THERAPEUTIC RECREATION JOURNAL Vol. 35, No. 4, 333–347, 2001

Measuring Resiliency in Youth: The Resiliency Attitudes and Skills Profile

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The importance of documenting outcomes of recreation interventions for youth has become quite clear in recent years. Competition for public funding for community-based interventions, requirements for reimbursement, and stakeholders' demands for "results" are pushing agencies to document outcomes. Fundamental to this outcome orientation is the availability of useful tools to assess program impacts. To be "useful," measures must be simple, easy to administer and interpret, appropriate for the target population, and relevant to the intended benefits of the intervention. The purpose of this paper is to describe the development and validation of a self-report instrument designed to measure resiliency in youth for recreation and other social services.

KEY WORDS: *Recreation, Resiliency, Youth, Program Assessment, Outcome Measures*

The vital importance of documenting outcomes of recreation interventions for youth has become quite clear in recent years (e.g., Baldwin, 2000; Hurtes, Allen, Stevens, & Lee, 2000; Lobo & Olson, 2000). Initial funding of such programs hinges significantly on evidence of efficacy of similar programs, and continuing support is increasingly contingent upon the demonstrated efficacy of ongoing programs. Thus, competition for public funding for community-based interventions, requirements for reimbursement, and stakeholders' demands for "results" are pushing agencies to document outcomes.

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gram impacts. To be "useful," measures must be simple, easy to administer and interpret, appropriate for the target population, and relevant to the intended benefits of the intervention (e.g., Allen, Stevens, & Harwell, 1996; Baldwin, 2000). The purpose of this paper is to describe the development and validation of a self-report instrument created for use in recreation and other social services. Specifically, the instrument is designed to measure resiliency, which is an intended benefit common to many youth service programs (e.g., Green, Kleiber, & Tarrant, 2000; Hurtes et al., 2000).

Resiliency and Youth Programs

In much of the social science research and, perhaps, in popular culture, there is a tendency to focus on what is wrong with people in general, rather than on what is right. This deficit, or risk-centered, paradigm focuses attention on weaknesses and failures, rather than on individual strengths. McCarthy (1995, p. 283) stated that "theoreticians and therapists have inadvertently caused iatrogenic harm [harm caused by that meant to heal] by emphasizing the deficits of victims rather than the potential resiliency of survivors." Specifically regarding youth, Nixon (1997) stated that "helping professions have traditionally defined youths in identified at-risk situations . . . in terms of what is needed to 'fix' the youths themselves" (p. 571). The widely accepted negative view of youth and their problems has led to a scarcity of research regarding what is, in fact, right with youth. As such, the general approach taken with respect to youth almost may be remedial in nature, parallel to a medical model, and may, according to Nixon, lead to a "significant lack of programs and services for youths that contribute to their overall healthy development" (p. 571).

Baldwin (2000) emphasized the need for a theoretical framework for recreation programming with youth. A youth development approach focuses on what young people are doing right and emphasizes the strengths, abilities, and potential of youth (see Caldwell, 2000). Consistent with this approach, Loftus, Milo, and Paddock (1995) advocated a programming structure that fosters resiliency. Further, Werner (1993, p. 511) suggested that the "study of resiliency holds considerable promise for the development of intervention programs." Thus, it appears that the development and inclusion of approaches and programs based upon a resiliency framework is both practical and timely.

Resiliency: Background and Conceptualization

The study of resiliency emerged from the field of developmental psychopathology. Basic research in this area sought to answer the question of why some individuals from high-risk or adverse backgrounds seemed to thrive while others failed (Anthony & Cohler, 1987; Cicchetti & Garmezy, 1993; Garmezy, 1990; Masten, Best, & Garmezy, 1990; Rutter, 1987; Werner & Smith, 1982). Those individuals that thrived were considered "resilient."

Resiliency has been defined in many ways. Rutter (1990, p. 181) defined it as the "positive pole of the ubiquitous phenomenon of individual difference in people's responses to stress and adversity." Garmezy (1991) characterized resiliency as the ability to bounce back, rebound, or recover. Werner (1989, p. 72) defined it as "successful adaptation following exposure to stressful life events." Resiliency has also been conceptualized as an individual's capacity for self-righting (Werner & Smith, 1992) and for transformation and change (Lifton, 1993). Further, resiliency is associated with a reduction of negative and undesirable behavior and the exhibition of healthy or productive behavior, even under difficult circumstances (Benard, 1991; Seligman, 1995; Werner & Smith, 1982; Zimrin, 1986). Finally, Doll and Lyon (1998) asserted that "while there is no universal definition of resilience, a central notion exists that resilience concerns successfully coping with or overcoming risk and adversity or the development of competence in the face of severe stress and hardship" (p. 348).

