DESIGN OF A HEALTH CARE SCREENING TOOL TO IDENTIFY ADOLESCENTS AT RISK FOR ALCOHOLISM

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Running head: Adolescent

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By

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Abstract

The purpose of this project was to design a tool to screen and identify adolescents who are at risk for alcoholism. Alcoholism will impact the cognitive, physical and psychosocial development of the adolescent. There is close association between use and abuse of alcohol and other health risk taking behaviors such as irresponsible decision-making, premature sexual activity, and transmission of sexually transmitted diseases, including HIV (Adger, 1991). Early identification of the adolescent at risk for alcoholism is the goal of this tool.

The tool developed for this project will be in the format of a screening questionnaire, based on Roy's conceptual framework, the review of literature and review of prior screening tools. Roy's model is useful in guiding this project, however implications for a comprehensive assessment tool using this model will need to be developed later with further research. Early and accurate identification of the adolescent at risk for alcoholism can lead to an increase in the success for intervention.

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INTRODUCTION

Background of the problem:

Alcohol use is a major public health issue that has its onset primarily during the pediatric years. Preventing the onset of alcohol use by children and adolescents should be a priority (Epps, Manley, and Glynn, 1995). Some estimates suggest that more than 30,000 alcoholics in the United States exist between 13 and 18 years of age (Kinney, and Lealon, 1987). Numerous studies, including the Monitoring the Future survey (1993), and the National Household survey on Drug and Alcohol Use among teenagers (1993), in all regions of the United States and in small and large communities have also agreed on this incidence. Many studies on alcohol use by adolescents have shown that adolescents in rural areas, including "dry" counties, drink as much as adolescents in urban settings (Thomas, and Dressler, 1993). These startling facts are the driving forces for the purpose of this project, to develop a screening tool to identify the adolescents at risk for alcoholism.

The use of alcohol has persisted over time as the number one drug problem among the youth in the United States (Rogers & Werner, 1995). Many primary health care providers underestimate the seriousness and prevalence of adolescent alcohol use. The lack of specificity and the "softness" of the diagnosis may frustrate many primary care providers, especially in a busy office practice with limited time for patient assessment. The epidemiology of alcohol use among adolescents is staggering, as are its danger and society's attitudes toward drinking (Castiglia, 1992).

Alcohol, tobacco, and other drug (ATOD) use have been a prominent factor in the deterioration of the health status of adolescents. For the society at large, adolescent substance abuse extracts a high cost in health care, educational failure, mental health services, drug and alcohol treatment, and juvenile crime (U.S. Public Health Service, 1997). Added to the immediate personal and social costs of adolescent alcohol abuse are the longer-range implications for youngsters who continue to abuse alcohol and drugs into adult life. Alcohol and drug abuse is involved in one third to one half of lung cancer and coronary heart disease cases in adults (Blum 1992). Alcohol, is also one of the risk factors in acquired immune deficiency syndrome (AIDS), violent crimes, child abuse and neglect, and unemployment. The problems associated with alcohol abuse carry costs in lost productivity, lost life, destruction of families, and a weakening of the bonds that hold the society together (Blum, 1992).

Almost half of the adolescent population has used illicit drugs before they finish high school, and 25% have used an illicit drug other than marijuana (Rogers & Werner, 1995). Although the reported prevalence of the use of most illicit drugs has decreased, relatively little change has been reported in the use of alcohol. In 1993, 87% of high school seniors reported some experience with alcohol in the past: more than 50% reported using alcohol within the last month: and 3% reported drinking daily. Results of national surveys indicate that 23%of the tenth-graders and more than 13% of eighth-graders report a recent episode of binge drinking and sporadic alcohol abuse. Prevalence rates alone fail to reflect adequately the

magnitude of adolescent health problems associated with alcohol use (Rogers & Werner, 1995).

According to the National Institute on Alcohol Abuse and Alcoholism (1996), 20% of adolescents aged 14-17 years are problem drinkers. Likewise, the National Council on Alcoholism estimates that 3 million adolescents abuse alcohol. Primary health care providers are in an ideal position to identify early alcohol-related problems in children, adolescents, and their families. Although identifying substance abuse in those patients who are most severely affected is the easiest, the challenge before health care providers is to identify individuals early in their involvement and to intervene in a timely manner.

Primary care providers often fail to recognize alcohol abuse problems in their patients. Some studies report detection rates as low as 30%. Minimal interventions by primary care clinicians, such as advice to modify current use patterns and warnings about adverse health consequences, can have beneficial effects, especially for patients in the early stages of addiction (U.S. Public Health Service, 1997).

Studies have shown that alcohol and drug abuse is a priority in health care from the teenager's viewpoint. Parents also consider discussions regarding substance abuse to be an important component of routine adolescent health care. Heeding these expectations and concerns, primary health care providers, should be prepared to include this topic as part of the health maintenance visits for adolescents. Unfortunately, many primary health care providers are uncomfortable with this subject and feel ill equipped to deal with the issues of alcohol and drugs

(See Figure 1). Lack of knowledge, insufficient amount of time, and inadequate reimbursement all have been cited by most primary health care providers as obstacles to such preventive health counseling. Patient's confidentiality considerations and skepticism regarding treatment and outcome also discourage primary health care providers from discussing alcohol usage and abuse in the office setting.

Nurses in advanced practice who are a part of the primary health care system are challenged to utilize past experience and current knowledge to develop comprehensive and focused assessment tools to meet the demands of the complex health and developmental needs of the adolescent. The purpose of this project is to develop a screening tool, which will guide primary care providers in the identification of the adolescent who is at risk for alcoholism. Identification of the adolescent, who is at risk for alcoholism, will assist the primary care provider, in helping to prevent alcoholism, thereby, aiding in the cognitive, physical, and psychosocial development of the adolescent.

Specialized tools for assessment of alcoholic clients have been developed by other disciplines. To date, nursing has not developed or adapted any of the above tools to screen for present and potential health needs of the adolescent who is at risk for becoming an alcoholic. The tool to be developed for this project will be limited to screening and identifying adolescents at risk for alcoholism, based on Roy's conceptual framework. The environmental adaptation mode of Roy's model will help to guide this project, and can be used later in guiding the assessment of the adolescent at risk of becoming an alcoholic.

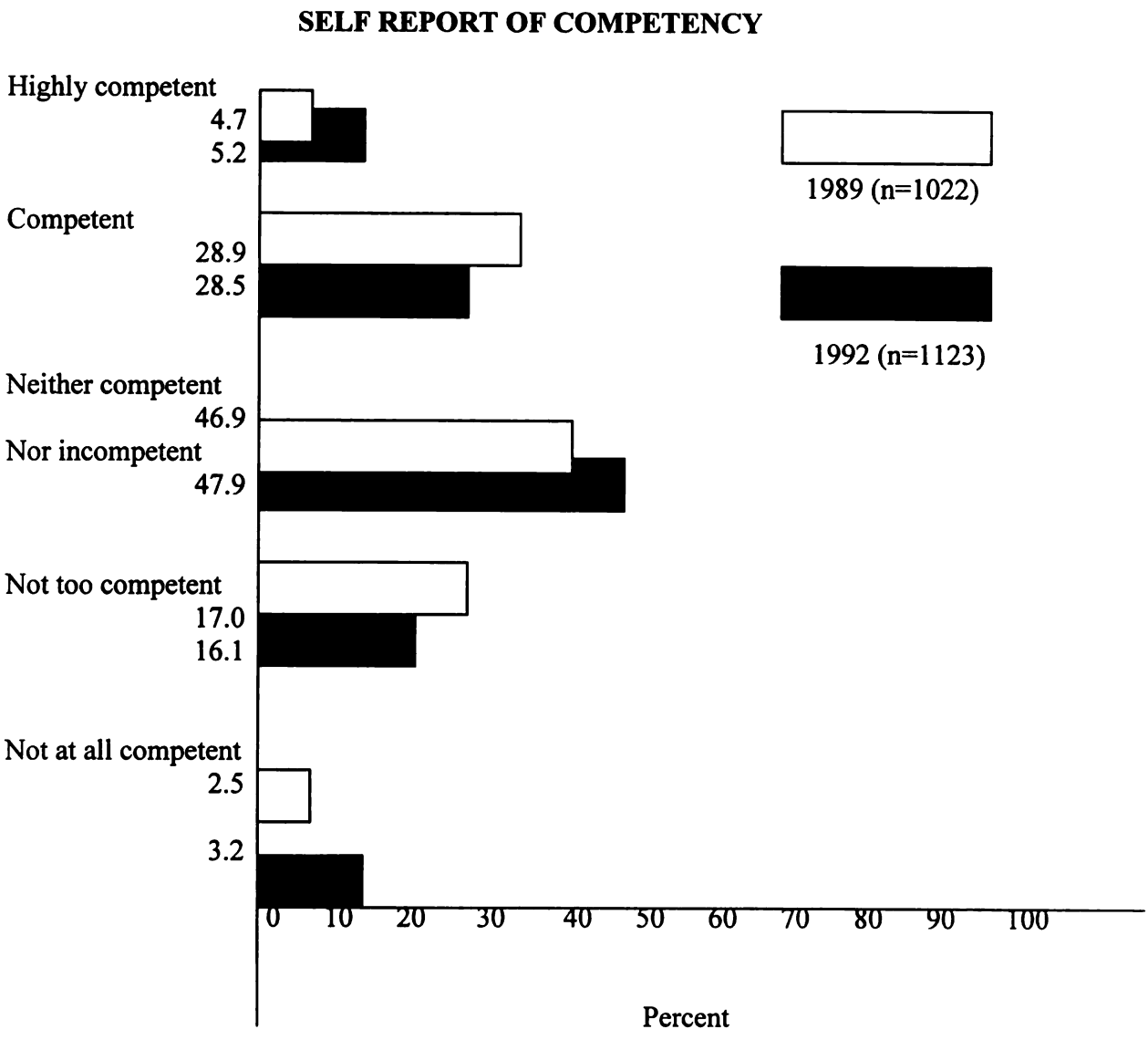


Figure 1. Percent of pediatricians reporting competency in identifying children with substance abuse problems, 1989 and 1992. Difference in response between 1989 and 1992 is not statistical significant. There has been no change over the past 4 years in pediatricians' feeling of competence in identifying children with a substance abuse problem. On a scale where 1 = highly competent and 5 = not al all competent, pediatricians were asked to rate their feeling of competence in their ability to identify patients with a substance abuse problem. In both 1989 and 1992, nearly one half of the respondents indicated they feel unsure about their ability to identify substance abuse problems, while on third feel fairly competent in this area and about one fifth do not feel very competent. The overall mean score for feeling of competency in both years was 2.8 (Adger, 1991).

