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The Reasons for living inventory for adolescents (RFL-A): validation in three adolescent populations

Joe S. Rich
University of Northern Iowa

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THE REASONS FOR LIVING INVENTORY FOR ADOLESCENTS (RFL-A):
VALIDATION IN THREE ADOLESCENT POPULATIONS

An Abstract of a Thesis

Submitted

In Partial Fulfillment

of the Requirements for the Degree

Specialist in Education

Joe S. Rich

The University of Northern Iowa

July 1999
ABSTRACT

This study is intended to examine further psychometric characteristics of the Reasons for Living Inventory for Adolescents (RFL-A), a self-report measure developed specifically for use with adolescents. Three separate groups were utilized in this study: a psychiatric suicidal group, a psychiatric inpatient non-suicidal group, and a non-clinical control group from a local laboratory school. Specifically, the factor structure, discriminant validity, internal consistency reliability, and convergent validity of the RFL-A total and subscales were examined.

Overall, results indicated that the five-factor structure that was identified by Osman et al. (1998) was replicated. Further, results showed that the measure demonstrated adequate internal consistency reliability on the total and of the subscales.
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VALIDATION IN THREE ADOLESCENT POPULATIONS

has been approved as meeting the thesis requirement for the degree of Specialist in Education.

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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIST OF TABLES</td>
<td>vi</td>
</tr>
<tr>
<td>Chapter</td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>INTRODUCTION AND PURPOSE</td>
</tr>
<tr>
<td></td>
<td>Introduction</td>
</tr>
<tr>
<td></td>
<td>Purpose of Study</td>
</tr>
<tr>
<td></td>
<td>Hypotheses</td>
</tr>
<tr>
<td>II</td>
<td>REVIEW OF THE LITERATURE</td>
</tr>
<tr>
<td></td>
<td>Suicidal Risk Factors</td>
</tr>
<tr>
<td></td>
<td>Demographic Risk Factors</td>
</tr>
<tr>
<td></td>
<td>Psychological Risk Factors</td>
</tr>
<tr>
<td></td>
<td>Psycho-social Risk Factors</td>
</tr>
<tr>
<td></td>
<td>Assessment of Suicide Ideation</td>
</tr>
<tr>
<td></td>
<td>Conclusion</td>
</tr>
<tr>
<td>III</td>
<td>METHOD</td>
</tr>
<tr>
<td></td>
<td>Participants and Procedure</td>
</tr>
<tr>
<td></td>
<td>Measures</td>
</tr>
<tr>
<td></td>
<td>Data Analysis</td>
</tr>
<tr>
<td>IV</td>
<td>RESULTS. ..................................................</td>
</tr>
<tr>
<td>------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Hypothesis #1. .........................................</td>
</tr>
<tr>
<td></td>
<td>Hypothesis #2. .........................................</td>
</tr>
<tr>
<td></td>
<td>Hypothesis #3. .........................................</td>
</tr>
<tr>
<td></td>
<td>Hypothesis #4. .........................................</td>
</tr>
<tr>
<td></td>
<td>Hypothesis #5. .........................................</td>
</tr>
<tr>
<td></td>
<td>Hypothesis #6. .........................................</td>
</tr>
<tr>
<td>V</td>
<td>DISCUSSION. ...............................................</td>
</tr>
<tr>
<td></td>
<td>REFERENCES. ................................................</td>
</tr>
<tr>
<td></td>
<td>APPENDIX A: SUICIDAL BEHAVIORS QUESTIONNAIRE. ....</td>
</tr>
<tr>
<td></td>
<td>APPENDIX B: BECK HOPELESSNESS SCALE. ...............</td>
</tr>
<tr>
<td></td>
<td>APPENDIX C: REASONS FOR LIVING INVENTORY FOR ...</td>
</tr>
<tr>
<td></td>
<td>ADOLESCENTS. ............................................</td>
</tr>
<tr>
<td></td>
<td>APPENDIX D: REASONS FOR LIVING INVENTORY FOR ......</td>
</tr>
<tr>
<td></td>
<td>ADOLESCENTS SCORING. ..................................</td>
</tr>
</tbody>
</table>
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ethnic Make-up of Participants by Group.</td>
<td>39</td>
</tr>
<tr>
<td>2. Factor Loadings for the RFL-A.</td>
<td>45</td>
</tr>
<tr>
<td>3. Item to Total Scale and Alpha for the RFL-A Sub Scales and Total</td>
<td>47</td>
</tr>
<tr>
<td>Scales</td>
<td></td>
</tr>
<tr>
<td>4. Means and Standard Deviations of the RFL-A Total Scales and</td>
<td>48</td>
</tr>
<tr>
<td>Sub Scales for the High School, Psychiatric Non-Suicidal and the</td>
<td></td>
</tr>
<tr>
<td>Psychiatric Suicidal Inpatient Groups.</td>
<td></td>
</tr>
<tr>
<td>5. Pearson Correlation Analysis.</td>
<td>50</td>
</tr>
</tbody>
</table>
CHAPTER 1
INTRODUCTION AND PURPOSE

Introduction

Over the past decade, the rate of suicides among adolescents has risen dramatically. It is now the third leading cause of death among the 15 to 21-year-old age group. For this reason, it is essential for the school psychologist to understand the issues that surround the assessment of suicidal ideation and behavior in clinical and nonclinical adolescent samples.

Due to the nature of self-report instruments, in that they are easy to administer as well as validate their psychometric properties, they are most commonly chosen by the school psychologist. Furthermore, the suicide literature suggests that adolescents are more likely to share private suicidal thoughts through this assessment procedure.

Upon examination of several items on self-report instruments including the Reasons for Living Inventory (RFL; Linehan, Goodstein, Nielsen, & Chiles, 1983), the Multi-Attitude Suicide Tendency Scale (MAST; Orbach et al., 1991), and the Suicide Probability Scale (SPS; Cull & Gill, 1988), it may be concluded that a self-report instrument that is specifically designed for the assessment of adolescent suicidal ideation and behavior is necessary. Specifically, most existing self-report instruments that have been designed for use with adults have simply been adapted for use with adolescent populations. Thus, the need to validate instruments specifically designed for this age group.
Purpose of Study

This study was designed to examine additional psychometric characteristics of the Reasons for Living Inventory for Adolescents (RFL-A; Osman et al., 1998), a new self-report instrument developed specifically for use with adolescents. Three separate groups were utilized in this study; a psychiatric suicidal group, a psychiatric inpatient non-suicidal group and a non-clinical control group from a local lab school. Specifically, the factor structure, internal consistency reliability, discriminant validity, and convergent validity of the RFL-A were examined.

Hypotheses

The following specific hypotheses were examined:

1. It was hypothesized that the five-factor model proposed by Osman et al. (1998) for the RFL-A would be replicated in the combined psychiatric suicidal, non-suicidal inpatients, and the high school groups.

2. It was hypothesized that, for each sample, the RFL-A total and subscales would show adequate internal consistency with corrected item-to-total scale correlations of .30 or greater, and Cronbach alpha value of .70 or greater.

3. It was hypothesized that the high school non-clinical group would score higher on the RFL-A total scale than the combined clinical suicidal inpatient and the psychiatric non-suicidal inpatients groups.
4. It was hypothesized that the non-suicidal inpatient group would have a higher score on the Suicide-Related Concerns (SRC) subscale than the suicidal inpatient group.

5. It was hypothesized that the high school control group would score higher on the Future Optimism (FO) subscale than the suicidal inpatient group.

6. It was hypothesized that the RFL-A total scale score would be negatively and significantly correlated with the BDI-II and the BHS total scale scores in the separate clinical and high school samples.
CHAPTER 2

REVIEW OF THE LITERATURE

Hopeless, depressed and lonely, many of us have felt this way at one time or another. However, there is an alarming trend among the adolescent population that is ending these negative feelings with a permanent solution. This solution is suicide. There is an increasing concern in the general population about the welfare of adolescents in light of the overwhelming number of adolescent suicides. Due to the growing number of adolescents that are choosing to take their own lives, it is important for both the scientific and nonscientific communities to examine those factors that contribute most to the causes and possible prevention of adolescent suicidal ideation and behavior.

Recently, the range of adolescent suicidal behavior has been explained on a continuum in the clinical literature. For example, Lewinsohn, Rohde, and Seeley (1996) have suggested that “Suicidal ideation can be defined as thoughts or wishes to be dead or to kill oneself; Suicide attempts are defined as self-inflicted behavior intended to result in death, and Suicide completions are self-inflicted death” (p. 26).

The true magnitude of suicidal behavior may not be known. The under-reporting of suicide has always been a concern to health care professionals. Religious implications, cultural expectations and family factors may be just a few of the major reasons for this under-reporting. Garland and Zigler (1993) suggest that many sudden deaths may be suicide; however, with no direct evidence such as a suicide note, sudden deaths are often ruled as accidents.
In the past decade, it has been reported that among the 15 to 24-year-old population, the incidence of suicide has increased 200% since 1960. Suicide is now the third leading cause of death among adolescents and young adults, ages 15 to 24-year-olds (National Center for Health Statistics, 1996). However, suicide as a potential cause of death, falls behind accidents and homicide (Garland & Zigler, 1993; Henry, Stephenson, Hanson, & Hargett, 1993; Lester, 1997). Lester (1997) reports that every 45 seconds someone attempts suicide, and every 16.9 minutes someone succeeds in killing himself or herself. The National Center for Health Statistics (NCHS; 1996) reports that in 1996, 11 deaths per 100,000 were attributed to suicide. The NCHS also reports there were 30,862 suicide completions in the United States in 1996.

The purposes of this literature review are to (a) examine and identify factors that contribute to suicidal ideation in adolescents, (b) evaluate the adequacy of assessment measures of suicidal behavior including self-report, projective, and interviewing techniques, and (c) examine the general psychometric properties of three well-developed self-report measures of suicidal behavior, the Reasons for Living Inventory (RFL; Linehan et al., 1983), the Multi-Attitude Suicide Tendency Scale (MAST; Orbach et al., 1991), and the Suicide Probability Scale (SPS; Cull & Gill, 1988)

Suicidal Risk Factors

It is important to understand both the positive and negative risk factors that contribute to suicidal ideation in adolescents. A solid understanding of these factors would aid in the construction of programs that would lead to the prevention of teen
suicide. It would also lead to the development and rigorous validation of useful instruments that could be used in the screening of adolescents for early signs of suicidal ideation.

