APPENDIX H

A GUIDEBOOK

TO THE USE OF THE ADOLESCENT SELF ASSESSMENT PROFILE - ASAP

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INTRODUCTION

The scales of the Adolescent Self Assessment Profile (ASAP) were developed out of a long history of multivariate research by Horn, Wanberg and Associates of symptoms, behaviors, attitudes, and emotional responses of individuals identified as having problems associated with alcohol and drug use. Pioneering studies in this area by Horn and Wanberg (1969, 1970) early on identified patterns, symptoms, and behaviors of alcohol use found among individual who were clinically diagnosed as being alcoholic. These alcohol use patterns have been operationally defined by the Scales of the Alcohol Use Inventory (Horn, Wanberg and Foster, 1987).

Early studies by Horn, Wanberg and Associates also focused on the identification of adjustment patterns and problems of individuals with alcohol use difficulties in domains outside of the specific area of the use of alcohol and drugs. Reliable factors describing problems in adjustment in childhood and adolescence could be identified by adults in retrospective data (Horn & Wanberg, 1970; Horn, Wanberg and Adams, 1982; Wanberg & Horn, 1983; Wanberg, 1970). These factors measured adjustment problems in the period of development in the areas of deviancy and acting out behavior, school problems, family disruption and emotional and psychological problems. These factors became the foundation for the development of the scales of ASAP.

These factors of life adjustment and drug use problems were further studied in a sample of late adolescent and young adult drug users in the Denver Metropolitan area (Wanberg & Farmer, 1974). This research identified various factors of life adjustment problems, drug disruption factors, and drug specific patterns of use associated with the primary categories of psychoactive drugs, e.g., cocaine, marijuana, amphetamines, etc. (Diesenhaus, Wackwitz, & Foster, 1977).

Similar life adjustment and drug use constructs were also identified among a population of juvenile offenders using multivariate methods and procedures (Wanberg, Embree, Tjaden & Garrett, 1986; Wanberg, Tjaden, & Garrett, 1990; Wanberg, Befus & Embree, 1990). The retrospective factors of deviancy, school adjustment problems, anxiety and depression, and family disruption identified in the early Horn & Wanberg studies with alcohol patients (Horn & Wanberg, 1970; Horn, Wanberg & Adams, 1982; Wanberg, 1970; and Wanberg & Horn, 1983) were reliably identified in the juvenile offender' studies. As well, the broad factors of drug use disruption, drug use benefits, and sustained drug use identified in the early Horn & Wanberg studies (Horn & Wanberg, 1969; Wanberg, Horn & Foster, 1977) and which are reliably measured by the Alcohol Use Inventory (Horn, Wanberg & Foster, 1987) were replicated in the study of juvenile offenders. Furthermore, the drug-specific factors identified in the Diesenhaus et al. study (1977) were also replicated in the juvenile offender studies.

The identification of the various factors of adjustment and drug and alcohol use in populations of individual's with drug and alcohol use problems have led to the multiple-conditioned theory of drug and alcohol abuse (Wanberg & Horn, 1987). This theory holds that there are independent and separate multiple causes, patterns and outcomes of psychoactive drug use; and that these patterns of use require different interventions and treatments. Such a view refutes the idea that there is a discrete, single or unitary disease or disorder that can account for all of the variance associated with drug use and abuse. The scales of the Adolescent Self Assessment Profile represent an operational definition of the multiple-condition theory of drug use and abuse within adolescent drug use populations. These scales can provide an empirical basis for a differential assessment of conditions and problems among adolescent drug users.

Drawing upon the above research based on the multiple-conditioned theory of alcohol and drug use and the various risk factors which have been associated with the development of drug use among adolescence (e.g., Botvin, 1983, Newcomb, Maddahian & Bentler, 1986; Hawkins, Lisner & Catalano, 1985), Wanberg and Befus (1990) identified a number of salient concepts and conditions which they considered to be essential in the differential assessment of adolescents identified as having alcohol or drug use problems. These included the conditions of family disruption, emotional and psycho-

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logical disruption, deviancy and acting out behavior, school disruption and problems, peer and friendship influence, an ongoing favorable and accepting attitude towards drug use, and exposure to and involvement in the use of drugs. These seven concepts formed the structure of the basic scales of ASAP.

A multiple conditioned assessment of adolescent drug users, however, should go beyond these seven factors. Thus, the ASAP scales also include factors which identify the more specific conditions associated with drug use. These factors include measures of benefits of drug use, disruptions of drug use, a sustained pattern of use, and the measurement of the extent of past use of drugs in the various categories of psycho-active drug use which have been identified in the literature (e.g., Diesenhaus, et al., 1977; Julien, 1988; American Psychiatric Association, 1987; Ray & Ksir, 1987; Wanberg, 1990). As well, the supplemental scales of ASAP provide a more indepth measurement of the general areas of family functioning, deviancy and mental health adjustment.

The purpose of the scales of the Adolescent Self Assessment Profile (ASAP) is to provide a multiple-condition framework for the assessment of life adjustment problems and alcohol and drug use among adolescents referred for intervention and treatment. This user's guide will discuss the organization and structure of ASAP, provide instruction on its administration and scoring, describe the content and meaning of the scales, identify and discuss the normative or reference group upon which the scales are normed, provide evidence of reliability and validity of the scales, and provide some guidelines on how to use the scales in the differential assessment of adolescents referred for the intervention or treatment of problems associated with drug use.

THE ORGANIZATION, ADMINISTRATION AND SCORING OF ASAP

Organization of ASAP Instrument

The questions in the ASAP test booklet are grouped by specific scales or con-structs. For example, all items pertaining to family or living situation are presented first and in sequence. Although there may be some drawbacks to this method of item presentation, advantages seem to outweigh the disadvantages.

