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Development and Psychometric Evaluation of the Reasons for Living—Older Adults Scale: A Suicide Risk Assessment Inventory

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Purpose: The purposes of these studies were to develop and initially evaluate the psychometric properties of the Reasons for Living Scale—Older Adult version (RFL-OA), an older adults version of a measure designed to assess reasons for living among individuals at risk for suicide. ***Design and Methods:*** Two studies are reported. Study 1 involved instrument development with 106 community-dwelling older adults, and initial psychometric evaluation with a second sample of 119 community-dwelling older adults. Study 2 evaluated the psychometric properties of the RFL-OA in a clinical sample. One hundred eighty-one mental health patients 50 years or older completed the RFL-OA and measures of depression, suicide ideation at the current time and at the worst point in one's life, and current mental status and physical functioning. ***Results:*** Strong psychometric properties were demonstrated for the RFL-OA, with high internal consistency (Cronbach's alpha coefficient). Convergent validity was evidenced by negative associations among RFL-OA scores and measures of depression and suicide ideation. RFL-OA scores predicted current and worst-episode suicide ideation above and beyond current depression. Discriminant validity was evidenced with measures of current mental status and physical functioning. Criterion-related validity was also demonstrated with respect to lifetime history of suicidal behavior. ***Implications:*** These findings provide preliminary support for the validity and reliability of the RFL-OA. The findings also support the potential value of attending to reasons for living during clinical treatment with depressed older adults and others at risk for suicide.

Key Words: Suicide, Reasons for living, Suicide risk, Resilience

Older adults, 65 years of age and older, are at greater risk for suicide than any other age group in the United States, with White men, aged 85 years and older, having the highest rate of suicide (National Center for Injury Prevention and Control [NCIPC], 2007). Older adults less frequently engage in self-harm behavior than do younger individuals but are considerably more likely to die as a result of self-harm (Draper, 1996). Older adults account for 20% of deaths by suicide but represent only 13% of the U.S. population (NCIPC).

Although these suicide rates are astonishingly high, little research has addressed suicidal ideation and behavior among older adults (Pearson & Brown, 2000). Equally astonishing is the fact that 70% of older adults who died by suicide had seen their primary care provider within 30 days of their deaths (Conwell, Olsen, Caine, & Falnnery, 1991; Diekstra & van Egmond, 1989; Luoma, Martin, & Pearson, 2002). These data suggest that many individuals who are at risk for suicide are, in principle, identifiable, and their suicides are potentially preventable. Although some predictors of older adult suicide are known (e.g., psychiatric illness, physical illness, functional impairment; Heisel &

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Duberstein, 2005), the lack of research focus on older adults to date has hindered the advancement of our knowledge regarding the assessment of suicide risk and prevention of suicide in this population. Age-related changes in the phenomenology and presentation of mental disorders (e.g., Edelstein, Kalish, Drozdick, & McKee, 1999; Kogan, & Edelstein, 2004; Edelstein et al., 2008) suggest the need for assessment instruments tailored to older adults. Unfortunately, to date there is only one published self-report suicide risk assessment instrument created explicitly for older adults (Heisel & Flett, 2006). Much of the research on suicide risk among younger adults, and most of the risk assessment instruments, have focused on demographic risk factors (e.g., marital status, age, sex), clinical variables (e.g., depression), and behaviors that place individuals at risk for suicide (see Brown, 1999, for instrument reviews). Another approach to suicide risk assessment focuses on assessing resiliency factors potentially preventive of suicide risk (Heisel & Flett, 2008). One example is an instrument initially developed by Linehan, Goodstein, Nielsen, and Chiles (1983) that measures reasons for not taking one's life despite suicidal thoughts or considerations. A major assumption of these reasons for living instruments is that suicidal individuals are lacking in adaptive beliefs present among nonsuicidal individuals that deter suicidal behavior. The reasons for living examined through these instruments can be considered buffers or personal and environmental contingencies operating against suicide. Reasons for living instruments have been developed for a variety of different age groups.

