



## The Adolescent Well-Being Assessment Instrument: An Interdisciplinary Approach

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# table of contents

Preface	1	
Introduction	3	
Purpose of Adolescent Well-Being Assessment Instrument	3	
Overview of Factors Incorporated in the Instrument	4	
How the Assessment Instrument is Completed	7	
Coding of Factors	9	
<b>Personal Development</b>	11	
<b>Environmental Influences</b>	23	
<b>Level of Functioning</b>	33	
Adolescent Well-Being Assessment Instrument	39	
Sample Cases	45	
Next Steps	57	
References	59	
Appendix	63	
Observation Checklist	65	
Youth Pediatric Symptom Checklist	69	
Personal Experience Screening Questionnaire	71	
Adolescent Well-Being Assessment Instrument	75	
My Exposure to Violence: Self-Report	79	

## preface

The Adolescent Well-Being Assessment Instrument is comprised of protective and risk factors that contribute to the development of adolescents, in terms of positive and negative outcomes. The risk factors consistently appear in the literature as correlates of problems associated with mental health, substance abuse, and juvenile delinquency while the protective factors emerge from resilience literature.

The instrument is intended to be used in a school setting by trained clinicians to help them identify risk and protective factors present in the development of a youth; decide whether further assessment is needed; and identify appropriate interventions. Essentially, this is a clinical instrument used to guide judgment; it is not intended to serve as a quantitative algorithm for determining interventions.

Certain assumptions guided the development of this instrument:

- Clinicians work closely with school specialist staff (e.g., Guidance Counselors, School Psychologists, Committee on Special Education) and public and private agency staff to review circumstances for each adolescent and to determine the best approach for each individual.
- Clinicians incorporate information from multiple perspectives and from multiple settings.
- The Adolescent Well-Being Assessment Instrument is completed by trained clinicians who are familiar with the factor descriptions outlined in this document.
- The assessment instrument is used as a focal point to guide discussions for interdisciplinary case management meetings.

We remind users of this instrument that the effectiveness of any assessment tool is influenced by the context in which it is used. To maximize the effec-

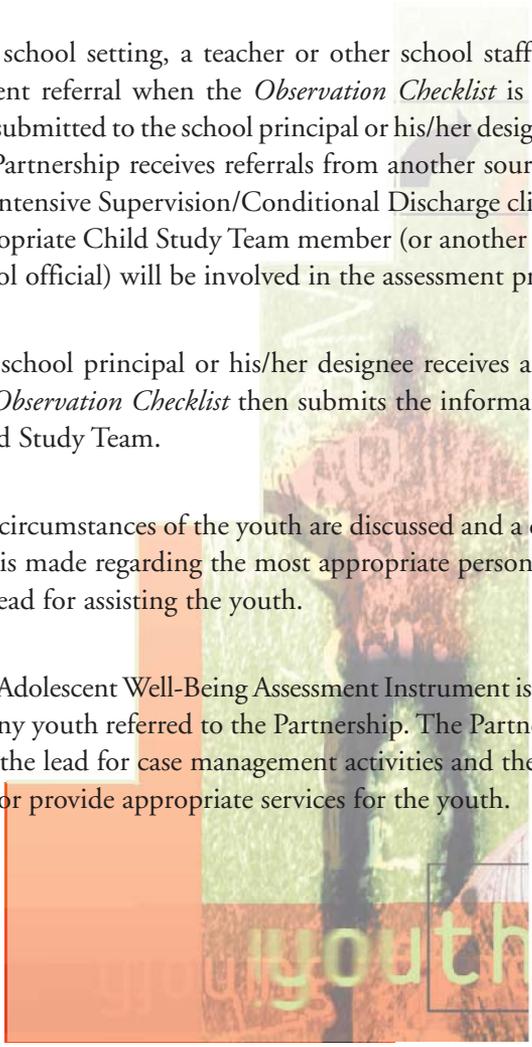
tiveness of this instrument in a school setting, we recommend close integration of efforts between school specialist staff and the Cayuga County Partnership staff, including Mobile Outreach Services Team (MOST) staff, Intensive Supervision/Conditional Discharge staff, and other Partnership staff. A process that has been successful in schools and other settings and one that is proposed for the Cayuga County Partnership is presented below.

**Step one:** In a school setting, a teacher or other school staff initiates a student referral when the *Observation Checklist* is completed and submitted to the school principal or his/her designee. When the Partnership receives referrals from another source, such as the Intensive Supervision/Conditional Discharge clinician, the appropriate Child Study Team member (or another designated school official) will be involved in the assessment process.

**Step two:** The school principal or his/her designee receives and reviews the *Observation Checklist* then submits the information to the Child Study Team.

**Step three:** The circumstances of the youth are discussed and a determination is made regarding the most appropriate person to assume the lead for assisting the youth.

**Step four:** The Adolescent Well-Being Assessment Instrument is completed for any youth referred to the Partnership. The Partnership staff take the lead for case management activities and then monitor and/or provide appropriate services for the youth.





overview

introduction

purpose



## introduction

Adolescents experience a number of developmental changes as they progress toward adulthood and it is essential for individuals who work with this age group to be able to distinguish between changes that indicate adolescents are “going through growing pains,” and those changes that serve as markers for future health and social problems. As adolescents negotiate their difficult course, we have a responsibility to provide them with the assistance they need to remain at home, in school, and out of trouble. Our ability to recognize markers, that is risk factors, will allow us to create safe environments and supports that allow adolescents to become healthy adults. Comprehensive, early assessments can help ensure this, allow us to provide timely assistance, and reduce the probability of negative outcomes.

## purpose of the adolescent well-being assessment instrument

The purpose of The Well-Being Assessment Instrument is twofold. The first purpose is clinical in nature in that the instrument is intended to ensure that a comprehensive, multidisciplinary assessment is conducted so adolescents’ full range of needs can be identified and addressed. The occurrence of comorbidity for substance abuse and mental illness is a particular concern, especially among high school age youth, and the instrument is designed to screen for this matter.

The second purpose of the instrument is related to both site-specific as well as clinical concerns. The instrument is intended to help identify adolescents who display initial evidence of risk factors associated with mental health, substance abuse, and juvenile delinquency while the youth are within schools so services and supports can be provided to them prior to the need for more expensive, intensive services. These youth may not be eligible for substance abuse services due to their limited use, or may not require extensive support of the mental health system due to their moderate symptoms. These tend to be the youth who fall into the 'gray zone,' those who are not eligible for services from the systems of care but display problematic patterns and *a need for early intervention*. The well-being assessment instrument can help us provide assistance to this group of adolescents so problems are addressed before they escalate.

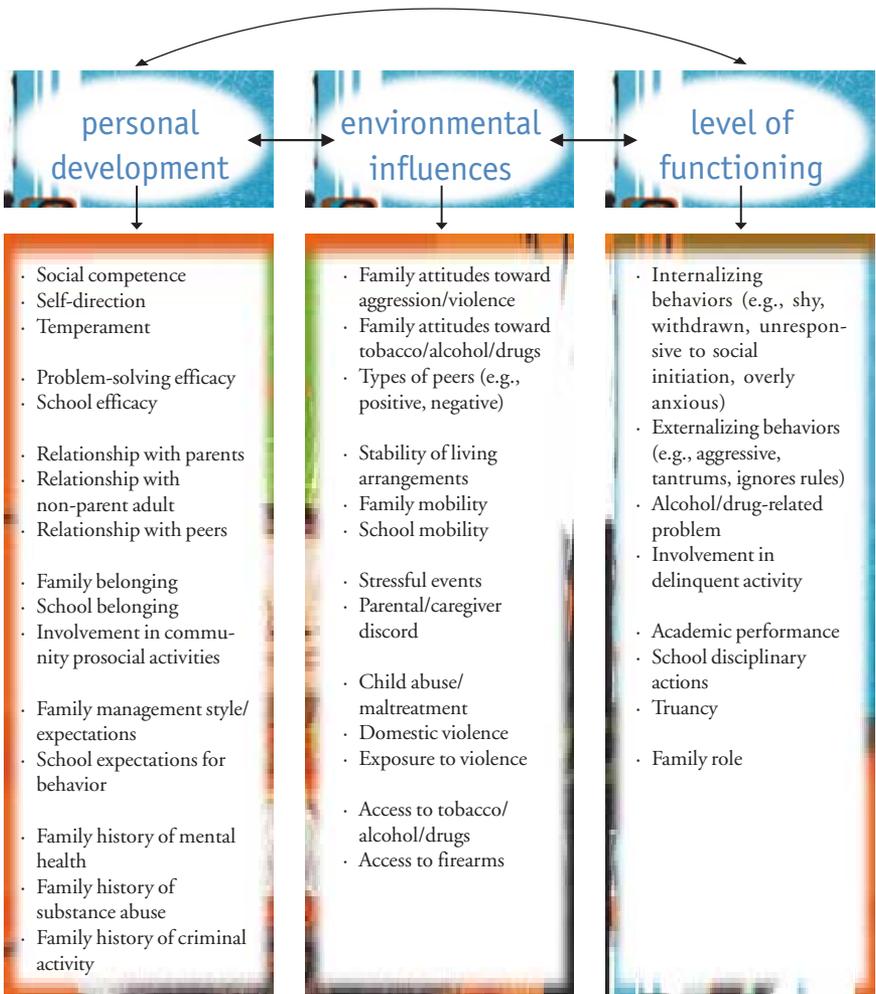
## overview of well-being factors incorporated in the instrument