First, it could be argued that this kind of item presentation format will arti-ficially increase the internal consistency reliability of the respective scales because it might create a response set on the part of the respondent. This is, however, an advantage in that the respondent is allowed to develop a single focus on a specific area of living and life concern for a concentrated period to time over a specific set of questions. This in fact could increase more reliable responding, and thus increase internal consistency reliability in a valid manner.

A second criticism of sequencing the presentation of items based on measurement constructs is that the respondent becomes (probably quickly) aware of the intent of measurement. However, ASAP, like other instruments of its genre, is comprised of items which are face valid. That is, the purpose of the questions and intent of measurement is obvious and transparent to most completing the instrument. There is no intent to hide the meaning of the items or the purpose of measurement. If the individual wants to present distorted or false information on ASAP or any other instrument of its kind, he or she can certainly do so.

Instruments which are face-valid may not be as effective with the unmotivated respondent; or for a client forced to take the questionnaire by order of the court. Yet, the user of ASAP needs to make it clear to respondents completing ASAP that they have a choice to be open and honest, which can lead to a more valid description of their condition; or they can choose to distort. It is for this reason that ASAP or similar instruments must be used in conjunction with collateral data - information acquired from significant others, e.g., family members, counselors, probation workers, etc. There is evidence that, even for individuals who are not completely motivated or who are not considered to be voluntary clients at presentation, self-report instruments which are face-valid in item presentation are responded to with a significant degree of honesty and candor (Kandel & Logan, 1984).

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example, an individual with a raw score of "0" on DEPENDENT will have a decile score of 2 and an approximate percentile score of 15. This feature is of particular importance when interpreting the meaning of some of the supplemental scales. For example, examine the raw scores on the supplemental profile for scale MENTAL, which measures the degree to which an individual reports that when using drugs, he or she experiences more mental alertness, thinks better, etc. It will be noted that a raw score of "0" results in a decile score of 7 and an approximate percentile score of 65. This would mean that 65 percent of the reference or normative group did not endorse any of the four items measuring this construct. A raw score of "1" results in an approximate percentile score of 75. This is not a common use benefit pattern found among adolescent drug treatment referrals.

When interpreting the meaning of the standard scores, then, it is important that one keeps in mind the individual's raw score, particularly when the "starting percentile score is in the decile rank of two or above.

The whole matter of standardization of scores, the meaning of these scores as they are applied to the ASAP scales, and the normative group will be discussed in a later section of this guidebook. Now, we will take a close look at the content, meaning and structure of the individual basic and supplemental ASAP scales.

DESCRIPTION OF THE ASAP SCALES

The Basic Scales

The first six basic scales operationally define the six major constructs which identify problems and conditions outside the area of drug and alcohol use. Scales 7 through 19 measure different aspects of drug and alcohol use. Scale 20 is a rater scale based on the clinicians ratings across seven areas of potential problems. Each of these scales will be discussed as to their content and interpretation.

Scale 1: FAMILY – Family Disruption and Dysfunction

Lack of parental nurturing, support, affection and closeness all seem to have significant interactions with the development of adolescent adjustment problems and drug use behaviors (Hays, et al.,1986; Barnes, 1984; Pandina & Schuele, 1983). There is also evidence that there is a significant relationship between deviant behavior and family dysfunction (Wanberg, Tjaden & Garrett, 1990).

The ASAP FAMILY scale is a measurement of the degree to which the adolescent sees his family to be destructive, disruptive, distant and non-nurturing. Individuals with high scores on this scale report that his or her parents were verbally and physically abusive, that the family is economically and even geographically unstable, there is drinking in the home, that he or she has experienced neglect and lack of guidance and supervision, and that parents argue and fight a lot. As well, there is the perception on the part of the individual that the family members are not close, that the individual does not feel love and support from parents, that there is little parent monitoring of children by the parents, and that there is little or no conjoint problem solving activity in the family. As well, the client may have been sexually abused. Although the sexual abuse item does not to refer specifically to a family member, it does have a significant correlation with this scale, and contributes variance to the measurement of family disruption.

FAMILY should be considered as a broad second order scale (in terms of factor analysis). Within this scale there are two specific factors: Family disruption and family distance. These represent specific factors in the supplemental scales.

Scale 2: PSYCH PROBLEMS – Psychological and Intrapersonal Disruption

Mental health problems, poor self-esteem, and depression have been found to have significant correlations with substance use and abuse in adolescents. For example, low self-esteem and a poor self-concept have been identified as interactive with if not

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precursors to adolescent substance use (Bry, 1983; Flay & Sobel, 1983). A significant relationship has been observed between depression and drug use (Deykin, Levy & Wells, 1978). Swaim et al. (1989), in a path analysis study, found that, with the exception of anger, emotional distress variables produce a small and indirect link to adolescent drug use. This finding only supports a multiple construct model for adolescent drug use etiology: that is, with some adolescents, emotional distress and mental health factors are important predictors of drug use; with other adolescents, this is not the case.

The ASAP PSYCH PROBLEMS scale measures a single dimension of psychological and emotional disruption. A high score on this scale would indicate that the individual is experiencing depression, worry, anxiety, irritability, anger, feelings of not wanting to live, being unable to control emotions, and uncontrolled acting out behavior.

The PSYCH PROBLEMS scale is a broad second order scale (in terms of factor analysis). Within this scale, there are three specific factors. These factors were developed into supplemental scales and are described in the next section.

