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Life Regrets and Subjective Well-being in Older Adults

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Abstract

This study investigated several aspects of life regrets in older adults, including the relationships between regret characteristics (number reported, negative consequences, intensity) and subjective well-being (life satisfaction, depressive symptoms). One hundred and thirteen female and 45 male participants (aged 65 to 94 years), predominantly residing in suburban areas of Sydney and Wollongong, completed written questionnaires. Slightly more than half the respondents reported having one or more life regrets. Regrets most commonly related to the life domains of education, career, marriage and romantic relationships, parenting and self-development. Participants with no life regrets reported greater life satisfaction than those with three or more regrets. Number of regrets was not related to depressive symptoms. In order to further explore the relationship between life regrets and subjective well-being, a measure of dispositional negativity and of physical health were considered in combination with two aspects of regrets (negative consequences and intensity). Multiple regression analyses showed that, after controlling for the effects of dispositional negativity and physical health, regret consequences contributed uniquely to predicting both measures of subjective well-being. However, regret intensity appeared more influential than regret consequences for the prediction of depressive symptoms.

Introduction

The experience of regret in connection with losses, mistakes and limitations is common throughout adulthood. Regret, defined as a negative cognitive and emotional state (Landman, 1993), is frequently associated with an individual's own actions or inactions (Gilovich & Medvec, 1995) and a desire to undo or correct that which is regretted (Zeelenberg, 1998). Life regrets are often related to developmental life tasks and decisions (Roese & Summerville, 2005) and may be maintained over extended periods of time, including into old age (Torges, Stewart, & Miner-Rubino, 2005). However, research focusing on the experience of life regrets for older adults has been limited to date.

In looking back over their lives, between 50% and 85% of older adults, aged 60 years and over, reported having at least one life regret (Baum, 1999; Timmer, Westerhof, & Dittmann-Kohli, 2005) or would make at least one major life choice differently given the opportunity to live it again (Hattiangadi, Medvec, & Gilovich, 1995; Torges et al., 2005). Older adults with life regrets tend to perceive fewer opportunities to

'undo' regretted circumstances than do younger adults (Wrosch, Bauer, & Scheier, 2005). Therefore, distressing life regrets in later life may have a negative impact on subjective well-being, including life satisfaction and affective well-being (Diener, Suh, Lucas, & Smith, 1999).

Life regrets related to missed opportunities and lifestyle choices have been associated with reduced levels of life satisfaction and positive mood in adults aged 60 to 65 years (Torges et al., 2005). Older adults are less likely than younger adults to invest effort in undoing the negative consequences of life regrets (Wrosch et al., 2005) and are more likely to make external attributions about the regretted circumstance (Timmer et al., 2005; Wrosch & Heckhausen, 2002). These dynamics may contribute to reduced regret intensity and fewer depressive symptoms (Wrosch & Heckhausen, 2002; Wrosch et al., 2005) in some older adults. However, life regret characteristics such as consequences and intensity have been shown to be related to subjective well-being.

For adults generally, there is evidence that the greater the perceived personal consequences of life regrets, the lower the levels of life satisfaction (Jokisaari, 2003). Further, higher ratings of intensity (regret-related negative affect and intrusive thoughts) was associated with reduced life satisfaction in middle-aged and older adults ((Wrosch & Heckhausen, 2002; Wrosch et al., 2005) and higher levels of depressive symptoms in older adults (Wrosch & Heckhausen, 2002).

Apart from the suggested links between regrets and subjective well-being for older adults, other research highlights other potentially important influences on well-being for this age group. For example, higher levels of emotional instability and negative emotional experience across adulthood (Costa & McCrae, 1980; Diener et al, 1999) and poorer physical health in older adults (Brief, Butcher, George, & Link, 1993; Kunzmann, Little, & Smith, 2000) have been associated with reduced subjective well-being. It is important to disentangle the effects of other influences on well-being from regret-specific relationships when investigating regrets in an older sample. This was the aim of the current study into regret characteristics (number, consequences, intensity) and subjective well-being (life satisfaction and depressive symptoms) taking into account competing influences (negative disposition, physical health). The hypotheses tested were:

1. Number of regrets are negatively associated with life satisfaction and positively associated with depressive symptoms.
2. Negative consequences of regrets predict life satisfaction and depressive symptoms beyond the influence of negative disposition and physical health.
3. The intensity of regrets adds further to predicting life satisfaction and depressive symptoms.