**Demographic Risk Factors**

Suicide rates have been shown to vary with race, age, and gender. It has been reported that the rates of suicide completion rise in older age samples. The highest rates of suicide are among white males above the age of 85; the overall rate in this category suggests 68.2 deaths per 100,000 (suicide facts). It has also been reported that among the population of young Black males, the rate has increased 358% in the last 20 years (Garland & Zigler, 1993). Shaffer, Gould, and Hicks (1994) state that among the African American population, the rate of suicide completions are approximately half that of Whites. There are also reports that there is a substantial difference among genders when looking at the rates of both suicide completions and attempts.

**Gender Differences in Suicidal Ideation and Behavior**

It has been reported that in western countries females have a much higher rate of suicidal ideation and subsequent attempts. However, males typically have a much higher rate of completions than females (Canetto & Sakinofsky, 1997). Many investigators have looked into the apparent association of gender with suicidal ideation and attempts. Among the adolescent population it has been reported that females attempt suicide more often than males (Andrews & Lewinsohn, 1992; Garland & Zigler, 1993; Lester 1997). The National Institute of Mental Health (NIMH, 1996) reports that females attempt
suicide about 2 times to every 1 time that a male attempts suicide (Suicide Facts). However, they do go on to report that males complete suicide about 6.4 times more often than females. This higher rate of suicide completions may be due largely in part to the lethal methods that males employ. It has been shown that males tend to use methods such as shooting and hanging more often than females (Lewinsohn et al., 1996).

A recent study that examines the issue of gender as a risk factor for suicidal ideation was conducted by Peterson, Zhang, Santa Lucia, King, and Lewis (1996). This study utilized 1,436 consecutive psychiatric emergency room visits for children that were younger than 16 years of age. The data collection took place over a 10-year period. Participants were classified broadly as either possessing suicidal ideation, suicidal behavior, oppositional defiance or aggression. All of the subjects were interviewed by child psychiatric personnel between 1983 and 1994. Information that would characterize the individuals were recorded (i.e., race, gender, and age). It was reported that of the 1,436 participants, 429 exhibited either suicidal ideation or suicidal behavior.

The authors report that in the sample, when looking at gender, the odds that a female would exhibit suicidal ideation was 1.6 to 1 of a male. They also report that when examining suicide attempts, it is 2.2 times as likely that the attempter will be a female.

This study lends support to the notion that females are more likely than males to attempt suicide. However, the authors note that there are limitations to this study. They state that guideline for classification of subjects as suicidal (ideation or behavior),
oppositional defiant, or aggressive were very broad. They also state that the sample was only 11 to 16 year-old’s and the findings could not be generalized to larger and older population of adolescents.

There is another body of research that looks into the completion rate of suicide attempters. Grøholt, Ekeberg, Whichstrøm, and Haldorsen (1997) are researchers that have examined the issue of gender and suicide completions. In a 1997 study designed to look at suicide completion rates in youth in Norway between the years 1990 and 1992, the authors used a small sample of 127 children. The participants ranged in age from 10 to 19 years. The researchers examined all of the medical records that had been classified a suicide in the county to determine the characteristics of the attempters.

The researcher found that the suicide rate for boys ages 15 to 19 was 18.6 per 100,000 and that the suicide rate for females of the same age was only 6.3. They also reported that the completion rate for males ages 10 to 14 years old was 2.7 per 100,000. Moreover, they stated that the rate for females of the same age was only 0.5.

The findings of the studies by Grøholt et al. (1997) and Peterson et al. (1996) do lend additional support to the proposal that although females may possess more suicidal thought than males, the methods that males use may be a factor that weighs heavily on the difference in completion rates. Next, we will examine differences between boys and girls in terms of the methods used to attempt suicide.

Social-Cultural Risk Factors
Many factors tend to combine to make a child who he or she is. The great debate over the nature vs. nurture factors continues to escalate around the world. What is it that makes a child see the world as he or she does? When examining this question within the context of suicidal thought patterns, there is also some discussion as to what the contributing factors are. Many researchers have looked into the factors that color the thoughts and actions of today’s adolescents. It may be concluded that many factors working together make up a child. Social and cultural factors that have been shown to contribute to suicidal ideation in teens are as common as the movies we see, to the type of families that we have, and what religious background we come from. The present discussion will focus on five of this multitude of socio-cultural factors.

**Familial Factors**

There are many familial factors that may contribute to suicide in adolescents. First, there is the genetic influence that the parents have on the child. In the book, *Making Sense of Suicide*, Lester (1997) reviews a classic study by Kallman (1953). This study looked at the concordance rate of suicide when one twin had killed himself or herself. The study looked at monozygotic (MZ) and dizygotic (DZ) twin pairs. Monozygotic twins are twins that were spawn from the same ovum making the genetics of both twins identical. Dizygotic twins on the other hand come from two separate eggs thus, they have the genetic makeup siblings. If suicide had a genetic cause, one would expect to see the concordance rate among the MZ twins to be much higher than that of the DZ twins.
It was found that MZ twins did have a higher concordance rate than that of DZ twins. Lester warns that future studies need to be conducted in this area with twins that were separated early and raised in different social environments to control for social factors that may have contributed to the higher concordance rate in MZ twins.

Other familial factors that may contribute to suicidal ideation have also been examined in the literature. A recent study looked at the characteristics of child survivors of a family suicide (Pfeffer et al., 1997). The purpose of the study was to examine psychosocial characteristics of children and adolescents who had recently experienced a loss of parent or sibling due to suicide. The sample included 16 families with children ranging in age from 5 to 14 years. Each subject had experienced the loss of a relative within one year from the initial phase of the research. The prevalence and severity of suicidal ideation was assessed using the Spectrum of Suicidal and Assaultive Behavior Scale (Pfeffer, Plutchik, & Mizoruchi, 1983).

Results indicated that 25% of the subjects had reported symptoms that were associated with depression. Depressive symptoms are often associated with suicidal ideation. Moreover, the study reported that an alarming 31% of the families had at least one child that reported suicidal ideation (Pfeffer et al., 1997).

Tishler, McKenry, and Morgan (1981) also identified other family factors that further contribute to suicidal ideation among adolescents, including the rise in divorce rates and marital dissatisfaction of parents. Data were collected over a two-year period at a children’s hospital emergency room.
The results of the study showed that of the 108 adolescent suicide attempters, (mean age = 15.07 years), only 49% were living at home with both parents. They also reported that of the children that were living with both parents, 60% rated their parents’ marriages as poor, and 18% reported that at least one of their parents currently had a drinking problem. An additional factor that was demonstrated in this study was that 22% of the adolescents reported that someone in their family had attempted suicide.

The combination of findings from these studies suggest that the family makeup may present as a significant potential risk factor for adolescent suicidal behavior.

Psychological Risk Factors

There has been a large amount of research into the area of mental illness and suicide. There is some research that suggests that the incidence rate of mental illness in those who commit suicide are as high as 94% (Lester, 1997).

In a recent study, examiners reviewed the relationships between a series of risk and associated factors for serious suicide attempts (Beautrais, Joyce, & Mulder, 1996). The factors the researchers chose to look at were childhood experiences and mental disorders. The sample was composed of 129 individuals that had made at least one serious suicide attempt.

Individuals were included in the study if they required treatments such as antidotes for drug overdoses, telemetry, or repeated tests or investigations. In addition, individuals who made suicide attempts with a high risk of fatality, such as hanging or gunshot, and who were hospitalized for more than 24 hours but who did not meet the above treatment criteria were also included in the sample of serious suicide attempters. (p. 1175)
The participants were comprised of individuals that ranged in age from 13 to 24 years of age. All of the attempters had made their attempts between September 1, 1991 and May 31, 1994. The researchers also utilized a control sample that consisted of 153 individuals that were selected from an electoral roll to represent the gender and age distribution of the attempters’ sample.

The examiners used a modified version of the Structured Clinical Interview for DSM-III-R to make the DSM-III-R (American Psychiatric Association, 1994) Diagnoses. One of the results of the study was that of the 129 individuals that had made a serious attempt of suicide, 89.2 % met DSM-III-R criteria for at least one psychological disorder. This is compared with only 31.4% of the control sample.

**Depression**

Of the psychological factors that have been shown to contribute to suicidal ideation, none may be as important as the symptoms of depression. Many studies have looked at the area of depression and the part that it plays in adolescent suicidal ideation. It has been reported that many of the people that attempt and succeed at suicide are shown to have symptoms associated with depression (Baker, 1995; de Man, Leduc, & Labreche-Gauthier, 1993; Flanagan & Flanagan, 1995; Garland & Zigler, 1993; Lester, 1997; Myers et al., 1991; Rotheram-Borus, Ferns, & Walker, 1996).

Individuals who are depressed tend to see the world as an uninviting place to be. They also believe that their situation is not going to improve. The thought of remaining in a life situation that is so unbearable with no hope of getting better becomes too much
for the individual to deal with (Battin, 1995). The clinical literature suggests, however, that most people do not attempt suicide while in the depths of depression. Lester (1997) observed that individuals with severe depressive symptoms may not have the energy to commit suicide. Lester also states that it is most likely that the individual would try and kill himself or herself when the depression begins to lift.

Other research has been shown to support the idea that depression is an important risk factor in the study of suicidal ideation.

For example, in a recent study designed to assess the suicidal behavior and risk factors of middle-class adolescents, Rotheram-Borus et al. (1996) utilized a sample of 1,616 predominately middle-class adolescents who were seeking crisis services. The sample was 60% male, 66% were white, 26% were African American, 5% Native American, and 2% were Mexican American. Approximately 96% of the sample was between the ages of 11 and 17 years of age. A large sample of 1,616 participants were interviewed at a large community based nonresidential crisis-counseling center (55%) and at two residential shelters (45%). Depression was assessed using 21 items adapted from the K-SADS (Chambers et al., 1985) and the Center of Epidemiological Studies of Depression Scales (Radloff, 1977). Results showed that twice as many suicide attempters as non-attempters presented symptomatology that were associated with depression.

