Rumination and reminiscence in older adults: implications for clinical practice

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Abstract Reminiscence is proposed as an important activity for well-being in late life but recent reviews highlight the differential outcomes of this behavior. If older adults engage in reminiscing as a natural process, but do so with a ruminative style of thinking, it may actually be detrimental to successful development and well-being. This project explored the relationship between rumination, reminiscence, mood, and psychosocial development. One hundred and fifty community dwelling older adults completed measures assessing these variables. As expected, increased rumination was related to increased depressed mood. Fifty-four of the participants completed a follow-up measure of depressed mood. Rumination also accounted for follow-up depressed mood beyond that explained by time-1 mood. The interaction between rumination and reminiscing significantly predicted future depressed mood after controlling for main effects and baseline mood. Further, this interaction significantly predicted overall psychosocial development. Implications for clinical practice are discussed.

Keywords Rumination · Reminiscence · Depressed mood · Psychosocial development

Reminiscence is the active or passive recalling of memories from the past (Cappeliez and O'Rourke 2006). It has been researched and discussed since the mid 1900s and is described as a natural developmental process (Butler 1963; Erikson 1959). The beneficial effects of using reminiscence

as a therapeutic treatment support its importance for well-being in late life (Bohlmeijer et al. 2007; Chin 2007). Although it is a natural process and can be used in the treatment and amelioration of distress among older adults, it would be unwise to presume that reminiscence is a straightforward process or a singularly healthy behavior. Dysfunctional forms of reminiscence can contribute to the experience of depressed mood in late life. For example, a tendency to ruminate is one such mechanism that may disrupt this natural reminiscence process and lead to maladaptive outcomes. Rumination is a style of thinking marked by intrusive, uncontrollable, repetitive, and recurrent thoughts (Brinker and Dozois 2009). This style of thinking may impair an individual's ability to employ adaptive forms of reminiscence and trap the person in more maladaptive forms.

Erikson (1959) wrote of reminiscence as a form of life review in relation to his eighth and final stage of psychosocial development, ego integrity versus despair. He proposed that in order to achieve ego integrity, older adults needed to review their experiences to create a coherent sense of self. Butler (1963) described such life review as "an inner experience or mental process of reviewing one's life" (Butler 1963, p. 65) and suggested that looking toward one's death prompts looking back over one's life. Moreover, the re-examination of previous experiences and their meanings can result in new or expanded understanding. The benefits of life review can be intimated from research illustrating reminiscence and life review as an effective psychotherapeutic intervention in late life. Chin (2007) conducted a meta-analysis of controlled trials evaluating the efficacy of reminiscence therapy and concluded that individuals taking part in this therapy reported greater increases in happiness and decreases in depressed mood than those who had not.

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While Butler (1963) argued that life review is a universal and natural process, he acknowledged that it may also lead to psychopathology. More recently, researchers have recognized both adaptive and maladaptive reminiscing (Westerhof et al. 2010). Obsessive reminiscing was identified by LoGerfo (1980) and investigated more closely by Wong and Watt (1991) who found that obsessive reminiscence was associated with increased despair. Cappeliez and O'Rourke (2002) found that those who reminisced in a ruminative fashion also reported dwelling on memories with negative valence. This tendency to get stuck on a topic or event may impair the processes of integrating, reframing, and restructuring thought to promote mental health (Westerhof et al. 2010). Torges et al. (2008) found that in the wake of bereavement, rumination impaired the resolution of regret. Moreover, if rumination can impede the resolution of one event, the working through of many events, some of which may involve guilt, remorse, or regret, may also be impeded by a ruminative thinking style.

Rumination is typically defined as repetitively thinking about the causes, consequences, and symptoms of one's negative mood (Butler and Nolen-Hoeksema 1994). This definition has been used extensively in research investigating the role of rumination in depressed mood and has provided a sound foundation for understanding ruminative processes in depression (Eshun 2000; De Luca et al. 2003). However, this definition does not consider that rumination may precede depressed mood or negative events. A broader conceptualization of rumination sees it as a style of thinking that is repetitive, recurrent, intrusive, and uncontrollable regardless of content, valence, or temporal orientation (Brinker and Dozois 2009). Using this broader definition, the authors found that a general ruminative style was still related to depressed mood, and was predictive of future depressed mood, even after controlling for time-1 mood. This conceptualization of rumination may be particularly relevant to older adults, due to its similarities with perseveration—a symptom of dysexecutive function. De Luca et al. (2003) report that executive skills may decline with normal aging, putting older people at greater risk of ruminative thinking. By measuring the process of rumination in this way, it is possible to assess the role of general ruminative style in reminiscence.