Statement of the Problem

Why is a specialized tool necessary for screening and identifying the adolescent at risk for alcoholism? To date, very little has been done in the area of a nursing health care screening tool developed for adolescents at risk for alcoholism. Many providers are unfamiliar with this population and there is often confusion between adolescent developmental behavior and the alcohol-impaired adolescent's behavior.

The tool developed in this project will be used to identify the adolescent at risk of becoming an alcoholic. This tool will be used by the APN and other primary health care providers to; 1) identify adolescents at risk for alcoholism; 2) provide a forum for utilization of information by health care providers; and 3) provide guidance for nursing diagnosis, facilitating intervention, treatment, and education specific to this population. A structured question format developed from Roy's adaptational two-level screening in the environmental mode will be used to develop a written questionnaire to facilitate the analysis of the biological and psychosocial dimension of the at risk adolescent.

The APN in the role of primary care provider to the adolescent who is at risk for alcoholism seeks to assess the health status of the adolescent. This screening tool will include the physical, cognitive, and psychosocial risks of the adolescent, as well as other health risk behaviors. The services of nurses at the advanced practice level to coordinate, facilitate, and provide for the multiple health needs of the adolescent client are seen as a key element in the future planning for health care delivery. The

nurse's function will be to assume a responsible role in assisting and supporting adolescents and their families in their search for better health that is free of alcohol.

Definition of Concepts

The concepts that follow will be defined in order to clarify the background, which prompts this tool development, and the context in which the tool will be utilized. The concepts that will be defined are: 1) Adolescence; 2) Alcoholism; 3) At risk adolescent.

Adolescence: The period of growth and development between the onset of puberty and adulthood. The upper developmental limit of adolescence is unclear since there are no objective physiologic events that can be used to define its termination. Chronologically, adolescence extends from about 12 and 13 years of age to the early 29s, with wide individual and cultural variations. Adolescence tends to begin earlier in girls than in boys, and to end earlier in both in some cultures. At age 9-11 years, the appearance of secondary sex characteristics begins, and spans the teen years to a completely developed adult form. Physiologic and psychological changes during this period prepare the individual for mature adult biologic and emotional functioning (Cooper, H. E., Jr., & Nakashima, I., 1996). For the purpose of this project adolescence will be defined as: The period of growth and development between the onset of puberty and adulthood, 12 years of age to the early 20's, with individual and cultural variations.

Alcoholism: Is a primary, chronic disease with genetic, psychosocial, and environmental factors influencing its development and manifestations. The disease is often progressive and fatal. It is characterized by continuous or periodic impaired

control over drinking; preoccupation with the drug, alcohol; use of alcohol despite adverse consequences; and distortion in thinking, most notably denial (Flavin, D. & Morse, R., 1991).

At risk adolescent: Low self- worth, feelings of inferiority, frequent accidents/injuries, family drinking, incest/rape, change in academic performance, absenteeism from school/work, increase in sleeping patterns, behavior change, and a change in friends are often present. Alcohol is utilized to provide relief from unpleasant situation(s). There also may be unclear hereditary components along with contributing sociocultural factors (e.g., peer pressures) (De Maso, D.R., & Rappaport, L.A., 1994).

CONCEPTUAL FRAMEWORK

The adaptation theory as proposed by Sister Callista Roy (1984), seems well suited for the use with adolescents who are at risk for becoming alcoholics. However, in order to utilize Roy's adaptation model, an understanding of the basic concepts underlying the theory is essential. The main concepts of Toy's theory are person, environment, health, and nursing. This section will describe the basic concepts in Roy's adaptation theory and integrate the adolescent at risk of becoming an alcoholic within this theory. The screening tool for this project is based on Roy's assessment in the environmental adaptive mode, and the adolescent's response to internal or external environmental stimuli. Whether the response is effective or ineffective will be highlighted.

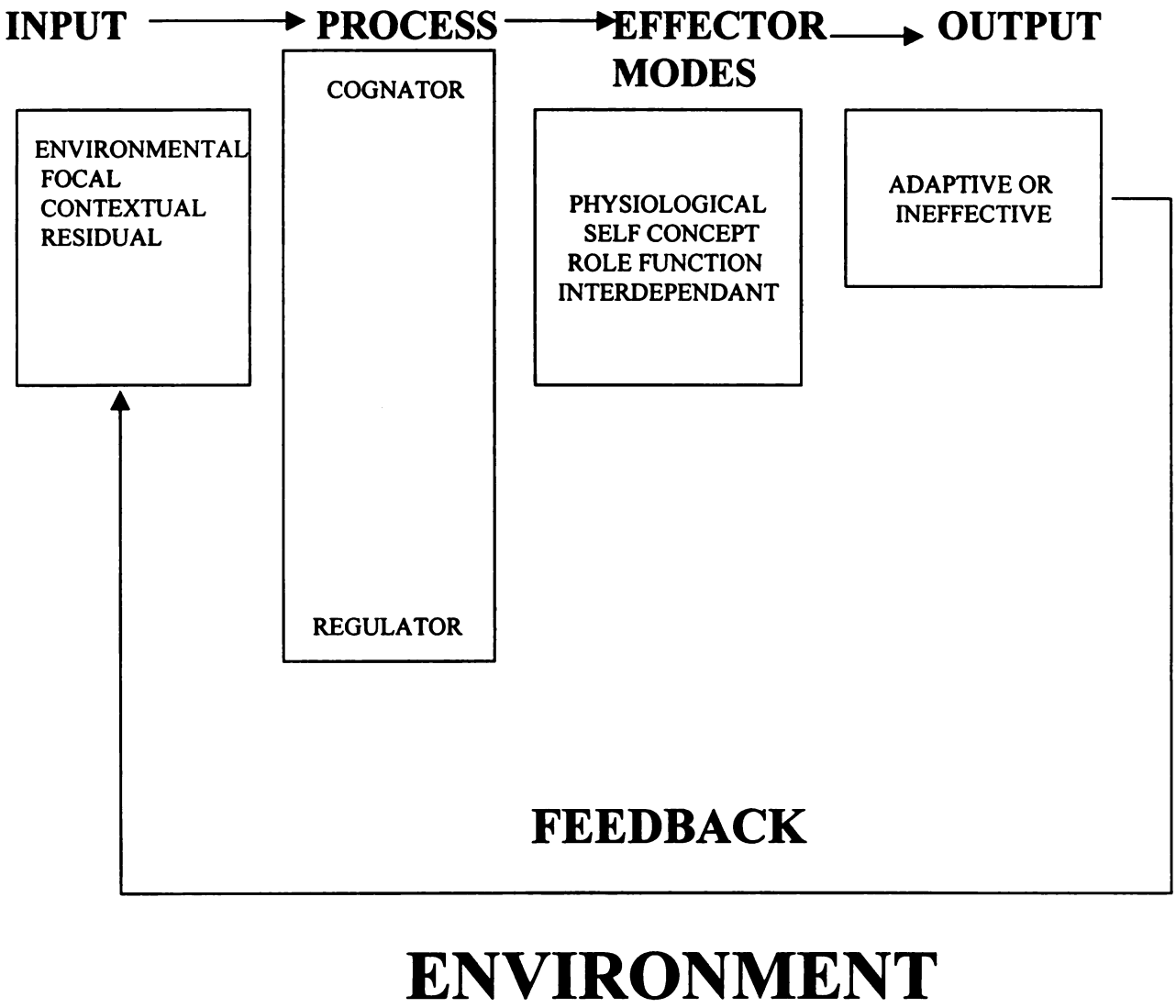
The person, the first concept, is seen as an individual and as a member of a group and as such is described as an adaptive system. This adaptive system takes in input (stimuli) and processes this input to produce a response or output. Adaptive behavior is evidenced by effective response to the stimuli while ineffective behavior indicates problems (Andrews & Roy, 1986) (See Figure 2). Roy's theory of adaptation sees the person as a biophysical being and an integrated whole. All body systems are balanced to produce a functioning person with biologic, psychosocial, and social needs, in constant interaction with the changing environment (Roy, 1984). Constant interaction with the changing environment of the modern world subjects the person to continual changes and stressors. Roy describes a person as using both innate and acquired mechanisms to cope with changes and adapt individually, with either positive or negative responses, to deal with stressors (Wesley, 1994). Roy also views the person as having an adaptive zone or range of ability to cope with stress.

The environment the second major concept, is described by Roy as the world within and around the person. Roy refers to the environment as all conditions, circumstances, and influences surrounding and affecting the development and behaviors of adolescents (persons or groups) (Wesley, 1994).