Metha and McWhirter (1997) attempted to examine the relationship between depression and suicide along with several other risk factors in gifted adolescents. The
purposes of the study were: (a) to evaluate differences if any, between gifted and non-gifted adolescents in the number and perceived stressfulness of life change events, depression, and suicide ideation, (b) to examine the relationship between stress, depression, and suicide ideation in gifted and non-gifted adolescents, and (c) to examine the impact of stress, depression, drug and alcohol use, and parent death in suicide ideation among gifted and non-gifted students. The sample included 72 students (30 males and 42 females) in seventh and eighth grades from the inner-city of a large southwestern city. Of the participants, 47% were considered gifted and 53% were considered non-gifted. The groups were equitable in socioeconomic status, gender, race, and age. The Adolescent Life-Change Event Scale (ALCES; Ferguson, 1981) was utilized as a measure of life-change events and perceived stressfulness, as well as the Beck Depression Inventory (BDI; Beck, Ward, Mendelsohn, & Erbaugh, 1961) as a measure of depression severity. Finally, suicide ideation was measured by summing the responses on Item 20 of the ALCES within the previous one year, Item 20 of the ALCES any time prior to the last year, and Item 9 of the BDI. All measurements were administered to each participant individually.

Results pertinent to this review indicated that stress and depression were significantly correlated with suicide ideation in both the gifted and non-gifted subgroups. In the gifted subgroup, a correlation of .51 was obtained between depression and suicide ideation. Among the non-gifted subgroup, a correlation of .60 was obtained between depression and suicide ideation. These results support previous literature on the relation
between depression and suicide but are inconsistent with previous literature which indicates a difference between gifted and non-gifted students. However, the authors noted that a major limitation of the study was the small sample size. But, they also noted that the data should remain useful to those concerned about students, depression, and suicide.

Depressive symptoms may also correlate with suicide ideation through other related factors. For example, Olverholser, Adams, Lehnert, and Brinkman (1995) investigated the indirect link between self-esteem and suicide, as self-esteem is correlated with depression. The sample included 542 adolescents; approximately 254 were inpatients. The inpatient subgroup included 108 males and 146 females with a mean age of 15.19 years. The remaining 288 participants were recruited from two local public high schools and one private high school. Measures included in the study were the Rosenberg Self Esteem Scale (RSE; Rosenberg, 1965) the Children’s Depression Inventory (CDI; Kovacs, 1985) and the Hopelessness Scale for Children (HSC; Kazdin, French, Unis, Esveldt-Dawson, & Sherick, 1983).

Results indicated that participants with low self-esteem were more likely to have previously attempted suicide. The authors claim that this finding provides an indirect link between depression and suicide, since self-esteem has been negatively correlated with depression in previous literature (Olverholser et al., 1995).
Another correlate of depression that has been shown to be related to suicide is hopelessness. Much research also has been done in the area of hopelessness. Next, the literature relating hopelessness to adolescent suicidal behavior will be examined.

**Hopelessness**

One of the most powerful correlates of adolescent suicidal behavior is hopelessness. Hopelessness is defined as negative beliefs towards oneself and the future. It has been concluded that, for adolescents, hopelessness is an even more powerful predictor of suicidal behavior than depression (Steer, Kumar, & Beck, 1993).

Cotton and Range (1996) attempted to examine the relationship between suicidal ideation and feelings of hopelessness. Further, the authors examined adolescents' attitudes of life and death.

Drawing upon the work by Orbach and his colleagues (1991) in Israel, the researchers reported that children and adolescents possess four basic attitudes toward life and death: (a) attraction to life, (b) repulsion by life, (c) attraction to death, and (d) repulsion by death. While some of these constructs may appear to overlap, they are truly distinct emotions. Attraction to life (AL) is the degree to which one's life experiences have been satisfying or pleasurable. Repulsion by life (RL) is the degree to which one's life experiences have been dissatisfying or unpleasurable. Attraction to death (AD) is the degree to which an individual fantasizes about death, perceiving it to be more exciting than life. Finally, repulsion by death (RD) is the degree to which an individual feels fear or anxiety about death.
Cotton and Range (1996) hypothesized that AL, RL, AD, RD, and hopelessness would contribute significantly to suicide ideation. It was also hypothesized that suicidal adolescents would exhibit more RL and AD attitudes, and less AL and RD attitudes, than their nonsuicidal counterparts. Finally, it was hypothesized that hopelessness would be positively correlated with suicidality, RL, and AD, and negatively correlated with AL.

Participants included 84 high school students and 15 psychiatric inpatient adolescents. The sample included 64 females and 35 males. The sample consisted of 8 African Americans, 75 Caucasians, and 1 Asian American. Assessment measures included the Suicidal Behaviors Questionnaire (SBQ; Linehan & Nielsen, 1981) and the Multi-Attitude Suicide Tendency Scale for Adolescents (MAST; Orbach et al., 1991). Results indicated that suicidal adolescents have less AL, and more RL and AD, supporting previous research. Hopelessness was negatively associated with AL, and positively correlated with RL, and RD. Finally, hopelessness and RL were found to be the best predictors of suicide.

Further research has provided additional support that hopelessness is a specific and distinct factor contributing to adolescent suicidal behavior. The purpose of the study conducted by Steer et al. (1993) was to evaluate whether hopelessness is related to suicidal ideation in adolescents when depression is controlled statistically in the analysis.

Subjects included 108 adolescents ranging in age from 12 to 17 from a psychiatric inpatient unit of a general hospital in New Jersey. The sample consisted of
38 males and 70 female subjects. Of the patients, 62 reported at least one past suicidal attempt.

Assessment measures included the Beck Depression Inventory (BDI; Beck et al., 1961) to measure the presence and severity of depressive symptoms. The Beck Hopelessness Scale (BHS; Beck, Weissman, Lester, & Trexler, 1974) was utilized to determine the patients’ negative expectancies about the future. The Beck Anxiety Inventory (BAI; Beck, Epstein, Brown, & Steer, 1988) was used to assess the severity and presence of anxiety symptoms. Finally, the Beck Suicidal Ideation (BSI; Beck & Steer, 1991) scale was administered to assess suicide ideation.

Results of this study suggested that when gender, ethnicity, age, diagnosis, history of past suicide attempts, current level of depression, and anxiety symptoms were controlled for, a significant association of hopelessness and suicidal ideation were shown. These findings provided satisfactory support for previous research conducted by Beck (1986) with adult inpatients.

Problem Solving Deficits

The years of adolescence are filled with turmoil. Family conflict, peer pressure, and expectations to perform well in school are all factors that contribute to the daily stress of a teen. Some researchers have examined the ways in which adolescents perceive and solve problems. Researchers have found, for example, that the methods teens use to problem solve may be useful predictors of suicidal behavior. It has been shown that
adolescents with poor ability to solve most everyday problems tend to have higher rates of suicidal ideation.

In a study by Adams and Adams (1996), 80 adolescent psychiatric inpatients, ages 12 to 18 years, were evaluated to determine if problem solving was a positive predictor of suicidal ideation. Specifically, the purpose of this study was to examine if (a) negative life events are related to higher levels of depression, and (b) higher levels of depression are related to specific negative perceived problem solving alternatives in adolescent psychiatric patients. The second general goal of the study was to determine whether adolescent psychiatric patients with negative life events who frequently tend to use negative problem solving alternatives are more likely (a) to be depressed and (b) to focus on suicidal ideation. Data for this study were collected as part of a regular psychiatric evaluation. A code was assigned to each subject to provide confidentiality. Several measures were administered including the Life Events Survey (LES; Adams & Adams, 1991), the Reynolds Adolescent Depression Scale (RADS; Reynolds, 1986), the Problem Solving Alternatives Scale (PSAS; Adams & Adams, 1996) and the Reynolds Suicidal Ideation Questionnaire (SIQ; Reynolds, 1987).

These authors found that negative problem solving orientation was highly associated with both depression and suicidal ideation. They also found that adolescent psychiatric patients with negative life events and negative problem solving alternatives were at the greatest risk for depression and suicidal ideation.
Yang and Clum (1994) hypothesized that problem-solving deficits, life stress, and social support would predict depressive symptoms, hopelessness and suicide ideation. The sample included 101 international students (73 male and 28 female) at a southeastern university in the United States. The assessment measures included in the study were the Modified Scale for Suicide Ideation (MSSI; Miller, Norman, Bishop, & Dow, 1986), Zung's Self-Rating Depression Scale (SRDS; Zung, 1965), the Beck Hopelessness Scale (BHS; Beck et al., 1974), the Life Experiences Survey (LES; Sarason, Johnson, & Siegel, 1978), the Modified Means-End Problem-Solving Procedure (MMEPS; Schotte & Clum, 1987) and the UCLA Loneliness Scale (UCLA; Russell, Peplau, & Ferguson, 1978). Participants completed all measures.

Results of the study indicated that problem-solving skills had significant indirect effects on suicide ideation. The researchers found that those participants who generated fewer alternatives to problems and more cons than pros for alternatives were also found to have higher levels of suicidal ideation. These findings provided support for previous investigations in the area of problem solving deficits.

Sadowski and Kelley (1993) investigated whether interpersonal problem solving deficits would be related to suicidal behavior in adolescents. The sample consisted of 60 adolescent inpatients from several state psychiatric facilities as well as 30 junior and senior high school students. Of the 60 inpatients, 30 were included in the suicidal group and 30 patients were included in the nonattempting group. The total sample included 57 female and 33 male adolescents ranging in age from 12 to 18 years with a mean age of
The sample was 88% White and 12% Black. The study utilized the Social Problem-Solving Inventory (SPSI; D'Zurilla & Nezu, 1990), the Hopelessness Scale for Children (HSC; Kazdin et al., 1983), the Reynolds Adolescent Depression Scale (RADS; Reynolds, 1986), the Youth Self-Report (YSR; Achenbach & Edelbrock, 1987), the Child Behavior Checklist (CBCL; Achenbach & Edelbrock, 1983; the RADS-Parent Version (RADS-P; Reynolds, 1986), the Suicide Intent Scale (SIS; Beck, Beck, & Kovacs, 1975), and the Risk-Rescue Rating Scale (Weisman & Worden, 1972). The researchers administered the CBCL, RADS-P, and a demographic questionnaire to a parent of each participant. Each of the participants completed the remaining assessment measures.

