

A comparative study of adolescent behaviors in rural communities
by Penny Whitcanack Carpenter

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Education
Montana State University
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A COMPARATIVE STUDY OF ADOLESCENT BEHAVIORS IN RURAL COMMUNITIES

by

Penny Whitcanack Carpenter

A thesis submitted in partial fulfillment
of the requirements for the degree

of

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APPROVAL

of a thesis submitted by

Penny Whitcanack Carpenter

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CHAPTER 1

INTRODUCTION

The developmental period of adolescence is a prevalent topic in the literature. Much has been studied and written about this period of life in this past century. Various aspects of teen-age life have been studied. In particular, the social influence of other teens on teenagers' behavior has been examined. Style of dress, hairstyles, musical interests, speech, language use, activities, and values are among the socially relevant characteristics that teenagers appear to learn, in part, by exposure to peer models (Kelly & Hansen, 1987). Hurlock (1973) noted that adolescents are oriented to peer groups and are likely to imitate the conduct of their age mates. Hurlock also proposes that "characteristics of the peer group in which a teenager seeks acceptance determine the specific social behaviors that will be reinforced by members of that group" (p. 138).

Albert Bandura's (1977) social-learning theory emphasizes that behavior is a function of the environment. In his theory, modeling or observational learning is extremely important. Gross and Levin (1987) say one need only look at the dress styles, language, and ideology of most teenagers

to see the influence of peer models. Television and movies often present attractive models being rewarded for abusive drinking, smoking, reckless driving, and drug abuse. Many of the undesirable behaviors may be learned from adolescent peer models who engage in maladaptive behaviors.

Individual behaviors that are problematic for teens, such as alcohol and drug use, have been the subjects of countless research studies. Each of the behaviors have been researched individually for many years (Delisle, 1986; Hall, 1986; Jessor & Jessor, 1977; Jones & Hartman, 1985; Lester, 1987; Robinson, Killen, Taylor, Telch, Byrson, Saylor, Maron, Maccoby, & Farquhar, 1987; Romeo, 1981; Shaffer, 1986; Swift, Bushnell, Hanson & Logemann, 1986). Most studies have examined only one problematic behavior. There is a need for more studies of the relationship between problematic behaviors to promote further understanding of this phenomenon.

Recently the idea of looking at self-destructive behaviors conjointly is emerging in the literature. Researchers (Donovan, Jessor & Costa, 1988) are starting to explore how self-destructive behaviors are interrelated, that is, how being involved in one behavior has an association with being involved in others. A number of programs have been created to prevent negative adolescent behaviors like drug use ("Just Say No", "Drug-free schools"), smoking ("Tobacco free by 2000"), drinking and driving ("Students Against Drunk Driving"), and others. The more traditional approaches to

prevention of single negative behaviors are now being challenged. New approaches in prevention programs are developing such as assertiveness training and self-esteem building, and are being employed to try to prevent a wide range of negative behaviors. These programs are intended to replace specific educational programs against just one behavior such as smoking (Horan & Straus, 1987).

Donovan and Jessor (1985) called for further research in the area of "understanding the organization of the interrelations between problem behaviors among adolescents" (p. 893). Behaviors that are negative and viewed as self-destructive may be correlated for several reasons. For example, they may be correlated because they are seen by youth as a means of achieving valued goals, or because they are learned together and expectations are that they continue to be performed together (Donovan & Jessor, 1985).

Sarvela, Takeshita and McClendon (1986) studied the influence of older teenagers on junior high age youth regarding the use of marijuana in a rural Northern Michigan community. A total of 181 students were selected for the study. They completed anonymous questionnaires of fifty-five questions on drug knowledge, personal drug use, peer drug use, introduction to drug use, health beliefs, general experiences with alcohol, and demographic characteristics. The researchers found that peer use of substances is a significant predictor of personal substance use and that introduction to use was

more frequently a result of older youth initiation (offering, coaxing, or cajoling). The correlation (r=.92) between peer and personal marijuana use among the 7th graders of this study may indicate that early adolescence is a period in time where very powerful peer pressure is present. The researchers (Sarvela, Takeshita, & McClendon, 1987), state:

> an almost perfect positive correlation indicates that peer pressure is overriding many other determinants of drug use such as familial variables, religion and health beliefs. The intense need to belong is clearly demonstrated by this relationship. (p. 36)

Horan and Straus (1987) state that of all the psychosocial correlates of substance use, the most convincing are the relationships between an individual's use and the behavior of peers, older siblings, and parents. They believe that modeling and social reinforcement play a role in the initiation of substance use for adolescents. Generally the peer models are older youth (including older siblings of same age friends) that younger adolescents want to "go along with to belong" (Horan & Straus, 1987, p. 315).

This study examined the social influence teenagers have on each other regarding self-destructive behaviors in small rural communities. The interrelatedness of self-destructive behaviors was also examined.

It was beyond the scope of this project to study the many other variables which potentially influence adolescent development and behavior such as family stress, divorce, repeated moves during childhood, traumatic events, child abuse and illnesses or injuries. It is necessary though to recognize that these concerns and other uncontrollable variables exist which could contribute to adolescent development of problematic behaviors. Certainly there is a strong potential that negative behaviors modeled by adolescents are first observed by watching adults, including their parents. Also, this project does not discount the large numbers of adolescents who do not choose behaviors that are self-destructive. Many youth grow and develop through adolescence imitating positive choices of behavior.

Statement of the Problem

The purpose of this study was to compare self-destructive behaviors (smoking, marijuana & alcohol abuse, eating disorders, sexual activity), and level-of-happiness in two communities where teens are regularly influenced by older youth coming in from other towns and states for employment (Gardiner/West Yellowstone), to students in two communities without outsiders' influence (Clyde Park/Wilsall).

Law enforcement statistics from both Gardiner and West Yellowstone reveal a pattern of increased alcohol and drug related disturbances and activity during the tourist season. Resident officers, Deputy Gary Tanascu from Gardiner and

Patrolman James Tannehill from West Yellowstone (personal communications, March, 1990) state that a large portion of youth involved in illegal activities (alcohol and drug use) during this time are not residents of the communities. Local youth are also part of the increased activity and are often found with the non-resident offenders at house parties, keggars, and other late night gatherings where drugs and alcohol are involved.

Through comparing these communities, social influence on self-destructive behaviors was assessed. A second purpose of this study was to examine the relationship between different self-destructive behaviors.

Importance of this Study

This project was intended to generate evidence regarding the influence of social learning on adolescents' self-destructive behaviors. It was also intended to demonstrate the interrelatedness of the self-destructive behaviors. The results of the study also improved the level of community awareness regarding involvement of local teenagers in self-destructive behaviors. Increased awareness can promote community efforts towards preventative programs and assist communities with planning for needed counseling services. The needs-assessment survey taken by this investigator previously demonstrated that self-destructive behaviors of local youth is a concern for both youth and adults in each of the four communities studied.