Method

Participants

Participants were 113 females and 45 males ranging in age from 65 to 94 years ($M = 73.27$, $SD = 6.24$). In total, 282 questionnaires were distributed and 186 (65.96%) were returned. Nine questionnaires were excluded due to age being either unspecified or less than 65 years. A further 19 questionnaires were excluded due to unacceptable levels of missing data or marked inconsistencies in responses.

Materials

A questionnaire was developed that included demographic questions and other questions to operationalise the variables of interest. Participants were encouraged to focus on life regrets by reading the following statement:

When people look back over their life, there may be things that they regret and would do differently if they had their time over. Please look back over your whole life and reflect upon the things you have done and have not done that you believe have influenced the direction your life has taken.

Measures

Number and Nature of Life Regrets The following question was posed: 'Are there things that you regret and would do differently if you had your time over?' Those responding "yes" were asked to indicate the life domain associated with the regrets. Five domains (*education, career, marriage and romantic relationships, parenting, and self-development*) commonly associated with regrets (Roese & Summerville, 2005) were listed along with a sixth option "other". Participants were given space to briefly elaborate. The number of life regrets was calculated based on the regret details provided within the categories.

Negative Regret Consequences. This was the sum of ratings to two items adapted from Jokisaari's (2003) consequence items to specifically address negative regret consequences: 1) 'To what extent would your life

have been better if you did not have your listed regret(s)?' 2) 'How much negative impact has your listed regret(s) had on your life?' Response alternatives were on a 5-point scale with a possible combined total score range of 0 – 8. Cronbach's reliability was .86 ($M = 3.48$, $SD = 2.14$) for the sub-sample ($n = 88$) with regrets.

Regret Intensity. This was calculated from two sets of items that measured regret-related negative emotion and frequency of intrusive thoughts (Wrosch et al., 2005). *Negative emotion.* On a 5-point scale participants rated how strongly they had experienced each of six emotions (*desperate, helpless, sorrow, irritated, angry, embarrassed*) when thinking about their listed regrets in the past few months. *Intrusive thoughts.* On a 5-point scale participants rated how often each of five intrusive regret-related behaviours (*e.g. difficulty concentrating, trouble sleeping*) had occurred in the past few months. Total score responses to the negative emotion items were highly correlated with the total score of the intrusive thoughts items ($r = .81$, $p < .001$, 2-tailed). Consequently, the sum of the ratings to each set of responses was used as an overall regret intensity measure with a possible range of 0 – 44. Cronbach's reliability was .94 ($M = 4.65$, $SD = 7.94$) for the sub-sample ($n = 88$) with regrets.

Negative Disposition. This was assessed using the 10-item Emotional Stability sub-scale of the 50-item International Personality Item Pool - Five Factor Model (IPIP-FFM Goldberg, 1999). Items were rated on a 5-point scale with a possible total score range of 10 -50 Cronbach's reliability was .78 ($M = 22.53$, $SD = 6.64$) for the sub-sample ($n = 89$) with regrets.

Life Satisfaction. This was measured using the 5-item Satisfaction with Life Scale (SLS Diener, Emmons, Larsen, & Griffin, 1985) Items were rated on a 7-point scale with a possible total score range of 5 – 35. Cronbach's reliability was .85 for the sub-sample ($n = 89$) with regrets ($M = 24.15$, $SD = 6.37$).

Depressive symptoms. These were assessed using the 10 items of the short version of the Center for Epidemiologic Studies Depression Scale (CESD-10 Andresen, Malmgren, Carter, & Patrick, 1994). In the current study ratings were made with reference to the past few months and on a 5-point scale making a possible total score range of 0 – 40. Cronbach's reliability was .82 ($M = 10.92$, $SD = 6.32$) for the sub-sample ($n = 89$) with regrets.

Physical Health. Participants rated the following question: 'How would you rate your physical health?' on a 5-point scale ranging from *Poor* to *Excellent*. This measure has been found to provide an acceptable

indication of subjective physical health in older adults (Freund & Baltes, 1998). For the current sub-sample ($n = 89$) with regrets M was 3.34 and SD was 1.04.

Procedure

This research project was approved by the Ethics in Human Research Committee of Charles Sturt University. Community-dwelling acquaintances of the principal researcher residing in Sydney and Wollongong were approached to identify and provide questionnaire packages to potential participants aged 65 years and over. Advertisements for the study and questionnaire packages were also displayed in a butcher shop and in the office of a general medical practitioner located in the northern suburbs of Sydney. The return of the completed questionnaires by mail constituted informed consent to participate in the study.