Results of the study indicated that the suicide attempter group had greater difficulty generating alternatives to problems than the control participants. Further, the suicide attempter group demonstrated greater difficulty in making decisions as well as greater difficulty implementing solutions. However, the analyses indicated that there were no specific correlations between suicide intent and any of the dimensions of social problem-solving skills. However, suicidal participants in general had more difficulty than their non-distressed peers with social problem-solving tasks.

Psycho-Social Risk Factors

With the increase in the adolescent suicide rate, it is of the utmost importance to understand the factors that contribute to suicidal behavior. Many factors have been identified as useful predictors of adolescent suicidal behavior. Recently, it has been
reported that as many as 94% of all suicide completers have some history of being
diagnosed with mental illness (Lester, 1997). Besides mental illness, other risk factors
have been noted to contribute to adolescent suicidal behavior. For example, Andrews
and Lewinsohn (1992) conducted a study designed to examine the factors that were
present in adolescents that had history of past suicide attempts. This study was made up
of 1,710 adolescents that ranged in age from 14 to 18 years old. The participants were
students at high schools throughout the state of Oregon. Of the 1,710 adolescents, 7.1%
had attempted suicide at some point in their lives. Young women had a significantly
higher rate of attempts with 10.1% than did males with only 3.8%. The sample also
provided some insight into other risk factors that correlate highly with suicidal behavior.
For example, as noted previously, these findings suggested that being raised by a single
parent was one of the risk factors that increased the likelihood that one would display
suicidal ideation, although it is probable that it was the absence of father from the home
that presented as a risk factor. It was also reported that the father was likely not to have a
college degree. Other factors examined in this research included history of past suicidal
attempts and mental disorders. It was also reported that approximately 80% of the teens
who had attempted suicide met the Diagnostic and Statistical Manual of Mental
Disorders criteria (DSM-IV; American Psychiatric Association, 1994) for at least one
psychological disorder. Disorders with the strongest association were depression,
substance abuse, and dependency disorders.
A second study (Lewinsohn, Rohde, & Seeley, 1992) was performed on the original data from the Oregon Research Institute in 1992. Further re-analyses of the original data were to concentrate on the psychosocial risk factors that are uniquely associated with past suicide attempts. The sample was the same 1,710 students ages 14 to 18. This study was unique in that it controlled for the current depression level. Participants were paid for their participation in the study. Participants were interviewed with the Schedule for Affective Disorders and the Schizophrenia for School-Aged Children (K-SADS; Chambers et al., 1985). The authors reported that the interview was adapted to provide information on the presence of DSM-III-R psychiatric disorders. It was reported that interrater reliability was good with a kappa index greater than 0.80.

These researchers found that several factors were associated with suicidal behavior. Those factors that seemed to be the most highly associated with past suicide attempts included internalizing and externalizing problem behaviors, past psychiatric disorders, depressotypic cognition, coping, school problems, health problems and gender. The researchers reported that the probability of engaging in a subsequent attempt of suicide increases with the combination of factors that the adolescent may possess. The researchers also noted that females tended to present more of the psychosocial risk factors and to be more susceptible to those factors. Females that had made previous attempts also had more problems with family conflicts than males.
Assessment of Suicide Ideation

The seriousness and permanence of suicide in the adolescent population calls for a careful examination of the assessment procedures used to assess and identify those who may be contemplating suicide. Some of the commonly used assessment tools have included projective measures, clinical interviews, and self report instruments.

Projective Measures

One controversial method sometimes utilized for identifying those individuals with serious suicidal ideation is the use of projective techniques. Unlike the clinical interview, or self-report measures, projective tests are an indirect method of assessment. The purpose of the projective test is to get the participant to discuss something unrelated to himself or herself. The discussion is later analyzed and inferences are made about the participant's personality using relevant background information and responses for the given tests. Proponents of projective measures argue that this indirect method greatly increases the honesty of the participant, and taps the unconscious as well as the conscious thoughts of the participant. Two such measures are the Rorschach (Rorschach, 1921/1942) and the Thematic Apperception Test (TAT; Morgan & Murray, 1935).

The Rorschach Inkblot Test consists of ten bilaterally symmetrical, mirror-imaged if folded in half, inkblots which are printed on separate cards. The test includes five black and white cards; two black, white, and red cards; and three multicolored cards. No test manual, administration procedures, scoring or interpretation instructions are included with this early version of the test.
In the assessment of suicide ideology, several different interpretation methods have been used with the Rorschach. Eyman and Eyman (1991) reviewed some of the interpretation techniques and clinical research. Among the interpretation methods are the single sign approach, and color shading response approach. However, Eyman and Eyman (1991) observed that in some cases no relationship exists between suicidal behavior and the responses given to select cards. Another promising interpretation method was developed by Exner (1978) known as the Adult Suicide Constellation method. After it was discovered that the adult method was not developmentally appropriate for children and adolescents, the Children’s Suicide Constellation method was developed for youth ages 8-18. However, Eyman and Eyman (1991) reported that no clinical studies support the use of the method as it is unable to help the clinician discriminate suicidal from non-suicidal groups.

Another commonly used projective measure is the Thematic Apperception Test (TAT; Morgan & Murray, 1935). The measure consists of 30 picture cards portraying a variety of scenes. The participant is asked to tell what events might have led up to the scene on the card, what is happening at that moment, and what might happen next. Participants are also asked to perceive what the people portrayed in the cards might be thinking and feeling. Eyman and Eyman (1991) report that little research has been completed utilizing the TAT to assess suicidal risk. However, the few studies that have been conducted, demonstrate that the TAT failed to differentiate suicidal from nonsuicidal groups.
Clinical Interviews

A commonly used technique for identifying those individuals with serious suicidal ideation is the clinical interview. Advantages of the interviewing process include direct contact with the individual, the opportunity to ask questions about factors that contribute to suicide which may not be apparent to others, and access to those students who are in need of immediate help. Reynolds and Mazza (1994) report that youth are generally reliable reporters of their own suicidal behaviors which may or may not have been previously reported to peers and family members. However, disadvantages to the clinical interview include that some individuals are not comfortable discussing their suicidal thoughts (Kaplan et al., 1994). Further, the interviewing process is time consuming and may be cumbersome in some systems level assessment. Finally, clinical research has demonstrated that the process of interviewing adds little to information that may be gained from self-report measures. Specifically, Kaplan and colleagues (1994) investigated the utility of clinical interviews when compared with self-report measures. Participants included 125 outpatients at the Anxiety and Depression Clinic of Montefiore Medical Center in Bronx, New York. Participants completed several self-rating surveys prior to being interviewed. Results indicated that when participants were asked the same questions, there was no discrepancy between the information gained from the interview and the information gained from the self-report measure. In fact, these researchers found that questions pertaining to recent suicide ideation were disclosed more often on self-report measures than in the clinical interview.
Self Report Measures

Previous research has indicated that self-report measures are useful in the assessment of suicidal behavior. For example, research suggests that self-report measures obtain reliable information about recent suicidal ideation as well as risk factors that may not be openly discussed (Kaplan et al., 1994). In addition, self-report measures are easily administered, are less time consuming than either projective measures or clinical interviews, and may be administered in the schools by personnel other than the psychologist. Finally, self-report measures are useful for group administration which may prove to be essential in the schools during a time of crisis. Specifically, Brent and colleagues (1992) demonstrated that exposure to suicide in the schools lead to a sharp increase in suicide ideation and attempted suicides. A group administration of suicide self-report measures may be helpful to the school psychologist during this period of systems level crisis intervention. Three commonly used self-report measures of adolescent suicidal ideation and behaviors that will be reviewed include: (a) the Multi-Attitude Suicide Tendency Scale (MAST; Orbach et al., 1991), (b) the Suicidal Probability Scale (SPS; Cull & Gill, 1988), and (c) the Reasons for Living Inventory (RFL; Linehan et al., 1983).

The Multi-Attitude Suicide Tendency Scale (MAST)

One of the self-report measures utilized for suicide assessment in adolescents is the Multi-Attitude Suicide Tendency Scale (MAST; Orbach et al., 1991). This instrument is designed to measure tendencies toward and repulsion by life and death in
adolescents. This self-report measure was developed based on the assumption that conflicting feelings regarding life and death mediate suicide.

The MAST contains 30 items that may be administered to a group or an individual. This self-report measure asks participants to rate their responses on a five-point Likert-type scale addressing issues related to life and death. Participants, for example, are asked to respond to the following statements: “My problems can’t be solved,” and “I like to do many things.” Participants indicate how they feel ranging from strongly agree to strongly disagree.

The four factors, identified by Orbach et al. (1991), were extracted utilizing principle components factor analysis with the orthogonal rotation. Specifically the factors include attraction to life, repulsion by life, attraction to death, and repulsion by death. The study included 90 Israeli participants and was replicated utilizing 165 Israeli normal, suicidal and psychiatric participants ages 15 through 18.

Osman and colleagues (1993, 1994) have investigated further the factor structure of the MAST utilizing an exploratory principal components factor analysis with a varimax rotation, and an eigenvalue equal to or greater than one criteria. Items less than .45 were not retained on a factor in the analyses. Participants of the study included 178 males and 238 females ages 18 to 24. Participants were recruited from an introductory psychology course at a medium sized Midwestern university.

Results of the study supported Orbach’s findings that the MAST is made up of four factors, with the exception of Items 8 and 19 which loaded at less than .45 on the
attraction to death factor. As a result of these findings, Osman and colleagues (in press) designed a study specifically to investigate this psychometric issue, by utilizing a more sensitive confirmatory factor analysis.