Measurement of Resiliency

Resiliency appears to be a useful framework that identifies key skills, attitudes, and abilities that empower youth to successfully negotiate life's challenges and thereby, promote positive growth and development. The adoption of a resiliency framework, however, poses a new challenge: How does resiliency manifest itself and how can practitioners determine the extent to which it is present in participants and affected by programs? Operationalizing and measuring resiliency has proven problematic (see Caldwell, 2000). Numerous authors have suggested specific individual characteristics of resilient individuals (Conrad and Hammen, 1993; Garmezy, Masten, & Tellegen, 1984; Marsh et al., 1996; Radke-Yarrow & Sherman, 1990; Rutter, 1979; Werner, 1989; Werner & Smith, 1982, 1992; Wyman, Cowen, Work, & Kerley, 1993), but little empirical investigation has been conducted to verify these assertions. While anecdotal observations of resilient individuals certainly have value, there is a distinct need to establish a clear operationalization of resiliency and to develop a method of measuring the construct.

The work of Wolin and Wolin (1993), stemming from family counseling, has been advocated within the field of social work (Anderson, 1997) and serves as the basis of the resiliency framework described in the Benefits-Based Programming of Recreation Services training materials (Allen, Stevens, Hurtes, & Harwell, 1998). Wolin and Wolin, as a result of qualitative analysis, identified the following as characteristics of resilient individuals: insight, independence, creativity, humor, initiative, relationships, and values orientation (morality). The presence of these skills and abilities is assumed to allow individuals to rise above adversity (Wolin and Wolin). A useful and appropriate measure of resiliency could thus include items that measure each of these seven dimensions. The following descriptions of these dimensions are based upon the work of Wolin and Wolin.

Insight is the ability to read and interpret situations, people, and subtle nuances of both verbal and nonverbal communication. Further, an insightful individual knows how to adjust her or his behavior to be appropriate in any situation. This characteristic manifests itself in an understanding of self and others.

The *Independence* dimension involves striking a balance between being true to oneself and accommodating the concerns of others. An independent individual can clearly say "no" when appropriate, rather than simply being evasive. A positive, optimistic orientation toward the future is also present. This dimension could be related to individual differences in ability to negotiate constraints.

Creativity involves generating options and alternatives to cope with the challenges of life. Rather than engaging in all forms of negative behavior, resilient individuals can imagine the consequences of their actions and then make decisions. Creativity also captures the ability to entertain oneself instead of waiting for someone or something else to provide entertainment.

Built upon a playful outlook, *Humor* finds the "lighter side" of life. The ability to laugh at oneself and to find joy in one's surroundings is a characteristic of resilient individuals. Humor provides a new, less serious perspective on life's challenges and makes coping with hardships more bearable.

Initiative involves the desire and determination to take charge of one's own life. Resilient individuals are proactive, rather than reactive, and strive to improve themselves, their surroundings, and their abilities to cope with that which is unchangeable. Resilient individuals see their lives as a series of challenges which they have the power to solve.

The quality of the *Relationships* maintained with others has a tremendous impact on quality of life. Honest, fulfilling, and supportive relationships with peers, family members, and role models are hallmarks of resilient individuals. This quality involves both seeking out and maintaining healthy relationships and

avoiding or removing oneself from codependency.

A *Values Orientation* goes beyond a basic knowledge of right and wrong to include the desire to live a good and productive life. Resilient individuals have evaluated their world and made their own decisions rather than accepting someone else's rules. They can identify what is appropriate, moral behavior and have the courage to stand by their convictions. Resilient individuals also look beyond the self to serving others in need.

The Wolins' perspective focuses on the strengths of individuals rather than on the risks faced by or needs of individuals. Thus, the positive, strengths-oriented philosophy of these authors is directly compatible with the youth development approach. Further, their work has "promoted an optimistic outlook on clients and has opened up a whole new research arena" (Framo, 1996, p. 302). As such, and combined with its logical appeal and face validity, the work of Wolin and Wolin (1993) serves as the basis for the Resiliency Attitudes and Skills Profile (RASP) described in this article.

