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Assessing How Adolescents Think About the Morality of Substance Use

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SUMMARY. A phenomenological cognitive model of how adolescents think about the socio-moral aspects of substance use is presented. It is argued that the ways in which adolescents make meaning of substance use has been neglected. A four-construct assessment battery is described, including measures of moral judgment stage,

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social knowledge domain categorization of substance use behaviors, ethical relativism, and interpersonal problem-solving. The methods employed include oral interviews, card sorts, objective questionnaires, and videotaped family conflict resolutions. A second example of the phenomenological approach presented is the study of adolescent risk-taking, derived from a theoretical model posited by Levitt, Selman and Richmond (1991). It is operationalized, assessed, and measured with objective questionnaires, oral interview questions, and videotaped family interactions. This approach offers new insight into the more traditional means of understanding adolescent substance use and a potential source for designing prevention and intervention programs.

Much is known about the behavioral aspects of adolescent substance use. Overt substance-related behaviors have been described or predicted in epidemiological studies (e.g., Johnson, O'Malley, & Bachman, 1991) and in studies of patterns (e.g., Shedler & Block, 1990) and correlates (e.g., Brook, Whiteman, Gordon, & Cohen, 1986) of substance use. Perhaps due to an historical tendency to regard addictive behavior as irrational and uncontrollable (Peel, 1987), researchers have recently begun to focus on the cognitive aspects of adolescent substance use (e.g., Severson, Slovic, & Hampson, 1993). Phenomenological approaches that focus on how individuals think about and decide to engage in substance use have recently emerged.

One area where this phenomenological approach is particularly relevant is to morally evaluating substance-related behavior. Morally prescriptive judgments necessarily entail cognitively making sense of substance use. In contrast to the more common focus on values (e.g., Peel, 1987), the phenomenological approach to morality requires an examination of *how* one makes meaning of substance-related behavior (or any other behavior). This necessitates a methodology different from the norm. The phenomenological approach proposes that the researcher must measure how the subject understands the phenomenon under study, rather than either measuring observable behavior or quantifying cognitive events. More specifically, the research goal is to measure the quality of the individual's attempts to make meaning out of experiences and knowledge.

This approach is not new to developmental psychology. Cognitive-structuralists have measured the quality of cognitive meaning-

making in individuals (Kohlberg, 1976; Piaget, 1970). Moral cognition has been related to a broad variety of illegal, antisocial, and/or harmful behaviors and a variety of quasi-clinical methods have been applied to this research, including semi-structured oral interviews, open-ended written questionnaires, objective questionnaires, and card sorts.

This paper presents a model for applying a phenomenological approach to the study of adolescent substance use. The model was derived from the work of Project Decide, a National Institute on Drug Abuse funded study of relations between adolescents' moral reasoning and their substance use which was designed to examine how adolescents make moral sense of drug abuse. Two examples of the phenomenological empirical approach will be described; first, a multi-method assessment of moral reasoning for substance use, and, second, a method of operationalizing a phenomenological-structural theory of adolescent risk-taking behavior applied to alcohol use.

ADOLESCENT MORAL REASONING AND SUBSTANCE USE

This section introduces four moral reasoning constructs. Their respective means of assessment will also be described.

Kohlberg Stages of Moral Judgment Development

Construct. In order to assess how adolescents think about the morality of substance use, it is necessary to examine models for how adolescents think about moral issues. The predominant model is Kohlberg's (1984) developmental stage theory of moral judgment. Kohlberg described an invariant universal developmental sequence of six stages of reasoning about justice (cf. Colby & Kohlberg, 1987). The justification for moral choices develops from a focus on concrete individual consequences, to maintenance of and adherence to a social system, to universal principles of justice. Each successive stage grows out of and is more logically adequate than the preceding stage. These six stages have been empirically related

to a variety of adolescent problem behaviors (for reviews, see Colby & Kohlberg, 1987; Kurtines & Gewirtz, 1984, 1991).