In their original research, Linehan and colleagues (1983) found that individuals with prior suicidal behavior reported fewer reasons for living than individuals with no suicidal history. Moreover, those with suicidal histories valued reasons for living to a smaller degree. That is, they rated reasons for living as less important than individuals with no suicidal history. More recent research (Cole, 1989; Gutierrez et al., 2002; Osman et al., 1993, 1998) has offered further support for the assessment of reasons for living in diverse populations (e.g., psychiatric inpatients, college students, delinquent adolescents). As one might expect, reasons for living are different for different age groups (Koven, Edelstein, & Charlton, 2001). In a preliminary study, Koven and colleagues combined reasons for living from scales developed for adolescents (Osman et al., 1998), adults (Linehan et al.) and older adults (Edelstein, McKee, & Martin, 2000) and found age-related differences in reasons for living for participants ranging in age from 19 to 88 years. Miller, Segal, and Coolidge (2001) compared older and younger adults' reasons for living using the reasons for living inventory (Linehan et al.) and found both overlap and differences in reasons for living between these two age groups. These foregoing studies suggest that scales intended to measure reasons for living must be appropriate to the age group being assessed (i.e., content valid), consistent with geropsychology practice guidelines (American Psychological Association, 2004). Although reasons for living inventories have been developed for adolescents, college students, young adults, and adults, no such inventory had been created for older adults. The purpose of the present article was to describe the development and psychometric evaluation of an older adult reasons for living inventory, termed the *Reasons for Living Scale—Older Adult* version (RFL-OA; Edelstein et al., 2000). The first study involved the initial development of the RFL-OA and was divided into three parts. In the first part, the items of the RFL-OA were developed. In the second part, the items were administered to a group of older adults to examine the preliminary psychometric properties of the instrument. Study 2 examined the psychometric properties of the RFL-OA with a group of depressed older mental health patients. Specific aims included examination of the internal consistency of the RFL-OA. Construct validity was assessed by correlations among the RFL-OA and established clinical research measures of depression and suicide ideation (convergent validity), and exploration of potential incremental validity of RFL-OA scores in explaining additional variability in suicide ideation scores above and beyond that contributed by depression severity. Correlations between the RFL-OA and current mental and functional status explored the measure's discriminant validity. Criterion-related validity was assessed by comparing RFL-OA scores for participants with or without a lifetime history of suicidal behavior.

Study 1—Part 1: Initial Development of RFL-OA Items

The initial development of the RFL-OA followed procedures similar to those used by Linehan and colleagues (1983). Reasons for living (not taking one's life), and other related information, were first obtained from community-dwelling older

adults. The questions most relevant to the construction of the RFL-OA asked participants what might keep them or other older adults from taking their lives. Responses to these questions formed the basis for the second phase of the study in which these responses were converted into scaled items.

Methods

Participants

Participants were 106 community-dwelling older adults, 60 years of age and older, in West Virginia. Ages ranged from 62 to 91 years, with a mean of 74.3 years (*SD* = 6.08). The sample was predominantly male (67.3%). All but two of the participants were Caucasian. Religious affiliations of participants included 83.2% Protestant, 8.4% Catholic, 0.9% Jewish, and 7.5% other religious faiths. Sixty-two percent of the participants were married, 7.5% single, 4.7% divorced, and 25.2% widowed.

Materials

Materials comprised a demographic questionnaire and a survey. The questionnaire requested information on age, race, sex, marital status, and religious preference. The survey informed potential participants that the authors were studying reasons that older adults want to stay alive and that this was important because older adults are at the greatest risk for taking their lives. The questions posed, as per Linehan and colleagues (1983), were as follows: (1) Have you ever considered suicide and, if so, what were your reasons for not taking your life? (2) If you were to consider taking your life, what would stop you from doing so? (3) What reasons do you think other older adults have for not taking their lives?

Procedure

Materials were mailed, along with instructions and stamped return envelopes, to 500 older adults whose names were purchased from Survey Sampling International. The names were randomly drawn from a list of all homeowners and individuals with driver licenses in the State of West Virginia. The 109 returned materials represented a 21% return rate, which is relatively common for mail surveys (Dillman, 2000). Respondents and nonrespondents could not be compared, as the mailing was anonymous.