Methods

The process of instrument construction utilized in this study follows the generally accepted procedures outlined by Nunnally (1964, 1970; Nunnally & Bernstein, 1994). This approach has been employed by numerous authors (e.g., Costa, Jessor, & Donovan, 1989; Finkelman, Ferrarese, & Garmezy, 1989; Stewart, Hays, & Ware, 1988). Nunnally's general approach to psychometric theory, reiterated by Churchill (1979) and Kline (1986), involves several steps, which can be collapsed into the six steps listed below:

1. Set bounds to item content. Specifying the domain of the construct can be accomplished by selecting a definition of the construct. The bounds to item content can be based on a particular theory or the results of a literature review.

2. Generate as many relevant items as possible. This can be accomplished by a thorough review of the literature, the use of focus groups and/or expert panels, critical incidence techniques, and the like.

3. Select the sample, collect data, and purify the measure. "Purification" may involve procedures such as confirmatory factor analysis, which seeks to group like items into single-construct dimensions.

4. Select a new sample, collect data, and establish reliability. Internal consistency is a common measure of reliability, often indicated by coefficient alpha. In this step, the instrument's stability and equivalence, through test/re-test and split-half procedures, respectively, may also be computed.

5. Collect new data and establish validity. According to Churchill (1979, p. 70), "specifying the domain of the construct, generating items that exhaust the domain, and subsequently purifying the resulting scale should produce a measure which is content or face valid." In addition, construct validity may be established through the use of confirmatory factor analysis (CFA), a technique becoming increasingly popular within instrument construction (Hays, Marshall, Wang, & Sherbourne, 1994; Keller et al., 1998; Priest, 1992; Shields & Cicchetti, 1997). To further establish the usefulness of an instrument, correlations with other measures may be examined.

6. Establish norms. The final step in the instrument construction process involves the establishment of norms. This process allows for the comparison of scores across respondents in absolute terms of magnitude. Norming involves a tremendous sample size, which increases with the size of the population to which an instrument is designed to generalize. (This step was not addressed by the present study.)

Item Generation

The bounds to item content for the RASP were based upon the theory of Wolin and Wolin (1993). As described previously, these

authors identified insight, independence, creativity, humor, relationships, initiative, and values orientation as the components of resiliency. This approach was chosen due to its face validity; its applicability to a variety of human services; and its positive, strengths-oriented philosophy.

Items were created to reflect the behavioral manifestations of the seven dimensions of resiliency as described by Wolin and Wolin (1993). This process resulted in 65 items, representing the seven dimensions of resiliency in the following manner: *Insight* (9 items), *Independence* (11 items), *Creativity* (10 items), *Humor* (7 items), *Initiative* (8 items), *Relationships* (10 items), and *Values Orientation* (10 items). These items were then subjected to a two-phase, modified Delphi expert review process to assess content validity. The seven-member panel consisted of three resiliency theory experts, three youth population experts, and one measurement expert. In Phase I, the researchers gave the experts the definitions of the seven dimensions based on the work of Wolin and Wolin (1993). The experts were then asked to identify the appropriate dimension for each item. In Phase II, the experts were asked to rate each item as an indicator of its dimension and, separately, as an indicator of the overall construct of resiliency.

From the original 65 items, the expert panel identified a total of 10 items for possible elimination and offered no new items, suggesting acceptable coverage of content. Some of the population and measurement experts' recommendations, if followed, would result in a loss of critical information from some of the Wolins' (1993) theoretical dimensions. Specifically, the items identified as "bad" reflected the opinion of only one individual. For example, this individual recommended discarding the following item: "I can change my behavior to match the situation." This item, however, was taken verbatim from the definition of *Insight* provided to the experts during Phase I. In order to effectively test the Wolins ideas, the researchers considered the items' consistency with the authors' approach as the dominant criteria. Rather than selectively adhering only to the experts' suggestions that were consistent with the Wolins' theory, then, all 65 of the original items were retained for initial testing. Thus, the expert review process served as a check on content validity rather than as a source for modifications to the instrument.

Sampling

Data were collected during the summer of 1999. Two sites provided participants for the data collection process, each involving a series of program settings. In both cases, participants from the individual program settings were combined into larger samples. This was done to provide a large enough sample with which to conduct relevant data analysis. Also, in each case, the surveys were administered by in-house personnel in order to prevent contamination of the data due to the introduction of a stranger to the programs. Both sites received a survey administration protocol to insure standardized procedures.

Site I (n = 274) consisted of a summer program offered to youth, ages 12 to 19, in a metropolitan area in the south. While the overall program was the same, it was operated out of six different high schools. Participant demographics indicated dominant groups across several variables: 58% were male, 48% were African-American, and 37% were of Haitian descent. Following the Benefits Based Programming model (Allen et al., 1996), the activities chosen and created for this program were specifically structured to develop resiliency in participants.