Operational Definitions

There are seven major concepts in this study that will be defined below. The concepts are community, adolescence, self-destructive behaviors, syndrome of self-destructive behaviors, non-resident-youth influence, alcohol and chemical abuse, and social influence.

Community. A group of people living in specific locality, sharing government (mayor, council) and having a common cultural and historical background. For the purpose of this study, communities are identified by the schools students' attend. For example, students attending Gardiner High School are considered to be members of the Gardiner community.

Adolescence. The transitional period between puberty and adulthood in human development, extending mainly over the teen years, ages 12 through 19. This study included students in grades 9 through 12 with ages ranging from thirteen to nineteen.

Self-destructive behaviors. Behaviors that are harmful, injurious, or destructive to oneself: for the purpose of this study these were measured by six scales. The names of the scales and abbreviations of their names follow: smoking (SMOKE), alcohol abuse (ALCO), marijuana abuse (DRUG), promiscuous sexual activity with repeated potential exposures to sexually transmitted diseases and pregnancies (SEX), and the detrimental eating habits of anorexia and bulimia (EAT).

Level-of-happiness. For the purpose of this study the students' level-of-happiness was measured by the FEEL scale on the survey.

Syndrome" of self-destructive behaviors. For the purpose of this study behaviors that are interrelated, linked, or associated with one another were referred to as a syndrome of behaviors. The behaviors listed above were studied to see if they constitute a syndrome.

Non-resident youth influence. Non-resident youth of the specific area, whose presence in the community is for seasonal employment. They are youth who come from other areas in Montana and from other states. Some have been identified by law enforcement as engaging in higher levels of self-destructive behaviors than local youth and who interact socially with some of the local youth influencing them to engage in self-destructive behaviors.

Alcohol and chemical abuse. The use of beer, other alcoholic substances, and marijuana by underage youth frequently and often to the point of intoxication.

Social influence. For the purpose of this study this was the degree, as measured by their self-report, that students were influenced by adolescents who are not permanent residents of their community to participate in self-destructive behaviors.

CHAPTER 2

LITERATURE REVIEW

This section will review literature on adolescents and adolescent self-destructive behavior. It will include the impact of social influence on adolescents' behavior. Also included will be literature on how harmful behaviors are related to one another. The review will first cover adolescent development to present the numerous and varied concerns of this age group. This will be followed by an examination of cognitive-developmental theory, psychosocial theory, and social learning theory, which all provide perspectives for understanding the processes occurring during the adolescent period of growth. Finally, research on self-destructive behavior, (i.e. suicide, eating disorders, substance abuse, and sexual activity), and studies done on how these behaviors may be related to form a "syndrome" of self-destructive adolescent behavior will be examined.

Adolescent Development

This section will discuss various areas of adolescent development including physical development, definitions of adolescence, common views of struggles during this time, and transitions and conformity concerns for teens. These will be

reviewed to assist with understanding the complexity of adolescent growth and associated behaviors.

The scientific study of adolescence began as the 20th century opened, and firmly established the growing layperson's perception of adolescence as a special stage of development occurring between childhood and adulthood (Van Hasselt & Hersen, 1987). Twenty years ago there was just one specialty journal serving as a publication outlet for research on adolescence; today there are five, (Adolescence, Journal of Adolescence, Journal of Early Adolescence, Journal of Adolescence and Youth, and Youth and Society).

The physical changes associated with puberty include alterations in body size, shape and physical strength. Capacity for sexual reproduction is also reached. Secondary sex characteristics appear including breast development in girls, voice changes and facial hair in boys, and the growth of pubic and axillary hair in both. The sequence of these changes is the same for all adolescents, but the timing and continuity of the changes varies greatly. Early and late maturation, growth spurts, and the less desirable afflictions of adolescence (acne, voice-breaking, and painful menstruation) all contribute to psychological effects on self-concept and feelings of acceptance (Sprinthall & Collins, 1988).

Rogers (1981) characterized adolescence as a period of rapid physical and psychological change accompanied by specific developmental tasks such as separation from parents,

the desire for independence, development of ego, development of self, acceptance of one's own body, sex role development, development of a system of values, and the achievement of some degree of economic status.

Social psychological perspectives have made influential contributions to the study of adolescence. Notable authors in this area include G. Stanley Hall, Sigmund Freud, Margaret Mead and Kurt Lewin (Sprinthall & Collins, 1988). Lewin (cited in Sprinthall & Collins, 1988) describes adolescents as "marginal" persons (p.15). Since they don't belong to either the child or the adult social groups, Lewin sees them "facing ambiguous expectations and unclear rights and privileges" (p. 15). This period of non-belonging contributes to the difficulties adolescents experience. Authority and control conflicts and influences of social and cultural affiliation may also contribute to difficulties for the adolescent (Klimek & Anderson, 1988).

Adolescence does not appear to be an unfavorable period for everyone. Offer, Ostrov, Howard, and Atkinson (1988) conducted a longitudinal study of 376 boys and challenged the historical belief that adolescence is "inevitably a period of storm and stress" (p. 119). They found only a small percentage (13%) of subjects with continuous significant behavior problems.

Diamond and Diamond (1986) describe adolescence as the "social transition phase between childhood and adulthood"

(p. 5). Individuals are acquiring education, training and experience to equip them for economic and social independence and future contributions to society.

Conformity seems to be high in early adolescence. This may also be related to social acceptance. The struggle to be accepted by their peers often includes partaking in group activities or behaviors that normally would not be chosen. Heightened conformity to peers is often seen as a problem, particularly when peer behavior conflicts with parental standards. Modeling behaviors of peers or persons teens look up to is considered a strong factor in perpetuating self-destructive behaviors (Van Hasselt & Hersen, 1987).

Theoretical Approaches

This section will address three theories of human development that contribute to understanding adolescence: Piaget's cognitive-developmental theory, Erikson's psychosocial theory, and Bandura's social learning theory. Piaget's and Erikson's theories are included here to better describe the complexity of adolescent development. Bandura's theory is included to provide support for the concept of social influence on adolescent behavior that is the focus of this study.

Cognitive-developmental Theory

Jean Piaget's (Salkind, 1981) most outstanding contributions to the understanding of cognitive development were his models of the process that occurs at each of four sequen-

tial interrelated stages of cognitive growth. The stages are the sensorimotor stage (lasting from birth through age two), the preoperational stage (lasting from two to age seven), the concrete operational stage (lasting from age seven to twelve) and the formal operational stage, (lasting from age twelve through adulthood).

It is the description of the formal operational stage that is of interest when discussing adolescent behavior. Salkind (1981) suggests that teenagers in the formal operational stage think that others see them the same way they see themselves. They function at a level of adolescent egocentrism and perceive themselves as being on center-stage. They value friendships highly and as such are more often influenced by friends than family.