Results

Sixty-nine unique reasons for living were identified by the researchers in the surveys after redundancies were eliminated. The participants' original wording was preserved whenever possible. When the content of reasons was similar to the content of an item from the original reasons for living inventory, the wording of the original inventory was used. Twenty-eight of the 69 items were the same or similar to those of the original reasons for living inventory. In contrast to the items of the original reasons for living inventory, the older adult reasons included substantially more reasons for living pertaining to family and friends, religious beliefs, and moral objections to suicide. This is consistent with the findings of Miller, Segal, and Coolidge (2001).

Study 1—Part 2: Scale Construction and Initial Administration

The second part of Study 1 involved the construction and administration of the RFL-OA. Sixty-nine unique items comprised the RFL-OA. These items were administered to older adults to gather initial normative data and estimate internal consistency.

Methods

Participants

One hundred nineteen community-dwelling older adults, 65 years of age and older (*M* age = 75.4, range = 66–90 years), were recruited through a mailing to a nonoverlapping sample of 500 older adults whose names were randomly drawn from a list of all homeowners and individuals with driver licenses in the State of West Virginia purchased from Survey Sampling International. This represented a 24% response rate.

Forty-five participants were 65–74 years of age (old), 33 were 75–84 years of age (old-old), and 11 were 85 years of age or older (oldest-old). Ninety-nine percent of the participants were Caucasian and 53% were men.

Materials

The materials comprised a demographic questionnaire and the RFL-OA, which was constructed from the reasons for living produced in Study 1. The questionnaire requested information on age, race, occupation, religious preference, and number of years since retirement. The RFL-OA included

69 items and employed a 6-point Likert-type scale assessing the importance of each item in deterring suicidal behavior (1 = *quite unimportant*, 2 = *unimportant*, 3 = *somewhat unimportant*, 4 = *somewhat important*, 5 = *quite important*, 6 = *extremely important*). Sample items are listed in the Appendix. Each item is a potential reason for living.

Procedure

Demographic questionnaires and the RFL-OA were mailed to 500 individuals. Participants were asked, "rate how important each reason would be for you, if you were ever to consider taking your life, no matter how unlikely that might be." This instruction is similar to that used by Linehan and colleagues (1983) in the original reasons for living inventory with two exceptions. In the present study "taking your own life" was used rather than "kill yourself," which was used in the original. Second, the statement, "no matter how unlikely that might be," used in the present study, was not used in the original.

Results

The following mean importance ratings were calculated for each of the measure's five-item categories, as aforementioned: survival = 4.57 (quite important), moral/religious objections = 4.56 (quite important), family/others = 4.23 (somewhat important), fear of social disapproval = 3.26 (somewhat unimportant), and fear of suicide = 3.18 (somewhat unimportant). Twelve items received mean importance ratings below 4.0 (somewhat important), although the standard deviations for these items ranged from 1.6 to 2.0. Thus, even the items receiving the lowest mean ratings received the majority of ratings at 4.6 or above. Internal consistency was examined through calculation of Cronbach's coefficient alpha, which was .96 for the total scale.

Study 2: Initial Psychometric Examination of the RFL-OA in a Clinical Sample

In the present study, we examined the psychometric properties of the RFL-OA in a sample of mental health patients 50 years of age and older. We specifically investigated the internal consistency, and convergent and discriminant validity of the RFL-OA, and the criterion-related validity of the measure in differentiating patients with versus without a lifetime history of self-injurious behavior.