Site II (n = 190) was comprised of a series of therapeutic wilderness camps in the southeast operated by Eckerd Youth Alternatives (EYA). In order to be admitted to Eckerd's program, youth must meet the following criteria:

1. DSM IV Axis I or Axis II diagnosis.
2. Functional intelligence with an IQ of 75 or above.
3. Evidence of ability to benefit from peer/adult relationships.

4. Capacity to understand cause and effect relationships.

5. Demonstrated behavioral problems of such magnitude that continuation in the home environment is no longer a feasible or practical option unless significant intervention takes place. (Eckerd Youth Alternatives, n.d.)

Participants in the study ranged from 12 to 17 years old. Dominant groupings also appeared within this sample. Of the participants, 88% were male, 71% were White/Non-Hispanic, and 23% were African-American.

Data Collection

The first version of the RASP, used at Site I, utilized a four-point response scale ("strongly disagree," "disagree," "agree," and "strongly agree"). The second version of the instrument, used at Site II, was based on a six-point response scale anchored by 1 = "strongly disagree" and 6 = "strongly agree." The response options for the second version were expanded to allow for greater variability. In each case, the even number of response options was used to force a choice and ideally, to encourage respondents to identify their true feelings.

In order to investigate convergent validity, or the relationship between resiliency and another hypothetically related concept, a second instrument was utilized in this study at Site II. This instrument was modified from the Mental Health Inventory, or MHI (Veit & Ware, 1983), which is most commonly used for mental health screening or as an intake assessment tool (Dorfman et al., 1995; Nelson & Berwick, 1989). The instrument contains 34 items addressing two negatively correlated subscales: psychological well-being (16 items) and psychological distress (18 items). A six-point response scale was used, anchored by 1 = "never" and 6 = "always." The notion of resiliency should, logically, be positively related to the psychological well-being subscale of the MHI and should be negatively related to psychological distress.

Validity of inferences that can be made from MHI scores has been suggested by associations with related mental health constructs (Ware, Johnston, Davies-Avery, & Brook, 1979). Internal consistency was supported by Cronbach's alpha levels of 0.92 to 0.96 for the two subscales in repeated testing (Veit & Ware, 1983). Stability coefficients ranged from 0.56 to 0.64 over a one-year interval (1983). Further, this instrument was assessed for its readability, and was deemed appropriate for reading levels of third grade or higher (Ostroff, Woolverton, Berry & Lesko, 1996).

Data Analysis

Structural equation modeling (SEM) was used to investigate the construct validity of the RASP with data from Site I (Keller et al., 1998). SEM examines the significance of the relationships between the items and the seven dimensions of resiliency, as well as the relationships between the dimensions themselves. These relationships constitute a model. SEM generates indices that "generally quantify the extent to which the variation and covariation in the data are accounted for by a model" (Hu & Bentler, 1998, p. 426). SEM allows the researchers to determine how well the items relate to their respective dimensions of resiliency. Fit indices, such as Bentler's Comparative Fit Index (CFI), with values of .90 or higher (on a scale from 0.0 to 1.0) suggest that a proposed model provides a good fit to the data. Another common fit indicator, which accounts for sample size, is the chi-square/degrees of freedom ratio. In general, this ratio should be small, specified as less than 2.0, to indicate a good fit (Hatcher, 1994).

SEM provides additional indices, called the Lagrange and Wald multipliers, that suggest modifications to improve the fit of the model by adding or removing relationships, respectively, between items and the resiliency dimensions, or between the seven dimensions themselves. Based upon these results and suggestions, the structure of the RASP was established using data from Site I. This model was then cross-validated using data from Site II, meaning that the instrument structure from Site I was applied to the data from Site II. This

was done to examine the applicability of the first model to the second data set.

Internal consistency, or the extent to which a set of items measures the same thing, was assessed by computing Cronbach's alpha for each of the seven subscales and for the entire RASP using data from Site I. The stability of the RASP was also investigated through SEM. At Site I, the RASP was administered a second time, five days after the initial administration. The short period of time between administrations was selected to control for possible differential increases in participants' resiliency levels due to the program itself. The instrument's structure was determined during the first administration and was then held constant on the second administration, and the relationship between the overall construct of resiliency at $Time_1$ (first administration) and $Time_2$ (second administration, or re-test) was examined. A significant covariance (interpretable as a correlation) between these latent constructs demonstrates stability, or the instrument's ability to measure consistently measure the same idea over time.