Kohlberg Stage Assessment. The most "orthodox" method of assessing Kohlberg stage of moral judgment is the individual oral interview (Colby & Kohlberg, 1987). In comparison to group administered methods, this produces the most extensive and valid information, but is expensive. Project Decide employed the first and last of three dilemmas of Colby and Kohlberg's instrument. Each subject was interviewed using parallel forms counterbalanced for longitudinal cases. Interviewers were trained to maximize the richness of the data and to avoid invalidating mistakes (e.g., leading probes). Each audiotaped interview was transcribed, then coded by trained assistants. Coding generated two summary scores for each interview representing (1) a weighted numerical average of stage scores (WAS) and (2) a more qualitative summary of modal reasoning stages (Global). Inter-rater Pearson correlations for WAS averaged .80 and mean agreement within 1/2 stage for Global averaged 84%. Preliminary analyses of the Project Decide adolescent moral judgment data reveal a range of WAS from 155 (between stages 1 and 2) to 356 (between stages 3 and 4).

An additional assessment option would be to replace or supplement the standard form dilemmas with customized substance-related dilemmas. A drawback of this technique is that there is no standardized scoring available, but responses could be scored from the general stage descriptions in Colby and Kohlberg's (1987) manual.

It seems reasonable to hypothesize that an adolescent's stage of moral judgment would be related to decisions about using or not using tobacco, alcohol, and illicit substances. Nevertheless, there were at least two reasons to doubt this hypothesis. First, field experience (Power, Higgins, & Kohlberg, 1989) suggests that substance use is treated differently by adolescents than are other common undesirable behaviors. In fact, in many cases, adolescents seem to understand substance use as a social "good"; i.e., as a social lubricant that can ameliorate problems, such as racial barriers. Second, a review of the existing literature on the relation between Kohlberg's stages of moral judgment and substance use revealed little support for this hypothesis (Berkowitz, Guerra & Nucci, 1991). The litera-

ture is sparse, the findings contradictory, and the empirical studies methodologically suspect due to non-comparable control groups, small sample sizes, and variable definitions and measures of substance use. Therefore, it seemed imprudent to operationalize adolescent moral thinking *solely* with the Kohlberg construct.

Domains of Social Knowledge

Construct. Because adolescents often do not view substance use as a moral issue, a second model of moral thinking is introduced. Turiel (1983) has differentiated domains of social knowledge, initially distinguishing between two domains of social knowledge confounded in the psychological literature: morality and social convention. Morality refers to "prescriptive judgments of justice, rights, and welfare" that are universal, independent of social context, and based on intrinsic features of actions (e.g., hitting hurts). Social conventions are "behavioral uniformities that serve to coordinate social interactions and are tied to the contexts of specific social systems" (Turiel, 1983, p. 3). They are context relative, arbitrarily derived from social agreement and participation in social groups, and typically enforced (e.g., men do not wear dresses). Nucci (1981) explicated a third domain, the Personal domain. This domain entails "actions considered to be outside the realm of societal regulation and moral concern. Personal issues comprise the set of social actions whose import and effect are perceived to be primarily upon the actor" (p. 114). Tisak and Turiel (1984) also applied the term *prudential* to a sub-category of the personal domain, i.e., those acts that affect only the self but are intrinsically harmful or at least potentially harmful to the self (cf. Berkowitz, Kahn, Mulry, & Piette, in press, for an analysis of prudential reasoning about substance use).

Project Decide used a five domain scheme: Moral, Social Conventional, Personal, Prudential-Unacceptable, and Prudential-Acceptable (Libertarian). The first three domains follow Turiel's (1983) and Nucci's (1981) definitions. At the suggestion of Nucci (personal communication, May 4, 1992), issues of self-harm (prudence) were separated from the personal domain. The latter two are defined by the locus of primary harm, i.e., harm to the actor, and the evaluator's judgment of its acceptability.