A study by Hammes and Duryea (1986) offers evidence that adolescents' cognitive abilities are related to their involvement in adaptive behavior. These researchers looked specifically at the issue of cognitive development and the dynamics of decision-making among adolescents. Their findings suggested that adolescents with increased ability for abstract thinking made more health-promoting decisions than adolescents with more concrete thinking styles. The researchers indicated that this was due to the abstract thinkers' ability to consider if-then type statements and consequences. Hammes and Duryea feel it is imperative for curriculum planners to

promote strategies that will enhance student's ability to think abstractly.

Psychosocial Theory

Erik Erikson (Salkind, 1981) was a student of Sigmund Freud and extended Freudian theory to include an emphasis on the ego as a central component in psychological development. Erikson's psycho-social theory focused on the entire life span and was divided into eight sequential stages. The first four stages are: oral-sensory, muscular-anal, locomotor-genital, and latency. The fifth is adolescence and the last three are young adulthood, adulthood and maturity. "According to Erikson, psychological development results from the interaction between maturational processes, or biological needs, and the societal demands and social forces encountered in everyday life" (Salkind, 1981, p. 108).

The fifth stage of development proposed by Erikson's theory is adolescence and entails a crisis of identity versus role confusion (Erikson, 1968). Adolescents are struggling with new roles as well as with their concern about how others perceive them. The inability to come to resolution of this struggle with a sense of self, or lack of establishing a role, can lead to role confusion. Erikson believed that the forming of cliques and adopting "in" clothing, speech and behavior are defense mechanisms against role confusion. A common compensa-

tion for role confusion is overidentification with "heroes, cliques and crowds" (Erikson, 1968, p. 262).

Jones and Hartmann (1985) examined Erikson's ideas by studying 2612 seventh through twelfth graders. The researchers examined the relationship of ego identity (the struggle within themselves as to who they are), self-esteem and substance use during adolescence. The researchers stated that the association between psychosocial maturity and socially unacceptable behavior has been ignored completely. They said that Erikson did not address the possibility of different effects coming from conflicting societal expectations. Jones and Hartman predicted that:

> substance use, a behavior that: 1) is socially acceptable in some, but not all social contexts; 2) distorts perception of experience (the primary ingredient of identity); and, 3) is increasingly evident within our society; is a potential component of "normal" ego identity development. (p. 5)

In other words, the researchers are saying that today, substance use is an experience that is potentially a component of normal ego identity development and self-esteem in adolescents. Two instruments were used to gather data. One was developed to assess the extent of alcohol and drug use. The other was to assess ego identity (the Extended Version of the Objective Measure of Ego Identity Status, by Grotevant and Adams, cited in Jones & Hartman, 1985). The validity and

reliability of the first instrument were not described. The researchers stated the following about the second: "initial estimates of reliability (internal consistency, test-retest) and validity (content, factorial, discriminant, and concurrent) are impressive" (Jones & Hartman, 1985, p.7). Multiple analysis of variance and separate univariate analyses of covariance (ANCOVA) were used to analyze data for each of the eight subscales of the Extended Version of the Objective Measure of Ego Identity Status tool. The researchers concluded that:

> the findings from this study provide direct support for Erikson's contention that ego identity is affected by experience, but raise a number of questions regarding both qualitative and quantitative aspects of substance use experience. (p. 10)

The sample for the study was appropriate as it included only adolescents, however sample selection was not mentioned. Percentages were given for race, gender and grade level for the participants but no other information was given. Ethical issues for the research were not addressed. The ideas presented in this study (Jones & Hartman, 1985) regarding adolescent identity and self-esteem support Erikson's psychosocial theory of development. The literature reviewed above suggests that adolescence is a time of trying to understand themselves; a time to achieve an identity and grow to adulthood. Erikson's psychosocial theory includes concepts

that suggest social forces play significant parts in human development.

Social Learning Theory

Albert Bandura's (Salkind, 1981) social learning theory applies to all periods of life. The theory assumes that "significant learning takes place through the process of imitation or modeling" (Salkind, 1981, p. 169). This assumption is crucial to understanding the development of self-destructive behaviors among adolescents. Bandura has presented the viewpoint that the experiences of others are important. An important difference between the traditional Stimulus-Response view of imitation and the social learning theory view is that within social learning theory, certain classes of behavior can be learned "without the benefit of direct experience" (Salkind, 1981, p. 169). Salkind states that vicarious or indirect reinforcement is as effective as direct reinforcement for facilitating and promoting imitation. He also states that research on vicarious learning has shown how the effects of watching behaviors are "very powerful influences on development" (Salkind, 1981, p. 178). Bandura (1977) states, in his book, Social learning theory, that:

> people are neither driven by inner forces nor buffeted by environmental stimuli. Rather, psychological functioning is explained in terms of a continuous reciprocal interaction of personal

and environmental determinants. (p. 11)

Research studies have supported social learning theory related to adolescence. Openshaw, Thomas, and Rollins (1983) conducted a study to clarify the independent contribution of social learning and symbolic interaction theories on adolescent self-esteem. "Symbolic interaction posits that the child's self esteem is a function of the parent's reflected appraisal of the child's inherent worth, which occurs during the course of parent-child interaction" (Openshaw, et al., 1983, p.317). Research by Gecas, Calonico and Thomas, 1974 (cited in Openshaw, et al., 1983) has suggested that both of these are viable explanations for self-esteem development, but did not address the contribution of each independently. The sample consisted of 368 adolescents and their parents from predominantly large, middle class families. The tool used to collect the data was self-report questionnaires administered by two investigators in the homes of the subjects. They reported that in some of their dyad comparisons, "social learning variables were found to have greater relative effect when compared to symbolic interaction variables" (Openshaw, et al., 1983, p. 327). They also reported that adolescent self-esteem may be more a function of social interaction with significant others (siblings, cousins, aunts, and uncles), and peers, than of modeling the parents' self-esteem. The researchers conclude that a theoretical framework somewhere between the two theories studied could be constructed to

account for observed variation of adolescent self-esteem development. This study was attempting to show support for social learning theory explanations of adolescent development.

Social learning influence on adolescents in areas other than self-esteem development have also been researched. A study by Akers, Krohn, Lanza-Kaduce, and Radosevich (1979) was done as a specific test of the social learning theory on deviant behavior in adolescents. The researchers looked at adolescent drinking and drug behavior to see if the behaviors could be explained by social learning theory. They concluded there was evidence supporting social learning theory explanations of the behavior of students in their study. The independent variables were the following measures of social learning concepts: imitation, differential association, definitions, and differential reinforcement. The researchers explain that social behavior is acquired both through direct conditioning and through imitation or modeling of others' behavior. Differential association is engaging in interaction and identifying with some groups of peers as opposed to other groups of peers. Differential reinforcement is when behavior is strengthened through reward and avoidance of punishment or weakened by aversive stimuli and loss of reward. Evaluative definitions of the behavior as good or bad are norms and attitudes that people learn in interaction with significant groups in their lives. Dependent variables were the frequency-of-use scales for marijuana and alcohol.