Methods

Participants

Participants included depressed psychiatric patients 50 years of age and older recruited from inpatient and outpatient psychiatric services associated with three teaching hospitals in Rochester, NY, including a community hospital, a tertiary care facility, and an academic medical center. Research coordinators approached 633 psychiatric inpatients older than 50 years admitted to the hospital with apparent symptoms of depression. Thirty-nine patients were also recruited from an older adult outpatient clinic. Two hundred fifty patients consented to participate in this study. For the present analyses, we excluded patients who did not complete the RFL-OA (n = 46), who did not complete (n = 4) or scored below 20 on the Mini-Mental State Examination (MMSE; n = 2; Folstein, Folstein, & McHugh, 1975), who did not complete the Structured Clinical Interview for the *Diagnostic and Statistical Manual of Mental Disorders*-IV (SCID; n = 5; First, Spitzer, Gibbon, & Williams, 1997) or the Scale for Suicide Ideation for current episode (SSI-C; n = 3; e.g., Beck, Brown, Steer, Dahlsgaard, & Grisham, 1999; Beck, Kovacs, & Weissman, 1979; Beck, Steer, & Brown, 1996; Beck, Weissman, Lester & Trexler, 1974), who were missing total scores on the revised Beck Depression Inventory-II (BDI-II; n = 6; Beck et al., 1996), or who were missing scores on the instrumental activities of daily living (IADL) scale and/or the physical self-maintenance scale (PSMS; n = 3; Lawton & Brody, 1969, 1988a, 1988b). Participants included 181 patients (75 men and 106 women) who were currently in treatment for depression (154 inpatients, 4 partial hospitalization patients, and 23 outpatients) ranging in age from 50 to 88 years (M = 60.1, SD = 10.0). The majority of participants were White (n = 160), 10 African American, 2 American Indian or Alaskan Native, and 8 of other racial background. Nine participants were Hispanic or Latino. One hundred forty-one participants had a major depressive disorder, 23 bipolar I disorder, 4 bipolar II disorder, 1 dysthymic disorder, 6 depressive disorder not otherwise specified, 2 schizophrenia, and 4 substance-induced mood disorder. Fifty-four percent were divorced (n = 63), separated (n = 19), or widowed (n = 15). Forty percent lived alone (n = 72). Fifty-three percent were unemployed (n = 35) or receiving disability benefits (n = 60). Participants completed an average of 13.3 years of education (SD = 2.6).

Measures

Reasons for living were assessed using the RFL-OA.

Suicide ideation was assessed with the SSI (Beck et al., 1979) for respondents' current state (SSI-C) and for the worst point in their lives (SSI-W; e.g., Beck et al., 1999). The SSI is a 19-item clinician-administered scale designed to assess the presence and severity of considerations and plans for suicide. The SSI has strong reliability with older adults (Heisel, Flett, & Besser, 2002) and the SSI-C has a reported interrater reliability coefficient of .87 in a clinical sample (Beck et al., 1979). Scores on this measure potentially range from 0 to 38. SSI scores were adjusted for missing data for up to four missing items (e.g., Beck et al., 1974, 1979, 1996, 1999).

Depression was measured with the BDI-II (Beck et al., 1996), a 21-item self-report questionnaire assessing depressive symptomatology. The BDI-II has demonstrated strong internal consistency, test–retest reliability, and convergent validity, significantly predicting hopelessness and suicide ideation (Beck et al.), and research supports its use with depressed older inpatients (Steer, Rissmiller, & Beck, 2000). Scores on this measure potentially range from 0 to 63. BDI-II scores were prorated for up to for missing items.

Cognitive functioning was assessed with the MMSE (Folstein et al., 1975), a brief global measure of an individual's cognitive state. The MMSE has demonstrated strong psychometric properties, with a reported test–retest reliability coefficient of .89 over a 24-hr period, and acceptable construct and concurrent validity (Folstein et al.). Scoring on this measure ranges from 0 to 30; this data set was restricted to individuals scoring 20 and above.

Physical functioning was assessed with the IADL scale (IADL) and the PSMS (Lawton & Brody, 1969, 1988a, 1988b), brief interviewer-rated measures of competence in basic (e.g., toileting, feeding, dressing, and bathing; PSMS) and instrumental daily activities (e.g., using the telephone, shopping, preparing food, and housekeeping; IADL). Higher scores represent greater functional impairment.