Scale 3: PEER INFLUENCE - Peer Influence and Dependency

The association between peer-group influence, pressure and approval and drug use is consistent and robust (Bry, 1983; Kandel et al., 1985; Oetting & Beavalis, 1987; Swaim et al., 1989). Although peer group influence is an important factor in determining whether an adolescent will engage in drug use, Morgan and Grube (1989) found that the peer group is not as important of an influence as are friends. Thus, the "proximal" peers are more influential than the peer group in general with respect to the initiation into and maintenance of drug use.

Scale 3 provides us with a measure of adolescent peer influence and dependency. Persons scoring high on this scale are indicating that they are most likely to do what friends want them to do, they are more likely to get into trouble if they are with friends, their friends have problems with their parents and with their own adjustment, their friends tend to use drugs, and they feel their peers have more influence over them than their parents.

An individual scoring high on PEER INFLUENCE will be struggling with the strong impact that peers have on his or her life. Peer relationship restructuring, values clarification, and positive peer involvement will be important components in the treatment of this individual. There is indication that about 25 to 30 percent of adolescent outpatient drug use clients are strongly influenced by their peers, and that 60 to 70 percent feel that their peers have at least some influence on them. This may not, however, be any different from a normal sample of adolescents. What is important is that there is a definite pattern where the strong peer influence has a direct bearing on whether the individual becomes involved in drugs or other maladjustive behavior.

Scale 4: SCHOOL: School Problems and adjustment

There are many dimensions of school adjustment problems. These include learning disorders, difficulty in getting along with teachers, academic achievement, and disruption in attendance and behavioral disruptions in school. Scale 4 of ASAP measures most of these components except for the area of learning disabilities. This scale is considered to be a primary scale in that a factor analysis of this scale indicated only one common factor.

About 25 percent of adolescents being admitted to outpatient programs for drug use treatment and intervention would indicate to have severe school adjustment problems. Although school adjustment problems are often apparent through several sources of information, the value of this scale is found as it is used in a configural interpretation in relationship to other scales. For example, the adolescent who scores high on SCHOOL, low on DEVIANCY and PSYCH PROB yet moderate on the drug use scales, e.g.,

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DISRUPT, will be most likely having school problems directly related to the drug use. Treating the drug use problems and issues will probably result in improvement in school adjustment. A client who has a high score on SCHOOL yet who has a fairly good school adjustment history (both academically and behaviorally) may be experiencing a current crisis or difficulty which may be impacting on school adjustment. Improvement in the current condition will often be followed by improvement in the school area. A high PSYCH PROBLEM score may be the clue to the current crisis situation. This configural approach will be dealt with more fully in a later section of this guidebook.

Scale 5: DEVIANT - Deviancy and Antisocial Behavior

The relationship between deviant behaviors and drug use problems in adolescents has been well established (Kandel et al., 1985; Tinkleberg, et al., 1981; Elliot et al., 1983). Elliot et al. (1983) found that as one moves from the normal group of adolescents through several levels of severity of offenders, there is a monotonically increasing prevalence of drug use and drug use problems. Among juvenile offenders, there is also a strong relationship ($r=.50$) between a factor measuring adolescent deviance and drug use disruption (Wanberg, Befus & Embree, 1990).

Scale 5, DEVIANT, provides a reliable measure of deviancy and antisocial behavior in adolescents referred for intervention and treatment of drug use. DEVIANT provides for a measure of a variety of deviant acts all the way from mischievous acts, fighting and vandalism to involvement in serious criminal behavior.

DEVIANT is a broad second order factor, and is comprised of two specific conditions: one pertaining to a pattern of minor deviancy which does not necessarily indicate significant involvement in antilegal behaviors; and the second factor which defines more serious deviant behavior or a pattern of delinquency. These two factors will be discussed in the supplemental scales section.

DEVIANT is an important measure when considering treatment and intervention of drug use conditions. For clients with elevated scales, e.g., decile scores of six or greater, it would be important to determine just how the deviancy pattern is interacting with other patterns, such as drug use or psychological problems. Treatment systems which are involved in receiving referrals from juvenile justice systems will find a certain portion of clients fitting the drug use-delinquency configural pattern. Such clients will need to receive not only treatment for drug use, but as well, treatment which will bring about behavioral and attitudinal changes which will eliminate future involvement in deviant, and particularly, antilegal behaviors.

A study of adolescent referrals to outpatient drug intervention and treatment programs (Wanberg, 1991) would suggest that about half of the group has engaged in misdemeanor kinds of deviancy, about 30 to 40 percent have been involved in serious antilegal behaviors on one or two occasions, and about five to 10 percent have engaged in serious criminal behavior on a number of occasions. It would appear that up to 20 percent of the sample would fall in the juvenile delinquency pattern of one kind or another. These findings would suggest that some aspects of a juvenile offender program should be available to a rather large proportion of these clients, e.g., victim awareness, journaling of delinquency history, building sociocentric values, practicing responsible behavior towards peers and community, values clarification, etc.

Scale 6: ATTITUDE - Approving attitude towards using drugs

Related to peer and friendship influence is the belief that drug use is "all right," and in fact, preferred. An ongoing favorable attitude towards drug use is seen as a major risk factor for predicting adolescent involvement in drug use problems (Hawkins, Lishner & Catalano, 1985). This risk factor is based on a belief systems model which holds that an individual's behavior is motivated and regulated by one's belief structure, and that what one values are the underlying or "deep structures" of that belief system (Rokeach, 1986). Thus, an early introduction into the use of drugs can reinforce the belief that drug use is "all right,' and the individual begins to formulate value structures associated with drug use. Hawkins et al. (1985) indicate

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that the onset of drug use prior to age 15 is a significant predictor of later drug use and abuse, and that initiation and onset of use in the late teens and early 20s tends to lower risk for later abuse.