Data were analyzed through multiple regression technique. The findings stated "the results of the regression analyses show strong support for the social learning theory of adolescent alcohol and drug behavior" (Akers, et.al., 1979, p. 642).

The Akers et al. (1979) study had a number of strengths. The introduction was well referenced and the problem statement was clear. The literature review for their study was comprehensive for social learning theory and adolescent drug and alcohol behavior. The methodology section included discussions on sampling and procedure, and reliability and validity for the self-report questionnaire technique. A thorough discussion of ethical considerations and steps taken to protect the rights of respondents and of the school districts was included. The researchers state that social learning theory is supported for adolescent drinking and drug behavior. This research project on social influence related to self-destructive behaviors (including drinking and drug use) demonstrated additional support for social learning theory.

From the studies cited above it can be concluded that various theories of human development encompass different viewpoints of growth. The three theories reviewed in relation to adolescence shed light on the complicated nature of this stage of growth.

Self-destructive Behaviors

This section will review each of four self-destructive behaviors separately (smoking, depression/suicide, eating disorders, substance abuse and sexual activity), which will be the focus of this study.

Depression/suicide

Citing a study done by Tishler, McKenry and Morgan in 1981, Delisle (1986) reported that an estimated thirteen adolescents per day end their own lives. There has been a 250% increase in suicides among young people since 1964 (Delisle, 1986). In this article, Delisle discussed suicide among gifted adolescents. He contends, based on the findings of current research, that gifted youth are especially susceptible to suicide attempts. According to Delisle, investigators suggest that the perception of failure among gifted students may be far different than among average students. Thus a "B" may be an equivalent to failure for some above average youth. This self-induced perfectionism, as well as societal expectations, may be causes of stress levels with which they are unable to cope. Citing a study by Shneidman in 1972, Delisle (1986) states "the stress of living up to expectations that the teenager perceives as unattainable overrides the desire to go on, and life becomes barren" (p.559). The choice made to end their life may be made following exposure to the idea via television shows, media

coverage of suicides or suicides of acquaintances thus indicating social influence as a factor.

Rosenkrantz (1978) wrote about the psychodynamics of suicide in youth. The act of suicide may be a sudden impulsive reaction to a stressful situation, but more often it is the result of the ego identity issue of adolescence. Ego-identity-issue refers to the struggle that teens have in discovering and accepting their identity. The impact that peers have on each other is a part of this struggle. Broken relationships and lost loves are other forms of social phenomena that are related to adolescent depression and suicide. Rosenkrantz (1978) states that the "most significant precipitating event in adolescent suicide seems to be this element of loss, such as death, desertion or separation" (p. 210). Therefore, the loss of a significant person or persons in the adolescent's life may produce a predisposition toward suicide.

Lester (1987) explored the subcultural theory of teenage suicide through a case study. He stated, "A subculture has its own customs, values, and attitudes within the larger culture. Subcultures are critically dependent upon the social pressures exerted by others, both directly and indirectly" (p. 318). Five teenagers were involved in the suicidal subculture studied in this article. Three of these teenagers took their own lives within two weeks of one another and subsequently generated suicidal preoccupation in their peers. As this

research points out, social pressures are related to suicidal behavior and the influence of others needs to be studied more.

Developmental level in relation to suicide has also been addressed in the literature. Children and adolescents are on different levels developmentally and respond differently. Hawton (1982) has suggested that children have multiple social support systems (close friends, teachers, relatives) that remain strong. However, the increasing self-consciousness of the older adolescent and the drive for individuation weakens those support systems of earlier childhood and increases their vulnerability to suicide. Shaffer (1986) suggested that desperation is "the critical construct for the contemplation or enactment of suicide" (p. 394). The feeling of despair may be the result of choosing between various abstract life alternatives and concluding that none are satisfactory. Shaffer states that if this is true, then the ability to make this choice falls into the category of hypothesis setting and testing which are mental activities that characterize the developmental stage of formal operations. Hypothesis setting and testing develop only in adolescence. Adolescence is the developmental age that exhibits more suicidal gestures than younger, or pre-operational children (Shaffer, 1986). This study provided information about the level of happiness among rural adolescents chosen for this project. No specific assessment of despair was attained but a general question

regarding how things are most of the time for the students was included.

The studies cited above lead us to conclude that suicide is a serious problem for adolescents. The results of these studies suggest that suicide arises from various areas of concern for teenagers.

Eating Disorders

Anorexia nervosa and bulimia are two adolescent self-destructive behaviors that are often discussed in the literature. Anorexia is an eating disorder that involves an intense fear of gaining weight or becoming fat (even though the individual may be underweight), and a distorted body image. One study (Swift, Bushnell, Hanson & Logemann, 1984) of thirty hospitalized anorexic female adolescents stressed that anorexia is one of the most fatal of psychiatric disorders. Swift et al. reviewed a study that documented a "startling high mortality rate of 19%" (p. 832). The researchers stated that the "anorexia self-image is notably deviant from that of the normal adolescent population" (p. 826). According to Swift et al. (1984), four of the common characteristics of teen anorexics in this study were warped body image, distressing affect, insecurity in social relationships and a sense of sexual inadequacy. The results of research done by Swift et al. (1984) illustrated the profile of the 30 anorexics as notably deviant in comparison to normal

subjects. The anorexics scored very low on three scales which gauge the psychological self. These three scales were: Impulse Control, Emotional Tone, and Body and Self-Image. For the anorexic subjects, the most distorted scores were found in the areas of social relationships and sexual attitudes.

Psychoanalytic theory (Romeo, 1984) suggests that sexual pressures inherent in adolescent development trigger the onset of anorexia nervosa at puberty. Romeo states that the youngster who develops anorexia emerges from the latency stage of development with a weak and immature ego which is overwhelmed by the developmental tasks of adolescence. The developing ego is affected by social influence of peers and the resulting sexual pressures may be associated with the onset of the disease. Romeo (1984) states that two of the major symptoms of anorexia nervosa, the cessation of menstruation and weight loss to childlike body proportions, "suggest that a sexual conflict is the central issue in anorexia" (p. 551). This research suggests there is a positive correlation between anorexia and sexual pressures.

Sprinthall and Collins (1988) cited Hilda Bruch (1973), in her book, Eating disorders, two possible associations for anorexia nervosa. These associations were sociocultural pressures for thinness and perfectionism in the home. The messages portrayed via media related to being thin and successful are powerful for young adolescent females. Bruch believes vulnerable adolescents come to believe that weight

control is equal to self-control and will lead to beauty and success. She also states that perceived demands from parents and related family emotional stress leads to the adolescent constantly striving for achievement "at all costs" (Sprinthall & Collins, 1988, p. 405) which may include being thin.

Bulimia is an eating disorder that involves eating large quantities of food and then purging, usually by forced vomiting. Carter and Duncan (1984) state that in their study, the prevalence of bulimia within a normal population they sampled was 13%. The researchers conducted a survey study of 421 female high school students from a single high school. They found that the vomiters in their study had higher levels of somatic symptoms, anxiety, social dysfunction and depression than did the nonvomiters. From the studies cited above it can be concluded that the various eating disorders are significant problems for a number of adolescents.