Procedures

Research coordinators screened the records of all patients 50 years of age and older admitted to one of three hospital's inpatient units or seen for an intake session in one hospital's ambulatory mental health clinic for older adults, to identify patients with a possible mood disorder. Following approval from an attending physician or primary clinician, a member of the research team approached patients seeking their written informed consent to participate in an interview and complete measures. Trained interviewers then administered the SCID Axis I Disorders (First et al., 1997) and the SSI (Beck et al., 1979). Participants also completed the RFL-OA and measures of depression and of cognitive and physical functioning. Following the acquisition of data and reviews of medical records, consensus diagnostic conferences were held attended by at least one psychiatrist, one psychologist, study investigators, and members of our research laboratory. The research coordinator who had interviewed the patient delivered a case presentation incorporating information from the record review and diagnostic interview, and the research team reached diagnostic consensus.

Statistical Analysis

Descriptive statistics are presented in Table 1, consisting of means, standard deviations, measures of normality and internal consistency, and intercorrelations among study measures. A pair of hierarchical multiple regression analyses are presented next, predicting current (SSI-C; Table 2) and worst-episode suicide ideation (SSI-W; Table 3) with RFL-OA scores, controlling for age, sex, and depression. A logistic regression analysis is presented in Table 4, predicting history of suicidal behavior (ever vs. never) with RFL-OA scores, controlling for age and sex. The logistic regression was tested using Wald's chi-square statistic. All reported p values are two tailed, with α set at .05. Unadjusted between-group differences are reported in text comparing RFL-OA scores by sex (male vs. female), age (50–64 years vs. >65 years), education (<13 years vs. >13 years), and history of suicidal behavior (ever vs. never). Independent samples t tests were employed assuming equal variances, unless Levene's test for equality of variances was significant, and then, t tests were employed that do not assume equal sample variances.

Results

Descriptive statistics for study measures are presented in Table 1. Scores on measures of depression (BDI-II: M = 25.2, SD = 14.2, range = 0–59) and current (SSI-C: M = 6.1, SD = 9.4, range = 0–32) and worst-episode suicide ideation (SSI-W:

Table 1. Correlational Matrix for the Measures Examined in Study 2

		1	2	3	4	5
1.	RFL-OA	1.00	–.40***	–.42***	–.43***	–.04
2.	SSI-C		1.00	.24**	.49***	–.06
3.	SSI-W			1.00	.29***	.05
4.	BDI-II				1.00	.04
5.	MMSE					1.00
	M	265.3	6.1	16.4	25.2	27.5
	SD	74.5	9.4	12.2	14.2	2.4
	Skewness	–0.45	1.43	–0.08	0.24	1.11
	Kurtosis	–0.55	0.62	–1.50	–0.81	0.61
	α	.98	.83	.87	.94	

Notes: Correlations were computed using pairwise deletion. RFL-OA = Reasons for Living Scale—Older Adult version; SSI-C = Scale for Suicide Ideation for current episode; SSI-W = Scale for Suicide Ideation-worst; BDI-II = Beck Depression Inventory-II; MMSE = Mini-Mental State Examination; α = Cronbach's coefficient alpha.

†$p < .01$. *$p < .001$.

M = 16.4, *SD* = 12.2, range = 0–36) were somewhat higher than published norms for clinical samples (e.g., Beck et al., 1974, 1979, 1996, 1999). MMSE scores (*M* = 27.5, *SD* = 2.4, range = 20–30) were consistent with published norms (Crum, Anthony, Bassett, & Folstein, 1993). All measures evidenced acceptable internal consistency. Normality of the distributions of scores was generally supported by skewness and kurtosis statistics.

Potential associations among RFL-OA scores and demographic variables (sex, age, and education) were examined next. RFL-OA scores were not significantly different for men, *M* = 257.8, *SD* = 77.7, and women, *M* = 270.6, *SD* = 72.1, $F(1,179) = 1.31$, $p = .25$, $\eta^2 = .01$. Participants were divided into younger (50–64 years: *n* = 136) and older cohorts (65 years and older: *n* = 45), and compared with respect to RFL-OA total scores.