Participants of this study included 180 adolescents ages 14 to 17 years, from an adolescent unit of a psychiatric inpatient state hospital. Assessment measures included the Minnesota Multiphasic Personality Inventory for adolescents (MMPI-A; Butcher et al., 1992), a background information questionnaire and a packet of self-report measures. The packet included the following assessment measures: the Suicidal Behaviors Questionnaire (SBQ; Linehan & Nielsen, 1981), the MAST, the Suicide Probability Scale (SPS; Cull & Gill, 1988), the Brief Reasons for Living Inventory for Adolescents (BRFL-A; Osman et al., 1996), the Piers-Harris Children’s Self-Concept Scale (PHCS; Piers, 1984), and the Brief Symptom Inventory (BSI; Derogatis, 1992). Confirmatory factor analysis was conducted to assess the fit of each model. Within the four-factor model, Items 8 and 19 were removed from the attraction to death factor.

Results indicated that there is support for the four-factor structure proposed by Orbach and colleagues (1991) and Osman et al., (1993, 1994). As predicted, Items 8 and 19 were found to have relatively low loadings on the attraction to death factor. The authors concluded that these two items may be “tapping another dimension of suicide (e.g., religious and beliefs related to life-after-death)” (Osman et al., 1994).

Osman and colleagues (1993) also investigated the concurrent validity of the MAST. Pearson partial correlation coefficients were calculated comparing the MAST
factors and related measures of suicidal ideation/behavior and suicidal risk/tendency. Specifically, the MAST was compared with the Suicidal Behaviors Questionnaire (SBQ; Linehan & Nielsen, 1981) and the Suicide Probability Scale (SPS; Cull & Gill, 1988). After controlling for general psychopathology, results indicated that attraction to life, repulsion by life, and attraction to death factors were significantly correlated with suicidal ideation, threats, and likelihood from the SBQ scales. The attraction to life and repulsion by life factors were low to moderately correlated with all four SPS scales. The negative correlations indicate that as one's attitude toward life becomes more positive, feelings of hopelessness, suicide ideation, negative self-evaluation, and hostility tend to decrease.

Finally, Osman and colleagues (1994) examined further whether the MAST would discriminate suicide ideology from other psychopathology by utilizing a psychiatric suicidal inpatient group, along with other high school nonsuicidal and psychiatric adolescent controls. Three of the four factors did adequately discriminate the three groups.

Suicide Probability Scale

The Suicide Probability Scale (SPS; Cull & Gill, 1988) is a 36-item self-report measure designed to tap into attributes and behaviors associated with suicidal risk. The items in this instrument ask participants to rate responses between 1 and 4, with 1 being that symptoms are experienced “none or little of the time” and 4 being that they are experienced “most or all of the time.” For example, participants are asked to respond to
the following statement: "I think of things too bad to share with others." The SPS was
designed for adults and adolescents over the age of 14.

In a study by Tatman, Greene, and Karr (1993) the factor structure of the SPS
was examined as compared with findings from the original investigation. The study
included 217 high school students ages 15-19 years with a mean age of 16.2. The overall
internal consistency of the SPS was strong at .90.

In the original study, Cull and Gill (1982) identified four factors for the SPS.
Specifically, the factors were labeled: hopelessness, suicidal ideation, negative self-
evaluation, and hostility. Further research (Tatman et al., 1993) identified four factors as
well. However, the fourth factor, which included two items, had only modest loadings at
.47 and .50. These findings led the researchers to dispose of the four factor solution. A
second principle components factor analysis was conducted with an extraction criteria of
three factors. Results indicated that the factors had adequate reliability. More
specifically, suicidal despair had an alpha coefficient of .90; the second factor, angry
frustration, had an alpha coefficient of .80; and the third factor, low self-efficacy, had an
alpha coefficient of .79. Tatman et al. (1993) concluded that the discrepancies among
factors existed due to the differences among samples. The differing factor structure for
adolescents leads researchers to recommend that the measure be used with caution until
further research may be conducted (Range & Knott, 1997).

Range and Knott (1997) reported it was originally claimed that the SPS could
adequately discriminate between nonclinical children, psychiatric patient children, and
suicide-attempting children. However, in the study conducted by Tatman et al. (1993), the SPS failed to differentiate between the adolescent sample utilized, and the inpatient psychiatric sample utilized by Cull and Gill (1982).

The SPS may be a useful tool for educators as it assesses the probability of suicide in youth. However, researchers have demonstrated the necessity for further research with this instrument in adolescent samples.

Reasons for Living Inventory

One self-report measure which differentiates itself from others is the Reasons for Living Inventory (RFL; Linehan et al., 1983). This measure taps into life affirming attributions based on reasons for living from non-suicidal adults. The RFL was designed for an adult population and utilizes 48 positively worded items. The items ask participants to rate the importance of each reason for not committing suicide on a six-point Likert-type scale. Participants, for example, are asked to respond to the following statements: “I care enough about myself to live,” and “I am afraid of the unknown.” Participants rate their responses from 1,(not at all important) to 6,(extremely important).

In the initial study of 431 adults, Linehan et al., (1983) identified a six-category factor structure including: (a) survival and coping beliefs, (b) responsibility to family, (c) child-related concerns, (d) fear of suicide, (e) fear of social disapproval, and (f) moral objections related to suicide. The Cronbach alpha coefficients for the six factors ranged from .72 to .89, indicating moderate reliability (Lewinsohn, Garrison, Langhinrichsen, & Marsteller, 1989).
However, more recently, researchers began to question whether the RFL was appropriate for use with adolescents. Cole (1989) investigated the psychometric properties of the RFL using a general adolescent population of 168 females and 117 males, grades 10 through 12. An additional sample of 85 juvenile delinquents (65 males and 14 females, ages 12 to 18 years) were also utilized. Participants completed the RFL and several other measures in random order including the Children's Hopelessness Scale (CHS; Kazdin, Rodgers, & Colbus, 1986), the Children's Depression Inventory (CDI; Kovacs, 1985), the Edwards Social Desirability Scale (EDS; Edwards, 1970), and the Marlowe-Crowne Social Desirability Scale (MCSD; Crowne & Marlowe, 1964). Cole (1989) eliminated the three items originally designed to assess child-related concerns.

Results of the study indicated a significant correlation between the six factors and measures of hopelessness, depression, and social desirability (Cole, 1989). The author reported that the moderate correlation with social desirability suggest some degree of discriminant validity. Finally, the RFL subscales related to suicide when depression and hopelessness were controlled for, providing evidence for construct validity. This study lends support to the psychometric validity of the RFL but proposes that some items may not be appropriate for youth.

Osman and colleagues (1993) investigated the psychometric properties of the RFL for use with young adults. Participants included 407 (128 male and 279 female) students from introductory psychology courses. Assessment measures included the Suicide Probability Scale (SPS; Cull & Gill, 1988), and the Suicidal Behaviors
Questionnaire (SBQ; Linehan & Nielsen, 1981). Results supported Linehan et al.'s (1983) study indicating that the RFL items loaded on six distinct factors. However, the authors reported that only three of the factors were useful in predicting suicide risk and general psychopathology. Specifically, the fear of suicide, fear of social disapproval, and survival and coping beliefs subscales were significantly correlated with the SPS hopelessness subscale. Further, the survival and coping beliefs was significantly correlated with three of the four SPS subscales.

More recently, Osman et al., (1996) used a modified version of the original RFL, the Brief Reasons for Living Inventory for Adolescents (BRFL-A; Osman et al., 1996), with a mixed adolescent sample. The BRFL-A is made up of 14 items derived from five factors. Participants included 115 high school students, 40 adolescents from a short-term adolescent unit of a state psychiatric hospital and 105 college freshmen from introductory psychology courses at a large Midwestern university. An additional sample included 120 consecutive admissions to an adolescent unit of an inpatient psychiatric state hospital. Assessment measures for Sample 1 included a brief demographic questionnaire, the RFL and several other self-report measures used for another study. Sample 2 completed a brief demographic questionnaire, the BRFL-A, the Suicide Probability Scale (SPS; Cull & Gill, 1988), the Brief Symptom Inventory (BSI; Derogatis, 1992), and the Minnesota Multiphasic Personality Inventory-Adolescents (MMPI-A; Butcher et al., 1992).

Results of the factor analysis of the items indicated that the BRFL-A was made up of five factors. Specifically the factors included: fear of social disapproval (FS),
moral objections (MO), survival and coping beliefs (SCB), responsibility to family (RF), and fear of suicide (FS). Alpha coefficients for the factors were as follows: FS .80; MO .79; SCB .76; RF .74; FS .67. Alpha coefficients for the BRFL-A overall score was found to be .75.

The authors concluded that the BRFL-A had adequate discriminant validity as it discriminated psychiatric inpatients with various levels of suicidal ideation from appropriate controls. Furthermore, adolescents with only moderate to extensive histories of suicidal ideation scored lower on the BRFL-A. The authors noted that these results are only preliminary and need to be examined in future investigations.

The Reasons for Living Inventory for Adolescents (RFL-A)

Osman et al. (1998) recently developed a measure that is specifically designed for the adolescent population. The Reasons for Living Inventory for Adolescents (RFL-A) is a measure that consists of 32 items that were specifically generated by adolescents.

Participants included 442, 9th-12th grade students from two medium sized Midwestern high schools. The sample included 221 males and 221 females. Participants completed the RFL-A and several other self-report measures including the Suicide Probability Scale (SPS; Cull & Gill, 1982); The Brief Symptoms Inventory (BSI; Derogatias, 1992); The Beck Hopelessness Scale (BHS; Beck et al., 1974); The Suicidal Behaviors Questionnaire (SBQ; Linehan & Nielsen, 1981). A confirmatory factor analysis was utilized to identify a five-factor model. Alpha coefficients for the five factors were, Future Optimism (FO) = .94, Suicide Self-Related Concerns (SRC) = .94,
Family Alliance (FA) = .95, Peer Acceptance and Support (PAS) = .92, Self Acceptance (SA) = .95, with item to total scale correlations for each factor scale .40 or greater.