The third major concept in the Roy model is health. This is defined as a state and a process of being and becoming an integrated and whole person. The opposite of health is a lack of integration of the person with the environment, leading to a state of ill health. The fourth concept, nursing, is described by Roy as a process and has four steps. The steps include; nursing assessment of the behavior, assessment of stimuli , nursing diagnosis, and nursing goals. Nursing intervention is carried out

Figure 2

Adaptive system of the person.



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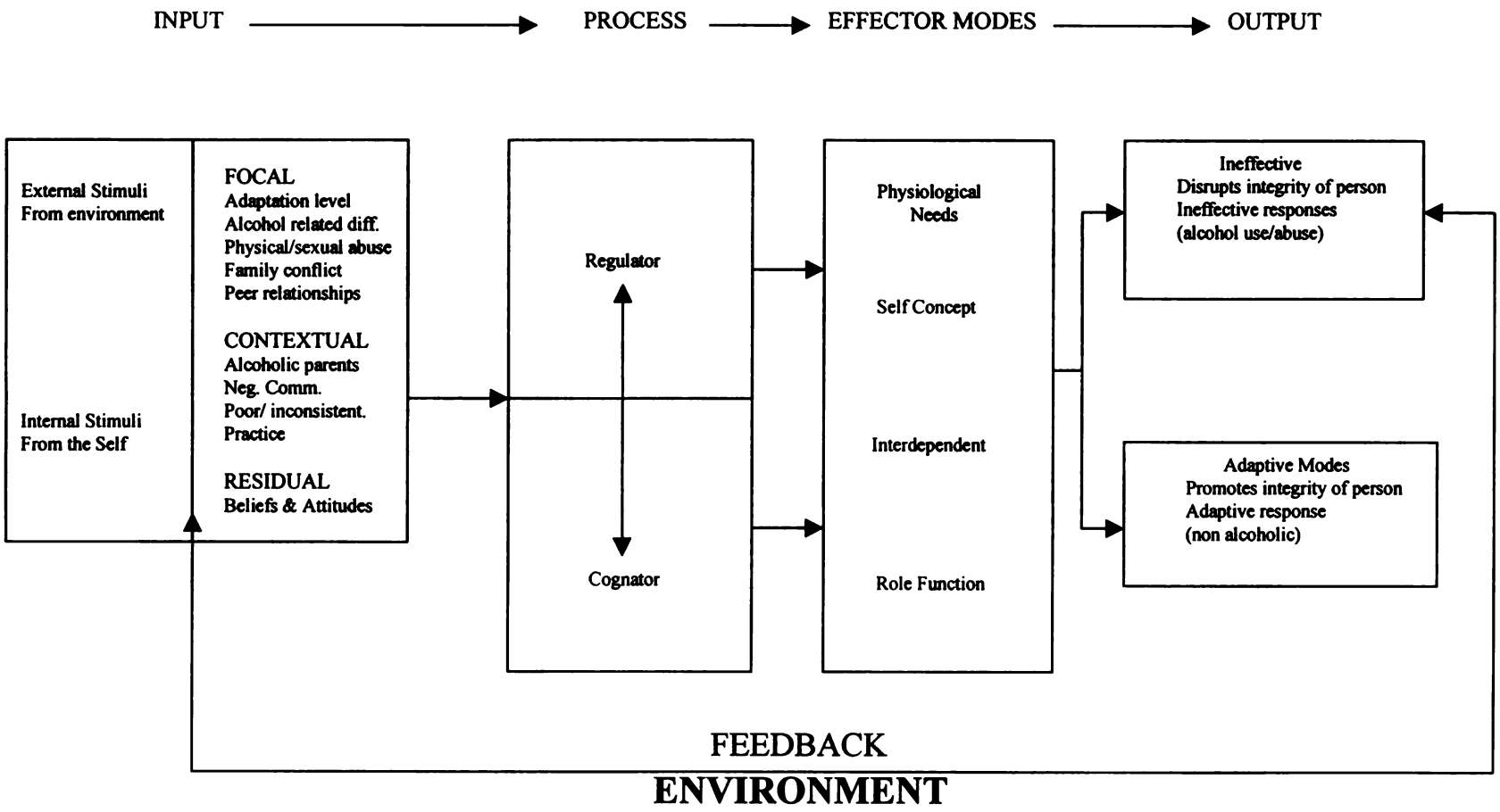
within the context of the nursing process and involves manipulation of the stimuli. Nursing is a process of analyses and action related to the care of the ill or potentially ill person.

In the system of adaptation (See Figure 2) (McCubbin and Figley, 1983). Roy refers to the environment as input (external and internal). The environmental input refers to such things as energy, matter, and information that the person receives and processes. It is also, described as a stimulus and may be focal, contextual, or residual. Focal stimuli are the stimuli immediately confronting the person. Residual stimuli, are factors from past experiences which may be relevant to the present situation but whose current effect cannot be validated. These factors include beliefs and attitudes. They are the stimuli, which influence the adaptive behavior, and the adaptation level. The effects of this influence may or may not be confirmed by the person immediately. Contextual stimuli are those stimuli that are present in situations, which will contribute to or influence one's behavior, but are not the focus. An individual's acquired adaptive mechanisms, as contextual stimuli, influence how the person will cope and deal with stressors (Roy 1984).

Roy sees the environment affecting the person through his/her perception of the stimuli - an exchange of matter and energy with the ever-changing environment. The regulator and the cognator systems will process the stimuli. The results of the processing are carried out through the effector modes (Wesley, 1994). Each person will respond in one or more of four modes: physiological, self-concept, role-function, and interdependent behaviors. (See Figure 3.) As defined by Roy, the physiological mode involves oxygenation, circulation, fluid and electrolyte balance, nutrition, rest

FIGURE 3.

INTERGRATION OF ROY'S CONCEPT



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and activity, and regulation of temperature, hormones, and sensory function. The self-concept mode is concerned with the perception on one's physical self and one's personal self, including personality, moral and ethical values, and beliefs. The interdependent mode involves social relationships, including both the need to be interdependent and the need for support by others. The role-function mode involves the behaviors of a person in each role taken on in his/her life (Roy, 1984).

Adaptive behavior, according to Roy, is evidenced by effective responses to stimuli while health problems are the result of ineffective responses to stimuli. The effector modes vary in intensity and quality and this may result in adaptations that are ineffective and lead to poor psychological and physical health status. The complex health needs of the adolescent at risk of becoming an alcoholic are the result of ineffective behavior and adaptation to negative feedback from the environment (Andrews & Roy, 1986).

Feedback refers to the process by which a person is aware of his/her internal and external environmental responses to behavior (output) and adapts, effective or ineffectively. Feedback involves receiving and responding to the return of its own output. Information about how a person is functioning is looped back (feedback from the output to the input, thus altering subsequent input. The person adjusts both internally and externally by adapting effectively or ineffectively to the environment (Goldenberg and Goldenberg, 1990).

Roy suggests that nursing also involves dealing with ineffective coping mechanisms, which cause ineffective responses, disrupting the integrity of the person. The concept, nursing, stresses health promotion and the importance of

assisting clients in manipulating their environment to obtain effective adaptation skills within the health-illness continuum (McCubbin and Figley, 1983). The goal of nursing is to promote adaptation of the client in regard to the four adaptive modes: 1) physiological; 2) self-concept; 3) role-function; and 4) interdependence (See Figure 3).

The goal of nursing is reached when the focal stimulus is within the zone set up by the client's adaptation level, i.e., when the focal stimulus falls within a range where the client is able to make an adaptive or effective response. Adaptation frees the adolescent to respond to other stimuli, thus leading to the intended consequences of the model - a higher level of wellness, resulting in a non-alcoholic lifestyle (Roy and Roberts, 1981) (See Figure 3).

Summary

This model facilitates the analysis of the biological and psychosocial dimensions of the adolescent at risk for alcoholism. When stress is too great or is beyond the person's ordinary repertoire of adaptation skills, the adaptive response is activated. The adolescent's use and abuse of alcohol is a means of adapting ineffectively to stressful situations. The response to stress is based on the presenting stimulus (Limandri, 1986). The many and often complex health and psychological needs of these adolescents are a result of adaptations over time. Roy's adaptation model is appropriate to screen this population whose alcohol impairment have necessitated multiple personal and environmental adaptations over time (Limandri, 1986).

Literature Review

In this section, the writer will review and critique the literature associated with primary health care of the adolescent who is at risk for alcoholism. The review will include morbidity and mortality in adolescence related to alcohol; relevant risk factors for alcohol abuse in adolescents; and screening and assessment tools.

Morbidity/Mortality

Alcohol is responsible for more adolescent morbidity and mortality than all other drugs combined (Muranmoto, and Leshan, 1993). The main cause of adolescent deaths, unlike children and adults, is not diseases. Rather, adolescents deaths are related primarily to preventable social, environmental, and behavioral factors, which have been labeled "social morbidity's." alcohol is the substance that appears to be the most powerful factor in placing these "social morbidity's" together (Freidman, 1995).

The three leading causes of mortality among adolescents in the United States, are accidents, homicides, and suicides. Unintentional injuries are the leading cause of death for adolescents, and approximately 49% of these are related to alcohol use (See Table 1). Accidental injury is the leading cause of mortality and morbidity among adolescents and young adults. Motor vehicle accidents account for up to 75% of accidental deaths with a large percentage being alcohol-related. Alcohol is also related to a large percentage of the non-vehicle-related injuries, deaths, suicides, and homicides (Freidman, 1995). Each year, a disturbing number of adolescents and young adults ages 16 to 19 years are killed in motor vehicle accidents (MVA's) involving alcohol. In 1989, almost 13,000 such fatalities occurred in this age range

Table 1. DEATH RATES (PER 100,000) BY CAUSE AND AGE GROUP

Cause of Death	10-14Yr.	15-19 Yr.	20-24 Yr.
Motor vehicle crash			
1979	8.2	44.6	46.7
1988	7.5	37.2	39.7
Other injury			
1979	8.0	14.8	19.1
1988	5.2	9.4	12.4
Suicide			
1979	0.8	8.4	16.4
1988	1.4	11.3	15.0
Homicide			
1979	1.2	10.3	16.4
1988	1.7	11.7	15.0
Other			
1979	31.8	98.9	131.0
1988	27.5	88.0	115.4

From Alcohol-related traffic fatalities among youth and young adults-United States, 1982-1989 MMWR 40(11); 178-187; with permission.