Table 2. Summary of a Hierarchical Multiple Regression Analysis Predicting Current Suicide Ideation (SSI-C) With Reasons for Living (RFL-OA), Controlling for Demographics (Age, Sex) and Depression (BDI-II) in Study 2 Participants

Variable	*B*	β	*t*
Step 1			
Intercept	21.836		5.15***
Age	–0.252	–.27	–3.71***
Sex	–1.511	–.08	–1.10
Step 2			
Intercept	6.112		1.36
Age	–0.117	–.12	–1.81†
Sex	–1.294	–.07	–1.05
BDI-II	0.297	.45	6.61***
Step 3			
Intercept	15.112		2.94**
Age	–0.109	–.12	–1.73†
Sex	–1.638	–.09	–1.36
BDI-II	0.234	.36	4.89***
RFL-OA	–0.029	–.23	–3.31***

Notes: $R^2 = .07$ (adjusted $R^2 = .06$), $F(2, 178) = 7.14$, $p < .001$ for Step 1; $R^2 = .26$ (adjusted $R^2 = .25$, $\Delta R^2 = .18$), $\Delta F(1, 177) = 43.74$, $p < .001$ for Step 2; $R^2 = .30$ (adjusted $R^2 = .29$, $\Delta R^2 = .04$), $\Delta F(1, 176) = 10.96$, $p < .001$ for Step 3. SSI-C = Scale for Suicide Ideation for current episode; RFL-OA = Reasons for Living Scale—Older Adult version; BDI-II = Beck Depression Inventory-II.

†$p < .10$. *$p < .01$. **$p < .001$.

Table 3. Summary of a Hierarchical Multiple Regression Analysis Predicting Worst-Episode Suicide Ideation (SSI-W) With Reasons for Living (RFL-OA), Controlling for Demographics (Age, Sex) and Depression (BDI-II) for Study 2 Participants

Variable	*B*	β	*t*
Step 1			
Intercept	34.611		6.18***
Age	–.311	–.39	–3.89***
Sex	1.012	–.02	–.22
Step 2			
Intercept	23.803		3.41***
Age	–0.216	–.18	–2.16*
Sex	1.376	.06	.72
BDI-II	0.202	.24	2.89**
Step 3			
Intercept	42.936		5.42***
Age	–0.217	–.18	–2.29*
Sex	0.862	.04	.47
BDI-II	0.059	.07	.80
RFL-OA	–0.059	–.36	–4.35***

Notes: $R^2 = .07$, adjusted $R^2 = .06$, $F(2, 150) = 5.54$, $p < .01$ for Step 1; $R^2 = .12$ (adjusted $R^2 = .10$, $\Delta R^2 = .05$), $\Delta F(1, 149) = 8.37$, $p < .05$ for Step 2; $R^2 = .22$ (adjusted $R^2 = .20$, $\Delta R^2 = .10$), $\Delta F(1, 148) = 18.91$, $p < .001$ for Step 3. SSI-W = Scale for Suicide Ideation for worst episode; RFL-OA = Reasons for Living Scale—Older Adult version; BDI-II = Beck Depression Inventory-II.

†$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

Table 4. Logistic Regression Analysis of Suicide Attempter Status as a Function of Age, Sex, and RFL-OA Scores for Study 2 Participants

Variable	*B*	*SE*	Wald statistic	*df*	Exp (*B*)	95% CI
Age	–0.07	0.02	11.69***	1	0.94	.902–.972
Sex	0.19	0.34	0.31	1	1.21	.625–2.322
RFL-OA	–0.01	0.00	7.24**	1	0.99	.990–.998
Constant	5.24	1.25	17.44***	1	187.95	

Notes: RFL-OA = Reasons for Living Scale—Older Adult version; exp (*B*) = estimated odds ratio; CI = confidence interval. Nagelkerke R^2 = .18.

$^{\dagger}p < .10$. $^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$.