To assess the convergent validity of the inferences that can be made from RASP scores, a modified version of the MHI (Veit & Ware, 1983) was utilized with data from Site II. The structure of the MHI was verified through the same procedure used to confirm the structure of the RASP. The relationship between the MHI and the RASP was then investigated. Significant and appropriate relationships between these instruments support the convergent validity of the RASP.

Results

The construct validity of the seven-factor structure of the RASP was investigated through SEM. Using data from Site I, the Lagrange and Wald indices led to the deletion of 31 items (after 37 iterations). The standardized loading coefficients of the items on their respective dimensions of resiliency, which represent the absolute magnitude of these relationships, were all significant. These coefficients, the variance explained by each item, and the text of the items are presented in Table 1.

The final structure of the RASP (containing 34 items) is presented in Figure 1. The individual items are not indicated in the figure for simplicity of presentation. Analysis of this model produced a chi-square/df ratio of 1.71 ($\chi^2 = 879.90$, $df = 516$). Bentler's CFI for this model was 0.85. This comparative fit index value of 0.85 could be increased, without changing the relationships between the items and the dimensions, by adding additional error covariances between items and across dimensions. However, doing so creates an "artificial" inflation of the CFI and complicates the interpretation of the model.

Significant error covariances between items indicate that some items are more related to each other than to others—in essence that there is some common piece of variance that is not being explained by either item. Within dimensions, this may be relatively easy to address through the addition of new items which, ideally, account for that specific piece of variance. However, if error covariances are significant between individual items from different dimensions (or across dimensions), the results become more difficult to interpret, assuming the theoretical independence of the dimensions. For example, it may not be a simple task to identify the relationship between an item from the *Creativity* dimension and one from *Values Orientation.* Adding these covariance terms does account for additional variance in the model, which, in turn, inflates the fit index. However, a lower fit index suggests the same conclusion as the presence of error covariances between items: The model, or instrument, can be improved. Therefore, the model presented in Figure 1 was retained due to its parsimony and relative ease of interpretation.

Each of the seven dimensions loaded significantly on the overall concept of resiliency, which supports the Wolins' theory that these dimensions are, in fact, all related to a common construct of resiliency (construct validity). However, three covariances between dis-

Table 1.

Characteristics of the RASP

Dimension	Item	Coefficient	R^2	Item Text
Insight	4	0.5690	0.3237	I learn from my mistakes.
	5	0.4158	0.1729	I notice small changes in facial expression.
	7	0.4934	0.2434	I know when I am good at something.
	10	0.4043	0.1634	I can change my behavior to match the situation.
	15	0.4455	0.1985	When something goes wrong, I can tell if it was my fault.
	21	0.3555	0.1264	I can sense when someone is not telling the truth.
	27	0.5085	0.2586	I can tell what mood someone is in just by looking at him/her.
Independence	2	0.3523	0.1241	I can deal with whatever comes in the future.
	8	0.5939	0.3527	I'm prepared to deal with the consequences of my actions.
	9	0.5354	0.2867	I say "no" to things I don't want to do.
	19	0.4837	0.2340	It's OK if some people do not like me.
	26	0.3978	0.1583	I control my own life.
Creativity	3	0.5311	0.2821	Once I set a goal for myself, I don't let anything stop me from reaching it.
	6	0.5329	0.2840	I can imagine the consequences of my actions.
	22	0.5452	0.2972	When I am faced with a tough situation, I come up with new ways to handle it.
	23	0.5544	0.3073	I can come up with different ways to let out my feelings.
Humor	11	0.5571	0.3104	My sense of humor makes it easier to deal with tough situations.
	25	0.4670	0.2181	I look for the "lighter side" of tough situations.
	33	0.4742	0.2249	Laughter helps me deal with stress.
Initiative	1	0.4656	0.2167	When my work is criticized, I try harder the next time.
	13	0.3854	0.1485	I can change my surroundings.
	30	0.7652	0.5856	I try to figure out things I do not understand.
Relationships	12	0.4925	0.2426	My friends know they can count on me.
	14	0.4903	0.2404	My family is there for me when I need them.
	18	0.4251	0.1807	I avoid people who could get me into trouble.
	24	0.6066	0.3679	I choose my friends carefully.
	31	0.7465	0.5572	I'm good at keeping friendships going.
	32	0.5673	0.3218	I have friends that will back me up.
Values Orientation	16	0.4684	0.2194	It's OK if I don't see things the way other people do.
	17	0.3536	0.1250	Lying is unacceptable.
	20	0.4567	0.2086	I am comfortable making my own decisions.
	28	0.6625	0.4389	I try to help others.
	29	0.6801	0.4625	I stand up for what I believe is right.
	34	0.4689	0.2198	I avoid situations where I could get into trouble.