Family and adult role models also become important factors in the development of the belief that alcohol and drug use are acceptable behaviors. The family and particularly the adult male family members can become the teacher of substance use patterns (Fontane & Layne, 1979) and the family can become a primary contributor to the development of adolescent substance use behavior (Mayer, 1980).

Scale 6 is an effort to measure the belief that alcohol and drug use are acceptable, if not desirable behaviors. Persons scoring high on this factor are affirming that drugs should be legalized, parents approve of the use of alcohol, it is acceptable to use drugs other than alcohol, and their peers feel it is all right to use drugs. Such individuals have strong beliefs which reinforce the use of alcohol and other drugs. A high score would suggest a strong commitment to drug use. This may be somewhat paradoxical in light of the fact that such clients have entered a program to intervene in a drug use pattern. Individuals who score high on ATTITUDE may be reflecting a past attitude, and may in fact be in an attitude change transition. This should be carefully explored with the person scoring high in this area. A low score would suggest a belief that alcohol and drug use are not personally acceptable behaviors. A low score could also indicate that the client is "faking good", that is, he or she wants to come across as someone who is against the use of drugs, whereas internally, there is a different set of beliefs determining the person's behavior. This is a rather common occurrence with adolescents: their stated values are often not congruent with their behavior.

Scale 7: EXPOSURE – Had a chance to use or did use specific drugs

There are 13 scales in ASAP which provides a more in-depth look at the client's drug use patterns, benefits and disruptions. Scale 7, EXPOSURE, provides a measure of the lifetime exposure to or actual use of one or more of 19 different kinds of drugs, including the three alcoholic beverages. Because ASAP is an instrument which can be used for adolescents who have not used any drugs, it was felt that some measure of exposure to use would be an important feature particularly in assessing the need for prevention programs. Thus, a client can receive a score if he or she has had a chance to use any one of the 19 drugs listed. For this scale, a score of two is given if the person used the drug, and a score of one assigned if the person indicates only having had a chance to use the drug. The value of EXPOSURE is found as it is interpreted in relationship to Scale 8.

Scale 8: EXTENT – Extent of use of different drugs

Scale 8 uses the same items as in Scale 7 except that scores are based on actual use on at least one occasion of one or more of the 19 different kinds of drugs. It is important to keep in mind, then, that these two scales are statistically dependent in that there are overlapping items and overlapping scoring. That is, a portion of the score in Scale 7 is invariably found in Scale 8. The value of this method of scoring, however, is that a client may never have used a drug, but there will be some measure of environmental exposure to drugs. Thus, a client may have a zero or very low (one or two raw score) on Scale 8 and conceivably a high score on Scale 7. Such a configuration would indicate high environmental exposure but low usage. For example, if this type of configuration is found in a younger client, then there is an increased risk of becoming involved in substance use. Such a configuration in an older adolescent would indicate that the client has develop some ego strengths to resist using drugs, even though there has been a favorable ecology for use involvement.

Scales 9 through 15: The Drug Category Scales

The "gateway" drug theory (Newcomb & Bentler, 1989) essentially holds that the drugs of alcohol, cigarettes and marijuana are generally used before harder drugs such as cocaine or amphetamines. This is the basis of the stage theory of drug use develop-

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ment (Hamburg, Braemer, & Jahnke, 1975; Kandel, 1978). Although, the gateway drug theory may be one factor in etiology, and there may be no progression without prior use of alcohol or tobacco (Blum & Richards, 1979), this theory tends to look at drug use and abuse as unitary or unidimensional in nature.

There is considerable evidence to indicate that, even among adolescents, drug and alcohol use and abuse is multidimensional in nature, and that a differential and multidimensional model is needed to fully explain drug use among both adults and teens (Wanberg & Horn, 1983; Horn, Wanberg & Foster, 1987; Wanberg, 1991). The following nine of the basic scales in ASAP provide for a differential assessment of drug use and abuse in adolescents. Scales 9 through 15 measures the extent of use in seven specific categories of drug use. Several sources were used in developing these various categories of drug use (e.g., Diesenhaus, et al., 1977; Julien, 1988; American Psychiatric Association, 1987; Ray & Ksir, 1987; Wanberg, 1990; etc.). Those chosen for the development of ASAP are: Alcohol, marijuana,k cocaine, amphetamines, hallucinogens, inhalants, heroin, pain killers, and sedatives and tranquilizers. Because respondents in adolescent populations seldom endorse the drugs in the latter three categories, responses to items in these three categories were combined to form one scale score. This scale is called "Other Drug Use."

Scales 9 through 15 measures the following: number of times used drugs in the specific category; days in row used; number of days used in the past month; frequency of use of drugs in the category; number of times used in one day; and the client's perception of whether use of drugs in the category in question has been a problem. The drug specific scales are: Scale 9, ALCOHOL; Scale 10, MARIJUANA; Scale 11, COCAINE; Scale 12, AMPHETAMINES; Scale 13, HALLUCINOGENS; Scale 14, INHALANTS; and Scale 15, OTHER DRUGS. The latter scale combines the drug use categories of heroin, pain killers, and sedatives and tranquilizers.

The drug-category scales do not measure the degree of disruption resulting from the use of drugs in that particular category. This information can derived from Scale 18, which measures the extent of disruption occurring in the individual's life due to drug use. A configural pattern analysis should be used when interpreting the drug specific scales. For example, if the client scores high on Scale 9, has zero scores on scales 10 through 15, and has a high score on Scale 18, this would suggest a monosubstance user who has experience serious effects from the use of alcohol.