The research literature offers a rich body of factors associated with substance abuse, mental health, and behavioral problems among adolescents. While highly informative, this research is careful to avoid causal claims that draw clear, straight lines between adverse experiences and later problems. However, the value of these factors lies in their predictive capacity. That is, we know adolescents with greater numbers of risk factors are more vulnerable and likely to experience problems related to one or more of the problem areas. Conversely, we also know adolescents who have protective factors, those factors that help counterbalance the harsh conditions they encounter, tend to be resilient, and less vulnerable to the risk factors in their lives.

The factors are not mutually exclusive. For example, factors associated with substance abuse (e.g., negative peers, lack of concentration, poor family management) are often associated with mental health and juvenile delinquency. This does not diminish their value in assessment of well-being. Rather it tends to highlight the complexity and interrelatedness of these factors as well as underline the somewhat system-imposed boundaries developed by the service systems that deliver care.

The well-being factors included in this assessment instrument, often referred to as risk and protective factors, were chosen due to their consistent presence in the literature as well as clinicians' acknowledgment of their informative value. The factors are categorized into three major domains: personal development, environmental influences, and level of functioning. The domains and the respective factors are presented below.

### conceptual model of well-being factors





completing the tool  
coding factors



## how the adolescent well-being assessment instrument is completed

Data pertaining to the well-being factors are collected using a modified structured interview approach. This approach ensures consistent information is gathered across clinicians and that the necessary information is available for clinical assessments. The first stage of data collection occurs when the school-based, clinical team receives a referral from school staff, primarily teachers. This referral is initiated when school staff completes the *Observation Checklist*.<sup>1</sup> The checklist is comprised of behavioral warning signs—symptoms associated with problems related to mental illness, substance abuse, delinquency, and learning disabilities. For instance, a teacher might identify adolescents who are painfully shy, have an inability to concentrate on assignments, appear to be unusually isolated, or are frequently violent or angry. This is the first source of information made available to the clinicians.

Next, the team of trained clinicians conducts interviews with teachers, the youth and his/her parents, pending parental approval. These interviews are used to gather information from multiple perspectives about how the youth behaves and functions in various settings (school, home, with peers).

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<sup>1</sup> The Observation Checklist is a modified version of the Systematic Screening for Behavioral Disorders (SSBD); behaviors associated with substance abuse, attention deficit disorder, and learning disabilities were added.

Additional information is gathered from the youth using standard measurement instruments—the *Personal Experience Screening Questionnaire (PESQ)* for substance abuse screening and the *Youth Pediatric Symptom Checklist* for behavioral health screening. Standardized screening instruments for substance abuse and mental health are integrated into the assessment instrument since these measures allow clinicians who may not be trained in a specific discipline to gather relevant data for the particular area of concern. Both standardized measures are self-reports completed by the youth since many issues, particularly internalizing problems or the need for/ effects of substances are best answered directly by the individuals referred. Clearly, due to the nature of the items on these questionnaires, clinicians must establish a rapport with each youth and establish a non-judgmental atmosphere prior to administering the instruments. *It is not recommended that these instruments be administered until a safe, trusting environment is established.*

Last, student school records are reviewed in order to gather information such as school performance, attendance, and disciplinary actions. Whenever appropriate, information from external sources (e.g., Health and Human Services, Probation) are examined. Typical information gathered from these sources includes reports of juvenile arrests or incidents of domestic violence or child abuse within the youth's family.

The completed well-being assessment instrument is used as the core of case management discussions and to guide decisions regarding whether there is a need for assistance (i.e., does the problem warrant the need for assistance) and the most appropriate form that assistance should take (e.g., school-based counseling or early intervention, community-based treatment).

## coding of the well-being factors

Coding of the well-being factors is to be conducted by trained clinicians once all data are gathered. Many of the factors are low-inference items that require minimal judgment (e.g., number of days absent, truant) while others are higher inference and require greater professional skill (e.g., family management style, exposure to violence).

The coding method associated with each factor, 0 through 2, is *meant to alert clinicians to areas of particular concern*, however, it is not meant to represent degree of severity where a total score of 10 indicates a greater concern than a total score of 5. This is due to the fact that all factors are not weighted equally. Information compiled through the assessment instrument should be used to *guide clinical judgment* regarding the need for further assessment and possible interventions rather than serve as a quantitative algorithm for determining course of treatment. Further research will be conducted to determine appropriateness of weights. A detailed description for factor coding follows.





## personal development

A number of factors influence an adolescent's healthy personal development. In particular, it is well recognized that dysfunctional aspects of family life can serve as risk factors for an adolescents' psychosocial development (Surgeon General's Report on Mental Health, 1999) and a child exposed to inconsistent discipline is at greater risk for later behavior problems (Werner & Smith, 1992). Furthermore, parental supervision and a children's perception of their parent's concern have been found to be associated with reduced likelihood of substance abuse (Hawkins et al. 1992). Research also indicates children with a family history of mental illness are more likely to experience mental health problems (Puig-Antick et al. 1989; Kovacs, 1997b; Wicramaratne & Weissman, 1998) and children whose parents experienced depression are more likely to be at risk of suicide. However, the literature is clear that adolescents with healthy relationships, a sense of belonging, and opportunities to exercise responsibility can achieve healthy personal development while exposed to adverse conditions (Constantine, Bernard, & Diaz, 1999; Fergusson & Lynskey, 1996; Knitzer, 2000; Luthar, Cicchetti & Becker, 2000). The following facing factors comprise the *Environmental Influences* domain.

- Social competence
- Self-direction
- Temperament
  
- Problem-solving efficacy
- School efficacy
  
- Relationship with parents
- Relationship with non-parent adult
- Relationship with peers
  
- Family belonging
- School belonging
- Involvement in community prosocial activities
  
- Family management style/ expectations
- School expectations for behavior
  
- Family history of mental health
- Family history of substance abuse
- Family history of criminal activity

## environmental influences

One of the most important aspects of an adolescent's life and a critical factor for one's mental health is the family environment. In particular, the relationship between stressful life events and risk for child mental disorders is well established (Garmezy, 1983; Garber & Hilsman, 1992). It is also recognized that physical and psychological abuses are related to mental health problems (Famularo et al. 1992; Kaufman, 1991; Salzinger et al. 1993; Kazdin, et al. 1985). Although estimates of co-occurring emotional and behavioral problems and addictive disorders across the period of adolescence have not been clearly established, estimates range from 22 to 82 percent (Lewinsohn, Rohde & Seeley, 1995). Environmental influences are not limited to family and, as noted, circumstances that occur outside the home have a major impact on adolescents (Sampson, 1997). For example, it has been noted exposure to violence is a possible cause of stress-related mental health problems (Jenkins & Bell, 1997) and may have considerable consequences for one's healthy development. The following factors comprise the *Environmental Influences* domain.