Substance Abuse

The following studies will review literature on substance abuse to promote understanding of this adolescent self-destructive behavior.

In a study (Robinson, Killen, Taylor, Telch, Byrson, Saylor, Maron, Maccoby & Farquhar, 1987) of 1,447 tenth graders, the researchers found that an increased level of substance use (alcohol & marijuana) by both boys and girls was most strongly predicted by the use of marijuana by friends.

The researchers state that the syndrome of problem behavior theory suggests that a tendency toward problem behaviors can be accounted for by the interaction of psychological, social environmental, behavioral, and physical variables. These were the independent variables in this study. The dependent variable was the level of substance use.

According to Robinson et al. (1987) the social environmental variable was the influence on the subjects by surrounding peers. The behavioral variable was the degree of subject involvement in problem behaviors and in socially approved behaviors.

The hypothesis tested by Robinson et al. (1987) was that "social influences represent the strongest predictor in involvement in adolescent substance use" (p. 2072). Regressions were performed separately for boys and girls. The variable accounting for 39% of the variance in level of substance abuse for boys and 44% of the variance in level of substance abuse for girls was the perceived use of marijuana by friends. Of the four categories of independent variables, the social environmental variables accounted for the largest percentage of the variance in level of substance abuse for both sexes. The findings support the hypothesis that social environmental factors exert the most profound influence on substance use involvement. The researchers believe that substance use is part of a syndrome of adolescent problem behaviors: all destructive behaviors and risk-taking be-

haviors in the study correlated significantly with level of substance use. In this research, adolescents most often cited social factors as their reasons for using alcohol and marijuana.

Halebsky (1987) reviewed studies done on adolescent substance use in relation to parental and peer influence. Adolescent use of drugs and alcohol was positively correlated to parents and peers use of drugs and alcohol. Halebsky believes his reviews of studies on peer and parental influence provides support for the concept of social influence on adolescent behavior related to drug and alcohol involvement.

According to Blau, Gillespie, Felner and Evans (1988) the greater portion of adolescent research has been done in urban settings. The researchers state one source that has previously been neglected is a rural population. They believe it is important to identify what predisposes adolescents to abuse substances and what influences them to start. They also suggest studying use of drugs and alcohol in a variety of populations and settings. Their study included 263 students from a rural school system in Alabama. The study was conducted to provide evidence of the relationships between self-esteem, depression, anxiety and drug abuse. The researchers found that for the students in their study, the relationships suggest the possibility that low self-esteem and high levels of depression and anxiety can be predispositions to drug use. They also found that children apparently develop opinions and

feelings about drugs and alcohol at a very early age and that the willingness to use drugs greatly increases as children approach adolescence.

Blau et al. (1988) believe that problems with self-esteem, depression, and anxiety are related to the development of pro-drug attitudes and drug use. The researchers state that it is important to examine environmental and biological factors as well.

Sexual Activity

Sexually active young people are vulnerable to pregnancy, sexually transmitted diseases (STDs), and feelings of inadequacy and exploitation (Gordon & Gilgun, 1987). "More than 1 million girls become pregnant each year, and about 600,000 give birth" (p. 155). Gordon and Gilgun state that half or more of these pregnancies result in induced and spontaneous abortions. Herpes, chlamydia, gonorrhea and other STDs are rampant among sexually active adolescents. Some of these diseases are very serious and can cause sterility or complications with pregnancies. Gordon and Gilgun cited a study done by Phillips (1984) as indicating that for gonorrhea, the second highest incidence rate among all groups is in the 15-to-19-year-old group.

Gordon and Gilgun (1987) reviewed literature in the area of heterosexual behavior among adolescents. They concluded that teenage sexual activity has been substantially increas-

ing. A study by Zelnik and Kantner (cited in Gordon & Gilgun, 1987) stated that "among 15-to-19 year olds, the increase has been from 30% in 1971, to 43% in 1976, to 50% in 1979" (p. 148). More recent research by Ostrov, Offer, Howard, Kaufman, and Meyer (cited in Van Hasselt & Hersen, 1987) revealed that even younger youth are involved. Ostrov et al. (cited in Van Hasselt & Hersen, 1987) states, "from 5% to 17% of girls 15 and under have had sexual intercourse, whereas among boys the same age, the range is from 19% to 38%" (p. 148). Ostrov et al. state in their study the "age at first intercourse was 16.2 overall, 16.4 for white girls and 15.5 for black girls" (p. 148).

Gordon and Gilgun (1987) talk about the lack of knowledge in the area of contraception among adolescents. According to Gordon and Gilgun, few American adolescents learn about contraception in sex-ed classes. Some learn from parents, but "most learn from peers, who are the sources, not only of misinformation, but often of attitudes that foster the development of sexual exploitation for boys and `doormatism' for girls" (Gordon & Gilgun, 1987, p. 151). They state that having and keeping a boyfriend are powerful motivators for girls to engage in intercourse. And they state that boys are socially influenced to be sexually experienced to be real men. It is common for boys to buy into this belief but also to feel conflicted by it. Gordon and Gilgun state that:

> also common are boys who feel humiliated and isolated from peers because they do not demonstrate sexual prowess. Some have sex because they think they are supposed to. This reflects the degree of pressure young people have to be sexually active. (p. 151)

Greeson and Williams (1986) conducted a study on the effects of Music Television (MTV) on: a) sexual attitudes; b) buying preferences; c) views towards violence; and d) peer group conformity. They studied sixty-four 7th and 10th graders in a small midwest community, primarily from middle income, working class families. The students completed questionnaires pertinent to the four areas listed above, before and after watching four hours of music videos. The researchers found that attitudes after watching had changed in that: a) there was more approval of premarital sex; b) buying preferences had increased in similarity; c) attitudes became more accepting of violence; and d) attitudes towards peer group conformity were more apparent. The findings cannot be considered conclusive because the effect that taking the questionnaire before could have on the results was not controlled. Also there was no control group as part of this study. Although these concerns do weaken the research, this study may support Bandura's (1977) social learning theory in relation to adolescent behaviors. Media influence (television) may be a factor in changes in attitudes of adolescents that subsequently influences teenagers' choices of behavior.

A descriptive study (Hall, 1986) that sought relationships among variables was conducted using two instruments, a Likert-type questionnaire developed by the researcher, and the Sex Knowledge Inventory. The researcher looked at factors associated with sexual activity in early adolescence. The study sought to determine the extent to which adolescent sexual activity was associated with lack of sex knowledge, maternal distancing, attempts to fulfill dependency needs, attempts to cope with developmental tasks, peer pressure, and problems in familial interaction. The sample was quite small and consisted of 52 pregnant girls between 14 and 16 years old from both rural (86%) and urban (14%) Alabama areas. No special effort was made to include girls according to ethnicity but the 3 to 1 Black-White ratio was parallel to the population served by the public health agencies. Some of these girls were in their second pregnancies. The findings revealed that peer pressure was the third most important variable; first and second most important variables were dependency needs and maternal distancing.