Assessment. Three predominant options for assessing the domain of social knowledge exist: (1) open-ended individual interviews (Turiel, 1983); (2) individual card-sorts (Smetana, 1982); and (3) group-administrable objective written questionnaires (Nucci, Guerra & Lee, 1991). For Project Decide, a card sort technique was created for substance use behaviors, based on Smetana and Nucci's, Guerra and Lee's work.

The 24 card sort items included 14 substance use items (e.g., "getting drunk on alcohol," "trying cocaine or crack") and 10 distractor items (e.g., "stealing," "a kid going to school without a school uniform"). Three domain definitions were presented on a card sort board. They were based on the definitions used by Nucci et al. (1991) and Smetana (1982) representing Morality, Social Convention, and Personal Knowledge domains. Morality was operationalized as "This action is wrong whether or not there is a rule or law against it," Social Convention as "This action is wrong only if there is a rule or law against it. It would be all right if there were no rule or law against it," and Personal Knowledge as "This is not an issue of right or wrong. There should be no rules or laws about this action. It should be the person's own business." Each subject was asked to place each of the 24 cards next to one of the three statements. They were then asked why they had placed the card next to that particular definition.

Project Decide subjects often employed justifications that were not simply paraphrases of the card sort board domain definitions. Following the work of Turiel and his colleagues, a 20 category coding scheme for substance-related items was created. Prior to statistical analyses, a conceptual analysis of the 20 categories (with the consultation of Nucci) led to the five domains described above.

Ethical Relativism

Construct. The next construct added to the moral reasoning assessment battery was ethical relativism. Ethical relativism refers to an ideology arguing against absolute criteria for determining right and wrong. Whereas, there are a variety of forms of relativistic arguments, a simple summary position would be that ethical relativism is the argument countering claims of moral absolutes, whether rules, values, principles, or facts.

Relativistic moral reasoning has been described as a fairly infrequent transitional stage of moral judgment preceding the development of absolute universal moral principles (Kohlberg, 1973). Other theorists treat ethical relativism somewhat differently. Perry (1970), for example, considers it to be a normative or necessary stage following naive dualism and leading to mature commitment. It is reasonable to assume that more relativistic adolescents would be less likely to be concerned with societal proscriptions against substance use. Indeed, pilot research for Project Decide revealed a consistently positive relation between relativism and substance use in a college sample (Berkowitz & Gimenez, 1993). Therefore, ethical relativism was added to the set of moral reasoning constructs.

Assessment. An objective questionnaire (Forsyth & Pope, 1984) was selected for the Project Decide protocol. Forsyth and Pope's Ethical Position Questionnaire (EPQ) is a 20 item Likert-type written instrument with two subscales: Relativism and Idealism. Together the two subscales can generate four distinct ethical ideologies. Because pilot data revealed no relations between Idealism and substance use (Berkowitz & Gimenez, 1993), only the Relativism subscale was included in the assessment protocol. One caution is that the verbal complexity of the EPQ items may be inappropriate for subjects with less than a high school reading level.

Interpersonal Problem-Solving

Construct. The three constructs described (Moral Judgment, Domain of Social Knowledge, and Ethical Relativism) are subject to the same long-standing criticism of failing to assess how problems are solved in a real social context where, arguably, most actual moral problems arise. Gilligan's (1982) well known gender-based critique is but one example of this position. One method of addressing the issue of analyzing the capacity to solve social problems is the study of reasoning about social problems (e.g., Selman, 1980) or about people (cf. Shantz, 1983). This approach, however, typically parallels the approaches described above. That is, the focus is on individual reasoning *about* social problems rather than an individual's reasoning *in* social situations.

A second way of approaching this issue is through analyses of actual interpersonal negotiations (Berkowitz & Gibbs, 1983; Sel-

man & Schultz, 1990). In both laboratory and clinical settings, group problem-solving behavior has been studied. This second approach was adopted for Project Decide for two reasons. First, it provides a sample of actual interpersonal behavior, rather than sampling reasoning about hypothetical behavior. Second, it produces open-ended interactional data that can later be reexamined from alternative perspectives.