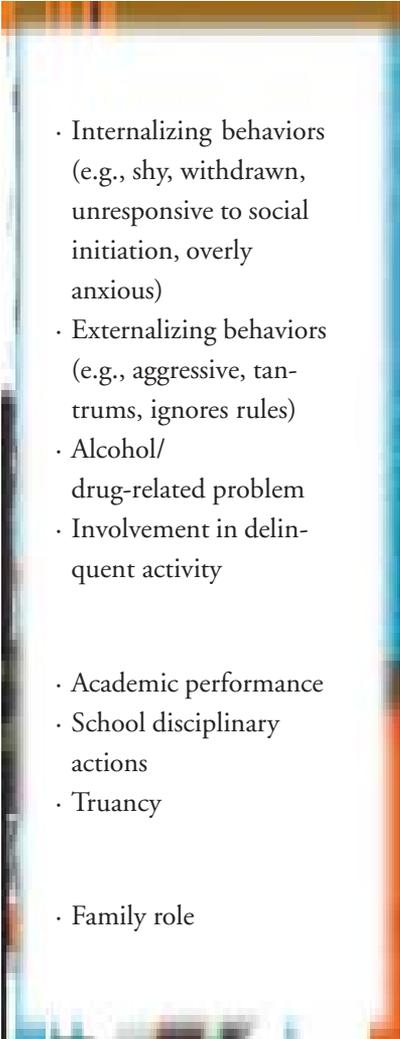
- Family attitudes toward aggression/violence
- Family attitudes toward tobacco/alcohol/drugs
- Types of peers (e.g., positive, negative)
  
- Stability of living arrangements
- Family mobility
- School mobility
  
- Stressful events
- Parental/caregiver discord
  
- Child abuse/maltreatment
- Domestic violence
- Exposure to violence
  
- Access to tobacco/alcohol/drugs
- Access to firearms

## level of functioning

By reviewing how an adolescent functions in multiple settings, we are better able to understand if there is a site-specific issue or an overall functioning problem. Furthermore, we are able to observe if and how the factors associated with an adolescent's environment and personal development impede his/her functioning.

The three areas outlined in this section include (1) personal issues in which the adolescent's ability to function independently is the primary area under review; (2) school, which looks at the degree an adolescent is able to maintain his/her "day-job" and be a responsible student; and (3) family, which focuses on the role the adolescent has within the family setting.

Many of the factors related to school functioning can be drawn from student records; family functioning data are readily available through student and parent interviews while personal factors can be gathered from teacher observations, student self-reports, standardized assessments, and record reviews.

- 
- Internalizing behaviors (e.g., shy, withdrawn, unresponsive to social initiation, overly anxious)
  - Externalizing behaviors (e.g., aggressive, tantrums, ignores rules)
  - Alcohol/  
drug-related problem
  - Involvement in delinquent activity
  
  - Academic performance
  - School disciplinary actions
  - Truancy
  
  - Family role



# technical properties of adolescent well-being assessment



## **Report on the Reliability of the Adolescent Well-Being Assessment Instrument**



## the standards for educational and psychological testing

The *Standards for Educational and Psychological Testing* (1999, hereafter referred to as the *Standards*) state that reliability refers to the consistency of measurements (page 25).

The *Standards* state (page 27), “Traditionally, three broad categories of reliability coefficients have been recognized: (a) coefficients derived from the administration of parallel forms in independent testing sessions (alternate-form coefficients); (b) coefficients obtained by administration of the same instrument on separate occasions (test-retest or stability coefficients); and (c) coefficients based on the relationships among scores derived from individual items within a test, all data accruing from a single administration (internal consistency coefficients). When test scoring involves a high level of judgment, indexes of scorer consistency are commonly obtained.”

This report presents data concerning the reliability of the Adolescent Well-Being Assessment Instrument (AWBA). Specifically, we present data on the (a) stability, (b) internal consistency, and (c) inter-rater consistency of AWBA scores.

A review of the *Standards* indicates that three reliability standards are especially relevant to the AWBA.

**standard 2.1** For each total score, subscore, or combination of scores that is to be interpreted, estimates of relevant reliabilities and standard errors of measurement or test information functions should be reported.

**standard 2.4** Each method of quantifying the precision or consistency of scores should be described clearly and expressed in terms of statistics appropriate to the method. The sampling procedures used to select examinees for reliability analyses and descriptive statistics on these samples should be reported.

**standard 2.10** When subjective judgment enters into test scoring, evidence should be provided on both inter-rater consistency in scoring and within-examinee consistency over repeated measurements. A clear distinction should be made among reliability data based on (a) independent panels of raters scoring the same performances or products, (b) a single panel scoring successive performances or new products, and (c) independent panels scoring successive performances or new products.

Based on the above standards, we present reliability data for total AWBA scores as well as for scores on the three AWBA scales: Personal Development, Environmental Influences, and Level of Functioning. We also describe in detail the methods used to collect the data on which the reliability estimates are based. Finally, we present reliability evidence concerning the stability, internal consistency, and inter-rater consistency of AWBA ratings. These ratings were completed by nine clinicians, each of whom was provided with case records concerning 10 students on two occasions separated by seven weeks. On each of these occasions, the same 10 students were rated by the same nine clinicians.



The mental health clinicians who participated in these technical analyses work on behalf of the Cayuga County (New York) Safe Schools/Healthy Students (SS/HS) Partnership. The Partnership is one of 95 community-based partnerships across the country that received a three-year, federal Safe Schools/Healthy Students grant to provide a comprehensive array of prevention and early intervention programs and services to address mental health, substance and alcohol abuse, violence, and academic enhancement issues. Cayuga SS/HS clinicians operate in two distinct program/service areas: 1) school-based mental health programming designed to supplement and support existing pupil personnel services such as social work, school psychology and special education activities and 2) a community-based, alternative-to-incarceration program designed to intervene intensively into the substance abuse, mental health, and/or family dysfunction issues that have brought a young person to the point of incarceration.

These clinicians completed the Adolescent Well-Being Assessment for a representative number of youth cases at two points in time in the Fall of 2002. The first session was conducted on September 20<sup>th</sup> and the second on November 8<sup>th</sup>—seven weeks after the initial session. Eight clinicians completed AWBAs on 10 cases at each session; a ninth clinician completed 8 cases. The same cases were used for both sessions.

At the time of the this activity all of the clinicians were experienced mental health professionals; all having worked for Cayuga and Onondaga County-based community organizations serving the mental health needs of youth and adult populations. Five of the 9 clinicians hold Masters of Science in Social Work (MSW), 2 hold Masters of Science in Education, 1 holds a Masters of Science in Clinical Counseling, and 1 holds a

Bachelors of Science in Social Work; two hold CSAC (Certified Substance Abuse Counselor) certification. The total number years of working “in the field” ranges from a low of 3 years to a high of 22, for an average of 10 years experience. Seven of the 9 clinicians have held their positions since the inception of the project 3-years earlier, and 2 have been in their jobs for 1 year. All clinicians have extensive experience administering the AWBA.

The specific cases (i.e., individual adolescents) selected for AWBA administration were based on actual youth who received services from the two program areas described above. Seven of the 10 cases were based on youth who received services via the school-based mental health program and 3 were based on youth who received services through the alternative to incarceration program. All personally identifying information was removed from the case files prior to instrument administration. The information provided to the clinicians for each case was identical to the information available to the clinician at the time of the true administration of the AWBA. This included

- Observation Checklist
- Youth Pediatric Symptom Checklist
- Personal Experience Screening Questionnaire
- Exposure to Violence Self Report (where indicated)
- Clinical notes taken from interviews and phone conversations with youth, family members, other service providers, etc.

For both instrument administration periods, the clinicians met at a neutral location, in a comfortable meeting room containing desks with ample writing surfaces. Clinicians were instructed to carefully read all the information for one case, and complete the AWBA by themselves without discussing the case with any of the other clinicians. Score sheets and copies of the AWBA Manual were provided to each clinician. Clinicians were instructed to mark an item, *not enough information to rate*, if they felt that insufficient information was available to them in the background packets they received. After completing the AWBA for the

first case, they were instructed to complete the remaining cases at their own pace. Opportunities for breaks and refreshments were provided.

On average, clinicians took 32 minutes to complete one case. Both scoring sessions lasted approximately 6 hours.