Adolescent couples who run the greatest risk of pregnancy are those involved in casual encounters. Scales and Beckstein (cited in Van Hasselt & Hersen, 1987) state that under conditions of non-commitment, males simply do not think about birth control. Instead, they trust to luck or assume that the female has the responsibility and has taken care of the contraception. According to the researchers, these behaviors

characterize male self-centeredness and when pregnancy results, adolescent males have an easy out. They can abandon the girl, and most do. If the boy feels guilty, then unprotected intercourse can be considered self-destructive for the male as well as for the female. The researchers state that sexual activity and adolescent suicide are often related. According to Scales and Beckstein (cited in Van Hasselt & Hersen, 1987) trouble with parents, school failure, and breakup of love relationships are the most common reasons for suicide attempts among adolescents. Gordon and Gilgun (1987) state:

> sex education is not likely to be a panacea for adolescent suicide. However, if more adolescents could be helped to see themselves as being worthy human beings, regardless of whether or not they have a boyfriend or girlfriend, it might mitigate some of the suffering. (p. 156)

From the studies cited above it can be concluded that teenage sexual activity involves risks for both physical and psychological consequences. This research into adolescent involvement in sexual activity in rural areas offered additional information on social influence as a possible factor for this behavior.

"Syndrome" of Self-Destructive Behaviors

Problem behavior has been defined by Jessor and Jessor (1977) as "behavior that is socially defined as a problem, a source of concern, or as undesirable by the norms of conventional society and its occurrence usually elicits some kind of social control response" (p.33). A variety of different adolescent behaviors can be considered problem behaviors including alcohol use, cigarette smoking, marijuana use, use of other illicit drugs, and precocious sexual intercourse. Because they are often seen occurring together, the behaviors listed above have been referred to as a syndrome of problem behaviors. The Jessors' data from two parallel longitudinal studies of youth from 1969 to 1981 gave support to the concept of a "syndrome" (p. 34) of problem behavior in adolescence. The problem behaviors were found to be positively associated in both samples.

The relations among self-destructive behaviors have been replicated in several independent nationwide samples of American adolescents as well as in local community surveys by using a variety of self-report measures (Adolescent Health Behavior Study, National Institute on Drug Abuse, 1973). Donovan and Jessor (1985) conducted a multivariate test of the syndrome of behaviors through a series of factor analyses of the Jessor and Jessor (1977) data. The researchers concluded that the factor analyses imply that problem behaviors are related and that for the subjects in their study, the "common

factor underlying the syndrome of problem behavior reflects a general dimension of `unconventionality'" (p. 901). Jessor and Jessor state that the behaviors may be correlated for other reasons as well, such as:

> the behaviors are seen by young people as substitutable or interchangeable means of achieving valued goals; because they are learned together and continue to be performed together; or because of linkages in the social ecology of adolescence (in certain socially structured situations there is considerable peer approval, pressure, and expectation for involvement in multiple problem behaviors. such as alcohol use, cigarette smoking, marijuana use, and precocious sex in a single setting, such as an unchaperoned party. (p. 902)

According to the researchers, the implication of the findings in this study for prevention programs is that such programs might well focus more generally on the larger behavior syndrome rather than on the traditional concern with individual problem behaviors.

A replication of Jessor & Jessor's study was conducted by Donovan, Jessor and Costa (1988) with new samples of male and female 11th and 12th-grade students. The study lends further support to the concept of a syndrome of problem behavior in adolescence. In this study all four problem behaviors (problem drinking, marijuana use, delinquent-type

behavior and sexual intercourse) correlated significantly. More frequent involvement in one of the problem behaviors was associated with more frequent involvement in other problem behaviors. The researchers state:

> this replication is all the more compelling considering that 13 years have passed, that the measures used to assess the problem behaviors are different, and that the prevalence and social context of the adolescent problem behaviors have also changed. (p. 763)

They explained the changed context to be greater social acceptance of marijuana use, increased societal concern with alcohol abuse (especially regarding drinking and driving), and more accepting attitudes about sex among adults and young people.

This section has reviewed literature on self-destructive behaviors of adolescents. The review has been done to examine background information which supports this study of social influence as it relates to self-destructive behaviors in rural communities. It can be concluded that some teenagers are involved in seriously dangerous behaviors.

CHAPTER 3

METHODOLOGY

The purpose of this study was to compare adolescent self-destructive behaviors between four communities. Two of the communities are in close proximity to Yellowstone Park and are tourist towns (Gardiner and West Yellowstone). Young people from other towns and states (non-resident youth) are seasonal employees for motels, restaurants, service stations and stores in these towns. Personnel records from the TW Services office in Mammoth reveal that approximately 945 youth from 18 to 22 years of age are hired for seasonal employment in the Park each year. Of this number 30% are hired from all over the state of Montana and 70% are from out of state (J. Hubbard, personal communication, April 10, 1990). According to law enforcement reports (G. Tanascu, personal communication, March 19, 1990 and J. Tannehill, personal communication, March 22, 1990) the young people who are seasonal employees have shown evidence of engaging in self-destructive behaviors in Gardiner and West Yellowstone and are considered sources of influence in these behaviors for the local adolescents.

The two other communities (Clyde Park and Wilsall) are approximately 80 miles north of Yellowstone Park and are farm and ranch communities. These towns do not have young people

(non-resident youth) from other areas hired to come there for the purpose of seasonal employment.

Design Statement

A correlational static group comparison design was employed in this study (Stanley & Campbell, 1963). The differences in involvement in self-destructive behaviors of adolescents between the two types of communities, those with non-resident social influence and those without non-resident social influence, were examined. The interrelatedness of the dependent variables (the self-destructive behaviors) was also examined.

The static group comparison is a correlational design (Campbell & Stanley, 1963). This design presents several strengths and also several threats to internal validity. One of the design's strengths is that it alleviates the effects of history or time delay between first and second administration of measurements because the measures are administered one time only. Learning effects from testing cannot occur as there will be no second administration. Another strength is that the instrument to be used for data collection relies only on personal perception and not on observation by another which lessens the effect of changes on the part of an observer. Only the marks on the questionnaire made by the students were addressed for this research.

Threats to internal validity are selection, mortality and interaction of selection and maturation. These are related to proving causation. Efforts to prove causation through this research would have been inappropriate because manipulation of the social influence variable was not within the scope of this project. Because this study was attempting to show a relationship and correlations, not causation, threats to internal validity were not a concern for this research.

Sample

The defined population for this study was all students in ninth through twelfth grades in each of the four communities of Gardiner, West Yellowstone, Clyde Park and Wilsall during the 1989-90 school year. The sample was made of persons from this population who agreed to participate, who had signed parental consent forms to do so, and who were available to complete the measure on the day the data were collected. Those participating did so voluntarily. The sample was 172 students.