(See table 1). The study by Simpson, (1997) showed that the alcohol - impaired driver aged 16 or 17 years was 165 times more likely to be involved in a fatal collision than a sober driver of the same age. Alcohol use has also been implicated in a significant percentage of adolescent homicides and suicides - the second and third leading causes of death in this age group (U. S. Public Health Service, 1997).

Each year there are approximately 15,000 deaths from automobile-related injuries, and 5,000 suicides in this age group. Approximately half of fatal motor vehicle accidents and homicides, as well as a substantial proportion of suicides, are associated with the use of alcohol and other drugs (Rogers, and Werner, 1995). Many of the 6,000 adolescent homicides are also committed when one or more of the parties are intoxicated. Alcohol and other psychoactive drugs or the combination of both drugs are factors in many of these fatalities (Kempe, Silver, & O'Brien, 1987).

Frequent or unexplained occurance of even minor injuries, although not life - threatening, should always arouse suspicion of substance abuse. Serious morbidity and significant mortality may occur if this diagnosis is not considered and if appropriate intervention is not initiated in a timely fashion. Primary health care providers often underestimate the seriousness and prevalence of teenage alcohol use. In fact, adolescent substance abuse is probably the most commonly missed pediatric diagnosis (Vital Statistics of the United States, 1986).

Risk Taking Behaviors

A descriptive correlational research study by Kidd & Holton (1993) explored alcohol use, risk-taking motivators, and driving practice in rural adolescent drivers. This study used three self-administered questionnaires: Risk-Taking questionnaire,

Driving Practice Questionnaire, and the short Michigan Alcohol Screening Test (See Appendix C). These test instruments were administered to 23 adolescent drivers, aged 16 to 18 years. The conclusion of the study indicated that drinking alcohol and risky driving might represent a broader risk-taking syndrome. In identifying injury-susceptible individuals, this study found that gender may be less useful than the identification of driving practices of adolescent drivers. Injury alone may be an indicator of risk-taking behavior, but when injury is combined with alcohol use the index of suspicion increases. Emergency room nurses can screen injured adolescents for risk-taking motivations by discussing the injury history and perceived injury susceptibility with the adolescent patient. Awareness of the behavior in the adolescent, is the first step in initiating self-protective measures (Kidd & Holton, 1993).

Hurst (1991) reported, that homicides, suicides, and accidents are increasing in adolescents, along with unintended pregnancy, substance abuse, and sexually transmitted diseases. The purpose of this descriptive correlation study was to ascertain the relationship among self-care agency, risk-taking, alcohol abuse, and health risks in adolescents. The conceptual framework for this study included, self-care concepts as described within Roy's conceptual model and risk-taking as related to health risk behaviors. The Denves Self-Care Agency Instrument, the Risk-Taking questionnaire, and the High School Health Risk Inventory were administered to 192 adolescents. A highly significant relationship existed between self-care agency and risk-taking when health risk was used as the criterion variable (Hurst, 1991).

Supportive of the above statistics, a study by Holt, (1993) supports that the needs of adolescent patients attending accident and emergency departments may not be recognized by nurses due to ignorance of the nature of adolescent development, and prejudice over perceived self-injurious behaviors. Holt (1993), addresses the mysteries behind the motivating forces of adolescent behaviors, and offers guidance to nurses who may be caring for what is understood to be a "difficult" patient group.

Risk Factors

The consequences of adolescent risk-taking behaviors have placed unprecedented strain on the medical, health, legal, educational and social systems. The cause of alcohol and substance abuse in adolescents is unknown. No single etiology applies universally to alcohol and substance abuse in all adolescents. The problem is truly multi-factorial, encompassing many physical, social, and psychological influences (Patton, 1995). The factors are separated arbitrarily for this paper into societal, family, peer, and genetic influences. It seems that the more risk factors to which the adolescent is exposed, the higher the likelihood of problems (Patton, 1995). Bry and associated (1982) reported that with four identified risk factors, the adolescent is at a 4.5 times higher risk for alcohol use. Unrelated to the specific use of chemicals, parental personality attributes and socialization techniques, including impulsiveness, depression, poor object relations, and problems with interpersonal relations are associated with drug and alcohol use in adolescents.

Societal Influences:

In the United States, children and adolescents are constantly enticed to experience the pleasures of chemicals both illicitly and licitly, through advertising and adult modeling behavior. Each year, a typical young person in the United States views more than 1000 commercials, including billboards for beer, alcohol, wine, and wine coolers, in addition to several thousand other fictional drinking incidents on television. Other societal factors that influence use of alcohol consumption include legal restrictions (e.g., driving age, legal ages for the sale of alcohol, cost of alcohol and tobacco including taxation) and neighborhood deterioration (Richardson et al, 1989).

Social pressures to drink, and sometimes to drink heavily, converge on the adolescent form all sides. The Bud Light advertising budget is twenty-five times that of the National Institute on Alcohol Abuse and Alcoholism (NIAAA) prevention and education budget (NIAAA, 1993). The alcoholic beverage industry in the United States spends about $2 billion a year, or $5.48 million a day, on advertising. Those businesses presumably get what they pay for; $2 billion worth of pressure on the public to drink (Alcohol Research Information Service, 1997). They claim it is not aimed at consumption but only at choice of brands, yet the net effect cannot help but promote drinking rather than abstinence. If everybody practiced moderation as the ads purport, the alcoholic beverage industry would lose nearly half of its business (NIAAA, 1993).

One issue of Ms. Magazine contained twice as many advertisements for liquor as for cosmetics. College newspapers in 1988 had thirty-four times as much

space for beer advertisement as for books. The atmosphere that this creates, is bolstered by the attractive cocktail waitress, who appeals to machismo with the subtle implication that you are not much of a man, if you don't order up. The portrayal of alcohol drinking on television shows is out of proportion to the actual rate of alcohol consumption and the public's tolerance of excessive drinking (NIAAA, 1993).

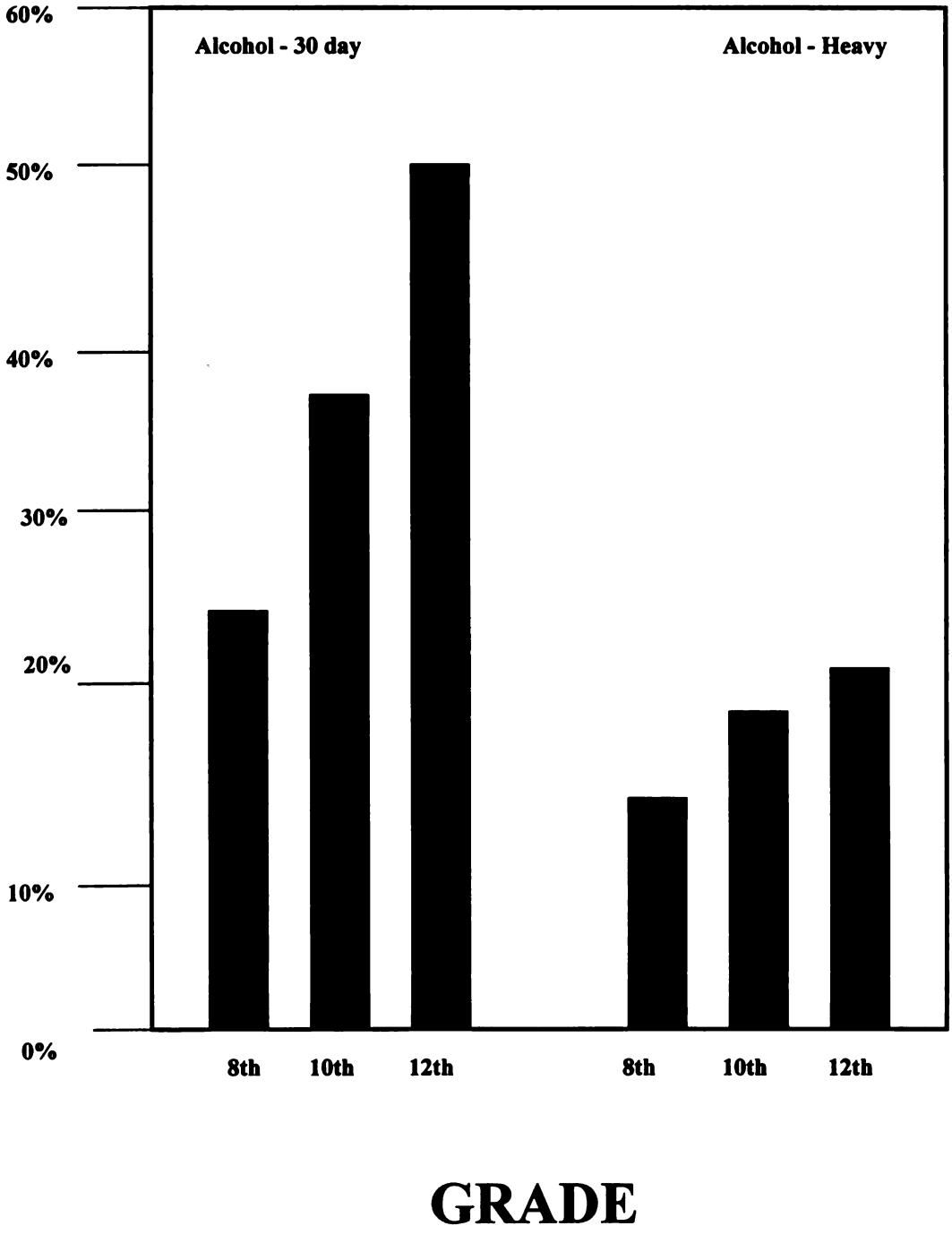
One study of televised sports showed 685 advertisements for beer, wine, and wine coolers during 443.7 hours of programming. These commercials and fictional accounts may provide a vicarious way to learn about drinking (Madden, and Grube, 1994). Another study (Miraze, E., et al: 1991) found that television followed by the print media, was the most frequent source of information about alcohol and other drugs for young adolescents. An abundance of positive portrayals of drinking behavior exist in the face of a paucity of depictions of adverse consequences of alcohol consumption within television shows and advertisements. These positive portrayals may give the adolescent the distorted impression that consumption of alcohol leads only to sociability, romance, and adventure without the consequences of accidents, alcoholism, and disability.