From that cognitive-structural perspective, Berkowitz and Gibbs' (1983) model of transactive discussion serves as the basis of the analysis of the interpersonal problem-solving segment of the Project Decide protocol. In studying moral judgment in adolescent dyads, Berkowitz and Gibbs identified discussion behaviors or transactive behaviors that were more prevalent in those peer moral discussions that produced individual development. The transactive model has been successfully applied to family discussions as well (Kruger, 1992; Walker & Taylor, 1991). Families in which parents accommodate to their children's level of moral understanding, are affectively supportive, are responsive and elicitive, and engage in non-critical paraphrasing of their children's argumentation produce more morally mature children. The Constraining and Enabling Family Coding System created by Hauser et al. (1990) and Hops et al.'s (1990) LIFE scheme were used for the coding of the affective and more psychodynamic aspects of parent-child interactions.

Assessment. The standard method of assessing transactive discussion is to present two or more individuals with a dilemma, and to ask them to try to reach agreement on the questions. Dilemmas may be hypothetical or real. Real dilemmas can be generated from their own lives (Walker & Taylor, 1991), selected from the news or history, or created in vivo by the experimenter. It is helpful to ensure that the discussants disagree on the solutions to the dilemmas. Where possible, a set of probe questions about the dilemmas should be supplied to the discussants to structure and enrich their interactions.

Two specific strategies were adopted for the Project Decide protocol. These were represented in the two types of dilemmas that families were asked to discuss. First, they discussed two real dilemmas based upon their remuneration for participation in Project Decide. Each participating family was paid \$25 and was promised a

lottery ticket. They were asked to agree on how the \$25 would be spent and how the winnings would be spent if the ticket turned out to be worth \$1000. Second, they discussed a hypothetical family substance use dilemma created for Project Decide. All three discussions were audiotaped and videotaped while the experimenter left the room. All discussions are being transcribed from the audiotapes and coded according to the transcript manual (Berkowitz & Gibbs, 1979) and the other coding systems noted above.

In sum, the Project Decide moral thinking assessment battery includes four constructs: moral judgment, domain of social knowledge, ethical relativism, and transactive moral discussion. This provides a diverse, multi-method assessment of moral thinking capacity. It allows assessment of the developmental level of the adolescent's moral reasoning. It provides an index of where in the realm of social knowledge the adolescent places substance-related behaviors, a measure of the degree to which the individual endorses the perspective that no absolute criteria for judging right and wrong exist, and the direct assessment of how the family discusses moral problems. Together, these four constructs and their varied measures generate insight into how the adolescent makes meaning of morality and substance use.

ADOLESCENT REASONING ABOUT RISK-TAKING AND ALCOHOL USE

In this section, a second approach to studying the moral understanding of substance use is introduced: the phenomenological model of risk-taking.

Phenomenological Model of Risk-Taking

Risk-taking has traditionally been assessed from either a behavioral (Alexander et al., 1990) or a personality (Zuckerman, Eysenck, & Eysenck, 1978) perspective. More recently, Levitt et al. (1991) have offered an alternative theoretical perspective, grounded in cognitive-structural models of development. This phenomenological model argues that there are three parts to adolescent risk-

taking. Domain Specific Knowledge focuses on both factual knowledge about the risk phenomenon (e.g., alcohol use) and the level of sophistication and conceptual understanding about the risk. Personal Meaning focuses on the perceived relevance of the risk phenomena to one's own life, both for the self and for one's relationships to others. Risk Management Strategies focus on the individual's ability to cope with intrapersonal and interpersonal conflicts. Levitt et al. (1991) hypothesized that Personal Meaning and Risk Management Strategies would be most important in understanding adolescent risk-taking behavior. This model was incorporated to complement the Project Decide approach to the moral phenomenology of adolescent substance use and each of the three parts of the model were incorporated in the Project Decide research protocol.