Results

For all results reported next, due attention was given to data screening and statistical test assumptions. Details and decisions are not provided due to space limitations but are available from the authors.

Eighty-nine (56.33%) participants, comprising 66 females and 23 males, reported having at least one life regret. Among the participants with life regrets, most (89.89%) listed their regrets under either the life domain or 'other' categories presented in the survey, with the remainder indicating they had a regret without providing details. A total of 181 life regrets were listed and were distributed across the specified life domains as follows: education (26.52%); career (19.34%); marriage and romantic relationships (17.13%); parenting (14.92%); self-development (12.15%) and other (9.94%). Some examples of commonly listed regrets were: 'In later life I regret I didn't try to educate myself better'; 'I should have gone on to university'; 'Wish I had found a more fulfilling job'; '...personal choice [of career] was not the best'; 'I feel I should have made a wiser choice of partner'; 'I should have listened more attentively to my children and given them more time'; 'Took too long to realise how important it is to value one's worth and utilise one's abilities to their full capacity'.

Number of Regrets and Subjective Well-Being

Table 1 shows descriptive statistics for self-reported life satisfaction and depressive symptoms broken down by the number of reported regrets. A significant overall difference was found in the mean life satisfaction score by regret levels $F(3,145) = 9.10, p < .001, \eta^2 = .158$. Scheffe post hoc tests showed only one significant difference with higher mean life satisfaction for those reporting no life regrets $M = (28.10)$ compared with those reporting 3 or more regrets ($M = 22.04$), $p < .001$.

There was no statistically significant difference for depressive symptoms score by number of reported life regrets levels $F(3,143) = 1.60, p = .19, \eta^2 = .032$.

Table 1. Mean and Standard Deviations for Life Satisfaction and Depressive Symptoms by Number of Regrets.

Regret No.	Life Satisfaction			Depressive Symptoms		
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>
No regrets	69	28.10	3.90	69	10.42	5.91
1 regret	23	26.17	5.12	22	10.23	5.52
2 regrets	29	25.17	6.33	29	8.76	4.84
3-5 regrets	28	22.04	7.01	27	12.15	6.64

Regret Characteristics and Subjective Well-Being

For the two negative consequences items participants who reported life regrets on average indicated 1) that their life would have been moderately better without their regrets ($M = 1.93, SD = 1.14, n = 88$) and 2) that their regret(s) had a small degree of negative impact on their life ($M = 1.55, SD = 1.14, n = 88$). The regret intensity score showed wide variability and a strong positive skew. Approximately half ($n = 42$) of those with regrets reported that they had not experienced any of the six negative emotions or the five intrusive thought behaviours in connection with their regrets over the previous few months. A further 39 (44%) reported low levels of negative emotions and intrusive thoughts due to their regrets. A small group of seven participants (8%) were in the moderate and high range on the regret intensity measure.

As expected, the negative consequence measure and regret intensity score were positively correlated ($r = .58, p < .01, n = 87$, two-tailed) and both were associated with lower life satisfaction ($r = -.45, p < .01, n = 88$ and $r = -.25, p < .05, n = 88$, respectively, two-tailed) and higher depressive symptoms scores ($r = .40, p < .01, n = 86$, and $r = .59, p < .01, n = 86$, respectively, two-tailed). Notwithstanding the overall pattern, it was interesting to note that several participants had high regret intensity but also relatively high life satisfaction scores.

Hierarchical regression analyses were used to examine whether the regret measures predicted life satisfaction and depressive symptoms beyond the impact of overall negative disposition and physical health. Predictor variables were entered in the following order: Step 1 (negative disposition, physical health) Step 2 (negative regret consequences) and Step 3 (regret intensity).

For life satisfaction, after Step 3 the overall regression model was significant ($F(4,82) = 8.90, p <$

.001) explaining 30.3% of the variation in reported life satisfaction. Only negative disposition ($B = -.30$, $SE B = .10$, $p = .002$) and negative regret consequences ($B = -1.28$, $SE B = .33$, $p < .001$) made a significant contribution. Negative regret consequences contributed to the prediction of life satisfaction beyond that of Step 1 variables ($\Delta F(1,83) = 14.46$, $p < .001$, $\Delta R^2 = 12.3\%$). Contrary to expectation regret intensity at Step 3 did not explain further variation in life satisfaction ($\Delta F(1,82) = 1.34$, $p = .25$, $\Delta R^2 = 1.1\%$).