Previous research found that youths with greater exposure to alcohol advertising were more likely to believe that those who drink possess positive characteristics, such as being attractive, athletic, and/or successful (Atkin, and Block, 1981). Commercials often link beer or wine coolers to pleasurable activities, such as beach parties or participating in an athletic function, which may give the impression that alcohol is an indispensable part of the enjoyment of these activities.

Although alcohol producers argue that their commercials do not target young persons and do not influence underage youth to begin drinking, their advertisements commonly feature young, active individuals, including well-known endorsers or fictional characters, who hold the greatest appeal to underage consumers in the viewing audience. In 1991, more than $600 million was spent on beer advertisements; more than $200 million on wine advertisements, and $125 million on wine cooler ads (Alcohol Research Information Service, 1997). In one survey, 73% of the general public expressed the opinion that advertising does have a significant impact on alcohol consumption by adolescents. Exposure to alcohol advertising has been shown to be significantly related to heavy drinking, problem situations and risk taking behaviors among adolescents (Athens, Neuendorf, & McDermott, 1983).

Since alcoholic beverages are readily available and known to the smallest child, there is not the same danger in giving information about alcohol as there is about other drugs. Hence the information can be given very early (Lecca and Watts, 1991). The preschooler can recite or sing all the beer ads from TV and tell you what brand of whiskey his/her daddy drinks. The five-year-old knows that what her mommy is drinking while she irons is not seven-up but gin (Lecca and Watts, 1991). High school is too late to start, as most of their attitudes are formed by age nine (fourth grade), and half of the youngsters are drinking by age thirteen. Education should begin by age twelve or earlier. But it must be field-tested: "alcohol free" meant "free alcohol" to some eight-year-olds (Lecca and Watts, 1991).

Figure 4. RECENT PREVALENCE OF ALCOHOL (30-day, heavy drinking), (Johnston & Bachman, 1993).



There has been a significant decrease in the reported prevalence of use for most illicit drugs; there has been little change in the reported use of alcohol and tobacco, the two most common drugs of abuse. Alcohol remains the drug of choice for most adolescents. In 1993, 67% of eight graders had tried alcohol in their lifetime, as had 81% of high school seniors. More than a quarter or eighth graders (26%) had used alcohol in the past month, as had 42% of 10th graders and 51% of high school seniors (Werner, & Adger, 1995) (See Figure 4).

Most disturbing is that at all three grade levels among those who had used alcohol in the past 30 days, half or more had had five or more drinks in a row at least once (13.5%, 23%, and 28%, respectively)(see figure 4). Although only 1% of adolescents consider themselves to have a drinking problem, 23% have often driven after excessive drinking, 17% report problems in peer relationship because of drinking, and 10% have been criticized by a close friend for drinking (Werner, & Adger, 1995).

Family Influences:

Sokol-Katz, and Ulbrick (1992), noted significant ethnic differences, in three groups in family management practices, the three groups include, Mexican, Cuban, and Puerto-Rican-American youths. The differences in family management practices were sibling deviance, parental approval of children drinking, and family structure, identified in each of the ethnic groups. In another study, Asian youth seemed to be protected by (1) less sibling use of alcohol and delinquent behavior (2) a higher probability of both parents in the home, and (3) parental disapproval of alcohol.

Ethnic differences seem to exist regarding initiation of alcohol use. In a study of urban fifth-graders, 23% of Caucasian, 7-9% of Asian, and 19% of African-American students had used tobacco. With 49%, 17% and 40% of these groups, respectively, reporting alcohol use (Catalano, Morrison, and Wells, et al, 1992). Contrary to the above study, Edwards, Thurman, & Beauvais, (1995) found that, in adolescence, the highest rates of alcohol use was general found among American Indians, followed in decreasing order by Caucasians, Hispanics, African-Americans, and Asian-Americans. The role of socio-cultural factors in alcohol use is significant, including level of acculturation, generation status, culturally specific values, beliefs, and peer influence. Patterns of alcohol use among ethnic minority adolescents show similar rates of alcohol use by males and females in the 8th grade but more males in the 12th grade for all ethnicity's except the American Indians who live on reservations.

Alcoholism appears less abundant among Jewish and Italian adolescents, and increased among those of Irish descent, whether due to cultural or genetic influence (Sokol-Katz, and Ulbrick, 1992). The family structure to which the adolescent belongs is an emotional unit in which complex relationships are interwoven over time and are affected by the personal histories of alcohol use and/or abuse, that each individual brings to the family. These factors also seem to influence alcohol-drinking behavior. In a similar study of the family structure in the Mexican, Cuban and Puerto-Rican-American youths 13.5%, 23%, and 28% of these youths respectively, reported alcohol use (Sokol-Katz, and Ulbrick, 1992).

Richardson and colleagues (1989) noted a higher incidence of alcohol among eighth grade students (the so-called "Latchkey" children) who care for themselves in the late afternoon while their parent(s) work. This finding is possible related to boredom and more of an opportunity to use substances. Of particular importance are the poor or inconsistent family-management practices. The lack of parental involvement in the activities of children and lack of consistent discipline of children can be predictors of alcohol use. Authoritative, as opposed to authoritarian or permissiveness, parenting is related to the development of more pro-social values in the adolescent.

Family factors also seem to contribute to the predisposition to alcoholism. Living in a household that has high levels of conflict seems to increase the use of alcohol (Richardson & colleagues, 1989). The degree of conflict seems more important than the marital structure per se. Shilts (1991) noted that 54% of adolescents, who use alcohol and/or drugs, report doing so to relieve pressures at home. Periods of stress, feelings of sadness, and low self-esteem are frequently related to family conflicts, strained peer relationships, and school-related difficulties. Teenagers often turn to alcohol or other drugs as a source of comfort or as a means of coping with these situations. Young adult victims of abuse may resort to these agents in an effort to relieve anxiety, reduce tension, and repress reality (Hoffmann, Mee-Lee, & Arrowood, 1993). Coupey, Klerman, Hanley and Belfus, (1992) found gay and lesbian youth to be particularly vulnerable to substance abuse in an effort to compensate for feelings of guilt, inadequacy, or self-depreciation.

Blum (1992) has developed the theory, that an alcoholic father or mother is a significant stress for children and often results in slowing normal development, leading to lowered self-esteem and inferiority complexes. Other reports have noted the resilience of certain individuals to the stress that surround them. Wolin and Wolin (1993) noted that in dysfunctional families, some children learn to watch out for themselves and to grow. They develop allies outside the family, build self-esteem in school, and, over time rise above adversity by developing skills and lasting strengths (Wolin & Wolin, 1993).

Peer Influences:

Older children may influence younger siblings, by introduction and/or initiation into the use of alcohol often times, using with them, or supplying them with alcohol. Many authors note the importance of peer influence in the initiation of alcohol use. Adolescents adrift in a large high school setting who are without healthy peer support, family support, or attachment to an organized team, club, or activity often finds that the only group who will accept them without reservation is the drug-using crowd (Shilts, 1991). Shilts (1991) reported that 88% of substance abusers have abusing friends. Much of the alcohol use is initiated in a social setting, and peers frequently provide the alcohol. Adolescents often model behavior like their peers in the use of drugs and alcohol.

Adolescents who engage in one type of risk-taking behavior are often involved in other risk-taking behaviors. Adolescents who engage in binge drinking or who frequently use alcohol are also more likely to smoke, chew tobacco, use illicit drugs, have unprotected sex, and exhibit antisocial behavior (Cotton, 1979).

It is important to note, that not all adolescents who experiment with alcohol, and who use with peers will progress to problems. Whether use continues or stops with experimentation appears to be more related to internal distress, psychopathology, and unhappiness than to direct peer influence. Adolescents who use drugs in response to peers and social settings are more likely to stop using than those who also use for psychological reasons are (Shilts, 1991).

Genetic Influences:

The most common type of genetically influenced alcoholism is milieu-limited alcoholism. It occurs in both men and women. This type of alcoholism requires both a genetic predisposition and certain environmental stressors that continually lead the adolescent back to alcohol as a way of adapting (Cloniger, 1987). Cotton, in 1979 demonstrated that as many as 40% to 45% of individuals who are receiving treatment for alcohol-related problems came from alcoholic family backgrounds. The risk of alcoholism seems to depend on both the number of alcoholic relatives and their proximity to the person being researched (Cotton, 1979).