School enrollment records offered the following information about the families of students who participated in this study. The students in the rural communities of Clyde Park and Wilsall came from primarily farm and ranch families. Some were sons and daughters of businessmen and educators and were of middle income level or below. The students in Gardiner and

West Yellowstone were primarily from business families, Park employees and educators. A small portion in the Gardiner school were sons and daughters of ranchers.

Instrument

The survey questionnaire used was developed by this investigator and was patterned after the Montana Adolescent Health Survey and the Minnesota Adolescent Health Survey. These surveys were created by the University of Washington Adolescent Health Program and the University of Minnesota Adolescent Health Program (M.D. Resnick, Ph.D., personal communication, June 28, 1989). This researcher conducted a test-retest reliability assessment of the first thirteen items on the questionnaire on December 14,1989 and January 4, 1990. A test-retest reliability assessment of the fourteenth item (added on March 19, 1990) was completed on April 2, 1990 by the same students that were involved in the first test-retest. A class of 20 juniors and seniors were given parental consent forms and 18 of these were signed and returned. The 18 students completed the questionnaire on December 14, 1989 and repeated it on January 4, 1990. Anonymity was guaranteed to the students. They were identified only by numbers assigned by the teacher. The same identifying numbers were used for the retest. The test-retest assessments yielded the following correlation coefficients for each of the six scales as follows: SMOKE, $\underline{r}$ = .81, FEEL, $\underline{r}$ = .73, EAT, $\underline{r}$ = .71,

ALCO, $\underline{r}$ = .91, DRUG, $\underline{r}$ = .97, and SEX, $\underline{r}$ = .79. The $\underline{r}$ value for the last scale, INFLUENCE, was $\underline{r}$ = .87.

The answers to the items on the questionnaire are Likert-type and were scored by number values assigned to each answer. The scales for SMOKE, DRUG, and FEEL are one question each. The other scales are composed of two or three answers and the number values are totaled for one score. An example is the ALCO scale: questions #5 and #7 will be totaled for one score. Questions #8, #9, and #10 will be totaled for the EAT scale and questions #11 and #12 will be totaled for the SEX scale. The demographic items on the survey were used to further describe the student sample in the results discussion of this project.

Students were given ample privacy to complete the questionnaire and were asked to be honest. They were reminded to not put their names on the surveys. They were also told that if they had questions or needed help with any of the questions, to raise their hand and I assisted them.

Validity

The validity of the research instrument employed in this study will be addressed below. Hauri, Sanborn, Corson and Violette (1988) state that validity is the most serious question faced in selection of an instrument. The primary concern is whether the instrument actually measures what it is expected to measure. Hauri et al. (1988) state that it is

helpful to consider the types of validity. Face validity refers to the obvious relationship of the items with the phenomenon to be studied. The instrument used for this research asks directly about the self-destructive behaviors being studied and therefore has content, or face validity. The 14th item has face validity as it asks about social influence which is what it is intended to measure.

Empirical validity involves previous research indicating that the question to be asked does actually relate to the underlying phenomenon. Empirical validity is present in this questionnaire for the first 13 items in that the questions have been related to the phenomenon in previous research (Delisle, 1986; Donovan & Jessor, 1985; Donovan, Jessor, & Costa, 1988; Jessor & Jessor, 1977; Lester, 1987; Rouse, Kozel & Richards, 1985). Hauri et al. (1988) states that "construct validity in mental health research often rests on expert consensus" (p.59). These items have been taken from questionnaires used by experts and are of the same self-report style as studies done by other prominent researchers (Donovan & Jessor, 1985; Rouse et al, 1985). It is widely believed that the conditions under which a survey is administered will have a significant influence on the validity of the data obtained. Edward Wagner (personal communication, February 24, 1989) states in his letter regarding the Montana Adolescent Health Survey that "investigators from different parts of the country, including ourselves, have received consistent

feedback from students which suggests that perceived confidentiality may be the single most important determinant of reporting accuracy". For this reason, student anonymity and confidentiality was of highest priority in each community.

Procedures

The local school boards were approached by this investigator and approval was given to conduct this research in each community. I distributed the parental consent forms to the students and explained the research project. Local guidance counselors accepted the returned signed forms. Follow up by telephone was done to parents not returning forms to provide the largest possible sample.

I returned to the schools to administer the surveys on a date as free of other activities as possible to have the highest number of students available to complete the measure. Students absent that day due to illness were not part of this project.

Hypotheses

Hypotheses for this study were stated in the anticipated direction of outcome. The criterion value for evaluating them was $p < .05$. The first hypothesis for this study was that self-reported degree of influence toward self-destructive behaviors by non-resident youth in Gardiner/West Yellowstone would be significantly higher than the self-reported degree

of influence toward self-destructive behaviors by non-resident youth in Clyde Park/Wilsall.

The second hypothesis was that there would be no significant difference in the self-reported degree of influence toward self-destructive behaviors by non-resident youth between Gardiner students and West Yellowstone students.

The third hypothesis was that there would be no significant difference in the self-reported degree of influence toward self-destructive behaviors by non-resident youth between Clyde Park students and Wilsall students.

The fourth hypothesis was that the measure of self-destructive behaviors of teenagers in the communities proximal to Yellowstone Park (Gardiner and West Yellowstone) would be significantly higher than would be the measure of self-destructive behaviors of teenagers in the rural communities away from the Park (Clyde Park and Wilsall).

The fifth hypothesis was that there would be no significant difference in the measure of self-destructive behaviors of adolescents between Gardiner students and West Yellowstone students.

The sixth hypothesis was that there would be no significant difference in the measure of self-destructive behaviors of adolescents between Clyde Park students and Wilsall students.

A seventh group of hypotheses was that there would be positive correlations between the different behaviors (FEEL to EAT, FEEL to ALCO, FEEL to DRUG, FEEL to SEX, FEEL to

SMOKE, EAT to ALCO, EAT to DRUG, EAT to SEX, EAT to SMOKE, ALCO to DRUG, ALCO to SEX, ALCO to SMOKE, DRUG to SEX and DRUG to SMOKE).

Statistical Analysis

A statistical computer program was used to analyze the data. A one-way ANOVA was used to test social influence. A two-way MANOVA was used to compare the results of what behaviors are occurring in the communities with non-resident influence and those without non-resident influence. A Chi-square was used in addition to the MANOVA after the dependent variables resulted in skewed distributions. A correlation matrix was done for the five scales of self-destructive behaviors and the level-of-happiness scale. The correlational matrix configured as follows:

	ALCO	DRUG	SEX	EAT	FEEL
SMOKE	X	X	X	X	X
ALCO		X	X	X	X
DRUG			X	X	X
SEX				X	X
EAT					X

Ethical Considerations

The parents of all students participating were fully informed of the study and permission for participation was

obtained in writing. Anonymity was guaranteed for all participants. Counseling services were provided for the participants for any issues that may have come up if needed. All data is being maintained by the researcher according to the Ethical Standards of the American Association for Counseling and Development (1981) for research. All materials are being kept in a locked cabinet and the researcher will be the only person having access to any identifiable information. Feedback will be done by group only to the school administration and local boards for the purpose of assisting with community planning for curriculum and intervention.