Assessment. Unfortunately, the Levitt et al. (1991) presentation is exclusively theoretical and offers no means of assessing the three constructs was available. Although the authors are in the process of constructing an objective written measure, it was not available. Therefore, it was necessary to operationalize each component of the Levitt et al. model. Pilot measures were either identified or constructed (Giese & Berkowitz, 1993).

Domain Specific Knowledge (DSK) was operationalized in two parts. Simple factual knowledge was measured with the written objective 10-item Absolute Alcohol Knowledge Survey (Addiction Research Foundation, 1985). Structural DSK was assessed with a pair of open-ended oral interview questions, "What does drinking alcohol do? What effect does it have?" An examination of Levitt et al.'s (1991) theoretical descriptions led to the identification of five criteria used to generate a four level coding scheme. This scheme has been successfully applied to a subset of the Project Decide data with acceptable inter-rater reliability (Giese & Berkowitz, 1993).

Personal Meaning was assessed both for self and for relationships to others with four open-ended oral interview questions: "How does your drinking or not drinking affect your life?" "How does the way you use alcohol affect the kind of person you are?" "How does it affect the way you feel about yourself?" and "How does it affect your relationships with other people?" Once again a coding system was necessary for processing the responses. Levitt et al.'s (1991) theoretical description as well as the work of Livesley

and Bromley (1973), Shantz (1983), and Selman (1980) were used to generate a coding scheme for the degree to which the adolescent could anticipate the personalized impact of alcohol use, and the degree to which the adolescent is interested and invested in the issue. This scheme has also been successfully applied to a subset of the Project Decide data with acceptable inter-rater reliability (Giese & Berkowitz, 1993).

Risk Management Strategies (RMS) were defined by Levitt et al. (1991) as both intrapsychic coping and interpersonal coping. Only the latter was included in the Project Decide assessment protocol. Videotaped family interactions described above in the discussion of transactive moral discussion were used to assess RMS. Because the RMS construct appeared to be derived from Selman's work on interpersonal negotiation strategies, Selman, Beardslee, Schultz, Krupa, and Podorefsky's (1986) model of interpersonal negotiation strategies was used to code the adolescent's interpersonal conflict resolution behavior in the videotaped interactions with the parent(s). Coding is direct from the videotapes (Walker & Taylor, 1991). A subset of the videotaped interactions has been coded with the Selman et al. (1986) scheme with acceptable inter-rater reliability. This application of Levitt et al.'s (1991) theoretical model of adolescent risk-taking offers an additional approach to studying the phenomenology of adolescent substance use. Whereas Levitt et al.'s model is not specifically a model of *moral* phenomenology, it is derived from cognitive-structural theory and social cognitive psychology, which are also the sources of both the Kohlberg model and the Turiel model.

RESEARCH SUGGESTIONS

The phenomenological-psychological approach to the role of morality in adolescent substance use offers opportunities for both researchers and clinicians. Moral judgment, domains of social knowledge, relativism, and personal meaning have all been empirically related in varying degrees to adolescent substance use. As the Project Decide data are analyzed, it is anticipated that relations will become clearer and other relations will be identified. Many of these constructs can be assessed in more than one way. Adding these

constructs to a research protocol opens a new window on adolescent substance use (i.e., it allows for the assessment of how the adolescent understands substance use-related behaviors). Such insights offer a powerful means of understanding adolescent decisions concerning substance use, and the possibility of more accurate bases upon which to design prevention and intervention efforts. Clearly further research is necessary to provide evidence of the utility of the constructs and measures of the phenomenological-psychological aspects of substance use. Project Decide represents a first attempt to begin a dialogue between cognitive-structural developmental psychology and the fields of substance abuse research, prevention, and treatment.