Conclusion

This review has examined issues that are related to adolescent suicide. Specifically, this review has provided (a) an overview of factors that contribute to suicidal ideation in adolescents and (b) the psychometric properties of self-report measures that are commonly used in the assessment of suicidal ideation in adolescents. After careful examination of the current literature, it is clear that questions still remain.

Throughout this review of the literature, the following self-report measures were examined: (a) The Reasons for Living Inventory (RFL; Linehan et al., 1983), (b) the Mutli-Attitude Suicide Tendency Scale (MAST; Orbach et al., 1991), (c) the Suicide Probability Scale (SPS; Cull & Gill, 1988), and (d) the Reasons for Living Inventory for Adolescents (RFL-A; Osman et al., 1998). Upon examination of these instruments, it may be concluded that a self-report measure which is specifically designed for the assessment of adolescent suicidal ideation and behavior is necessary. Three of the self-report assessment instruments reviewed were designed for use with adults, and have been simply extended to the adolescent population. Recently, Osman et al. have developed a measure specifically for adolescents, tapping into those specific factors contributing to adolescent suicidal ideation and behavior. However, further validation of the measure is needed.
In conclusion, this review has serious implications for the school psychologist. It is essential for the school psychologist to recognize factors that contribute to adolescent suicide, and to have an expertise in assessing for suicidal ideation and behaviors.

Furthermore, the school psychologist should have an understanding of the research which has examined adolescent suicide.
CHAPTER 3

METHOD

Participants and Procedure

Participants included adolescent boys and girls ranging in age from 14 to 17 years and grades 9-12. Data were collected from both a Midwestern laboratory high school and a large Midwestern psychiatric inpatient institution.

The high school control group included 154 boys and girls from a laboratory school in Midwestern Iowa. Boys (n = 86; Mean age = 16.1 years, SD = 1.19) and girls (n = 68; Mean age = 15.7 years, SD = 1.10) did not differ significantly in age, t (152) = 2.26, p = .19. Participants ranged in age from 14-18 years, grades 9-12. The participants were primarily Caucasian (see Table 1). Two potential participants were dropped from the sample because they did not meet the age requirement, ages 14-18 years.

The psychiatric inpatient group also included 154 boys and girls from an adolescent unit of a large state psychiatric facility. Boys (n = 86; Mean age = 15.7 years, SD = .93) and girls (n = 68; Mean age = 15.7 years, SD = 1.0) did not differ significantly in age, t (152) = .42 p = .67. Participants ranged in age from 14-18 years, grades 9-12 and were primarily Caucasian (see Table 1). The hospital serves patients from several counties in the eastern part of a Midwestern state. We obtained permission from the hospital administrators to conduct the study. Participation was voluntary and consent for participation was obtained from each potential participant. The participants
completed the questionnaire packets anonymously within 2 weeks of admission to the unit. The sample included 86 males and 68 females.

Table 1
Ethnic Make-up of Participants by Group

<table>
<thead>
<tr>
<th></th>
<th>G1 High School N = 154</th>
<th>G2 Non-Suicidal N = 70</th>
<th>G3 Suicidal N = 84</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caucasian</td>
<td>118 (77%)</td>
<td>58 (83%)</td>
<td>71 (85%)</td>
</tr>
<tr>
<td>African American</td>
<td>16 (10%)</td>
<td>3 (4%)</td>
<td>7 (8%)</td>
</tr>
<tr>
<td>Asian American</td>
<td>5 (3%)</td>
<td>2 (3%)</td>
<td>1 (1%)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>4 (3%)</td>
<td>3 (4%)</td>
<td>1 (1%)</td>
</tr>
<tr>
<td>Other</td>
<td>11 (7%)</td>
<td>4 (6%)</td>
<td>4 (5%)</td>
</tr>
</tbody>
</table>

Three self-report questionnaires (discussed below) were assembled into a packet for data collection purposes. The questionnaires selected were: the Reasons for Living Inventory for Adolescents (RFL-A; Osman et al., 1998), the Beck Hopelessness Scale (BHS; Beck et al., 1974), and the Beck Depression Inventory-II (BDI-II; Beck, Steer, & Brown, 1996).

Participants were assigned to three distinct groups including a non-suicidal inpatient group, a suicidal inpatient group, and a high school non-suicidal group. Suicidality in the inpatient sample was determined by the admission status of the psychiatric inpatient adolescents. Participants who were admitted to the adolescent unit
because of suicide attempts were placed in the suicidal group, participants admitted for other psychiatric disorders (e.g., conduct disorder) were included in the non-suicidal inpatient group.

This study utilized a combined clinic and nonclinic sample of 308 participants to carry out the analyses. An initial examination of the data required that five participants from the high school control group be dropped, due to incomplete questionnaire packets. Further, 16 participants from the high school control group were dropped due to past self-reported suicidal threats or attempts.

**Measures**

*The Reasons for Living Inventory for Adolescents (RFL-A)*. The RFL-A (Osman et al., 1998) is a self-report questionnaire that is used in the assessment of suicidal ideation. This 32-item measure was developed for and by adolescents. The RFL-A was developed to tap into adaptive reasons for living rather than negative risk factors that are typically used to determine suicidal ideation and behavior. The RFL-A is scored by computing mean scores for the total and factor scales. For example, the total or summed score of the 32 items is divided by 32. A higher score on the RFL-A total scale suggests a higher occurrence of reasons for not considering suicide as an alternative. This procedure can also be performed for any of the five sub-scales. Thus summed score for the subscale would be divided by the number of items in that scale.

*The Beck Hopelessness Scale (BHS)*. The BHS (Beck, Weissman, Lester, & Trexler, 1974) is a 20-item self-report measure that was designed to assess thoughts and
feelings of hopelessness about the future. The BHS is a frequently used measure of pessimism in adolescents and adults (Lewinsohn, Garrison, Langhinrichsen, & Marsteller, 1989). The BHS is scored by reverse scoring 10 items and simply summing the 20 true items. With the scale being dichotomous, it has made it hard to evaluate the factor structure of the instrument. The BHS has been used extensively with adults and has been shown to possess a high level of internal consistency with coefficients in the .90s. The BHS has also been shown to have high levels of concurrent validity when compared with clinicians’ ratings of hopelessness. Beck (1986) found that the BHS was consistent with clinical ratings of suicidal ideation and could consistently discriminate suicide attempters from non-attempters.

The Beck Depression Inventory-II (BDI-II). The BDI-II (Beck, Steer, & Brown, 1996) is a 21-item self-report questionnaire that was designed to assess the overall severity of depression. The items are rated on a 4-point scale ranging from 0 to 3. Participants are asked to respond to each item regarding their thoughts and feelings for only the last two weeks. The instrument is scored by summing the highest ratings for each of the 21 items. The psychometric properties of the BDI-II have been evaluated in several studies. Specifically, Steer and Clark (1997) found that the measure has shown a high internal consistency reliability among college students. The construct validity of the BDI-II was confirmed by Steer, Ball, Ranieri, and Beck (1999). Osman et al. (1997) extended the work of Beck, Steer, and Brown (1996) by evaluating the factor structure of the BDI-II with young adults ages 17-25 years.
Data Analysis

Hypothesis #1: It was hypothesized that the five factor RFL-A structure identified by Osman et al. (1998) would be replicated in the combined suicidal and non-suicidal inpatient as well as the high school control group.

To test this hypothesis, only data from completed questionnaires were included and, all 32 RFL-A items were retained in the analysis consistent with Osman et al. An exploratory principle-axis factor analysis with a varimax rotation method was utilized. Both the scree plot and Eigenvalue greater than one criteria were used to determine the number of factors to extract. Only items loading .40 or greater were retained on a factor. The original factor names were retained because the factors were consistent with those reported in Osman et al. (1998).

Hypothesis #2: It was hypothesized that the RFL-A total and factor scales would show adequate internal consistency with corrected item-to-total scale correlations of .30 or greater (factor scales), and alpha indices of .70 or greater (total scale).

To test this hypothesis, both the corrected item-to-total scale correlation and the Cronbach alpha indices were computed for each factor and total RFL-A.

Hypothesis #3: It was hypothesized that the high school non-clinical group would score higher on the RFL-A total scale than the combined clinical suicidal inpatient and the psychiatric non-suicidal inpatients groups.

To test this hypothesis, a one-way analysis of variance (ANOVA) was conducted using the groups as independent variables and the RFL-A as the dependent variable.
Hypothesis #4: It was hypothesized that the non-suicidal inpatient group would have a higher score on the Suicide-Related Concerns (SRC) subscale than the suicidal inpatient group.

To test this hypothesis, a one-way analysis of variance (ANOVA) was conducted using the inpatient groups as the independent variable and the SRC subscale as the dependent variable.

Hypothesis #5: It was hypothesized that the high school control group would score higher on the Future Optimism (FO) subscale than the suicidal inpatient group.

To test this hypothesis, a one-way analysis of variance (ANOVA) was conducted using the groups as the independent variables and the FO subscale as the dependent variable.

Hypothesis #6: It was hypothesized that the RFL-A total score would be negatively and significantly correlated with the BDI-II and the BHS total scale scores in the separate clinical and high school samples.