Several studies have found disproportionately high rates of alcohol problem among persons with alcoholic relatives, especially children of alcoholics (COA) (Dawson, et al, 1992). This increased risk seems to be the result of both genetic and environmental factors. COA's generally demonstrate a three - to fourfold increased risk for being alcoholic as compared with non-COA's. This finding holds true whether they are raised by their alcoholic parents or by non-alcoholic adoptive parents (Goodwin, Knop, et al, 1993). One third of COA's become chemically dependent people, and one-fourth engage in both alcohol and other drugs.

Therefore, COA's are the highest-risk group for developing chemical dependence (Morrison, and Smith, 1990). Not only are COA's at risk for alcoholism, but they also have an increased incidence of behavioral and psychological difficulties. For instance, children of substance abusers are at increased risk of developing depression and its associated social and behavioral problems (Perez-Bouchard, Johnson, and Ahrenns, 1993).

COAs are commonly pictured as destined to become alcoholics themselves and to develop psychological problems. Research on COAs, however, has not strongly supported this impression. Rather, pediatricians have good reason to believe that COAs develop a checkerboard of strengths and weaknesses (Garmezy, 1993). The weaknesses are adequately explained by a traditional risk paradigm that they called the Damage Model, whereas the strengths were overlooked in this model. The Challenge Model and its related vocabulary of strengths extend the Damage Model by including the possibility that COAs and other children of hardship can be both resilient and vulnerable. The challenge Model offers a developmental vocabulary of resilience. It also implies that pediatricians should not launch an exclusive search for pathology in COAs, but instead they should ask questions of patients more like, "How is your struggle going" (Garmezy, 1993)?

Not all COA's use substances during adolescence. A current study by Hussong & Chassin (1997), investigated whether five factors (self-awareness, perceived control, family organization, behavioral coping and cognitive coping) buffer COA risks for substance use initiation during adolescence. A community sample of 454 COA and matched control families was recruited to participate in a 3-

year longitudinal study, involving annual computer-assisted interviews with adolescents and their parents. These findings suggest that highly organized families and behavioral coping efforts of the adolescent may deter substance use initiation. Moreover, perceived control over one's environment and cognitive coping may buffer adolescents from the risk associated with parental alcoholism (Hussong & Chassin, 1997).

A structural equation model by Dumka, & Roosa (1995), was developed and used to analyze data from fathers and mothers related to father's personal adjustment. The purpose of the study was, to test a stress process model in which family stressors (negative life events) and father's family system resources (marital adjustment and positive father-child relationships) were evaluated as mediators of the relationship between problem drinking (fathers and mothers) and father's personal adjustment. Mother's who are problem drinkers contributed only to less positive father-child relationships.

The conclusion to the above study indicated that the stress process models for fathers and mothers differ, in particular, family relationships do not appear to play a significant mediation role for fathers whereas they do for mothers. Interventions for symptomatic father might best concentrate on alleviating problem drinking and extrafamilial sources of stress (Dumka, & Roosa, 1995).

<u>Screening and Assessment Instruments:</u>

Use of an informal questionnaire developed to screen psychosocial risks in an adolescent client population, in a primary care practice setting is only one approach to screening for alcohol use and other drug problems in adolescents. For

adults, the CAGE (See Appendix B) and SMAST (See Appendix C) have been shown to be clinically useful (Schwartz & Writz, 1990).

The development and clinical use of the CAGE questions were described in an original paper presented at an International Conference on Alcoholism. Mayfield & colleagues (1974) brought the attention of the clinical alcoholism field to the existence of the CAGE questions. Four clinical interview questions, the CAGE questions, have proved useful in helping to make a diagnosis of alcoholism. The questions focus on Cutting down, Annoyance by criticism, Guilty feeling, and Eye-openers. The acronym "CAGE" helps the primary care provider to recall the questions.

The Michigan Alcoholism Screening Test (MAST) was devised to provide a consistent, quantifiable, structured interview instrument to detect alcoholism (Selzer, Vinokur, & Van Rooijen, 1975). Originally consisting of 25 questions administered in 10 to 15 minutes, it is now used as a screening device in many treatment and research programs. Pokorny et al (1972), offered a brief version of the MAST using 10 of the original 25 items. The results indicated their "Brief MAST" was as effective as the complete instrument. The Pokorny group's approach was a systematic attempt to produce an effective, shorter, self-administered and more easily scored version of the original 25-item MAST.

In addition to the above studies, the practicality of using the short Michigan Alcoholism Screening test (SMAST) and the Alcohol Use Disorders Identification Test (AUDIT) in screening adolescents for alcoholism in a primary care setting was assessed by Foster, Blondell, & Looney, (1997). Foster, & colleagues, (1997) sought

to determine the prevalence of alcohol use among adolescents, 16-21 years of age, presenting to a private Family Medicine practice for medical care. A consecutive sample of 67 subjects was asked to complete the SMAST and AUDIT questionnaires. Overall, only 52 subjects returned the questionnaires, 25 (48%) admitted to drinking. Alcohol use was relatively common considering the age group. Using the SMAST and AUDIT to screen for alcoholism was found to be labor intensive, and time consuming. In addition adolescents appeared to misinterpret some questions and were often accompanied to the office by their parents, thus their answers may not be valid. This study concluded that history of alcoholism taken upon typical office examination and relevant advice appears to be a better alternative to the use of questionnaires in determining the prevalence of alcohol use in this age group (Foster, Blondell, & Looney, 1997).

Current screening tools available in detecting patients with dependence on, or abuse of alcohol, include a brief screening questionnaire by Rumpf, Hapke, Hill, & John (1997). The purpose of their work was to develop a sensitive as well as a brief screening questionnaire by combining the well-known instruments of CAGE and the Michigan Alcoholism Screening Test (MAST) (Appendix A). This instrument comprises two CAGE and five MAST questions (Leubeck Alcohol Dependence and Abuse Screening Test: LAST) and was significantly higher in sensitivity than CAGE and SMAST by means of logistic regression and item analysis. It was concluded that the LAST is an optimized instrument for use in general hospital and general practice (Rumpf, Hapke, Hill, & John, 1997).

Previously conducted studies suggested that combining the CAGE with the Perceived Benefit of Drinking Scale (PBDS) provides information about an adolescent's use of tobacco, and best friend's drinking pattern and is a useful composite screening measure for problem drinking. A study by Werner et al (1996), was undertake to evaluate this composite screening measure prospectively as a predictor of subsequent problem drinking among late adolescents across 3 years of College. College student's responses to the CAGE, PBDS, tobacco use, and their friends drinking patterns remained consistent over the 3 years and correlated with concurrent and future risk for problem drinking. These variables explained significant variance in drinking and alcohol-related problems and may constitute a useful screening measure for current and future problem drinking (Werner et al, 1996).

Research indicates that adolescents have unique patterns of drinking behavior. Some are binge drinker, social drinkers, drinking due to stressful situations and drinking to impress their peers. The Rutgers Alcohol Problem Index (RAPI) and the Marlowe-Crowne Social Desirability Scale can be used to examine the patterns of drinking behavior. The social context of adolescent drinking involves the combined influence of motivational and situational factors. Marlowe and Crowne (1994) assessed the usefulness of the Social Context of drinking scales in discriminating among four adolescent drinker types. Light and moderate drinkers were classified by relatively low scores on alcohol consumption measures and the Rutgers Alcohol Problem Index (RAPI) a measure of drinking consequences. Heavy

drinkers were identified by, high consumption score, but a low RAPI score. High-consequence drinkers were those with high RAPI scores.

A discriminate analysis of the drinker groups yielded three statistically significant factors. The first factor clearly distinguished light from high-consequence drinkers, and was strongly correlated with variable "Social facilitation". The second factor, which best-separated heavy from high-consequence drinkers, was dominated by the variable "Stress Control". Moderate and heavy drinkers were distinguished from one another by gender on a third factor. Alcohol use intensity was not important to the discrimination between these types of alcohol abusers. The findings of this study support the discriminate validity of the Social context of Drinking Scales and point to social psychological differences among types of adolescent drinkers (Marlow, & Crowne, 1994).

A questionnaire measuring alcohol use, the social contexts of drinking, and the personality trait known as "sensation seeking," was administered to more than 1,200 seventh grade students in four rural public schools in western New York State. A majority (57%), of the seventh grade students were drinkers. Discriminate function analyses were performed on their scores to determine if they could distinguish between different levels of alcohol use intensity, alcohol-impaired driving, and riding with an impaired driver. Results indicated social context measures were effective in distinguishing among levels on each incident of abuse. In particular, high-intensity drinkers, impaired drivers, and riders with impaired drivers were more likely to drink in a context of social facilitation, stress control, and defiance of school and adult authority. The drinking context of peer acceptance

was important only in distinguishing teen-agers that ride with drunk drivers from those who do not. Overall, the sensation-seeking trait was of moderate importance in distinguishing among different alcohol abuse practices. Implications of these findings for the assessment of alcohol use, the social contexts of drinking, and the personality trait known "sensation seeking," as well as school-based prevention programs are discussed (Thombs, Beck, Mahoney, Bromley, & Benzon, 1994).

Schwartz (1993), developed the Drug and Alcohol Problem Quick Screen for adolescents in the private practice setting. These questionnaires screen only for alcohol or drug problems and do not comprehensively or formally assess other psychosocial parameters. The ideal instrument would be holistic in scope, easy to use, time efficient (10 - 15 minutes), valid and reliable in the population and setting in which it is used, have the potential to identify other life problems, and provide the basis for referral and treatment (Schwartz, 1993).

The Problem-Oriented Screening Instrument for teenagers is a screening tool recently designed to identify ten potential problem areas needing further in-depth assessment. It is appropriate for use in medical or school settings in the 12 to 19 year age group (Rahdert, 1993).