REFERENCES

- Addiction Research Foundation (1985). *Alcohol Knowledge Survey*. Toronto: Addiction Research Foundation.
- Alexander, C.S., Kim, Y.J., Ensminger, M., Johnson, K.E., Smith, B.J., & Dolan, L.J. (1990). A measure of risk taking for young adolescents: Reliability and validity assessments. *Journal of Youth and Adolescence, 19*, 559-565.
- Berkowitz, M.W., & Gibbs, J.C. (1979). *A preliminary manual for coding transactive features of dyadic discussion*. Unpublished manuscript, Marquette University.
- Berkowitz, M.W., & Gibbs, J.C. (1983). Measuring the developmental features of moral discussion. *Merrill-Palmer Quarterly, 29*, 399-410.
- Berkowitz, M.W., & Gimenez, J. (1993). *Adolescent moral reasoning and substance use*. Unpublished manuscript, Marquette University.
- Berkowitz, M.W., Guerra, N., & Nucci, L. (1991). Sociomoral development and drug and alcohol abuse. In W.M. Kurtines & J.L. Gewirtz (Eds.), *Handbook of moral behavior and development: Application (Volume 3)* (pp. 35-53). Hillsdale, NJ: L. Erlbaum.
- Berkowitz, M.W., Kahn, J.P., Mulry, G., & Piette, J. (In press). Psychological and philosophical considerations of prudence and morality. In M. Killen & D. Hart (Eds.), *Morality in everyday life: Developmental perspectives*. New York: Cambridge University Press.
- Brook, J.S., Whiteman, M., Gordon, A.S., & Cohen, P. (1986). Dynamics of childhood and adolescent personality traits and adolescent drug use. *Developmental Psychology, 22*, 403-414.
- Colby, A., & Kohlberg, L. (1987). *The measurement of moral judgment (Volumes 1 & 2)*. New York: Cambridge University Press.
- Forsyth, D.R., & Pope, W.R. (1984). Ethical ideology and judgments of social psychological research: Multidimensional analysis. *Journal of Personality and Social Psychology, 46*, 1365-1375.
- Berkowitz et al. 123
- Giese, J.K., & Berkowitz, M.W. (1993). *Adolescent risk-taking, problem drinking and knowledge about alcohol*. Paper presented at the annual conference of the American Psychological Society, Chicago.
- Gilligan, C. (1982). *In a different voice: Psychological theory and women's development*. Cambridge, MA: Harvard University Press.
- Hauser, S.T., Powers, S.I., Weiss-Perry, B., Follansbee, D., Rajapark, D.C., Greene, W.M., & Waters, P.L. (1990). *Constraining and enabling family coding system*. Unpublished manuscript, Harvard Medical School.
- Hops, H. et al. (1990). *Living in family environments (LIFE) coding system*. Eugene, OR: Oregon Research Institute.
- Johnson, L.D., O'Malley, P.M., & Bachman, J.G. (1991). *Drug use among Americans in high school seniors, college students and young adults, 1975-1990*. U.S. Department of Health and Human Services.
- Kohlberg, L. (1973). Continuities in childhood and adult moral development revisited. In P.B. Baltes & K.W. Schaie (Eds.), *Life-span developmental psychology: Personality and socialization* (pp. 179-204). New York: Academic Press.
- Kohlberg, L. (1976). Moral stages and moralization: The cognitive-developmental approach. In T. Lickona (Ed.), *Moral development and behavior: Theory, research, and social issues* (pp. 31-53). New York: Holt, Rinehart & Winston.
- Kohlberg, L. (1984). *Essays on moral development: Volume 2. The psychology of moral development*. San Francisco: Harper & Row.
- Kruger, A.C. (1992). The effect of peer and adult-child transactive discussions on moral reasoning. *Merrill-Palmer Quarterly, 38*, 191-211.
- Kurtines, W.M., & Gewirtz, J.L. (Eds.) (1984). *Morality, moral behavior, and moral development*. New York: Wiley Interscience.
- Kurtines, W.M., & Gewirtz, J.L. (Eds.) (1991). *Handbook of moral behavior and development (Volumes 1-3)*. Hillsdale, NJ: L. Erlbaum.
- Levitt, M.Z., Selman, R.L., & Richmond, J.B. (1991). The psychosocial foundations of early adolescents' high-risk behavior: Implications for research and practice. *Journal of Research on Adolescence, 1*, 349-378.
- Livesley, W.J., & Bromley, D.B. (1973). *Person perception in childhood and adolescence*. New York: John Wiley and Sons.
- Nucci, L. (1981). Conceptions of personal issues: A domain distinct from moral or societal concepts. *Child Development, 52*, 114-121.
- Nucci, L., Guerra, N., & Lee, J. (1991). Adolescent judgments of the personal, prudential, and normative aspects of drug usage. *Developmental Psychology, 27*, 841-848.
- Peele, S. (1987). A moral vision of addiction: How people's values determine whether they become and remain addicts. *The Journal of Drug Issues, 17*, 187-215.
- Perry, W. (1970). *Forms of intellectual and ethical development in the college years: A scheme*. New York: Holt, Rinehart & Winston.
- Piaget, J. (1970). Piaget's theory. In P.M. Mussen (Ed.), *Carmichael's manual of child psychology* (3rd edition, pp. 703-732). New York: John Wiley & Sons.