## questions these reliability analyses are intended to answer

Because the Adolescent Well-Being Assessment is completed by clinicians on the basis of their review of student data, our reliability analyses sought to answer three questions.

### First, do different clinicians agree when using AWBA to evaluate a student's well-being?

Substantial disagreement among clinicians would mean that a student's AWBA scores reflect idiosyncrasies of the clinician in addition to (or instead of) characteristics of the student being rated. Substantial agreement among clinicians indicates that a student's ratings on AWBA are not strongly affected by idiosyncrasies of individual clinicians, and this provides a measure of confidence that the student would receive similar AWBA ratings from any appropriately trained clinician who is provided with adequate data on which to base ratings.

### Second, are the items on AWBA internally consistent?

Because items on AWBA are intended to measure different albeit related aspects of the same construct (adolescent well-being), we would expect the items to be internally



consistent (i.e., positively correlated with each other). Stated differently, there should be a tendency for students who are rated as having adjustment problems on one item to also be rated as having adjustment problems on some (although not necessarily all) other items.

### Third, are AWBA ratings (scores) stable over time?

If a clinician is given the same information about a student on two occasions (separated by several weeks or months), the clinician's ratings of the student should be consistent (stable) over time. If the clinician's ratings of a student were not stable, it would suggest that AWBA ratings are more affected by the occasion or time of measurement than by the student's characteristics. If the clinician's ratings are stable over time, this would indicate that ratings of students are not affected by idiosyncrasies associated with the occasion of measurement (such as the clinician's mood).



## internal consistency of AWBA ratings

Each item on AWBA is rated on a 0 to 2 scale. The AWBA scoring guidelines provide definitions and examples concerning the meaning of a 0, 1, and 2 rating for each AWBA item. Ratings of 0 indicate the clinician believes there is little or no evidence that suggests the student is experiencing (or might experience) problems with respect to the behavior/situation assessed by the item. Ratings of 1 indicate a moderate level of concern about the student's well-being or adjustment, and ratings of 2 indicate a higher level of concern about the student's well-being or adjustment.

Because items on AWBA are intended to measure different albeit related aspects of the same construct (adolescent well-being), we would expect the items to be internally consistent (i.e., positively correlated with each other). Stated differently, there should be a tendency for students who are rated as having adjustment problems on one item to also be rated as having adjustment problems on some (although not necessarily all) other items.

We used the clinician ratings collected in September 2002 (Time 1 ratings) to calculate Cronbach's coefficient alpha for the AWBA total score (37 items, hereafter referred to as T) and for the scores on the three AWBA scales: Personal Development (16 items, hereafter referred to as the P scale), Environmental Influences (13 items, hereafter referred to as the E scale), and Level of Functioning (8 items, hereafter referred to as the F scale). These analyses were based on data from 88 completed AWBA instruments (8 clinicians rated the same 10 students, and one clinician rated 8 of the same students). Due to the nature of Cronbach's coefficient alpha, when a clinician did not complete ratings on all AWBA

items for a student, that clinician/student data was not included in the analyses.

AWBA scale	crohbach's coefficient of stability	number of cases
Total (T)	.90	37
Personal Development (P)	.84	40
Environmental Influences (E)	.66	49
Level of Functioning (F)	.77	33

### interpretation:

Alpha coefficients equal to or greater than .70 are generally interpreted as evidence that items on an instrument are internally consistent. The internal consistency of the AWBA total score is high (.90). The internal consistency of the P and F scales is also acceptable (.84 and .77, respectively). The internal consistency of the E scale is slightly below .70 (.66). These results suggest that AWBA total scores, as well as scores on the P and F scales, are internally consistent.

It should be noted, however, that the internal consistency of ratings (as contrasted with the internal consistency of items on an achievement or ability test) may be inflated to the extent that ratings are affected by halo error. Halo error occurs when a rater (in this case, a clinician) allows his or her overall impression of the student to influence ratings of the student on each item. For example, a clinician who has a positive overall impression of a student might provide favorable ratings on nearly all AWBA items, even when such ratings are not warranted on some items. When halo influences ratings, low ratings on one item will tend to be accompanied by low ratings on other items (and high ratings on

one item will tend to be accompanied by high ratings on other items). The net effect of halo error is to inflate (increase) the internal consistency of ratings. The presence of halo error in the current study is likely to have been reduced (although not eliminated) because clinicians did not know any student's identity and therefore had no basis on which to form a prior impression of any student.



## stability of AWBA ratings

For each student, we calculated each clinician's mean rating across all AWBA items. We also calculated the clinician's mean rating of each student on each of the AWBA scales (P, E, and F).

Eight of the nine clinicians rated the same 10 students in September 2002 (Time 1) and then rated the same 10 students seven weeks later (November 2002, Time 2). One clinician rated eight of these same students at Time 1 and Time 2. The analyses that follow are therefore based on data from 88 AWBA instruments completed at Time 1 and Time 2.

First, we calculated the correlation between AWBA total scores (T) at Time 1 and Time 2. We then calculated the correlation between scores on each of the three AWBA scales at Time 1 and Time 2. These correlations are referred to as coefficients of stability.

AWBA scale	coefficient of stability
Total (T)	.90
Personal Development (P)	.83
Environmental Influences (E)	.78
Level of Functioning (F)	.85

Note: The coefficient of stability is the correlation between AWBA ratings at Time 1 and Time 2. For all correlations,  $p < .01$ ,  $N = 88$

We also repeated the analyses described above for each of the nine clinicians. For example, for clinician A, we calculated the correlation between AWBA total scores at Time 1 and Time 2 across the 10 students rated by the clinician on both occasions. Following are the coefficients of stability for each clinician.

clinicians	AWBA scales			
	Total (T)	Personal Development (P)	Environmental Influences (E)	Level of Functioning (F)
A	.79**	.75**	.63*	.89**
B	.98**	.94**	.89**	.94**
C	.91**	.88**	.62 <sup>a</sup>	.74*
D	.95**	.91**	.90**	.95**
E	.93**	.92**	.65*	.94**
F	.77**	.80**	.69*	.80**
G	.83**	.66*	.75*	.82**
H	.96**	.76*	.72*	.81**
I	.98**	.94**	.94**	.96**

Note: Cell entries are coefficients of stability. \*\*  $p < .01$ , \*  $p < .05$ , <sup>a</sup>  $p = .10$

It can be seen that the stability coefficients of AWBA total scores for individual raters ranged from .77 to .98 (median = .93). The range of stability coefficients for individual raters on the P scale was .66 to .94 (median = .88). The range of stability coefficients for individual raters on the E scale was .62 to .94 (median = .72). The range of stability coefficients for individual raters on the F scale was .74 to .96 (median = .89).

Finally, we conducted paired t-tests that compared the mean ratings on AWBA at Time 1 and Time 2. Following are the means and standard deviations of ratings at Time 1 and Time 2, as well as the t values.

AWBA scale	time 1 mean	time 1 standard deviation	time 2 mean	time 2 standard deviation	t
Total (T)	1.01	.45	1.06	.48	-2.37*
Personal Development (P)	1.07	.49	1.14	.53	-2.23*
Environmental Influence (E)	1.00	.45	1.08	.45	-2.45*
Level of Functioning (F)	.95	.61	.91	.63	1.06

Degrees of freedom = 87, \* < .05

There is a significant ( $p < .05$ ) difference between Time 1 and Time 2 ratings on AWBA scales T, P, and E. On these three scales, Time 2 ratings are slightly higher (i.e., associated with lower levels of well-being) than Time 1 ratings, however, when expressed in standard deviation units, the magnitude of the mean differences between Time 1 and Time 2 ratings is quite small (see table below).

AWBA scale	mean <sub>time 2</sub> - mean <sub>time 1</sub>	pooled standard deviation	d
Total (T)	.05	.46	.11
Personal Development (P)	.07	.51	.14
Environmental Influences (E)	.08	.45	.18
Level of Functioning (F)	-.04	.62	.06

Note: d equals the mean difference divided by the pooled standard deviation. According to Cohen (1988), small, medium, and large values of d are about .20, .50, and .80 respectively.