To test this hypothesis, Pearson moment correlation analyses were conducted, using the RFL-A, the BDI-II and the BHS scores within each group.
Hypothesis 1

It was hypothesized that the five factor RFL-A structure reported by Osman et al. (1998) would be replicated in the combined suicidal and non-suicidal inpatient, and high school control groups. To investigate whether the five factor structure identified by Osman et al. (1998) would be replicated in the combined suicidal and non-suicidal inpatients and high school control groups, the following analyses were conducted. An exploratory principle-axis factor analysis (PAF) with a Varimax rotation method was conducted. Only data from completed questionnaires were included, and all 32 RFL-A items were retained in the analysis consistent with Osman et al. Both the scree plot and Eigenvalue greater than one criteria were used to determine the number of factors to retain in the analysis. Both the scree plot and the Eigenvalues greater than one criteria suggested a five-factor structure. Only items loading .40 or greater were retained on a factor. The original factor names were retained because previous findings were replicated. Specifically, results from the PAF replicated the five-factor structure that was reported by Osman et al. The factor loadings for each of the 32 RFL-A items are presented in Table 2.
### Table 2

**Factor Loadings for the RFL-A**

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1 (FO)</th>
<th>Factor 2 (FA)</th>
<th>Factor 3 (SRC)</th>
<th>Factor 4 (PAS)</th>
<th>Factor 5 (SA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>28</td>
<td>.80</td>
<td>.21</td>
<td>.21</td>
<td>.19</td>
<td>.23</td>
</tr>
<tr>
<td>19</td>
<td>.79</td>
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<td>.17</td>
<td>.17</td>
<td>.22</td>
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<tr>
<td>15</td>
<td>.78</td>
<td>.18</td>
<td>.16</td>
<td>.23</td>
<td>.32</td>
</tr>
<tr>
<td>25</td>
<td>.71</td>
<td>.37</td>
<td>.14</td>
<td>.18</td>
<td>.26</td>
</tr>
<tr>
<td>4</td>
<td>.70</td>
<td>.19</td>
<td>.13</td>
<td>.14</td>
<td>.24</td>
</tr>
<tr>
<td>11</td>
<td>.69</td>
<td>.23</td>
<td>.17</td>
<td>.28</td>
<td>.15</td>
</tr>
<tr>
<td>13</td>
<td>.65</td>
<td>.31</td>
<td>.20</td>
<td>.23</td>
<td>.29</td>
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<tr>
<td>24</td>
<td>.17</td>
<td>.81</td>
<td>.18</td>
<td>.16</td>
<td>.27</td>
</tr>
<tr>
<td>1</td>
<td>.17</td>
<td>.80</td>
<td>.16</td>
<td>.14</td>
<td>.11</td>
</tr>
<tr>
<td>7</td>
<td>.24</td>
<td>.77</td>
<td>.23</td>
<td>.20</td>
<td>.11</td>
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<tr>
<td>30</td>
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<td>.23</td>
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<td>.14</td>
<td>.23</td>
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<tr>
<td>12</td>
<td>.27</td>
<td>.71</td>
<td>.20</td>
<td>.18</td>
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<tr>
<td>23</td>
<td>.25</td>
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<td>.16</td>
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<tr>
<td>32</td>
<td>.10</td>
<td>.17</td>
<td>.88</td>
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<td>21</td>
<td>.11</td>
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<td>.86</td>
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</tr>
<tr>
<td>20</td>
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<td>.20</td>
<td>.85</td>
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<td>.16</td>
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<tr>
<td>26</td>
<td>.19</td>
<td>.16</td>
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<td>8</td>
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<td>2</td>
<td>.22</td>
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<td>.68</td>
<td>.13</td>
<td>.16</td>
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<tr>
<td>10</td>
<td>.23</td>
<td>.13</td>
<td>.14</td>
<td>.84</td>
<td>.10</td>
</tr>
<tr>
<td>5</td>
<td>.11</td>
<td>.13</td>
<td>.07</td>
<td>.83</td>
<td>.15</td>
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<td>.08</td>
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<td>16</td>
<td>.26</td>
<td>.15</td>
<td>.21</td>
<td>.69</td>
<td>.34</td>
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<td>.18</td>
<td>.22</td>
<td>.74</td>
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<tr>
<td>9</td>
<td>.30</td>
<td>.23</td>
<td>.24</td>
<td>.19</td>
<td>.72</td>
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<td>.39</td>
<td>.31</td>
<td>.16</td>
<td>.23</td>
<td>.69</td>
</tr>
<tr>
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<td>.27</td>
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<td>.15</td>
<td>.21</td>
<td>.65</td>
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<td>13</td>
<td>.49</td>
<td>.32</td>
<td>.16</td>
<td>.18</td>
<td>.54</td>
</tr>
</tbody>
</table>

**Note.** FO = Future Optimism; SRC = Suicide Related Concerns; FA = Family Alliance; PAS = Peer Acceptance and Support; SA = Self Acceptance; RFL-A = Reasons for Living Inventory for Adolescents
Hypothesis 2

It was hypothesized that the RFL-A total and factor scales would show adequate internal consistency with corrected item-to-total scale correlations of .30 or greater (factor scales), and Cronbach alpha indices of .70 or greater (total scale). To test this hypothesis, the internal consistency reliability for each scale was examined. For the analysis involving the corrected item-to-total scale correlation, only items within each scale were used. The analysis involving Cronbach alpha for the total scale used all 32 items. Results of the corrected item-to-total scale correlations are discussed first followed by the Cronbach alpha indices. The analysis involving the FO scale ranged from .72 to .86; for the FA scale, the scores ranged from .75 to .85; the scores for the SRC scale ranged from .71 to .88; the PAS scores ranged from .73 to .82; and the SA scores ranged from .71 to .85. The results show that the corrected item-to-total scale correlation was adequate for each RFL-A scales. Alphas for the FO, FA, SRC, PAS, and SA scales were .94, .94, .94, .92, and .93, respectively. The internal consistency for all 32 items ranged from .50 to .77 with an overall Cronbach alpha of .96. Overall, the hypothesis that the RFL-A total and factor scales would show adequate internal consistency with corrected item-to-total scale correlations of .30 or greater (factor scales) and alpha of .70 or greater (total scale) was supported (results are reported in Table 3).
Table 3
Item to Total Scale and Alpha for the RFL-A Sub Scales and Total Scale

<table>
<thead>
<tr>
<th>Scale</th>
<th>Corrected-Item Scale (range)</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. FO</td>
<td>(.72 - .86)</td>
<td>.94</td>
</tr>
<tr>
<td>2. SRC</td>
<td>(.71 - .88)</td>
<td>.94</td>
</tr>
<tr>
<td>3. FA</td>
<td>(.75 - .85)</td>
<td>.95</td>
</tr>
<tr>
<td>4. PAS</td>
<td>(.73 - .82)</td>
<td>.92</td>
</tr>
<tr>
<td>5. SA</td>
<td>(.71 - .85)</td>
<td>.95</td>
</tr>
<tr>
<td>Total Scale</td>
<td>(.50 - .77)</td>
<td>.96</td>
</tr>
</tbody>
</table>

Note. FO = Future Optimism; SRC = Suicide Related Concerns; FA = Family Alliance; PAS = Peer Acceptance and Support; SA = Self Acceptance.

Hypothesis 3

The differences between the high school group and the psychiatric inpatients were examined. It was hypothesized that the high school non-clinical group would score higher on the RFL-A total scale than the combined suicidal inpatient and the psychiatric control inpatient groups. To conduct this analysis, the mean scores for each of the subscales were computed due to the unequal number of items in each of the subscales. A one-way analysis of variance was conducted. The dependent variable included scores on the RFL-A with the independent variable being the high school group and the psychiatric inpatients. Results of the analysis showed that the high school group scored significantly higher (Mean = 4.7, SD = .91) than the combined psychiatric inpatient group.
(Mean = 4.4, SD = 1.2) on the RFL-A total scale, $F(1, 306) = 6.72, p < .01$. This result supports the original hypothesis that the high school group would score higher on the RFL-A than the psychiatric inpatient samples (Means and Standard Deviations are presented in Table 4).

Table 4
Means and Standard Deviations of the RFL-A Total Scales and Sub Scales for the High School, Psychiatric Non-Suicidal and the Psychiatric Suicidal Inpatient Groups

<table>
<thead>
<tr>
<th>Scale</th>
<th>G1 High School N = 154</th>
<th>G2 Non-Suicidal N = 70</th>
<th>G3 Suicidal N = 84</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>1. FO</td>
<td>5.1</td>
<td>0.9</td>
<td>5.2</td>
</tr>
<tr>
<td>2. SRC</td>
<td>4.0</td>
<td>1.6</td>
<td>5.0</td>
</tr>
<tr>
<td>3. FA</td>
<td>4.8</td>
<td>1.1</td>
<td>4.9</td>
</tr>
<tr>
<td>4. PAS</td>
<td>4.8</td>
<td>1.2</td>
<td>5.2</td>
</tr>
<tr>
<td>5. SA</td>
<td>4.9</td>
<td>1.0</td>
<td>5.1</td>
</tr>
<tr>
<td>RFL-A</td>
<td>4.7</td>
<td>0.9</td>
<td>5.1</td>
</tr>
</tbody>
</table>

Note. FO = Future Optimism; SRC = Suicide Related Concerns; FA = Family Alliance; PAS = Peer Acceptance and Support; SA = Self Acceptance; RFL-A = Reasons for Living Inventory for Adolescents.

Hypothesis 4

It was hypothesized that the non-suicidal inpatient group would have a higher score on the Suicide-Related Concerns (SRC) subscale than the suicidal inpatient group.
To conduct this analysis, the mean scores for each of the subscales were computed due to the unequal number of items in each of the subscales; a one-way ANOVA on the SRC scale was performed with the dependent variable as scores on the SRC subscale. The independent variables included the non-suicidal inpatient group and the suicidal inpatient group. As predicted, the non-suicidal inpatient group scored significantly higher (Mean = 5.0, SD = 1.3) on the SRC subscale than the suicidal inpatient group (Mean = 3.2, SD = 1.7), $F(1, 152) = 52.54, p < .001$. These findings support the original hypothesis that the non-suicidal inpatient group would have a higher score on the SRC subscale than the suicidal inpatient group (Means and Standard Deviations are presented in Table 4).

**Hypothesis 5**

It was hypothesized that the high school control group would score higher on the Future Optimism (FO) subscale than the suicidal inpatient group. To test this hypothesis, the mean scores for each of the subscales were computed due to the unequal number of items in each of the subscales, and a one-way analysis of variance was conducted on the FO subscale. The independent variables included the high school control group and the suicidal inpatient group. As expected, the high school control group obtained significantly higher mean scores, ($M = 5.1, SD = .94$) on the FO subscale than the suicidal inpatient group ($M = 4.1, SD = 1.3$), $F(1, 236) = 37.64, p < .001$ (Means and Standard Deviations are presented in Table 4).
Hypothesis 6

It was hypothesized that the RFL-A total score would be negatively and significantly correlated with the BDI-II and the BHS total scale scores in the separate clinical and high school samples. The Pearson moment correlation analysis revealed a negative and significant correlation between the RFL-A and the BDI-II (results are presented in Table 5). It was also shown that the BHS was negatively and significantly correlated with the RFL-A (results are presented in Table 5).