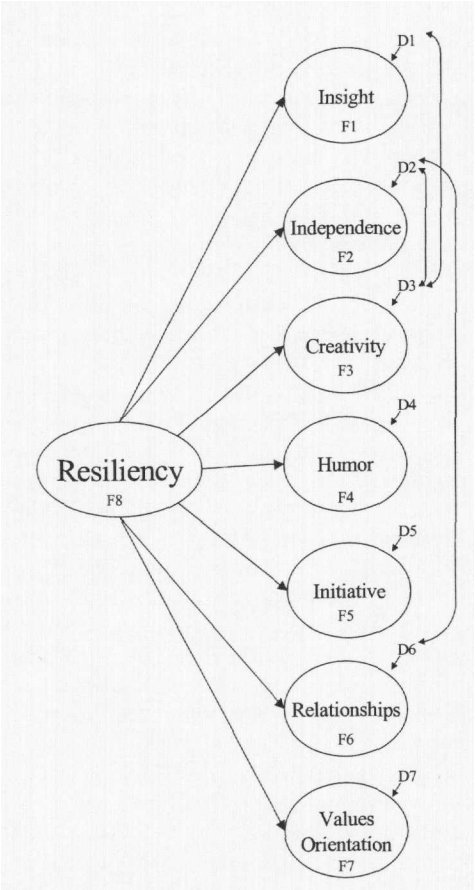

FIGURE 1. FINAL STRUCTURAL (SECOND ORDER FACTOR) MODEL OF THE RASP FOR SITE I.

turbance (error) terms for factors (represented by curved arrows between D1 and D3, D2 and D3, and D2 and D6) were significant (t = 3.451, 4.281, and −4.263, respectively). Similar to the error covariances described previously, these significant results indicate that the overall construct of resiliency was not fully accounting for or explaining the relationships between some of the seven dimensions (specifically between *Insight* and *Creativity, Independence* and *Creativity,* and *Independence* and *Relationships*). These results suggest that these dimensions are more related to each other than to the rest of the factors. When the definitions of these dimensions are considered, these relationships seem to make logical sense due to common foci on unique thought processes, problem solving and cognitive restructuring, and interactions with others, respectively. Noting that the covariance between Independence and Relationships was negative (t = −4.24), it appears as if increasing levels of independence are associated with lower capabilities in seeking, forming, and maintaining relationships (and vice versa), which seems reasonable.

This final instrument structure from Site I was then tested using data from Site II (Figure 2). This analysis resulted in a chi-square/df ratio of 1.64 (χ^2 = 850.45, df = 517). Bentler's CFI was 0.72. Each of the seven dimensions were still significantly related to the overall construct of resiliency. However, two different disturbance covariances were significant, specifically between D1 (*Insight*) and D6 (*Relationships*) and between D3 (*Creativity*) and D4 (*Humor*) (t = −3.748 and 2.567, respectively). Once again, this suggests that these pairs of factors, or dimensions, are more related to each other than to the other factors. The association between *Insight* and *Relationships* is negative (t = −3.75). As such, higher levels of insight are related to lower capabilities with respect to interpersonal relationships, which seems appropriate for the population. Youth who have been part of "the system" for extended periods of time may have honed their ability to read people and, as a result, may have become cynical with respect to trusting others. The positive relationship between *Creativity* and *Humor* may exist as both involve cognitive coping methods. Again, while the fit index could be inflated by adding error covariances, the more parsimonious model was retained.

The assessment of internal consistency revealed that the RASP, as a whole, achieved an alpha coefficient of .91, indicating strong internal consistency for the total scale. Alpha levels for the seven subscales were somewhat lower: *Insight* = .65, *Independence* = .62,