## interpretation:

Reliability coefficients (coefficients of stability) that exceed .70 are generally regarded as acceptable. It is desirable for such stability coefficients to exceed .80. These results indicate that, across clinicians and students, AWBA ratings are stable over time and are therefore likely to reflect characteristics of the students being rated rather than idiosyncrasies associated with the occasion of measurement. Finally, there was a tendency for AWBA ratings to increase between Time 1 and Time 2, however the magnitude of this increase was very small.

Although these results indicate that AWBA ratings are stable over time, it should be noted that stability coefficients can be artificially inflated to the extent that clinicians' Time 2 ratings were influenced by their memory of their Time 1 ratings of the same students. Because the gap between Time 1 and Time 2 ratings was seven weeks (rather than only a few days), memory effects are likely to have been reduced (although not necessarily entirely eliminated).

## inter-rater consistency of AWBA ratings

Inter-rater consistency refers to the extent to which different raters (clinicians) agree when rating the same student. High levels of inter-rater reliability indicate that high ratings of a student by one rater are generally associated with high ratings of the same student by other raters (and that low ratings of a student by one rater are generally associated with low ratings of the same student by other raters).

We calculated the inter-rater consistency (reliability) of AWBA ratings at Time 1. The index of inter-rater reliability we used was taken from a classic article on intraclass correlations (Shrout and Fleiss, 1979). Specifically, we conducted a two-way analysis of variance (rater by ratee) on AWBA total score ratings, as well as for ratings on each of the three AWBA scales. We then calculated inter-rater reliability as the intraclass correlation (ICC) where:

$$ICC = (MS_{\text{between}} - MS_{\text{within}}) / MS_{\text{between}}$$

Note that this formula gives the reliability of the average or sum of the ratings for N raters. In the current case, the formula provides the reliability of the average rating provided by the nine raters (clinicians).

In most applied settings, we expect that only a single clinician will complete AWBA for each student. Thus, we are interested in the reliability of ratings provided by a single rater (clinician). We therefore adjusted the ICC by using the Spearman-Brown formula to estimate the reliability of a single rater (clinician). The Spearman-Brown formula is:



results (continued)

$$R = k r_{xx} / [1 + (k-1)r_{xx}]$$

To estimate reliability of one rater from a reliability for nine raters,  $k=.11$ .

The following table presents the inter-rater reliability for the AWBA scales.

AWBA scale	inter-rater reliability (of the average rating of nine raters)	reliability of a single rater
Total (T)	.98	.84
Personal Development (P)	.97	.78
Environmental Influences (E)	.95	.68
Level of Functioning (F)	.98	.84

## interpretation:

Inter-rater consistency that exceeds .70 is generally considered an acceptable level of reliability. The reliability estimates for a single rater (clinician) therefore appear acceptable for AWBA total scores as well as scores on the P and F scales. For the E scale, reliability estimates for a single rater (clinician) are only slightly below .70.



## summary

The reliability of the Adolescent Well-Being Assessment Instrument was investigated by collecting ratings from nine clinicians concerning 10 students on two occasions separated by seven weeks. Because decisions concerning a student's potential for being at risk (and hence the student's need for professional intervention and support) should be based on the AWBA instrument as a whole (rather than on the student's score or profile on any single item or scale), we were primarily interested in the reliability of AWBA total scores.

Results indicate that AWBA total scores are internally consistent, stable over time, and demonstrate acceptable levels of inter-rater consistency. These reliability analyses therefore strengthen our confidence that AWBA ratings reflect the characteristics of the students being rated rather than idiosyncrasies associated with the time of measurement or the rater (clinician) completing the ratings.



American Educational Research Association, American Psychological Association, National Council on Measurement in Education (1999). *Standards for educational and psychological testing*. Washington DC: American Educational Research Association.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Hillsdale, NJ: Lawrence Erlbaum Associates.

Shrout, PE, & Fleiss, JL. (1979). Intraclass correlations: Uses in assessing rater reliability. *Psychological Bulletin*, 86, 420-428.



# **Report on the Relationship of the Adolescent Well-Being Assessment Instrument with Other Measures**

Evidence of Discriminant Validity and  
Contrasting Groups Validity



## the standards for educational and psychological testing

The *Standards for Educational and Psychological Testing* (1999, hereafter referred to as the *Standards*) state that validity refers to the degree to which evidence and theory support the interpretations of test scores entailed by the proposed uses of tests (page 9).

The *Standards* (pages 11 through 16) describe several sources of validity evidence. One source of evidence is test content. The procedures (and subject matter experts) used to develop the content for the Adolescent Well-Being Assessment Instrument (AWBA) are described in a separate report.

Other sources of validity evidence can be based on response processes, internal structure, and relations to other variables. The *Standards* state (page 13) that external variables may include “measures of some criteria that the test is expected to predict, as well as relationships to other tests hypothesized to measure the same constructs, and tests measuring related or different constructs. Categorical variables, including group membership variables, become relevant when the theory underlying a proposed test use suggests that group differences should be present or absent if a proposed test interpretation is to be supported. Evidence based on relationships with other variables addresses questions about the degree to which these relationships are consistent with the

construct underlying the proposed test interpretations.” (See also Standard 1.14.)

The principal purpose of this report is to present information concerning the relationship of AWBA scores with other variables. We also present information concerning the reliability (internal consistency) of AWBA scores.



The data described in this report represent clinicians' ratings of 225 individuals on the Adolescent Well-Being Assessment Instrument. At the time of the ratings, the clinicians were experienced mental health professionals; all having worked for Cayuga County-based community organizations serving the mental health needs of youth and adults. Six of the 9 clinicians hold Masters of Science in Social Work (MSW), and the remaining 3 hold BSWs; two hold CACs (Certified Alcoholism Counselor). The total number years of working "in the field" ranges from a low of 3 years to a high of 22; for an average of 11 years experience. Each of the clinicians has been in their present positions for at least one year and all of them have extensive experience administering the AWBA.

The clinicians work on behalf of the Cayuga County (New York) Safe Schools/Healthy Students (SS/HS) Partnership. The Partnership is one of 95 community-based partnerships across the country that received a three-year, federal Safe Schools/Healthy Student grant to provide a comprehensive array of prevention and early intervention programs and services to address mental health, substance and alcohol abuse, violence, and academic enhancement issues. Cayuga SS/HS clinicians operate in two distinct program/service areas: 1) school-based mental health programming designed to supplement and support existing pupil personnel services such as social work, school psychology and special education activities and 2) a community-based, alternative-to-incarceration program designed to intervene intensively into the substance abuse, mental health, and/or family dysfunction issues that have brought a young person to the point of incarceration.

The specific cases (i.e., individual adolescents) selected for AWBA administration were based on actual youth who received services

from the two program areas described above. Seven of the 10 cases were based on youth who received services via the school-based mental health program and 3 were based on youth who received services through the alternative to incarceration program. All personally identifying information was removed from the case files prior to instrument administration. The information provided to the clinicians for each case was identical to the information available to the clinician at the time of the true administration of the AWBA. This included

- Observation Checklist
- Youth Pediatric Symptom Checklist
- Personal Experience Screening Questionnaire
- Exposure to Violence Self Report (where indicated)
- Clinical notes taken from interviews and phone conversations with youth, family members, other service providers, etc.

These clinicians completed the Adolescent Well-Being Assessment for a representative number of youth cases at two points in time in the Fall of 2002. The first session was conducted on September 20<sup>th</sup> and the second on November 8<sup>th</sup>—seven weeks after the initial session. Eight clinicians completed AWBAs on 10 cases at each session; a ninth clinician completed 8 cases. The same cases were used for both sessions.

For both data collection periods, the clinicians met at a neutral location, in a comfortable meeting room containing desks with ample writing surfaces for each clinician. Clinicians were instructed to carefully read all the information for one case, and complete the AWBA by themselves without discussing the case with any of the other clinicians. Score sheets and copies of the AWBA Manual were provided to each clinician. After completing the AWBA for the first case, they were instructed to complete the remaining cases at their own pace. Opportunities for breaks and refreshments were provided.

On average, clinicians took 32 minutes to complete one case. Both scoring sessions lasted approximately 6 hours.