For depressive symptoms, after Step 3 the overall regression model was significant ($F(4,80) = 25.71$, $p < .001$) explaining 56.2% of the variation in depressive symptom scores. Negative disposition ($B = .27$, $SE B = .08$, $p = .001$), physical health ($B = -2.03$, $SE B = .45$, $p < .001$) and regret intensity ($B = .31$, $SE B = .08$, $p < .001$) made significant contributions in the final model. As expected, negative regret consequences made an additional contribution to the prediction of depressive symptom scores at Step 2 ($\Delta F(1,81) = 9.56$, $p < .001$, $\Delta R^2 = 6.3\%$) but the contribution was nullified in the final model by the predictive contribution of regret intensity ($\Delta F(1,80) = 17.15$, $p < .001$, $\Delta R^2 = 9.4\%$).

Discussion

The results of this study confirm that life regrets are a common experience for older adults. Just over half of those surveyed reported at least one life regret. Of these, approximately one third listed 3-5 life regrets. Participants readily categorised their life regrets using the five most common life domains from Roese and Summerville (2005) and only 10% of regrets were listed in the 'other' category. Regrets were most often in the 'education' and 'career' categories, but relationships, family and self-development were also common sources of regret.

Participants in the study were asked about the negative impact of regret(s) on their life and the intensity of their regrets (negative emotions and intrusive thoughts) over recent months. There was wide variation in the responses particularly for regret intensity. Consistent with previous research across adulthood (Jokisaari, 2003; Wrosch et al., 2005), regret-related negative life consequences, negative emotions and intrusive thoughts were not uncommon and for some participants these were strong. However, the range of regret intensity reported by older adults has previously shown less variability (Wrosch, Bauer, Miller, & Lupien, 2007). In that study, participants evaluated their "most severe regret". The ratings in the current study were made "considering together all of the regrets listed" and this procedural variation may have contributed to some difference.

The relationships between regrets and two measures of subjective well-being (life satisfaction and depressive symptoms) were also investigated in this

study. At a basic level, depressive symptoms were not associated with number of regrets, whereas participants with three or more regrets reported lower average life satisfaction than those with no regrets. However, there was also an apparent increase in variability in life satisfaction scores across number of regret categories. Number of regrets has previously been associated with reduced life satisfaction and increased depressive symptoms in younger and middle-aged adults (Lecci, Okun, & Karoly, 1994).

A more complex multivariate investigation of the relationships of regrets characteristics (negative consequences, regret intensity) with life satisfaction and depressive symptoms also took into account the competing influences of negative disposition and self-rated physical health. Collectively, the results do attest to a degree of association between regret characteristics and measures of well-being. These results indicate that previously identified associations between reduced subjective well-being and both regret consequences (Jokisaari, 2003) and regret intensity (Wrosch et al., 2005) are also relevant for older adults. Further, these relationships remained after accounting for the significant associations with negative disposition and physical health. However, the exact role of negative regret consequences and regret intensity was unclear. Regret consequences took precedence with life satisfaction whereas regret intensity contributed uniquely to depressive symptoms.

Contributing to the results for the two regression models and possibly complicating their interpretation was the temporal matching of variable measurement. While ratings of regret consequences and life satisfaction both likely involve appraisals across the lifespan (Torges et al., 2005), regret intensity and depressive symptoms were in the current study specifically assessed over recent months. In addition, the discrete time sampling does not address the way the experience of regrets may change over time. One limitation to generalisability of the current findings was the use of a non-representative, convenience sample. Further, the nature of the present results may be restricted by the influence of historical context to the cohort of older adults sampled. Conclusions relating to directionality of effects were also not possible, including assessments of the potential for pre-existing clinical levels of depression to influence ratings of regret intensity.

The current study had the advantages of a quantitative study (i.e., psychometrically defined variables and multivariate statistical analyses) but also the limitations of "thin data". Qualitative investigations should be pursued to understand more of the details and dynamics of regrets. For example, what are the nuances of regret experiences and are there common themes associated with how people 'come to terms' (Torges et

al., 2005) with their regrets? Although regret is common among adults of all ages, do older adults experience regrets as part of a life review process and associated changes in life narrative and identity (Cavanaugh & Blanchard-Fields, 2006)? The current preliminary evidence suggests that for older adults the experience is worth understanding as regrets are common and may influence psychological well-being.

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