- Selman, R.L. (1980). *The growth of interpersonal understanding*. New York: Academic Press.
- Selman, R.L., Beardslee, W.R., Schultz, L.H., Krupa, M., & Podorefsky, D. (1986). Assessing adolescent interpersonal negotiation strategies: Toward the integration of structural and functional models. *Developmental Psychology*, 22, 450-459.
- Selman, R.L., & Schultz, L.H. (1990). *Making a friend in youth: Developmental theory and pair therapy*. Chicago: University of Chicago Press.
- Severson, H.H., Slovic, P., & Hampson, S. (1993). Adolescents perception of risk: Understanding and preventing high risk behavior. *Advances in Consumer Research*, 20, 1-6.
- Shantz, C.U. (1983). Social cognition. In J. Flavell & E. Markman (Eds.), *Cognitive development*, in P. Mussen (General Ed.), *Carmichael's manual of child psychology* (4th edition, pp. 495-555). New York: John Wiley & Sons.
- Shedler, J., & Block, J. (1990). Adolescent drug use and psychological health: A longitudinal study. *American Psychologist*, 45, 612-630.
- Smetana, J. (1982). *Concepts of self and morality: Women's reasoning about abortion*. New York: Praeger.
- Tisak, M.S., & Turiel, E. (1984). Children's conceptions of moral and prudential rules. *Child Development*, 55, 1030-1039.
- Turiel, E. (1983). *The development of social knowledge: Morality and convention*. New York: Cambridge University Press.
- Walker, L.J., & Taylor, J.H. (1991). Family interactions and the development of moral reasoning. *Child Development*, 62, 264-283.
- Zuckerman, M., Eysenck, S.B., & Eysenck, H.J. (1978). Sensation seeking in England and America: cross-cultural, age and sex comparisons. *Journal of Consulting and Clinical Psychology*, 46, 139-149.

An Approach for High Risk Prevention Research

Judith A. De Jong, PhD

SUMMARY. This paper provides a framework for prevention research, based on Chaos theory elements, which was developed by the Center for Substance Abuse Prevention (CSAP). The framework was designed with both theoretical and practical considerations for minority communities, where traditional experimental research methodology was found to be inappropriate. This framework offers the advantage of conceptualizing a disparate field and provides a model for designing and evaluating targeted prevention interventions. A variety of prevention research paradigms are introduced, the research problem which helped form the proposed framework is discussed, and the advantages of the model are noted.

INTRODUCTION

A number of problems which have plagued prevention research were recently summarized (Moskowitz, 1993), including: comparison groups are often inappropriate; measurement, instrumentation

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