## sample description

Age at intake ranged from 9 to 19 (M = 13.44, SD = 2.27), and age at testing ranged from 7 to 20 (M = 12.22, SD = 2.68). Sixty-five percent (65%) of these individuals were male and 35% were female. With respect to race/ethnic status, 91% were White, 6% were Black and 3% were Hispanic or Other.

The distribution of household incomes is listed below.

		frequency	percent	valid percent	cumulative percent
valid	< \$5000	15	1.8	7.4	7.4
	\$5,000 - \$9,999	20	2.4	9.9	17.3
	\$10,000 - \$14,999	30	3.7	14.9	32.2
	\$15,000 - \$19,999	17	2.1	8.4	40.6
	\$20,000 - \$24,999	22	2.7	10.9	51.5
	\$25,000 - \$34,999	41	5.0	20.3	71.8
	\$35,000 - \$49,999	24	2.9	11.9	83.7
	\$50,000 - \$74,999	21	2.6	10.4	94.1
	\$75,000 - \$99,999	8	1.0	4.0	98.0
	\$100,000 +	4	.5	2.0	100.0
	Total	202	24.7	100.0	
Missing	999	617	75.3		
Total		819	100.0		

The distribution of mother’s education is listed below.

		frequency	percent	valid percent	cumulative percent
<b>valid</b>	No degree	41	5.0	22.7	22.7
	HS or GED degree	94	11.5	51.9	74.6
	Some college	17	2.1	9.4	84.0
	Associates	16	2.0	8.8	92.8
	Bachelors	5	.6	2.8	95.6
	Masters	3	.4	1.7	97.2
	Professional degree	5	.6	2.8	100.0
	Total	181	22.1	100.0	
<b>missing</b>	999	16	2.0		
	System	622	75.9		
	Total	638	77.9		
<b>Total</b>		819	100.0		

For 71% of the individuals, the AWBA assessment was associated with School-Based Mental Health Services. For 11%, the AWBA assessment was associated with Court-Ordered Supervision. For 4%, the AWBA assessment was associated with Court-Ordered Assessment. For 6%, the AWBA assessment was associated with Therapeutic Foster Care. Eight percent (8%) of the individuals received multiple services.

In addition to these background data, current reading achievement scores were available for 138 of these individuals. Current mathematics achievement scores were available for 169 of these individuals. The reading achievement scores were grade equivalent scores from a standard-

ized reading achievement test. The mathematics achievement scores were, likewise, grade equivalent scores from a standardized math instrument. The mean reading achievement score was 5.88 (SD = 2.85, range 1.2 to 12.0). The mean mathematics achievement score was 5.98 (SD = 2.56; range 0.6 to 13.0).



## questions these analyses are intended to answer

Although detailed evidence concerning the reliability of clinicians' ratings on the AWBA was examined in a separate study (see *Report on the Reliability of the Adolescent Well-Being Assessment Instrument*, February 2003), we examined the reliability of these AWBA ratings by asking, “*Are the items on the AWBA internally consistent?*”

Because items on the AWBA are intended to measure different albeit related aspects of the same construct (adolescent well-being), we would expect the items to be internally consistent (i.e., positively correlated with each other). Stated differently, there should be a tendency for students who are rated as having adjustment problems on one item to also be rated as having adjustment problems on some (although not necessarily all) other items.

The Adolescent Well-Being Assessment instrument is intended as a measure of adolescent well-being. It is not intended to be a measure of socioeconomic status (e.g., parent's education or household income) or academic achievement. We therefore asked, “*Are the AWBA ratings correlated with socioeconomic status or academic achievement?*”

We expect that the AWBA ratings should show only a small (or perhaps no) relationship with socioeconomic status and academic achievement. If the AWBA ratings were strongly correlated (or associated) with these factors, this would raise a concern that the ratings were contaminated by these factors or that the AWBA was merely a surrogate measure of socioeconomic

Finally, we asked, “*Are the AWBA ratings higher (i.e., indicating lower levels of well-being/adjustment) for students receiving Court-Ordered Supervision or Court-Ordered Assessment as compared with students receiving School-Based Mental Health Services or Therapeutic Foster Care?*”

This type of analysis is often referred to as contrasting groups analysis. One source of validity evidence is the ability of an instrument to distinguish between groups that are known to differ on the construct that the instrument purports to measure (in this case, adolescent well-being). That is, the AWBA should be able to distinguish between students receiving school-based mental health services versus students who have already had some level of involvement with the courts (i.e., Court-Ordered Supervision or Assessment). Involvement with the courts can be seen as external and independent evidence that a student is experiencing adjustment problems. Hence, students who have already had some level of involvement with the courts would be expected to receive higher AWBA ratings than students receiving school-based mental health services or therapeutic foster care.



## internal consistency of the AWBA ratings

Each item on the AWBA is rated on a 0 to 2 scale. The AWBA scoring guidelines provide definitions and examples concerning the meaning of a 0, 1, and 2 rating for each AWBA item. Ratings of 0 indicate the clinician believes there is little or no evidence that suggests the student is experiencing (or might experience) problems with respect to the behavior/situation assessed by the item. Ratings of 1 indicate a moderate level of concern about the student’s well-being or adjustment,



and ratings of 2 indicate a higher level of concern about the student's well-being or adjustment.

Because items on the AWBA are intended to measure different albeit related aspects of the same construct (adolescent well-being), we would expect the items to be internally consistent (i.e., positively correlated with each other). Stated differently, there should be a tendency for students who are rated as having adjustment problems on one item to also be rated as having adjustment problems on some (although not necessarily all) other items.

We calculated Cronbach's coefficient alpha for the AWBA total score (37 items, hereafter referred to as T) and for the scores on the three AWBA scales: Personal Development (16 items), Environmental Influences (13 items), and Level of Functioning (8 items).

AWBA Scale	Cronbach's Coefficient Alpha	Number of Cases
Total (T)	.88	225
Personal Development (P)	.79	225
Environmental Influences (E)	.73	225

## interpretation:

Alpha coefficients equal to or greater than .70 are generally interpreted as evidence that items on an instrument are internally consistent. The internal consistency of the AWBA total score is high (.88). The internal consistency of the P and E scales is also acceptable (.79 and .73, respectively). The internal consistency of the F scale is slightly below .70 (.68). These results suggest that AWBA total scores, as well as scores on the P and E scales, are internally consistent.

It should be noted, however, that the internal consistency of ratings (as contrasted with the internal consistency of items on an achievement or ability test) may be inflated to the extent that ratings are affected by halo error. Halo error occurs when a rater (in this case, a clinician) allows his or her overall impression of the student to influence ratings of the student on each item. For example, a clinician who has a positive overall impression of a student might provide favorable ratings on nearly all AWBA items, even when such ratings are not warranted on some items. When halo influences ratings, low ratings on one item will tend to be accompanied by low ratings on other items (and high ratings on one item will tend to be accompanied by high ratings on other items). The net effect of halo error is to inflate (increase) the internal consistency of ratings. It is difficult to determine the extent to which AWBA ratings may have been influenced by halo error in this dataset.

## relationship of the AWBA ratings to socioeconomic status

We examined the correlation of AWBA ratings with mother’s education level (an indicator of socioeconomic status) and household income.

Mother’s Education Level was coded: 1 = No degree, 2 = High school or GED degree, 3 = Some college but no degree, 4 = Associates degree, 5 = Bachelors degree, 6 = Masters degree, 7 = Professional degree. The distribution of Mother’s Education Level is presented below.

		frequency	percent	valid percent	cumulative percent
<b>valid</b>	No degree	41	18.2	22.7	22.7
	HS or GED degree	94	41.8	51.9	74.6
	Some college	17	7.6	9.4	84.0
	Associates	16	7.1	8.8	92.8
	Bachelors	5	2.2	2.8	95.6
	Masters	3	1.3	1.7	97.2
	Professional degree	5	2.2	2.8	100.0
	Total	181	80.4	100.0	
<b>missing</b>	999	16	7.1		
	System	28	12.4		
	Total	44	19.6		
<b>Total</b>		225	100.0		

\$14,999, 4 = \$15,000 to \$19,999, 5 = \$20,000 to \$24,999, 6 = \$25,000 to \$34,999, 7 = \$35,000 to \$49,999, 8 = \$50,000 to \$74,999, 9 = \$75,000 to \$99,999, 10 = \$100,00 or more. The distribution of household income is presented below.

		frequency	percent	valid percent	cumulative percent
valid	< \$5000	15	6.7	7.4	7.4
	\$5,000 - \$9,999	20	8.9	9.9	17.3
	\$10,000 - \$14,999	30	13.3	14.9	32.2
	\$15,000 - \$19,999	17	7.6	8.4	40.6
	\$20,000 - \$24,999	22	9.8	10.9	51.5
	\$25,000 - \$34,999	41	18.2	20.3	71.8
	\$35,000 - \$49,999	24	10.7	11.9	83.7
	\$50,000 - \$74,999	21	9.3	10.4	94.1
	\$75,000 - \$99,999	8	3.6	4.0	98.0
	\$100,000 +	4	1.8	2.0	100.0
	Total	202	89.8	100.0	
missing	999	23	10.2		
<b>Total</b>		225	100.0		

The correlations between AWBA ratings and socioeconomic status are presented below. The AWBA ratings were unrelated to mother's education level and had a small negative correlation with household income.