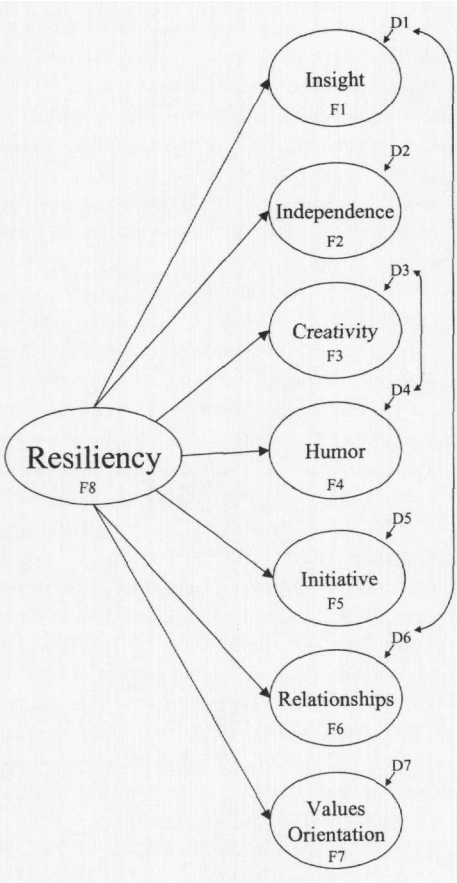

FIGURE 2. FINAL STRUCTURAL (SECOND ORDER FACTOR) MODEL OF THE RASP FOR SITE II.

Creativity = .68, *Humor* = .49, *Relationships* = .71, *Initiative* = .53, and *Values Orientation* = .68. These lower values may be due to the fact that each of the seven dimensions are multidimensional in and of themselves, which would directly reduce internal consistency. For example, *Independence* consists, in part, of the ability to separate oneself from individuals who may wield a negative influence, the ability to say "no" rather than simply being evasive, and a positive outlook toward the future. These traits, while certainly diverse, can all be viewed as characteristics of a potent, independent actor. Each of the items, then, appear to be clearly related to the overall concept of resiliency, but may not fit discretely into the seven dimensions (a possibility also supported by the level of the fit index).

The stability of the RASP across administrations was quite strong. The relationship between the overall concept of resiliency at $Time_1$ and $Time_2$ was .94 and was significant ($p < .001$), indicating good stability. This suggests that the RASP consistently measures the same construct over time.

Finally, in assessing the convergent validity of the RASP, the factor structure of the MHI was confirmed to establish a baseline measure of fit. Using data from Site II, this analysis resulted in a CFI of .85 and a chi-square/df ratio of 1.61 ($\chi^2 = 832.49$, $df = 518$). As suggested by the theory underlying the MHI, the two subscales were significantly negatively correlated ($p < .001$). As before, the fit index could be improved by adding error covariances. However, this model represents that used in all previous studies involving the MHI and was, therefore, retained.

The relationships between the RASP (overall construct of resiliency) and the two subscales of the MHI were significant ($p < .001$) and in the appropriate directions: correlations between resiliency and psychological well-being and psychological distress were .47 and −.22, respectively. These results suggest that resiliency increases with psychological well-being and decreases as levels of psychological distress increase. Thus, convergent validity was indicated.

Discussion and Implications

The purpose of this paper was to describe the development and validation research on a self-report instrument designed to measure resiliency in youth for use in recreation and other social services. However, this study may have, in fact, raised as many questions as it answered. For example, while SEM does remove some of the subjectivity of typical approaches to factor analysis (through the generation of significance tests for loadings),

results of this type of analysis are still left to interpretation. For each analysis of the RASP, the CFI was below the recommended standard of .90, but the chi-square/df ratio clearly met standards of acceptability. These contraindications of goodness of fit are far from definitive concerning the usability of the RASP in its present state. Further, while the significant differences between the fit indices for Sites I and II do suggest that the RASP possesses an acceptable level of construct validity, its universal use across different youth populations remains to be validated.

From a theoretical perspective, this study supports the existence of resilience as a unique construct. The significant, but moderate, level of correlation between the overall concept of resiliency and psychological well-being suggests that, though related, they are not the same constructs. In addition, this study supports the notion that the overall concept of resiliency is multidimensional, and may be comprised of the seven dimensions specified by the theory of Wolin and Wolin (1993). This view of resiliency as a multi-dimensional construct was asserted by the work of Luthar, Doernberger, and Zigler (1993), who suggested that resiliency spans a variety of adjustment domains. From a practical perspective, these results also indicate the complexity of measuring a concept as multifaceted as resiliency appears to be. Even when adhering to only one of the many definitions, operationalization is problematic due to the broad range of resilient behaviors.

The model fit of the MHI, which suggests that the model could be improved, may have important ramifications. While this instrument is frequently used as a screening tool within general adult populations, these results suggest that the instrument may not be fully appropriate for use with adolescents in general or, more specifically, for adolescents with diagnosed mental health conditions. For adolescents in general, and despite the "readability" of the MHI, the developmental level of comprehension may not be sufficient to understand the items. Regarding diagnosed populations, and beyond any developmental issues, the difficulties of using the MHI may be due to a form of "institutionalization." Many of these youth have been involved with mental health, juvenile justice, and other social services for years and may have, as a result, learned to provide the responses sought by administrators. These youth may simply be too savvy for this type of measurement.