A computerized alcohol screening instrument, a composite instrument, Alcohol Screening Instrument for Self-Assessment (ASISA) was developed at the University of Michigan with the university's extensive computer networking capabilities in mind. It is an anonymous, self-administered alcohol-screening instrument, designed as a "frontline" self-identification, screening questionnaire. It is intended to help individuals determine whether or not their current drinking

practices are problematic or if they have the potential for becoming problematic (Rathburn, J., 1993). The ASISA is not a replacement for an in-depth alcohol evaluation. Its aim is to encourage members of the university community to take a closer look at their drinking patterns and seek a comprehensive clinical assessment if indicated by scores received on the ASISA (Rathburn, J., 1993).

The Center for Substance Abuse Treatment (CSAT) has reported the findings of consensus panels convened for the purpose of evaluating, screening, assessment, and treatment guidelines for alcohol and other drug-abusing adolescents (U. S. Department of Health and Human Services, 1993). Although formal testing instrument may not be practical in some practice settings because of time and other limitations, becoming familiar with these resources and considering their implementation is at least educational for the adolescent health care provider.

The majority of literature relative to this subject was in the form of screening instruments. It focused on measurement of alcohol use/misuse, prevalence of alcohol use, the practicality of use of screening tools and revision of existing screening tools for detecting alcohol use and misuse. This literature spanned the last twenty years, and was therefore able to give an excellent historical perspective on how attitudes and concerns have changed toward alcoholism.

<u>Limitations:</u>

There is a substantial amount of literature discussing the use of questionnaires as screening instruments, especially targeted toward the adult population. There is limited amount of literature available in screening and assessing the adolescent at risk of becoming an alcoholic. There are numerous

alcohol screening instruments, however, there is not much information about preventive strategies that have been successful for this concern.

Project Development

Overview

In this section, a screening tool to identify the adolescent at risk of becoming alcoholic using current and past health risk patterns in the environmental adaptive mode developed by Roy (1984) will be presented. The screening tool is discussed in terms of the proposed methodology for developing the tool, implementing the tool and evaluating the tool.

Purpose of the Project

The purpose of this project is to design a screening tool to identify the adolescent at risk for alcoholism. The tool will be in the format of a screening questionnaire. The instrument will be holistic in scope, meet the following criteria: 1)clarity; 2) cost effectiveness; 3) time efficient; 4) appropriateness in the primary care setting; 5) have potential to identify the target adolescent population (usefulness). Early and accurate identification of risk for alcoholism could lead to an increase in success for intervention.

The following steps were used to develop the instrument:

1. **Literature was reviewed**
2. **Review of tools currently available**
3. **Items in the instrument were developed within Roy's (1984) environmental adaptive mode, based on the literature and clinical practice.**

Format of the Instrument

The instrument (Appendix F) which has been developed, as a result of this scholarly project is a tool directed primarily toward the identification of the adolescents at risk for alcoholism. The instrument is based on the four-effector modes (physiological needs, self-concept, interdependent, and role function) in the environmental adaptive mode developed, based on the review of the literature.

Each of the areas will be in the form of a question requiring a "yes" or "no" answer.

Implementation

This tool is designed to be implemented in a primary care setting by primary health care providers, when screening adolescents who, may be at risk for alcoholism. The screening process is designed to be completed within 3-5 minutes, during the client's visit. To implement the instrument, advanced practice nurses and pediatricians at a family health care clinic will be asked to implement the screening tool. A community family health care clinic will be the target setting, and the target population will be adolescents.

Primary care providers must exercise care and judgement in selecting the circumstances in which they will screen the adolescent at risk for alcoholism. As always, what is in the best interests of the patient is of paramount importance in making that judgment. The constellation of signs and symptoms that fit recent abuse of alcohol requires screening to identify the adolescent at risk for alcoholism as an adjunct to the diagnostician's evaluation.

Some clinical circumstances clearly mandate screening for the presence or risk of alcoholism. The adolescent who has presented to the emergency department, with chest pain, or with a newly diagnosed cardiac arrhythmia should also be screened for the identification of risk for alcoholism. Screening should also be considered for the patient who is ataxic, sluggish, lethargic, delirious, and agitated, or whose psychiatric condition resembles an organic brain syndrome. Also, adolescents who have been involved in a serious motor vehicle accident or who have another injury in which their judgement seems impaired should be screened also for being at risk for alcoholism.

Whenever the primary care provider does decide to screen the adolescent for risk of alcoholism, full disclosure to the adolescent, with a frank yet sensitive discussion for the rationale for the screening, is imperative. With adolescents, assure confidentiality unless the behavior puts the adolescent or others at risk. Such a conversation must also address the limits of confidentiality and should stress the importance of securing the adolescent's consent to his or her family's presence and/or involvement in the managing of a alcohol abuse problem. If the diagnosis is a problem, parents will probably need to be informed, since they'll likely play a role in the treatment (Committee on Adolescence, Committee on Bioethics, and Provisional Committee on Substance Abuse, 1989).

After establishing a nursing diagnosis or medical diagnoses, the primary care providers can cluster the various symptoms and prioritize them to establish interventions for changing or modifying the behavior of the adolescent. The

additional benefit in reviewing all of the items under each category is that the clinician's attention will be called to identifying the adolescent at risk for alcoholism.

Evaluation

The tool will be tested in a number of community primary care settings. To evaluate the instrument, advanced practice nurses and pediatricians at a family health care clinic will be asked to implement the screening tool.

A letter of explanation (Appendix D): a copy of the instrument (Appendix E); and a evaluation form, explaining the instrument will be given to each of the primary care providers. The primary care providers will be asked to implement the instrument in order to evaluate clarity, cost effectiveness, usefulness, appropriateness, and efficiency. The primary care providers will receive written parameters in terms of the specific population with whom this instrument is to be used, i.e., adolescents at risk for alcoholism. Who are living in a community setting, and relying on community primary care providers for provision of health care.

Implication for Practice

Health care in the United States is expensive. A resource exists however, which can profoundly change the availability and cost of health care. The broad paradigm shift in health care delivery with an emphasis on health care outcomes has contributed to a rapid proliferation of the ANP services (Hahn, 1995). The APN's are certified in areas of specialization. Therefore highly skilled and cost-effective, the APN's are a resource, which offers a solution to many of the problems constituting America's health care crisis (Becker, Fournier, and Gardner, 1992).

Screening adolescents for alcoholism risk is an excellent opportunity for the APN to eliminate some of the financial barriers to patients and family members. The APN can facilitate the recognition and/or the prevention of the adolescent at risk for alcoholism, and then provide continuity of care. Continuity of care can be facilitated in being accessible, thereby, eliminating some of the factors of not keeping appointments and/or no-shows. This continuity of care enables the APN to be responsible and accountable across the whole health/illness and growth/development continuum.

While providing continuity of primary care, the APN focuses on prevention, health promotion, early detection of problems, health maintenance, education, and treatment of the at risk adolescent for alcoholism. The APN can continue to educate and monitor the adolescent as specialized care is being given, thus saving extra trips to the specialist.

The APN is able to bring caring into the adolescent/provider role, which is a very powerful thing. Because caring helps break down many types of barriers and get to whatever is most relevant to the adolescent, problems can be solved in a quicker, more effective way. The caring relationship can help the adolescent feel more hopeful and empowered, and it also enables the APN to be more perceptive regarding adolescent cues and early warning signs.

In the role of an advocate, the APN can help ease the generation gap and/or barriers that many adolescents feel exist between the adult and the adolescent. Because such differences, barriers, generation gaps etc., may be causing problems for the adolescent, the APN can intervene effectively by communicating and

advocating the adolescent's concern to other appropriate health professionals. In some instances, before this can occur, the APN may need to develop trust with his /her adolescent client.

Implication for Research

The APN's ability to conduct and apply research is important in decreasing barriers that many adolescents feel exist, and to enlighten other APN's on the methods of identifying the adolescent at risk for alcoholism. Being knowledgeable about and using research which has suggested successful strategies for the identification of the adolescent at risk for alcoholism can lead to better health outcomes, as well as promote ideas about types of research that still need to de done. By knowing, using, and conducting effective research, the APN can also serve as a role model for other health professionals. In the end, the adolescent patient will benefit through prevention and education.

Additional research and empirical data is needed to analyze the cost effectiveness of the APN as a competent provider in assuring prevention of the adolescent at risk for alcoholism. Implication for future research is needed. If a Federal Grant was to be obtained, money could be allocated to test the reliability, validity and outcomes in identifying high-risk adolescents at multiple sites in the rural, suburban and inner city areas. Measuring the questions for conciseness and explicitness, thereby avoiding discrepancies is also needed. Roy's Model is well suited for further research. Perhaps this research will culminate in the future.

Implication for Education

Education is integral for the success of decreasing adolescents at risk for alcoholism. Therefore, education for screening adolescents at risk for alcoholism should be implemented in the undergraduate curriculum for nursing as well as the medical and physician assistant students.

Primary health care providers are also integral in the education of the adolescent and family members in advocating the need to educate about the use of alcohol and its danger to one's health and society's attitudes toward drinking (Castiglia, 1992). Screening and early identification of the at risk adolescent, may help to prevent and decrease the high cost in health care, mental health services, alcohol treatment, alcohol related deaths, and juvenile crime.