AWBA Ratings	Mother's Education Level	Household Income
Total (T)	-.12	-.24 **
Personal Development (P)	-.10	-.24 **
Environmental Influences (E)	-.11	-.31 **
Level of Functioning (F)	-.09	-.03

Note: Cell entries are correlation coefficients. For Mother's Education Level, n = 181. For Household Income, n = 202. \*\* p < .01

Finally, AWBA ratings were positively correlated with age at testing. That is, there was a tendency for older children to receive higher AWBA ratings (i.e., indicated lower levels of adjustment) than younger children. Age at testing explained between 5% and 8% of the variance in AWBA ratings.

AWBA Ratings	Age at Testing
Total (T)	.29 **
Personal Development (P)	.23 **
Environmental Influences (E)	.28 **
Level of Functioning (F)	.25 **

Note: Cell entries are correlation coefficients. N = 225. \*\* p < .01

## interpretation:

The Adolescent Well-Being Assessment ratings were unrelated to the mother's level of education. They had a small negative association with household income. Individuals from lower income homes received somewhat lower AWBA ratings than individuals from higher income homes, however, household income explained only 5.7 percent ( $r^2$ ) of the variability in AWBA total scores. As might be expected, the strongest correlation (albeit still modest in magnitude) was between household income and the AWBA Environmental Influences scale ( $r = -.31$ ). These results indicate that AWBA ratings are unrelated to the mother's education level and have only a small negative relationship with household income.

## relationship of AWBA ratings to academic achievement

First we examined whether academic achievement was related to the student's age or the family's socioeconomic status. Not surprisingly, reading achievement scores and mathematics achievement scores were related to age at testing. Also, reading achievement was related to mother's education level. The correlations among these variables are presented below.

	1	2	3	4	5
1. Reading Achievement	-----				
2. Mathematics Achievement	.79 **	-----			
3. Age at Testing	.36 **	.42 **	-----		
4. Household Income	.15	.13	.03	-----	
5. Mother's Education Level	.23 *	.13	-.04	.31 **	-----

Note: Cell entries are correlation coefficients. \*  $p < .05$ , \*\*  $p < .01$

Next, we examined the relationship between AWBA ratings and academic achievement. Results indicated that academic achievement was unrelated to AWBA ratings.

AWBA ratings	reading achievement	mathematics achievement
Total (T)	.00	.03
Personal Development (P)	-.08	-.01
Environmental Influences (E)	.04	.08
Level of Functioning (F)	.08	.04

Note. Cell entries are correlation coefficients. For all correlations,  $p > .30$  (not significant).

We also conducted covariance analyses in which we examined whether academic achievement predicted AWBA ratings after controlling for age at testing, household income, and mother’s education level. Results indicated that the relationship of reading achievement to AWBA total scores approached significance ( $t = -1.79$ , standardized beta =  $-.17$ ,  $p = .08$ , increase in  $R^2 = .015$ ) after controlling for age at testing, household income, and mother’s education level. Also, the relationship of mathematics achievement to AWBA total scores approached significance ( $t = -1.93$ , standardized beta =  $-.17$ ,  $p = .06$ , increase in  $R^2 = .022$ ) after controlling for age at testing, household income, and mother’s education level. Academic achievement explained about 2% of the variance in AWBA total scores after controlling for age and socioeconomic status.

## interpretation:

The relationship between AWBA ratings and academic achievement did not reach statistical significance, even after controlling for socioeconomic status and age at testing. These results indicate that AWBA ratings are largely independent of a student's level of academic achievement.

## contrasting groups analysis

In these analyses we examined whether the AWBA ratings were higher (i.e., indicating lower levels of well-being/adjustment) for students receiving Court-Ordered Supervision or Court-Ordered Assessment as compared with students receiving School-Based Mental Health Services or Therapeutic Foster Care.

We conducted an analysis of variance (ANOVA) where the independent variable was Service. Service had five levels: Court-Ordered Supervision, Court-Ordered Assessment, School-Based Mental Health Services, Therapeutic Foster Care, and Multiple Services. The dependent variable was AWBA total scores.

Results indicated that the AWBA total scores differed for students receiving different services ( $F = 12.71, df = 4, 220, p < .01$ ). Post hoc Scheffe tests indicated that children receiving Court-Ordered Supervision, Court-Ordered Assessment, or Multiple Services received higher AWBA total scores than students receiving School-Based Mental Health Services or Therapeutic Foster Care.

Services	Mean AWBA Total Score	Standard Deviation	n
Court-Ordered Supervision	1.10	.25	24
Court-Ordered Assessment	1.12	.33	10
Multiple Services	.99	.21	18
School-Based Mental Health Services	.75	.30	159
Therapeutic Foster Care	.67	.24	14

The table below presents the magnitude of these mean differences expressed in standard deviation units using Cohen's *d* (where *d* equals the mean difference divided by the pooled standard deviation). According to Cohen (1988), small, medium, and large values of *d* are about .20, .50, and .80 respectively. It can be seen that there are large mean differences (where *d* exceeds .90) between students receiving Court-Ordered Supervision, Court-Ordered Assessment, or Multiple Services vs. students receiving School-Based Mental Health Services or Therapeutic Foster Care.

contrasted groups	cohen's d
Court-Ordered Supervision vs. Therapeutic Foster Care	1.72
Court-Ordered Assessment vs. Therapeutic Foster Care	1.55
Therapeutic Foster Care vs. Multiple Services	1.39
Court-Ordered Supervision vs. School-Based Mental Health Services	1.25
Court-Ordered Assessment vs. School-Based Mental Health Services	1.16
School-Based Mental Health Services vs. Multiple Services	.92
Court-Ordered Supervision vs. Multiple Services	.48
Court-Ordered Assessment vs. Multiple Services	.48
School-Based Mental Health Services vs. Therapeutic Foster Care	.30
Court-Ordered Supervision vs. Court-Ordered Assessment	.07

Additional analyses of variance were conducted using each of the three AWBA sub-scales (Personal Development, Environmental Influences, and Level of Functioning) as dependent variables. The results closely paralleled those reported above.

## interpretation:

One source of validity evidence is the ability of an instrument to distinguish between groups that are known to differ on the construct that the instrument purports to measure (in this case, adolescent well-being). These results indicate that contrasted group mean differences on the AWBA are large and in the direction that would be expected based on the student's level of involvement with the court system. That is, AWBA ratings effectively distinguish between students receiving school-based mental health services or therapeutic foster care vs. students who have already had some level of involvement with the courts (i.e., Court-Ordered Supervision or Assessment).



The Adolescent Well-Being Assessment ratings obtained in operational use were internally consistent. This finding confirms results presented in a separate study (see *Report on the Reliability of the Adolescent Well-Being Assessment Instrument*, February 2003), that found AWBA total scores to be internally consistent, stable over time, and to demonstrate acceptable levels of inter-rater reliability.

The AWBA ratings were not related to academic achievement or to the mother's level of education. There was a small negative relationship between AWBA ratings and household income; however, household income explained only 5.7 percent of the variability in the AWBA total scores. These data indicate that AWBA ratings are not surrogates for (or substantially contaminated by) the child's academic achievement or the socioeconomic status of the child's family.