The current study examined the relationship between a ruminative thought style and reminiscence and how these two activities may interact in their influence on mood and psychosocial development. It is expected that increased ruminative thinking will be related to higher levels of current and future depressed mood and that rumination will interact with reminiscing to predict higher levels of depressed mood. It is further hypothesized that increased ruminative thought will be related to lower scores on a measure of Erikson's Psychosocial Development scale, and

that a ruminative style and frequency of reminiscing will interact to predict reduced attainment of these developmental stages.

Method

Participants

A total of 150 community dwelling older adults from Canberra, Australia participated in the first phase of the study. Data from 144 participants were completed and included in these analyses. Seventy percent of the sample was female. The mean age was 74.85 (SD = 8.9) years, with a range of 60–93 years of age. Fifty-eight percent of the participants were married, 32 percent were widowed, and 9 percent were divorced (1 % did not complete this item). Fifty-eight percent of the sample lived with their spouse, while the others lived on their own. All participants were Caucasian. Fifty-four participants from this first study were invited to take part in a related study and completed a second mood measure for that project. This data have been used here for a follow-up examination of depressed mood.

Materials

Ruminative thought styles questionnaire (RTS)

The RTS is a 20-item measure of a general style of ruminative thought that is not based on depressive mood (Brinker and Dozois 2009). It allows for an assessment of repetitive, intrusive, recurrent, and uncontrollable thinking regardless of content, valence, and temporal orientation (e.g., past and future). Items are rated on a scale of 1 = “does not describe me well” to 7 = “describes me very well,” with higher scores indicating greater ruminative thought. The scale shows good internal reliability with alpha scores ranging from .87 to .95, and also shows good test-retest reliability ($r = .80$, $p < .01$ over a 2-week time period; Brinker and Dozois 2009). For the current study, Cronbach's alpha was .95.

Reminiscence functions scale (RFS)

This 12-item scale is based on the RFS (Webster 1993) and was selected for its ability to assess the motivations prompting the behavior as well as its frequency. The short form of this scale is drawn from Tornstam (1999). Participants rate how often they engage in reminiscence for each reason (e.g., because I'm expected to) on a four-point scale from “1—never” to “4—often.” For the current project Cronbach's alpha was .83.

Measure of psychosocial development (MPD; Hawley 1988)

This instrument provides a measure of resolution of each of Erikson's eight developmental stages as well as an index of overall psychosocial health. Users rate 112 items on a five-point scale ranging from "very much like me" to "not at all like me." The MPD generates scores representing resolution of each of the eight stages, a total negative score (composed of the negative attitudes assessed across all stages), and a total positive score (composed of the positive attitudes assessed across all stages). Finally there is an overall resolution score across all stages. For the purpose of this study, only the total resolution score from the eighth stage and the overall resolution score across all stages are included.

The depression-happiness scale (DHS; Joseph and Lewis 1998)

The DHS is a 25-item scale assessing mood states and associated behaviors. Respondents rate how often they have experienced each item in the past week from 1—"never" to 4—"often." Scores range from 25 to 100, with higher scores indicating greater depressed mood. The scale shows good convergent validity and good internal reliability ($\alpha = .93$; Joseph and Lewis 1998). For the current sample at time-1, Cronbach's alpha was .89, and in the follow-up it was .71. Since any scale is not sufficient for diagnosis of clinical depression, the variable produced will be referred to as depressed or negative mood.

Procedure

Participants were recruited from the community through a Catholic Church-based education program. The researcher gave talks at local churches and those who were interested in participating were given questionnaire packs with postage-paid return envelopes. This led to snowball sampling where participants told friends and family members about the project who in turn contacted the researcher directly. Participants were given an initial package of questionnaires to complete at their leisure. The package included a letter of information, consent form, questionnaires, and a postage-paid reply envelope to return the completed package by mail (time-1). On the consent form there was a request for a follow-up interview for a separate study. If participants wished to take part in the interview, they provided their home phone number to be contacted. At the interview, participants were given the DHS to complete a second time (time-2). These follow-up interviews were conducted between 2 weeks and 1 month following the return of the initial questionnaires, with a mean delay of 20.4 days ($SD = 6.82$).