Appendix A

Appendix A.
Revised, MICHIGAN ALCOHOLISM SCREENING TEST (MAST)

1. Do you feel you are a normal drinker? (By normal we mean you drink less than or as much as most other people.) (No, 2 points)
2. Have you ever awakened the morning after some drinking the night before and found that you could not remember a part of the evening? (Yes, 2 points)
3. Does your wife, husband, a parent, or other near relative ever worries or complain about your drinking? (Yes, 1 point)
4. Can you stop drinking without a struggle after one or two drinks? (No, 2 points)
5. Do you ever feel guilty about drinking? (Yes, 1 point)
6. Do friends or relatives think you are a normal drinker? (No, 2 points)
7. Are you able to stop drinking when you want to? (No, 2 points)
8. Have you ever attended a meeting of Alcoholics Anonymous? (Yes, 5 points)
9. Have you ever gotten into physical fights when drinking? (Yes, 1 point)
10. Has drinking ever created problems between you and your wife, husband, a parent, or other near relative? (Yes, 2 points)
11. Has your wife, husband, a parent, or other near relative ever gone to anyone for help about your drinking? (Yes, 2 points)
12. Have you ever lost, friends or girl friends because of your drinking? (Yes, 2 points)
13. Have you ever gotten into trouble at work because of your drinking? (Yes, 2 points)
14. Have you ever lost a job because of drinking? (Yes, 2 points)
15. Have you ever neglected your obligations, your family, or our work for two or more days in a row because you were drinking? (Yes, 2 points)
16. Do you drink before noon fairly often? (Yes, 1 point)
17. Have you ever been told you have liver trouble? Cirrhosis? (Yes, 2 points)
18. After heavy drinking have you had delirium tremens (DT's) or severe shaking, or heard voices or seen things that was not really there? (Yes, 2 points)
19. Have you ever gone to any one for help about your drinking? (Yes, 5 points)
20. Have you ever been in a hospital because of drinking? (Yes, 2 points)
21. Have you ever been a patient in a psychiatric hospital or on a psychiatric ward of a general hospital where drinking was part of the problem that resulted in hospitalization? (Yes, 2 points)
22. Have you ever been seen at a psychiatric or mental health clinic or gone to any doctor, social worker, or clergyman for help with any emotional problem, where drinking was part of the problem? (Yes, 2 points)
23. Have you ever been arrested for drunken driving, driving while intoxicated, or drinking under the influence of alcoholic beverages? (Yes, 2 points)
24. Have you ever been arrested, even for a few hours, because of other drunken behavior? (Yes, 2 points)

The alcoholism-indicating responses are in parentheses, with the weighted scores
From: Selzer, Vinokur, & Van Rooijen. A Self-Administered Short Michigan Alcoholism Screening Test

Appendix B

Appendix B.

CAGE QUESTIONNAIRE

"Have you ever felt you ought to **C**ut down on drinking?"
"Have people **A**nnoyed you by criticizing your drinking?"
"Have you ever felt bad or **G**uilty about your drinking?"
"Have you ever had a drink first thing in the morning to steady your nerves or get rid of a hangover (**E**ye-opener)?

One "yes" response should raise suspicions of alcohol abuse. More than one "yes" response should be considered a strong indication that alcohol abuse exists.
From: Ewing JA. Detecting alcoholism: the CAGE questionnaire. JAMA. 1984; 252: 1095-1907.

Appendix C

Appendix C.
SHORT MICHIGAN ALCOHOLISM SCREENING TEST

1. Do you feel you are a normal drinker? (By normal we mean you drink *less than* or *much as* much other people.) (No)*
2. Does your wife, husband, a parent, or other near relative ever worries or complain about your drinking? (Yes)
3. Do friends or relatives think you are a normal drinker? (Yes)
4. Do you ever feel guilty about your drinking? (Yes)
5. Are you able to stop drinking when you want to? (No)
6. Have you ever attended a meeting of Alcoholics Anonymous? (Yes)
7. Has drinking ever created problems between you and your wife, husband, a parent, or other near relative? (Yes)
8. Have you ever gotten into trouble at work because of drinking? (Yes)
9. Have you ever neglected your obligations, your family, or your work for two or more days in a row because you were drinking? (Yes)
10. Have you ever gone to anyone for help about your drinking? (Yes)
11. Have you ever been to a hospital because of drinking? (Yes)
12. Have you ever been arrested for drunken driving, driving while intoxicated, or driving under the influence of alcoholic beverages? (Yes)
13. Have you ever been arrested, even for a few hours, because of other drunken behavior? (Yes)

*Alcoholism-indicating responses in parentheses.

From: Seltzer MI, Vinokur A, & Van Rooijen: A Self-Administered Short Michigan Alcoholism Screening Test (SMAST). Journal of Studies on Alcohol. 1975; 36:117-126. Reproduced by permission of the American Medical Association; copyright 1984.

Appendix D

Letter to Primary Care Provider Evaluators

20112 Strathmoor Street
Detroit, Michigan 48235

March 4, 1998

Dear MFC Providers:

I am requesting your assistance in evaluating the attached screening tool, which will be used to identify adolescents who are at risk for alcoholism. This tool was developed as a product of my scholarly project to complete the requirements for a Master of Science in Nursing degree at Michigan State University.

The format of the evaluation is a questionnaire about the tool and has seven questions. I would like your comments/suggestions on each question in the space immediately below each question. Additional blank pages are supplied should you need more space.

In order to effectively evaluate the tool, it would be helpful to use it for at least two client-assessments. As you read the tool and answer the questions, please keep in mind your other adolescent clients who may be at risk for alcoholism. Should you have any comments elicited by the questions, please use the attached sheet for these. Any additional comments are welcome and, will be used to modify the tool.

If you have questions, please feel free to call me at work, (313) 579-0000 or my home, (313) 864-0200 after 5:30 p.m.

My sincere thanks to you all, for your help in this project. I hope the completed tool will be useful to you in your clinical practice. I will make the tool available to the agency for use with the adolescent clients.

Sincerely,

Ethel Tisdell, R.N., M.S.

Appendix E

Adolescent Screening Tool

Evaluation Form

Evaluators Questionnaire

Q. 1. Are the questions under each category clearly stated? If no, suggest a specific alternative.

Q. 2. Are there additional questions under any category, which you would add? State the category.

Q. 3. Given your clinical expertise, are there any questions under any category you would delete? Would you include deleted question under any other category?

Q. 4. Would the format of the questionnaire need to be changed in any way to increase "user friendliness?"

Q. 5. Would you use this tool, for the following?

a. Screening

b. Re-screening

c. Single acute episode

d. Other (be specific)

Appendix F

Original Screening Tool

Appendix F

ADOLESCENT SCREENING QUESTIONNAIRE

A. Physiological Mode:

(Oxygenation)

Within the past 3-6 months Have you:	Yes	No	Comments
1. Ever been ill as a result of Drinking?			
2. Visited the ER for medical treatment?			
3. If so, how many times & why?			
4. Had any fractures or dislocations since you were 18 years old?			
5. Sustained any injury(s) after drinking alcoholic beverages?			

(Nutrition)

	Yes	No	Comments
1. Have you had a change in weight: >10 lb. or <10 lb. In the past year?			

(Senses)

Within the past 3-6 months:	Yes	No	Comments
1. Have you had a hangover?			
2. Have you had a loss consciousness?			
3. Have you ever had blackouts?			

B. Self Concept Mode:

	Yes	No	Comments
1. Do you sleep most of the day?			
2. Regardless of what you decide beforehand, do you frequently wind up drunk?			
3. Have you ever tried to hurt your self?			
4. Have you felt angry, ashamed, afraid, and/or sad when you know your Mother/Father has been drinking?			

Self Concept Mode Cont'd	Yes	No	Comments
5. Do your parents know that you drink alcoholic beverages?			
6. Do you ever worry about your drinking?			
7. Do you ever drive a car while drinking alcohol and/or drunk?			
8. Do you drink alcohol to feel better?			
9. Do you feel you have a high tolerance level - drinking just about anyone under the table?			
10. Do you pass-out/blackout-sometimes not remembering what happened while drinking?			

C. Role Function:

	Yes	No	Comments
1. Have you been expelled from school?			
2. Do your friends (all or most) drink alcohol at parties?			
3. Have you had sex with someone who might be drunk or has been drinking? Or while you were drunk?			
4. Have you had problems at work or in school as a result of drinking?			

D. Interdependent Mode:

Do you:	Yes	No	Comments
1. Ask your parents for help?			
2. Depend on your parents for help?			
3. Turn to your peers for help?			
4. Try to handle your entire problem yourself?			

Alcoholism Rating: A total of 8 - 10, "Yes" indicate some concern and follow-up may be indicated.
A total of 10 - 15, "Yes" indicate follow up, within 3-4 weeks. (Professional counseling may be needed).
A total of 15 - 28, "Yes" indicates a strong likelihood of hazardous or harmful alcohol consumption. (Extensive assessment recommended as well as professional counseling)

Appendix G
Letter for permission to Copyright

Appendix G

Letter of permission to Copyright

April 1, 1998

Ms. Patricia Jones
Journal Permission Department
American Academy of Pediatrics
W. B. Saunders Company
A Division of Harcourt Brace & Co.
Philadelphia, Pa., 19106-3399

Dear Ms. Patricia Jones:

I am a graduate, nursing student at Michigan State University in East Lansing, Michigan. I am writing to request permission to utilize two figures (Figure 1 & 4) and one table (table 1) from the April, 1995 The Pediatric clinics of North America, pp. 241-259. The article is entitled, "Adolescent substance abuse: Epidemiology and Implications for Public Policy". I have utilized these figures and the table within my scholarly project text to present Roy's adaptation model. My completed and bound scholarly project will partially fulfill the requirements for the degree of Masters of Science in Nursing at Michigan State University. I would appreciate a reply to this request at your earliest possible convenience.

Sincerely,

Ethel Tisdell, R.N., M.S.

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