Age at testing was positively related to AWBA scores and explained between 5% and 8% of the variance in ratings.

Finally, contrasting groups validity analyses found that the AWBA ratings were substantially higher (indicating lower levels of adolescent well-being and adjustment) for students who have a history of involvement with the courts than for students receiving school-based mental health services or therapeutic foster care. This finding confirms results reported in a separate study (see report titled *Contrasting Groups Validity Evidence*, March 2003).

Taken together, these analyses provide evidence that supports the reliability, discriminant validity, and contrasting groups validity of the Adolescent Well-Being Assessment instrument.



American Educational Research Association, American Psychological Association, National Council on Measurement in Education (1999). *Standards for educational and psychological testing*. Washington DC: American Educational Research Association.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Hillsdale, NJ: Lawrence Erlbaum Associates.



# references



## references

- Baird, C. (1991). *Validating risk assessment instruments used in community corrections*. U.S. Department of Justice National Institute of Justice Report No. 147395. Madison, Wis.: National Council on Crime and Delinquency.
- Brent, D.A., Perper, J.A., Goldstein, C.E., Kolko, D.J., Allan, M.J., Allman, C.J., & Zelenak, J.P. (1988). Risk factors for adolescent suicide: A comparison of adolescent suicide victims with suicidal inpatients. *Archives of General Psychiatry*, *45*, 581-588.
- Brent, D.A., Perper, J.A., Moritzs, G., Liotus, L., Schweers, J., Balach, L., & Roth, C. (1994). Familiar risk factors for adolescent suicide: A case-control study. *Acta Psychiatrica Scandinavica*, *89*, 52-58.
- Browning, K., Thornberry, T.P., & Porter, P.K. (April, 1999). *OJJDP Fact Sheet No. 3: Highlights of findings from the Rochester development study*. Washington, D.C.: U.S. Department of Justice.
- Constantine, N., Bernard, B., & Diaz, M. (June, 1999). *Measuring protective factors and resilience traits in youth: The healthy kids resilience assessment*. Paper presented at the Seventh Annual Meeting of the Society for Prevention Research, New Orleans, La.

- Famularo, R., Kinscherff, R., & Fenton, T. (1992). Psychiatric diagnoses of maltreated children: Preliminary findings. *Journal of the American Academy of Child and Adolescent Psychiatry*, 31, 863-867.
- Fergusson, D.M., & Lynskey, M.T. (1996). Adolescent resiliency to family adversity. *Journal of Child Psychology and Psychiatry*, 37, 281-292.
- Garber, J., & Hilsman, R. (1992). Cognition, stress, and depression in children and adolescents. *Child and Adolescent Psychiatric Clinics of North America*, 1, 129-167.
- Garmerzy, N. (1983). Stressors of childhood. In N. Garmerzy & M. Rutter (Eds.), *Stress, coping and development in children* (pp. 43-84). New York: McGraw-Hill.
- Gottfredson, D.C., & Koper, C.S. (1997). Race and sex differences in the measurement of risk for drug use. *Journal of Quantitative Criminology*, 13, 3, 325-347.
- Hawkins, J.D., Catalano, R.F., & Miller, J.Y. (1992). Risk and protective factors for alcohol and other drug problems in adolescence and early adulthood: Implications for substance abuse prevention. *Psychological Bulletin*, 112, 6, 64-105.
- Jenkins, E., & Bell, C. (1997). Exposure and response to community violence among children and adolescents. In J. Osofsky (Ed.), *Children in a violent society* (pp. 9-31). New York: Guilford Press.
- Kaufman, J. (1991). Depressive disorders in maltreated children. *Journal of the American Academy of Child and Adolescent Psychiatry*, 30, 257-265.
- Kazdin, A.E., Moser, J., Colbus, D., & Bell, R. (1985). Depressive symptoms among physically abused and psychiatrically disturbed children. *Journal of Abnormal Psychology*, 94, 298-307.

- Kelly, B.T., Loeber, R., Keenan, K., & DeLamatre, M. (December, 1997). *Juvenile Justice Bulletin: Developmental pathways in boys' disruptive and delinquent behavior*. Washington, D.C.: Office of Juvenile Justice and Delinquency Prevention.
- Knitzer, J. (2000). Promoting resilience: Helping young children and parents affected by substance abuse, domestic violence, and depression in the context of welfare reform, Issue Brief 8. New York: National Center for Children in Poverty.
- Kovacs, M., Devlin, B., Pollock, M., Richards, C., & Mukerji, P. (1997). A controlled family history study of childhood onset depressive disorders. *Archives of General Psychiatry*, *54*, 337-343.
- Lewinsohn, P.M., Roberts, R.E., Seeley, J.R., Rohde, P., Gotlib, I.H., & Hops, H. (1994). Adolescent psychopathology II: Psychosocial risk factors for depression. *Journal of Abnormal Psychology*, *103*, 302-315.
- Luthar, S.S., Cicchetti, D., & Becker, B. (2000). The construct of resilience: A critical evaluation and guidelines for future work. *Child Development*, *71*, 543-562.
- Pasternoster, R., & Brame, R. (1997). Multiple routes to delinquency? A test of developmental and general theories of crime. *Criminology*, *35*, 49-84.
- Patterson, G.R. (1996). Some characteristics of a developmental theory for early-onset delinquency. In M.F. Lenzenweger & J.J. Haugaard (Eds.), *Frontiers of developmental psychopathology* (pp. 81-124). New York: Oxford University Press.
- Pelham, W.E., Jr., Gnagy, E.M., Greenslade, K.E., & Milich, R. (1992). Teacher ratings of DSM-III-R symptoms for the disruptive behavior disorders. *Journal of the American Academy of Child and Adolescent Psychiatry*, *31*, 210-218.
- Puig-Antick, J., Goetz, D., Davies, M., Kaplan, T., Davies, S., Ostrow, L., Asnis, L., Twomey, J., Iyengar, S., & Ran, N.D. (1989). A controlled family history study of prepubertal major depressive disorder. *Archives of General Psychiatry*, *46*, 406-418.

- Salzinger, S., Feldman, R.S., Hammer, M., & Rosario, M. (1993). The effects of physical abuse on children's social relationships. *Child Development, 64*, 169-187.
- Sampson, R.J., Raudenbush, S.W., & Earls, F. (1997). Neighborhoods and violent crime: A multilevel study of collective efficacy. *Science, 277*, 918-924.
- Seifer, R., Sameroff, A.J., Baldwin, C.P., & Baldwin, A. (1992). Child and family factors that ameliorate risk between 4 and 13 years of age. *Journal of the American Academy of Child and Adolescent Psychiatry, 31*, 5, 893-903.
- Selner-O'Hagan, M., Kindlon, D.J., Buka, S.L., Raudenbush, S.W., & Earls, F.J. (1998). Assessing exposure to violence in urban youth. *Journal of Child Psychology, 39*, 2, 215-224.
- U.S. Department of the Surgeon General. (1999). *Mental health: A report from the Surgeon General*. Washington, D.C.: Author.
- Verlinden, S., Hersen, M., & Thomas, J. (2000). Risk factors in school shootings. *Clinical Psychology Review, 20*, 1, 3-56.
- Werner, E.E., & Smith, R.S. (1992). *Overcoming the odds: High risk children from birth to adulthood*. Ithaca, N.Y.: Cornell University Press.
- Wicramaratne, P.J., & Weissman, M.M. (1998). Onset of psychopathology in offspring by developmental phase and parental depression. *Journal of the American Academy of Child and Adolescent Psychiatry, 37*, 933-942.
- Wiebush, R.G., Baird, C., Krisberg, B., & Onek, D. (1995). Risk assessment and classification for serious, violent, and chronic juvenile offenders. In J.C. Howell, B. Krisberg, J.D. Hawkins, & J.J. Wilson (Eds.), *Serious, violent and chronic juvenile offenders: A Sourcebook*. (pp. 171-212). Thousand Oaks, Calif.: Sage Publications.



# appendix



## appendix

- Observation Checklist
- Standardized Measures
  - Youth Pediatric Symptom Checklist (mental health measure)
  - Personal Experience Screening Questionnaire (substance abuse measure)
- Adolescent Well-being Assessment Instrument
- My Exposure to Violence: Self-Report