controlling for progress was conducted to assess whether the relationship between physical health and depression is mediated through perceived progress. When the contribution of progress to the association between the physical health score on the SF-12 Health Survey and depression was removed, the strength of association was reduced but the relationship remained significant ($r=-0.23$, $df=170$, $p<0.002$).

Goal setting style

Respondents were categorised as conditional goal setters ($n=116$) if they believed that their personal happiness was ‘extremely’ dependent on achieving their number 1 ranked goal, with the remaining respondents categorised as non-conditional goal setters ($n=71$). To assess the impact of goal setting style on relationship between physical health, depression and perceived progress the correlations conducted above were repeated
DISCUSSION

Depression and depressive syndromes in the elderly significantly decrease quality of life and increase death rates (Berkman et al., 1986; Blazer et al., 2001; Blazer, 2003). This study looked at physical health, depression, progress towards goals and goal setting style. In line with previous studies the results showed that poorer physical health is associated with higher depression scores (Murphy, 1982; Murrell et al., 1983; Berkman et al., 1986; Beekman et al., 1995a, 1995b, 1997). This highlights that those with poor physical health need to be monitored for symptoms of depression. As not all people with poor physical health get depression (Street, 2003) factors that may account for susceptibility to depression need to be explored. This study hypothesized that the relationship between poor physical health and depression is partly mediated by perceived progress towards goal, but this relationship will be stronger in those who are conditional goal setters.

Results showed that perceived poor physical health is associated with decreased perceived progress towards goals. This may be due to a direct effect, that perceived poor physical health negatively impacts on activities of daily living (Blazer and Houpt, 1979) and therefore ones’ physical ability to achieve goals. This may also be due to an unknown indirect effect. More exploration into why perceived poor physical health inhibits the pursuit of a goal, and how greatly this impacts on perceived progress is needed. Poor perceived progress towards goals was also associated with higher depression scores. Street (2002) also highlighted this result from other studies noting that ‘perceived inability to make progress towards an important goal may create vulnerability to depression’ and this is in line with studies looking at goal progress and wellbeing (Arieti and Bemporad, 1980; McGregor and Little, 1998).

After these points were confirmed, the next question raised was whether the relationship between poor health and depression is mediated by progress. When the whole sample was considered the correlation between poorer physical health and higher depression scores was partly mediated by progress. When considering only the non-conditional goal setters the relationship between physical health and depression was no longer mediated by progress. When considering only the non-conditional goal setters the relationship between physical health and depression was no longer mediated by progress. When considering only the non-conditional goal setters the relationship between physical health and depression was no longer mediated by progress. When considering only the non-conditional goal setters the relationship between physical health and depression was no longer mediated by progress.
Limitations of this study are the small number of people in the non-conditional goal setters group and also the characteristics of those who choose not to participate are unknown. This study has future implications for treatment targets. Cognitive therapy is know to be a useful treatment of depression in the elderly (Koder et al., 1996). Targeting cognitive restructuring and belief about wellbeing may enhance current cognitive therapy techniques. Exploration into goal setting style and perceived progress as treatment targets would be valuable in this field as well as further research into why people set goals in the first place.

REFERENCES

Ware J, Kosinski M, Keller SD. 1995. SF-12: How to score the SF-12 Physical and Mental Health Summary Scales. The Health Institute, New England Medical Center: Boston, MA.