The older cohort, *M* = 296.6, *SD* = 68.3, scored significantly higher on the RFL-OA than the younger cohort, *M* = 254.9, *SD* = 73.9, $F(1,179) = 11.15$, $p < .001$, $\eta^2 = .06$. Participant self-reported education was median split at 13 years, dividing participants into those who had not continued their education beyond high school (0–12 years: *n* = 76) and those who had done so (13+ years: *n* = 105). Findings supported an association between reasons for living and education, as the group with less formal education, *M* = 297.0, *SD* = 63.3, scored significantly higher on the RFL-OA than those with more education, *M* = 242.3, *SD* = 73.9, $F(1,179) = 27.21$, $p < .001$, $\eta^2 = .13$.

Reliability

The results indicated robust internal consistency for the RFL-OA (Cronbach's $\alpha = .98$).

Validity

Construct validity was assessed with zero-order correlations between RFL-OA total scores and the measures examined in the present study (see Table 1). Significant associations among RFL-OA scores and measures of current suicide ideation (SSI-C: $r = -.40$, $p < .001$), suicide ideation at the worst point in one's life (SSI-W: $r = -.42$, $p < .001$), and depression (BDI-II: $r = -.43$, $p < .001$) attested to the measure's convergent validity. Discriminant validity was indicated by nonsignificant correlations between the RFL-OA and both mental status (MMSE: $r = -.04$, $p = .64$) and physical functioning (IADL: $r = -.05$, $p = .55$; PSMS: $r = .02$, $p = .84$).

A pair of hierarchical multiple regression analyses was computed next exploring the incremental validity of the RFL-OA in predicting current and worst-episode suicide ideation scores above and beyond demographic variables (age and sex) and depression. Participant age and sex were entered as covariates on Step 1, depression scores were entered as a block on Step 2, and RFL-OA scores were entered on Step 3. RFL-OA scores explained significant added variability in current suicide ideation scores, above and beyond current depression scores, $R^2 = .30$, $\Delta R^2 = .04$, $\Delta F(1, 176) = 10.96$, $p < .001$, after controlling for the demographic variables (see Table 2). Similar findings emerged when worst-episode suicide ideation was treated as the dependent variable, $R^2 = .22$, $\Delta R^2 = .10$, $\Delta F(1, 148) = 18.91$, $p < .001$ (see Table 3).

Criterion-related validity for the RFL-OA was examined with lifetime history of suicidal behavior treated as the criterion. Participants were divided into two groups based on self-reported past suicidal behavior; those having engaged in suicidal behavior at any point in their life (*n* = 80) and those never having done so (*n* = 92). Nine participants did not provide sufficient information to assess their history of suicidal behavior. Those with histories of suicidal behavior, *M* = 244.4, *SD* = 74.9, reported significantly lower RFL-OA scores than those without, *M* = 281.8, *SD* = 72.0, $F(1,170) = 11.08$, $p < .001$, $\eta^2 = .06$. A logistic regression analysis was conducted next, examining whether RFL-OA scores predicted suicidal behavior status after controlling for participant age and sex (see Table 4). An omnibus test of the logistic regression model was significant, $\chi^2(df = 3, n = 172) = 24.4$, $p < .001$; age (Wald statistic = 11.7, $p < .001$) and RFL-OA scores (Wald statistic = 7.2, $p < .01$) both significantly differentiated the two groups. Odds ratios indicated that age, exp (*B*) = .94, and RFL-OA scores, exp (*B*) = .99, were associated with a slightly, although significantly, lower likelihood of having engaged in suicidal behavior.

Discussion

The foregoing two studies described the development and initial psychometric evaluation of the

RFL-OA. The initial development of the scale followed the procedures of those used by Linehan and colleagues (1983) in developing their original reasons for living Inventory. The age-related change in content validity is revealed by the current finding that only 28 of the 69 RFL-OA items, developed with older adults, were the same or similar to those of the original reasons for living, which were developed with younger adults. This finding is consistent with Koven and colleagues' (2001) finding of age-related changes in reasons for living from adolescence through older adulthood. Internal consistency was excellent.