Table 5
Pearson Correlation Analysis

<table>
<thead>
<tr>
<th></th>
<th>BDI-II</th>
<th>BHS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. High School Control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BHS</td>
<td>.50**</td>
<td></td>
</tr>
<tr>
<td>RFL-A</td>
<td>-.45**</td>
<td>-.56**</td>
</tr>
<tr>
<td>2. Non-Suicidal Inpatients</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BHS</td>
<td>.64**</td>
<td></td>
</tr>
<tr>
<td>RFL-A</td>
<td>-.40**</td>
<td>-.66**</td>
</tr>
<tr>
<td>3. Suicidal Inpatients</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BHS</td>
<td>.60**</td>
<td></td>
</tr>
<tr>
<td>RFL-A</td>
<td>-.33**</td>
<td>-.38**</td>
</tr>
</tbody>
</table>

Note. BDI-II = Beck Depression Inventory II; BHS = Beck Hopelessness Scale; RFL-A = Reasons for Living Inventory for Adolescents. ** p < .01
Suicide is the third leading cause of death among 12 to 21 year olds in most Western countries. Despite these alarming facts, a review of the literature suggests that there are few psychometrically sound self-report instruments that attempt to assess and predict adolescent suicidal behavior. Due to the seriousness and finality of suicide, it is essential that psychologists, clinicians, and school personnel be able to identify students in need of help. This study was designed in direct response to the need for accurate assessment of suicidal students. Specifically, the purpose of this study was to replicate the findings of Osman et al. (1998) and to further validate the Reasons for Living Inventory for Adolescents (RFL-A). Also, this study was designed to determine if the RFL-A has the ability to discriminate between the high school control group, the suicidal and the non-suicidal psychiatric inpatient groups.

As hypothesized, the five-factor solution, as previously identified by Osman et al. (1998), was replicated in the combined sample of psychiatric inpatients and high school control groups. This suggests that the specific items cluster around the factors that have been reported in the literature. As a result, we retained the original five factor names as follows: future optimism (FO), suicide related concerns (SRC), family alliance (FA), peer acceptance and support (PAS), and self-acceptance (SA).

As hypothesized, the total RFL-A and factor scales showed satisfactory internal consistency with corrected item-to-total scale correlations of .30 or greater (factor
scales), and alpha indices of .70 or greater (total scales). This provides support that the RFL-A has adequate internal consistency reliability.

Next, the differences between the high school group and the psychiatric inpatients were examined. As expected, the high school group scored significantly higher on the RFL-A than the psychiatric inpatients, showing that the RFL-A can discriminate between non-suicidal adolescent and psychiatric inpatients. Also, as predicted, the non-suicidal inpatient group scored significantly higher on the SRC subscale when compared with the suicidal inpatient group, thus showing that even the RFL-A subscale has the ability to differentiate among suicidal and non-suicidal inpatients.

Also lending support to the ability of the RFL-A to discriminate between groups, the high school control group obtained significantly higher mean scores on the FO subscale than the suicidal inpatient group.

The RFL-A total score was negatively and significantly correlated with the BDI-II and the BHS total scale scores in the separate clinical and high school samples, suggesting that adolescents with more reasons for living present significantly lower levels of depression and hopelessness. It should be noted that both hopelessness and depression have been commonly linked to suicidal ideation and behaviors in the literature.

It is noted that there are limitations to the present study. First, since the data were collected from a non-clinic (high school) and a clinic (psychiatric inpatient) populations, the generalizability of these findings to other populations may need to be evaluated.
Secondly, because of the racial makeup of the participants (77% of the high school and 84% of the inpatient were Caucasian), populations with different ethnic makeup needs to be evaluated. Also, because of the manner in which the data were collected from the high school population (group administration), the possibility of socially desirable answers on the measures may be considered.

Overall, this study has provided support for the use of the RFL-A as a reliable and valid measure in these samples. Further research with this instrument could someday provide a measure that could be used by the psychologist for a quick screening device for use with adolescents. The clinical utility of the RFL-A can best be recognized when the school psychologist uses multiple assessment information to actively intervene. For example, adolescents who report low adaptive reasons for living could be offered immediate treatment services. Items on the RFL-A could serve as initial areas of focus in the therapeutic process. We note, however, that any active form of intervention for suicidal ideation and behavior should be undertaken only after a comprehensive assessment has been carried out by trained mental health professionals.
REFERENCES


APPENDIX A

SUICIDAL BEHAVIORS QUESTIONNAIRE
SUICIDAL BEHAVIORS QUESTIONNAIRE

1. Have you ever thought about or attempted to kill yourself?

0 = Never
1 = It was a brief passing thought
2 = I have had a plan at least once to commit suicide
3 = I have attempted to kill myself, and really hoped to die

2. How often have you thought about killing yourself on the past year?

1 = Never 2 = Rarely (1 time) 3 = Sometimes (2 times)
4 = Often (3-4 times) 5 = Very Often (5 or more times)

3. Have you ever told someone that you were going to commit suicide, or that you might do it?

1 = No
2 = At one time, during a short period of time
3 = More than once, during more than one period of time

4. How likely is it that you will attempt suicide someday?

0 = Never 1 = No chance at all
2 = Rather unlikely 3 = Unlikely
4 = Likely 5 = Rather likely
6 = Very likely
APPENDIX B

BECK HOPELESSNESS SCALE
BECK HOPELESSNESS SCALE

This questionnaire consists of 20 statements. Please read the statements carefully one by one. If a statement describes your attitude for the past week including today, circle (T) indicating TRUE next to the statement. If the statement does not describe your attitude, circle (F) indicating FALSE next to this statement. Please be sure to read each statement carefully.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>1. I look forward to the future with hope and enthusiasm.</th>
</tr>
</thead>
<tbody>
<tr>
<td>T</td>
<td>F</td>
<td>2. I might as well give up because there is nothing I can do about making things better for myself.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>3. When things are going badly, I am helped by knowing that they can not stay that way forever.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>4. I can't imagine what my life would be like in ten years.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>5. I have enough time to accomplish the things I want to do.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>6. In the future, I expect to succeed in what concerns me most.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>7. My future seems dark to me.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>8. I happen to be particularly lucky, an I expect to get more of the good things in life than the average person.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>9. I just can't get the breaks, and there's no reason I will in the future.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>10. My past experiences have prepared me well for the future.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>11. All I can see ahead of me is unpleasantness rather than pleasantness.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>12. I don't expect to get what I really want.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>13. When I look ahead of the future, I expect that I will be happier than I am now.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>14. Things just don't work out the way I want them to.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>15. I have great faith in the future.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>16. I never get what I want, so it's foolish to want anything.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>17. It's very unlikely that I will get any real satisfaction in the future.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>18. The future seems vague and uncertain to me.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>19. I can look forward to more good times than bad times.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>20. There's no use in really trying to get anything I want because I probably won't get it.</td>
</tr>
</tbody>
</table>
APPENDIX C

REASONS FOR LIVING INVENTORY FOR ADOLESCENTS
Reasons for Living Inventory for Adolescents (RFL-A):

This questionnaire lists specific reasons that people sometimes have for not committing suicide if the thought were to occur to them or if someone were to suggest it to them. Please read each statement carefully, and then choose a number that best describes how important each reason is to you for not committing suicide. Use the scale below to respond to each item. Please use the whole range of choices so as not to rate only at the middle (2, 3, 4, 5) or only at the extremes (1, 6).

How important to you is this reason for not committing suicide?

1 = Not at all important
2 = Quite unimportant
3 = Somewhat unimportant
4 = Somewhat important
5 = Quite important
6 = Extremely important

1. Whenever I have a problem, I can turn to my family for support or advice.
2. It would be painful and frightening to take my own life.
3. I accept myself for what I am.
4. I have a lot to look forward to as I grow older.
5. My friends stand by me whenever I have a problem.
6. I feel loved and accepted by my close friends.
7. I feel emotionally close to my family.
8. I am afraid to die, so I would not consider killing myself.
9. I like myself just the way I am.
10. My friends care a lot about me.
11. I would like to accomplish my plans or goals in the future.
12. My family takes the time to listen to my experiences at school, work, or home.
13. I expect many good things to happen to me in the future.
15. I am hopeful about my plans or goals for the future.
16. I believe my friends appreciate me when I am with them.
17. I enjoy being with my family.
18. I feel that I am an OK person.
19. I expect to be successful in the future.
20. The thought of killing myself scares me.
21. I am afraid of using any method to kill myself.
22. I can count on my friends to help if I have a problem.
23. Most of the time, my family encourages and supports my plans or goals.
24. My family cares about the way I feel.
25. My future looks quite hopeful and promising.
26. I am afraid of killing myself.
27. My friends accept me for what I really am.
28. I have many plans I am looking forward to carrying out in the future.
29. I feel good about myself.
30. My family cares a lot about what happens to me.
31. I am happy with myself.
32. I would be frightened or afraid to make plans for killing myself.
APPENDIX D

REASONS FOR LIVING INVENTORY FOR ADOLESCENTS SCORING
Scoring the Reasons for Living Inventory for Adolescents (RFL-A)

(Osman et al., 1998)

5. **Family Alliance (FA) Scale (7 items)**

   Calculate mean ratings for Items: 1, 7, 12, 17, 23, 24, 30.

6. **Suicide-Related Concerns (SRC) Scale (6 items)**

   Calculate mean ratings for Items: 2, 8, 20, 21, 26, 32.

7. **Self-Acceptance (SA) Scale (6 items)**

   Calculate mean ratings for Items: 3, 9, 14, 18, 29, 31.

8. **Peer-Acceptance and Support (PAS) Scale (6 items)**

   Calculate mean ratings for Items: 5, 6, 10, 16, 22, 27.

9. **Future Optimism (FO) Scale (7 items)**

   Calculate mean ratings for Items: 4, 11, 13, 15, 19, 25, 28.

**RFL-A Total Score:** Calculate mean Ratings for Items 1 to 32.