Each of these drug-category scales do not indicate which specific drugs in the category were used. This information, however, can be derived from the responses to items 89 through 107. The ASAP user may want to refer to this set of measures when evaluating the drug specific scales (Scales 9 through 15).

Scale 16: SUSTAINED - Sustained, continued use of drugs

The remaining drug use scales are generic in the sense that they measure patterns, reactions and behaviors across drug use in general. Thus, Scale 16 measures a pattern of sustained use across whatever drugs the respondent has been using. Scale 17 is a general measure of the benefits the client perceives to derive from the use of drugs. Scale 18 is a generic measure of negative consequences or disruptive effects due to drug use.

SUSTAINED provides a measure of a pattern of sustained drug use. This is a robust factor found in multivariate studies of drug and alcohol use (Horn & Wanberg, 1969; Horn, Wanberg & Adams, 1982; Wanberg, Horn & Foster, 1977; Horn, Wanberg & Foster, 1987). Persons scoring high on this scale will indicate that they use drugs throughout the day, they carry drugs with them, they have used drugs many days in a row without stopping, they tend to use drugs frequently if not daily, and they have few days in the past year with out using drugs.

The distribution of the scores on this type of scale among adolescents is negatively skewed, that is, the scores tend to pile up at the low end. This indicates that most adolescents tend not to be sustained drug users. Sustained drug use is most

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apt to be found among adolescent alcohol and marijuana users, and ALCOHOL and MARIJUANA
have the highest correlations with SUSTAINED. This scale has the highest correlation
with disruption, indicating that sustained drug use will portend drug use disruption.
This is not the case among adults, where the sustained use of alcohol has a rather low
correlation with the negative consequence scales (Wanberg, Horn & Foster, 1977). Among
adolescents, however, high scores on SUSTAINED will most likely indicate the client is
experiencing a more severe pattern of drug use disruption.

Scale 17: BENEFITS - Benefits from the use of drugs

Self reports of benefits from the use of alcohol and other drugs is multivariate.
Horn, Wanberg and Associates (e.g., Horn, Wanberg & Foster, 1987) have identified
several factors indicating that individuals have different perceptions of what drugs
do for them. These specific factors, however, tend to combine to form a general self-
enhancement or general benefits factor. Such is the case with Scale 17 in ASAP. This
scale is based on a second order factor within which there are several latent variables
(common factors). ASAP uses this second order factor as one of its Basic Scales. As
we shall see later, there are four common factors in BENEFITS, and these were used to
construct four supplemental scales.

Persons scoring high on this scale will indicate that when using drugs they are
more sociable and outgoing, think and work better, they tend to use drugs to get over
being depressed or anxious, they use drugs to handle problems at home and school, and
they use drugs to bring about a sense of excitement and well being.

One of the problems with a generic benefits factor is that different drugs will
be used for different benefits. For example, downers such as alcohol, sedatives, etc.
are often used for purposes of reducing tension and stress. Cocaine is often used to
stimulate the system and improve mental functioning and reacting. Yet, one of the
primary scales in the Alcohol Use Inventory is a mental improvement scale which
measures the use of alcohol (a sedative) to stimulate mental responding. Yet, it is
well known that different drug produce different reactions (Julien, 1988; American
Psychiatric Association, 1987; Ray & Ksir, 1987; Wanberg, 1990). When interpreting
the BENEFITS scale in ASAP, again, it is important to do so in relationship to the
individual's scores on other measures. A client may score low on the disruption
scales, or even the extent scales (Scales 9 through 15), yet score high on BENEFITS.
This would suggest a strong need for an intervention type program, but not necessarily
a program of treating symptoms or disruptions.

Scale 18: DISRUPT - Disruptive consequences from drug use

DISRUPT represents a second order measure of problems and disruptive consequences
due to drug use. It measures the negative consequences of drug use. Persons with high
scores on this scale will indicate that drugs cause loss of control over behavior,
disruption of psychological and physiological functioning, and causes problems at home,
work, and at school.

This factor has been clearly identified in the multivariate studies of adult
alcohol users (e.g., Horn & Wanberg, 1969; Wanberg, Horn & Foster, 1977) and is a
second order measure in the AUI (Horn, Wanberg & Foster, 1987). The focus of the
measurement of these disruptive signs and symptoms in ASAP is in respect to how the
individual sees these occurring in relationship to drugs in general, and not any
specific drug or drug category. DISRUPT is the best measure of drug abuse and
dependence. It will provide the clinician with the best picture as to the degree of
severity of the individual's drug use pattern.

Scale 19: DEPENDENT - DSM III-R diagnostic concepts

The Diagnostic Statistical Manual III-R (American Psychiatric Association, 1987)
identifies nine criteria for drug dependence. If an individual meets three of these
criteria, then that person can be given a diagnosis of drug dependence, the specific
diagnosis depending on the specific drug or drugs being used. Although there are

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problems with these DSM criteria with respect to rendering a diagnosis of drug dependence (see Wanberg & Horn, 1987, for a discussion of these problems and limitations), the primary one being that it is a unitary approach to assessment, the nine criteria do provide the clinician with a framework within which to conceptualize drug dependence (and abuse). In constructing a scale to measure drug dependence as conceptualized by the DSM - III R, the essential concept of each of the criteria was used in writing an item (see items 211 through 220).