Results

All analyses were executed by means of the statistical software package SPSS 19. Hypotheses were tested using a variety of procedures. Relationships between variables were examined using one-tailed correlations. To examine the predictive ability of variables and their interactions, hierarchical regressions were employed. Analyses were also conducted to examine any differences between the initial sample and those who volunteered for the separate study. The respective study participant groups did not significantly differ in mood ($t = 1.61$), rumination ($t = 1.89$), or overall reminiscence ($t = .64$). The participant groups did significantly differ on overall psychosocial development across all stages ($t = 2.79$, $p = .01$) and overall resolution of the eighth stage ($t = 2.4$, $p = .02$), with those who completed measures at both times showing greater resolution. There were also no group differences in relation to the following characteristics: sex ($\chi = 1.53$, $p = .22$), marital status ($\chi = 2.12$, $p = .35$), or living arrangement ($\chi = 1.10$, $p = .58$). The respective study participant groups did differ by age, however. Those who completed the follow-up were older than those who did not ($t = -3.65$, $p < .01$).

All time-1 variables were analyzed for sex differences. Females endorsed more reasons for reminiscing but no other sex differences were significant (see Table 1). Correlation analyses examined the relationship between age and all variables and showed no significant relationships. Means and standard deviations for all variables are presented in Table 1. As predicted, greater rumination scores were related to higher depressed mood scores at both time-1 ($r = .41$, $p < .05$) and follow-up ($r = .56$, $p < .05$). A hierarchical linear regression showed that rumination was still a predictor of future depressed mood, even after controlling for time-1 depressed mood ($\Delta R^2 = .09$, $p < .05$).

Table 1 Means and standard deviations of time-1 and 2 variables

	Females M (SD)	Males M (SD)	Total M (SD)
Age	74.32 (8.64)	76.10 (9.54)	74.85 (8.92)
Rumination	66.45 (25.67)	64.67 (18.63)	65.72 (23.58)
Depressed mood	39.65 (10.52)	38.71 (5.94)	39.68 (9.65)
Follow-up depressed mood	38.75 (6.57)	38.89 (5.39)	38.80 (6.12)
Life satisfaction	14.04 (4.14)	13.86 (2.10)	14.07 (3.69)
Eighth stage resolution	14.71 (7.51)	12.86 (5.90)	14.09 (7.06)
All stages resolution	93.00 (40.80)	90.11 (33.40)	91.81 (38.53)
Reminiscence	29.57 (6.04) ^a	25.76 (5.29)	28.42 (6.02)

^a Significantly higher than males

Table 2 Rumination and reminiscence predicting mood and psychosocial development

	<i>B</i>	<i>SE B</i>	<i>t</i>	<i>p</i>
Predicting time-2 depressed mood				
Time-1 depressed mood	.200	.093	2.225	.031
Rumination	.339	.106	3.21	.002
Reminiscence	.835	.237	3.52	.001
Rumination × reminiscence	−.01	.003	−2.652	.011
Predicting Eighth stage resolution				
Time-1 depressed mood	−.314	.062	−5.076	.000
Rumination	−.264	.114	−2.33	.021
Reminiscence	−.43	.27	−1.59	.155
Rumination × reminiscence	.009	.004	2.41	.017
Predicting total resolution				
Time-1 depressed mood	−1.577	.318	−4.953	.000
Rumination	−1.87	.591	−3.158	.002
Reminiscence	−2.476	1.41	−1.753	.082
Rumination × reminiscence	.052	.019	1.344	.008

To understand the interactive relationship between rumination and reminiscence, hierarchical linear regression was used to examine the prediction of follow-up depressed mood. Time-1 mood scores were entered into the first step, followed by reminiscence and rumination scores in the second step. In the final step, the interaction term of these two was entered. Table 2 illustrates that the interaction between rumination and reminiscing predicts future depressed mood beyond that accounted for by depressed mood at time-1 and the main effects of these two variables.

These same regression analyses were repeated with resolution scores of the eighth stage as the dependent variable. The interaction between rumination and reminiscence accounted for unique variance in resolution of the eighth stage (Table 2), with increased rumination and reminiscing predicting reduced resolution of this stage. The analyses were repeated with total resolution across all stages as the dependent variable and again, rumination interacted with reminiscence as a significant predictor.

The psychosocial development variables were in line with predictions regarding life satisfaction and mood. Depressed mood was negatively correlated with resolution of the eighth stage ($r = -.40$, $p = .01$) and overall resolution across all stages ($r = -.45$, $p = .01$). Time-2 mood and overall resolution across stages were also significantly related ($r = -.39$, $p < .05$). Hierarchical linear regressions showed that only total resolution across all stages predicted time-2 mood after controlling for time-1 mood ($\Delta R^2 = .05$, $p < .05$).