Similarly, the RASP, in its present state, is not prepared for use with youth with diagnosed mental health conditions. Bearing its psychometric properties in mind, the RASP should not be used as an individual assessment tool. Current levels of precision are insufficient to make placement and/or discharge decisions. However, the RASP, in its current form, may provide some useful information as a program evaluation tool for more general populations of youth with respect to gaining an idea of a group's level of resilient functioning. Any such use should consider the RASP as a whole, due to the higher levels of internal consistency for the entire scale.

Certainly, limitations to this study should be noted. The age range of the participants (ages 12 to 19) represents a wide variety of developmental characteristics. Issues such as identity formation, moral reasoning, and intellectual ability were not assessed during this study and, as a result, could not be controlled. Based upon the nature of the survey items utilized in this study, it is also possible that social desirability bias had an impact on the results. However, this bias was not assessed and therefore, could not be controlled. Further, no correction was made for the potential level of "institutionalization" among participants at Site II, described previously. Further, all measures utilized in this study were self-reported by the youth. There was no information available for triangulation.

The demographics (specifically sex and ethnic background) within the two samples may have had an impact on the results. At Site II, for example, the sample was predominantly male (88.9%) concordant with the fact that the preponderance of diagnosed cases of emo-

tional and behavioral disorders are male. It is certainly possible that, due to gender socialization and popular culture, the structure of resiliency for males and females is radically different—specifically with respect to dimensions such as *Independence,* where gender roles can vary so widely. Further, the nature of the home culture (collectivistic versus individualistic) could also have a tremendous impact on the definition and manifestation of resiliency. Some cultures place a higher value on independent behavior, while others place emphasis on relationships.

There is much additional research that should be conducted to both support and clarify the findings of the present study. Perhaps the most immediate and potentially important need is to test the RASP in a variety of settings and with a variety of youth in order to cross-validate its structure and increase the instrument's utility. The significant difference between the fit indices for the RASP at Site I and the RASP at Site II suggest that the structure of resiliency can vary widely across subcultures of youth. Specifically, such studies should focus on illuminating any differences in structure due to mental health status, gender, race, age, and other demographic characteristics. Also of interest would be an examination of the relationship between resiliency and processes such as identity formation.

Similarly, a more thorough investigation of the structure of resiliency for adolescents in treatment would be beneficial. It is plausible that "institutionalization" actually represents a certain level of resiliency. Learning to provide the expected and desired responses to the inquiries of program administrators suggests the utilization of both insight and creativity. Further, this behavior may be reflected in the interpretation and value of relationships to youth in treatment. As such, different types of questions may be needed for this population.

It is certainly necessary to evaluate the RASP with respect to social desirability bias. This could be accomplished through the use of the Crowne-Marlowe scale (1960). Controlling for this response bias would provide a more lucent portrait of resiliency in youth. Related to this notion, the reverse-coded items dropped from the instrument in this study should be re-written to avoid any negative words or phrases. While reverse-coded items are often recommended to compensate for other response biases, the populations in this study did not appear to process these items effectively. The results of this study also suggest the need for the utilization of multiple methods when investigating resiliency. In the present study, it would have been immensely beneficial to ascertain the youth's interpretations of the items that were discarded. Further, it would be useful to conduct focus groups or interviews to identify this population's conceptualizations of the seven dimensions of resiliency or, on a more basic level, to identify the characteristics that youth believe to be necessary for the successful navigation of life. Such qualitative data would allow for further cross-validation of the RASP.

Finally, the study of resilience will not be complete until longitudinal studies are conducted that establish the predictive validity of the construct. Do resilient individuals actually exhibit different behavior than non-resilient individuals? Are there behavioral differences resulting from different levels of resiliency? These questions must be answered in order to fully validate the usefulness of resiliency as a programming outcome. The face validity, or the fact that such changes in behavior may simply make logical sense, may not be a sufficient or lasting rationale for programming efforts in an increasingly demanding society.

As the pressure to document programming outcomes increases, the issues become determining which outcomes are most important and then how to achieve them. This study asserts that the development of resiliency is a relevant and practical program objective for the human services in general. Research should continue to focus on the strengths and abilities of youth and how these qualities can be developed and enhanced through outcome-oriented programming.

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