The use of DEPENDENT in ASAP has two goals. One was to give the clinician some indication of how the client scored with respect to the DSM III -R criteria, which would further assist in the assessment process. A second, and more important goal, however, was to provide a validation measure for the ASAP scales. If the DSM III-R criteria do in fact measure some quality of drug dependence, then a scale constructed from the essential meaning of these criteria should have significant correlations with other ASAP scales which putatively measure drug abuse and disruption.

Caution should be used in interpreting the results from DEPENDENT. As we shall see in the next chapter, DEPENDENT has a high correlation with DISRUPT, indicating that DISRUPT is a measure of dependency as identified in the DSM III-R criteria. Thus, it would be safe to use the score on DEPENDENT to assist in providing a diagnostic assessment. It would be safe to say that a decile score of seven or above would be indicative of drug dependence as conceptualized by the DSM III-R. Yet, it appears that the DSM - III-R criteria may not be an effective method in diagnosing drug dependence and abuse in adolescents (see Wanberg, 1991). Even those clients who have a low score on DEPENDENT (decile of under 4) may have serious enough drug use problems to warrant treatment, and not just prevention and intervention, for drug use problems.

Scale 20: RAPS - Rating adolescents problems scale

RAPS provides a mechanism for the clinician to offer his or her rating of the client's problems in the six general areas of assessment: family, mental health, peer influence, school problems, deviant behavior, and drug use. In using this scale, the clinician is asked to use all available information to rate the client, including information gained from ASAP. The seven items are summed and a single score is derived to provide a measure of the clinician's impression. The derived score is compared with the normative sample, which includes individual clinicians in various drug use and abuse intervention and treatment programs. This scale is found on page 1 of the answer sheet under Section II: Summary.

The Supplemental Scales

The Supplemental Scales are essentially primary scales derived from a principal axis factoring of each of the five broad domains of family, psychological problems, deviancy, drug use benefits and drug use disruptions. Each of these areas represent a broad factor among the basic scales. A brief summary of these specific scales within each of these five broad domains will be presented.

The Family Scales

Two specific family scales were developed from a common factor analysis of the items in the FAMILY scale.

Scale 21, FAMILY DISRUPTION, measures a family problems pattern where the client reports disruptive conditions within the primary family. The client is indicating that his or her family has money problems, that there is overt fighting and conflict among parents, that the individual has felt neglected, yelled and cussed at, abused and left alone. There is also an indication of geographic instability and excessive alcohol use by one or both parents in the home. This factor measures overt disruptive and abusive conditions within the family.

Scale 22, FAMILY DISTANT, measures a lack of emotional and interpersonal closeness in the family. An individual with a high score on this scale would be

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indicating that he or she comes from a maximum distance family. The family does littl together, the parents do not monitor the children, do not problem solve with the children, and there is minimal overt expression of emotions and positive feelings among family members.

Psychological Problems Scales

A factor analysis of the mental health variables indicated three common factors. Each of these common factors were developed into a primary scale which can be used to provide more specific interpretations of the client's mental health situation.

Scale 23, ANXIETY-DEPRESSION provides a highly reliable measure of a combination of anxiety and depression. Persons scoring high on this scale are indicating that they are experiencing depression, sadness, tension, nervousness and anxiety. This appears to be a current status measure of the client, yet there is some historical significance in the measure in that the person is also indicating that in the past, she or he has felt depressed and anxious. This scale in and of itself will not indicate whether the individual will fit a more depressed or anxious pattern. Further clinical evaluation will be necessary in order to determine this.

Scale 24, IMPULSIVE, provides a measure of anger and aggressiveness. The salient concept measured by this scale is impulsiveness. Clients scoring high on this scale indicate to have a history of hyperactivity, possible attention deficit problems, and impulsive acting out. There is a quality of anger and aggressive responding measured by this scale. Although the internal consistency of this scale is a bit lower than optimal, it is adequate for reliable measurement.

Scale 25, SELF-HARM provides a measurement of hopelessness and suicidal thinking, both in the present and past. Even though this scale has only four items, it is highly reliable. Even moderate scores on this scale may indicate suicidal concern. The clinician should also attend to the specific items of this scale, particularly item 41 "Have you felt like wanting to hurt yourself or take your life?" This scale tends to measure hopelessness in the item "have felt like not wanting to live," low positive affect in "am unhappy person," and the suicidal measures of items 40 and 41. These tend to meet the criteria indicated by Tellegen (1985) with respect to measuring depression.

Thus, SELF-HARM is not only a measure of suicidal risk, but is also a measure of depression. A combination of a high score on ANXIETY-DEPRESSION and SELF-HARM will possibly indicate serious depression and certainly indicate a need for a more indepth psychological evaluation. However, one should not conclude that depression is an essential component of suicide risk. Endorsement of any of the items 33, 40, and 41 is sufficient to require more specific attention to the individual's mental status.

The Deviancy Scales

A factor analysis of the deviancy variables indicated two common factors. Each of these common factors were developed into primary scales which can be used to provide more specific interpretations of the client's involvement in deviant behavior.

Scale 26 measures a condition of minor deviancy. Certainly, some of these acts are antilegal such as the shoplifting, going on other people's property without permission, and sneaking into movies, etc., without paying. Yet, these are minor and at best, misdemeanor acts. Yet, a high score on this scale may portent involvement in more serious criminal behavior.

Scale 27 measures a condition of more serious deviancy which indicates a condition of juvenile delinquency. The acts are not only antilegal, but serious in nature. There is a combination of property offenses as well as crimes against people. A person with a high score would indicate involvement in both of these dimensions, with a clear involvement in violent acts. A person with a high score on SERIOUS DEVIANCY may have a history of involvement in gang activity.