Discussion

This project examined the relationship between rumination, reminiscence, mood, and the life review. In line with predictions, rumination was significantly related to both current and future depressed mood even after controlling for baseline depressed mood. This supports previous research suggesting that this style of thinking, marked by recurrent, repetitive, intrusive, and uncontrollable thinking, accounts for unique variance in depressed mood (Brinker and Dozois 2009). This is important because it confirms that ruminations need not be only about one's depressed mood as previously suggested (Nolen-Hoeksema 2000), thus allowing for an examination of the process of the thought style free from its content. Further, given the relationship between rumination and executive functions, and the decline of executive function with normal aging (De Luca et al. 2003), assessing this process may help to better understand the role of perseverative thinking.

The key finding that emerged from this analysis is the interaction between rumination and reminiscing in the prediction of depressed mood. As Butler proposed and LoGerfo confirmed, ruminative reminiscing can manifest in depressed mood. LoGerfo (1980) suggested that this kind of obsessive reminiscing might be the result of stress, guilt, or grief. Morrow and Nolen-Hoeksema (1990) argue that one of the ways rumination may exacerbate and maintain depressed mood is that it keeps exposing persons to their negative thoughts and memories, thereby fueling the emotion attached to them. LoGerfo (1980) recommends additional therapies to improve reminiscing to help address depressed mood, such as having clients write their reminiscences in a journal to work through obstructing experiences. This is an interesting idea because conceivably, writing is an activity that may help to transform circular, repetitive, and recurring thoughts into a linear and more logically progressive story, possibly altering the ruminative processing style.

The current research project had some limitations in design that should be mentioned. First was the snowball sampling may have biased results insofar as participants may have recommended others who were similar to them. This might, thereby, limit the generalizability of the findings. Further, the time between initial measurement and follow-up was quite short. It would be very interesting to see how predictive these same variables are over a much longer follow-up period. It should be noted, nevertheless, that depression is a reasonably stable phenomenon. Thus, even short-term follow-up speaks to the potency of the variables in question to predict a change.

The key limitation of the project was the correlational nature of the study, preventing any conclusions about the directional nature of these relationships. It is not possible to say if rumination impairs psychosocial development or if

impaired psychosocial development predisposes an individual to rumination. At this point, however, simply knowing that they are related is important because either of these possibilities warrants further investigation. As discussed, rumination might create a looping of thoughts and thwart linear progression through the life review. But, it is also possible that a person's development may be at the root of a disposition toward rumination. Rumination was shown to be significantly and negatively related to overall resolution, as well as resolution of the eighth stage in the Erikson paradigm. This pattern was found even when controlling for depressed mood, suggesting that it was the process of ruminating, and not just the possible negative valence of the thoughts, that may have been playing a role.

Clinical implications of the findings

This paper highlights important clinical implications for the use of reminiscence as a therapy for older adults. The life review process is a meaningful part of late-life well-being, and understanding factors that impede it can facilitate both the treatment of depression and anxiety and their prevention. A ruminative style of thinking has long been implicated in both of these disorders (Brinker and Dozois 2009; Morrow and Nolen-Hoeksema 1990) and obsessive rumination is proposed to manifest itself in different psychopathologies (LoGerfo 1980). Reminiscence therapies have shown some efficacy in treating depressed mood (Chin 2007), but reminiscing is a complex process with both adaptive and maladaptive features (Cappeliez and O'Rourke 2006). If therapists are not sufficiently trained and are not vigilant about factors influencing the process of reminiscence, such as a ruminative disposition, encouraging reminiscing may actually lead to greater depressed mood.

Administration of a measure of rumination such as the RTS at the beginning of reminiscence therapy would allow the clinician to address this concern either through psychoeducation or by assigning tasks that may prevent the looping process of rumination. This can be achieved, for example, by encouraging such activities as writing in a journal, as was mentioned earlier in the article. Bohlmeijer et al. (2007), in their meta-analysis of the effects of reminiscence on well-being, concluded that structured life review had a significantly greater effect on well-being than simple reminiscence. It may be the structured guidance that countered a ruminative style of thinking in some participants. Future research examining ways to minimize

ruminative thinking while maximizing the life review would be invaluable for therapists working in this area.

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