The results of Study 2, in which the psychometric characteristics of the RFL-OA were examined with mental health patients, revealed strong reliability and validity. Internal consistency statistics supported the measure's internal reliability. Findings indicate strong construct validity for the RFL-OA, including significant convergence with measures of depression and of both current and worst-episode suicide ideation. RFL-OA scores further explained significant added variance in current and worst-episode suicide ideation scores above and beyond demographic variables (age and sex) and depression, providing potential evidence of the measure's incremental validity with respect to recent and remote suicidal thoughts. Nonsignificant associations between reasons for living and current mental and physical functioning attested to the measure's discriminant validity. RFL-OA scores distinguished those with a lifetime history of suicidal behavior, providing evidence for the measure's criterion-related validity. Future research is needed to demonstrate criterion validity in discriminating between clinical and nonclinical samples of older adults, and predictive validity with respect to the advent of suicidal thoughts and behavior among older adults with no such history.

The RFL-OA scores were negatively associated with recent and remote suicidal thoughts and distinguished between participants with respect to history of suicidal behavior. The findings support the potential value of exploring reasons for living when assessing and treating older adults who are at risk for suicide. This could be done as one element of an exploration of an individual's overall adaptive behaviors, psychological adjustment, and coping skills. The collective consideration of these more positive factors is supported by findings of salient associations between reasons for living and measures of psychological adjustment and coping (Range & Stringer, 1996).

Clinicians are encouraged to discuss both sides of the suicide equation; the reasons for wanting to take one's life, and one's psychological strengths and life-affirming reasons for not doing so (Heisel & Flett, 2004, 2008). Part of a good suicide risk assessment includes assessment of the presence of protective or resiliency factors, which complements the conventional assessment of pathology and risk factors. This is consistent with the work of suicide researchers and guidelines that have been developed for the assessment of suicide risk and the prevention of suicide (see http://www.ccsmh.ca/en/projects/suicide.cfm).

There are a few limitations to our findings that warrant consideration. The original item development sample could have been larger and more diverse in terms of ethnicity, race, religion, and geographic region. Thus, the generalizability of our results should be considered when interpreting our findings. Ultimately, the utility of the RFL-OA will have to be reaffirmed with additional research with diverse populations across a wide range of geographic regions. Another potential limitation was the possibility that the instructions to the participants, which referred to suicide, may have influenced their ratings. Ideally, participants should have been blinded to the purpose of the scale.

Future researchers may consider exploring the dimensional structure of the instrument and whether specific dimensions or items better differentiate between suicidal and nonsuicidal older adults. Findings that older adults scored significantly higher on the original reasons for living Inventory's moral objections subscale, and higher on the religion items of the RFL-OA, for example, suggest the relevance of attending to moral and spiritual reasons for living in older clientele (Miller et al., 2001); however, it is unclear whether these differences can be ascribed to aging or to cohort effects. Future research is needed to explore the stability of the measure over time and its sensitivity as a potential measure of clinical change. Clinical researchers are encouraged to attend to reasons for living and related adjustment and resiliency factors in promoting psychological well-being and in potentially protecting against suicide among older adults (Canadian Coalition for Seniors' Mental Health, 2006; Heisel & Flett, 2004, 2007, 2008).

Finally, The RFL-OA may also have promise for the field of positive psychology. Seligman and Csikszentmihalyi (2000) have aptly noted that we know little about how normal individuals thrive

when not faced with adversity. The RFL-OA could be used to begin exploring valued subjective experiences (e.g., happiness, hope, optimism, well-being) among older adults who are not at risk for suicide.

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Appendix
Sample Reasons for Living—Older Adults Scale Items

1	2	3	4	5	6
Extremely unimportant	Quite unimportant	Somewhat unimportant	Somewhat important	Quite important	Extremely important
It would hurt my family too much, I would not want them to suffer.					
My religious beliefs forbid it.					
I believe only God has the right to end life.					
I am afraid of going to hell.					
Tomorrow I may feel better.					
I want to see my grandchildren grow up.					
I love and enjoy my family too much and could not leave them.					
I have the hope that things will improve and the future will be happier.					
I still have many things left to do.					
My family depends on me and needs me.					
Life is too beautiful and precious to end it.					
I can always think of someone else who is worse off than I am.					
I am concerned about what others would think of me.					
I do not want to die.					
I consider it morally wrong.					