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The Drug Use Benefits Scales

The multiple dimensions of the benefits of the use of drugs have been well established in the Horn and Wanberg studies of alcohol use (Horn, Wanberg & Foster, 1987). The dimensions of mental improvement, social improvement and using alcohol to change moods have been replicated across a variety of samples of alcohol users. These three factors are also replicated in the ASAP instrument. A fourth dimension, EXCITE, was also identified in this study of adolescent drug users. Items were written in order to identify a factor indicating that individuals could report that drugs made them feel happy, excited, experience strange visions, etc.

Scale 28, SOCIAL BENEFIT, is a replication of the Social Improvement scale of the Alcohol Use Inventory (AUI) (Horn, Wanberg, & Foster, 1987). Persons scoring high on this scale will indicate that when using drugs, they feel less shy and more important. As well, they report that drugs help them to make friends, get along with others, and makes it easier to converse with peers.

Scale 29, MENTAL BENEFIT, is a replication of the Mental Improvement scale of the AUI. This scale measures a pattern of use where the user affirms that drugs helps to think better, work better, be more mentally alert, and help ideas come easier.

Scale 30, ALTERMOOD, is very similar to the AUI measure of drinking to manage or change moods. In this scale, we see the individual endorsing the idea that drugs help to reduce tension, depression, obsessing around personal, school and home problems, to alter ones moods, to calm ones self, and to overcome feelings of anger. A high score on ALTERMOOD would indicate that the individual is self-medicating – using drugs to deal with difficult psychological and emotional states.

Scale 31, EXCITE provides a measure of the extent to which the adolescent would use drugs to turn on positive feelings and excitement. The implication is that drugs are deliberately used to enhance positive psychological states. The salient markers of this scale is to use drugs to "have a good trip" and to get "strange visions." This would target the hallucinogen user. This scale correlates higher with Scale 13, HALLUCINOGEN, then with the other drug specific scales (scales 9 through 12, and Scales 14 and 15).

The Disruption from Drug Use Scales

A common factor analysis of the disruption variables indicated three common factors: behavioral disruption from drug use; psychophysical disruption from use; and disruption of expected social role of the user.

Scale 32, BEHAVIOR DISRUPTION, provides a measure of loss of control over behavior when using drugs. Persons scoring high on this scale are indicating that when using drugs, they can get violent, stumble and stagger, pass out, and experience blackouts (loss of memory without losing consciousness). What is most significant about these findings is that "blackouts" was also a significant loader on the Loss of Control factor (LCONTROL) in the AUI. All of the four variables in the ASAP common factor also load on the LCONTROL factor in the AUI.

Scale 33, PSYCHOPHYSICAL DISRUPTION, is comparable to the HANGOVER and DELIRIUM scales in the AUI. Adolescents who score high on this factor will be indicating that they are experiencing significant psychophysical symptoms when using drugs. What is important to remember, however, is that whereas HANGOVER and DELIRIUM on the AUI refer only to disruptions on withdrawal from the use of alcohol, in ASAP, PSYCHPHYSICAL refers to disruptions which can occur either while the individual is on drugs, or when the individual is withdrawing. PSYCHOPHYSICAL DISRUPTION does not distinguish between these two conditions. The distinction comes when a configural interpretation of the ASAP scales is used; that is, if the individual indicates alcohol to be the primary drug of use, then a high score on PSYCHOPHYSICAL for that individual would suggest that the pattern represents withdrawal. If the adolescent is using both sedative hypnotic

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drugs (the symptoms in PSYCHPHYHSICAL are indicative of withdrawal for these kinds of drugs) and stimulate drugs, then this would indicate that the individual may be experiencing this pattern during both intoxication and withdrawal.

Scale 34, ROLE DISRUPTION, is essentially a replication of the AUI ROLEMALA scale. An individual who scores high on this scale is indicating that drug use is interfering in the role expectations of the adolescent drug user. What is interesting about this scale is that in the AUI, the suicide attempt variable ("tried to take own life on drugs") contributes to the measurement of loss of control when drinking (LCONTROL), whereas in ASAP, it is part of the Role disruption scale.

Global Adolescent Disruption Scale (GADS)

The intercorrelations among the five core disruption factors (family, school, deviancy, psychological problems, and drug use disruption) were found to be sufficiently high to indicate that there may be a general factor among these scales might. GADS represents the best single measure of overall global disruption in the adolescent drug use sample. A person with a high score on this scale is indicating that he or she is experiencing disruption across the areas of family, psychological problems, school problems, deviancy, and drug use disruption.

GADS represents the best single measure of overall global disruption in the adolescent drug use sample. As well, GADS has the highest correlation (.59) with the general rating of overall disruption of the adolescent drug user, or RAPS (Rating Adolescent Problems Scale).

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Third, it was assumed that the concepts of theory can be represented by common-factor latent variables, the measurement of which can be reliably estimated through factor scores (e.g., Horn, 1965a; Wackwitz & Horn, 1971). A number of specific analytical and statistical methods were be used to study the internal structure of ASAP and to test the factorial integrity of the hypothetical constructs around which ASAP was constructed. Although these have been explained in detail in other documents (e.g., Wanberg, Horn and Foster, 1977; Horn, Wanberg & Foster, 1987), they will be briefly outlined. Exploratory procedures were used to identify common factors, using both principal components and common factor methods. Simple structure solutions were accomplished through the varimax (Kaiser, 1958) and oblimin (Carroll, 1959) methods. Factor selection criteria relied on the Guttman-Kaiser-Dickman root-one criterion (as explained by Horn, 1965b), the scree test (as discussed by Horn & Engstrom, 1979), selection of factors which have at least three variables with salient loadings, and the logical interpretation of factors. Factor measurement and factor scale construction will utilize the non-overlapping, unweighted salient loading method (Horn, 1965b).

Fourth, constructs must be measurable and reliable. A measurable concept must demonstrate that separate indicants of the concept vary together so as to represent the concept (Horn & Cattell, 1965). The intercorrelations among these indicants must be high enough to conclude that the measure is internally reliable. The goal, however, is for the construct to have both "fidelity" (the items measuring the construct are highly related) and "bandwidth" (each item represents a different expression of the construct) (Cronbach, 1984). Internal consistency reliabilities (ICR) between .70 nd .90 would meet these conditions (Cronbach, 1984). The internal consistency of each scale was studied by examining loadings on the first principal component of a principal components analysis of the items of each scale; and by examining the internal consistency reliability of each scale using Cronbach's (1951) alpha.

Fifth, the measures of constructs must be reliably distinct or independent which means that a measure of a construct must not be accounted for — that is predicted by — measures of other constructs. This concept is basic to the development of a multiple construct view of a certain area of human behavior. One operational definition of construct independence used in the development of ASAP was that of requiring the internal consistency reliabilities (ICR) of the measured concept to be larger than the squared multiple correlation (SMR) of that measure with all other measures in the set (Horn, Wanberg & Foster, 1987). The ICR is the variance of the true-score component of a measure (in contrast to the error-score components). The SMR is the variance of the measure that is held in common with a best-weighted linear combination of other measures. The difference between the ICR and the SMR is the true-score variance that is common to any other measure. It is the percent of unique variance (PUV) assessed by the measure.

Another way that multiple constructs are independent is if they have different construct validities (Campbell & Fiske, 1959; Cronbach, 1986). For example, if the construct "Peer Influence" has a significant correlation with "deviance" and a zero correlation with "family disruption" and mental health has a zero correlation with "deviance" and a significant correlation with "family disruption", this would suggest that the two measures have construct independence.

Finally, constructs will be linked together so as to form broader constructs at a more general level of measurement. This higher order analysis makes it possible to determine whether there are broader influences operating among more specific measures. The interrelationships which might exist among separate measures may help to define a network which supports theory at a different level of interpretation. Higher order constructs were identified by factoring the correlations among the oblique (correlated) factors (Gorsuch, 1974, McDonald, 1985), and the correlations of the final primary scales.

Norms: The Standardization of Scores

There are many ways to interpret the meaning of a particular measure in behavioral science. First, the meaning of a particular measure or scale is found in

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the content of the items of that scale. A description of the ASAP scales along wit
the items comprising each scale have been presented. The meaning of individual scales
can also be understood through a study of the scale's correlations with other
meaningful measures and concepts, or its construct validities (Cronbach, 1986). The
construct validities of the scales will be discussed in later in this guidebook.

The raw score of a particular test or scale also takes on meaning as we compare
that score with the raw scores of a particular sample or group. We make this
comparison by translating the raw score into what we call a standardized or normative
score.

There are several kinds of standardized scores which we could use. For example,
the standardized score used in interpreting the scales of the MMPI-II is the score
(Butcher, Dahlstrom, Graham, Tellegen & Kaemmer, 1989). The mean of the T score is 50
and the standard deviation is 10. Thus, we know that an individual with a T score of
50 on a particular scale would be about average on the measure. This would also mean
that, in a T score distribution, about 66 percent of the individuals would fall between
a T score of 40 and 60. An individual with a T score of 60 scores higher than about
83 percent in his or her group.

Another standardized score is the percentile score. Such a score would tell us
directly what percentage of individuals in a particular group scores higher or lower
than the particular individual in question. The T score can be thus interpreted, but
it must be translated into a percentile score.

The percentile rank score can also be translated into a decile score. The decile
score represents a range of 10 percentile scores. This score takes on value when we
recognize that there is always measurement error in any score we might derive from a
test. The decile score is not as precise as the percentile score, but it does allow
us to build into the standard score the measurement error itself.

For example, if a raw score of an individual translates into a standard decile
score of four, this would mean that at least 30 percent of the individuals in the
normative group have lower scores and at least 60 percent of the individuals in the
normative group would have higher scores than this particular individual. This leaves
a margin of error of about 10 percentage points when interpreting the individual's
scores. Although one might want to estimate the individual's percentile score from the
raw score translation table, the error of measurement must be kept in mind. Thus, if
the standard error of measurement is six percentage points, then for a percentile rank
score of 60, we would be able to say that at least 57 percent of the individuals in the
normative group scored lower and at least 37 percent of the norm group scored higher
than the individual with a 60 percentile score.

Several normative groups for ASAP are being developed. The Individual Profile
of ASAP will identify which normative group (raw score translations) upon which the
profile is based. Each profile will indicate the number of subjects each scale is
normed on, and the particular normative group will be identified at the bottom of the
profile.

One meaningful group is comprised of a sample of adolescents who were admitted
into a number of outpatient treatment programs within the State of Colorado. These
programs were designed for the intervention and treatment of adolescents whose drug or
alcohol use has become problematic. The mean age of this sample is 16.1 (standard
deviation of 1.79) and the mean years of schooling is 9.79 (standard deviation of 7.0).
The sample is comprised of 32 percent female; 62 percent were Anglo, 34 percent
Hispanic, three percent Black, and one percent Native American and Asian.

The mean scores and standard deviations for the 20 Basic Scales for the standard
profile for this particular normative group is found in Table 3 along with the number
of items in each scale. Table 4 provides the means and standard deviations for the
supplemental scales along with the number of items in each scale for the supplemental
profile.

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