CHAPTER 4

RESULTS OF THE STUDY

This study asks several questions: is there more self-reported experience of social influence by non-resident youth on resident adolescents to engage in self-destructive behaviors (smoking, alcohol abuse, marijuana abuse, eating disorders, sexual activity) in Gardiner/West Yellowstone than in Clyde Park/Wilsall? Is the degree of social influence experienced by adolescents in Gardiner and West Yellowstone similar to that experienced by adolescents in Clyde Park and Wilsall? Are self-destructive behaviors more evident among adolescents in Gardiner/West Yellowstone than in Clyde Park/Wilsall? Are the levels of self-destructive behaviors among adolescents in Gardiner and West Yellowstone similar to the levels of self-destructive behaviors among adolescents in Clyde Park and Wilsall? The study also asks are the self-destructive behaviors and level-of-happiness correlated.

In order to answer these questions, data compiled from the Adolescent Survey given to 172 ninth through twelfth grade students from these four communities are reported within this chapter. The first section will describe the demographic data obtained. The next section will discuss the descriptive

statistics and the last section will discuss the statistical analysis chosen for each hypothesis and the outcome for each hypothesis.

Demographics

A total of 172 students were included in this study. All the students in attendance, who had parental consent forms returned on the day the survey was administered by the investigator in each school, were counted. Students absent or those without parental consent forms were not part of this survey. The overall participation rate was 74.5%. Of the 172 who did participate, 91 were male and 81 were female. The number of participants by school were:

Table 1

Demographic Data

	Participants	Total Enrolled
Gardiner	52	83
West Yellowstone	46	53
Clyde Park	49	63
Wilsall	25	32

The ages of the participants were:

13 years of age: 1
14 years of age: 18
15 years of age: 42
16 years of age: 39
17 years of age: 45
18 years of age: 26
19 years of age: 1

Mean 16.11 Std Dev 1.277 Range 13 to 19

TABLE 1 continued

Grade levels of the participants were:

Freshmen (9):	45	Juniors (11):	40
Sophomores (10):	41	Seniors (12):	46

Mean 10.506 Std Dev 1.147 Range 9 to 12

Descriptive Statistics

The six scales, or dependent variables, have overall distributions as listed below:

Table 2

Descriptive Statistics

	MEAN	STD DEV	RANGE
SMOKE (smoking)	1.46	1.00	1 to 6
ALCO (alcohol)	5.35	2.79	2 to 12
DRUG (marijuana)	1.19	.78	1 to 6
EAT (eating-disorders)	3.44	.93	3 to 9
SEX (sexual activity)	2.55	1.87	1 to 7
FEEL (level-of-happiness)	1.83	.68	1 to 4

Hypotheses Testing

A one-way analysis of variance (ANOVA) is an inferential statistical procedure which has the same general purpose as the *t* test: to compare groups in terms of the mean scores

(Huck, Cormier, & Bounds, 1974). A one-way ANOVA can be used to compare two or more groups. For the ANOVA the four communities in this study were grouped in pairs: Gardiner with West Yellowstone (Group I) and Clyde Park with Wilsall (Group II). This statistic was chosen for this study to test the hypothesis that there is a statistically significant difference in social influence between the Gardiner/West Yellowstone students and the Clyde Park /Wilsall students. The criterion value used for evaluating the hypothesis was the traditional $p < .05$.

ANOVA found a statistically significant difference between these groups of students. The mean for the Gardiner/ West Yellowstone group was 2.25 and the mean for the Clyde Park/Wilsall group was 1.83 (sd .212). The results are found in Table 3.

Table 3

Anova Summary Table for Social Influence Between Gardiner/West Yellowstone and Clyde Park/Wilsall

Source	Sum of Squares	DF	Mean Square	F	Signif of F
Between groups	7.34	1	7.34	7.96	.005
Error	156.68	170	.92		
Total	164.02	171	.96		

Two separate ANOVAs were also done to test the hypothesis that there are no significant differences in social influence between the two similar communities of each of the two groups listed above. ANOVA found no statistically significant differences between the communities in Group I, Gardiner and West Yellowstone. The mean for the Gardiner students was 2.21 and the mean for the West Yellowstone students was 2.3 (sd .044). The results are found in Table 4.

Table 4

Anova Summary for Social Influence Between Gardiner and West Yellowstone

Source	Sum of Squares	DF	Mean Square	F	Signif of F
Between groups	.21	1	.21	.19	.664
Error	106.41	96	1.11		
Total	106.62	97	1.10		

ANOVA also found no statistically significant differences between the communities in Group II, Clyde Park and Wilsall. The mean for the Clyde Park students was 1.838 and the mean for the Wilsall students was 1.838 (sd .002). The results are found in Table 5.

Table 5

Anova Summary for Social Influence Between Clyde Park and Wilsall

Source	Sum of Squares	DF	Mean Square	F	Signif of F
Between groups	.00	1	.00	.00	.987
Error	50.05	72	.69		
Total	50.05	73	.68		

If a researcher has two or more independent variables or two or more levels of a single independent variable, then an analysis of variance should be used (Huck et al., 1974). This study has two levels of a single independent variable. If there are two or more criterion measures involved in the study, then a multivariate analysis of variance (MANOVA) is required (Huck et al., 1974). This study has six criterion measures, or dependent variables. By analyzing these six dependent variables at the same time, it was possible to test the syndrome effect (whether the behaviors tested in the same direction at the same time) of deviant behaviors. There are two simple rules that must be followed in using a multivariate analysis of variance (Huck et al., 1974). First, there should not be fewer dependent variables than there are groups being compared. Second, the total number of participants in the study should be at least twice as large as the number of dependent variables. The number of participants for this

study was 172. The dependent variables were six scales: SMOKE, ALCO, DRUG, SEX, EAT, and FEEL. MANOVA was chosen for this study to test the hypothesis that there is a significant difference in the self-destructive behaviors between the Group I students (Gardiner/West Yellowstone) and the Group II students (Clyde Park/Wilsall). The criterion value used for evaluating the hypothesis was $p < .05$.

While it is customary to run MANOVAs on dependent variables that are normally distributed, the dependent variables in this study are self-destructive behaviors and were expected to be distributed nearly in a normal curve. However, this did not occur. The dependent variables were not normally distributed. "Some researchers do not go to the trouble to test the assumption (of equal dispersion matrices) because they feel that the MANOVA procedure is robust to minor violations of the assumption," (Huck et al., 1974, p.190). The analysis was run but we cannot have too much faith in it due to the skewed distributions of the behaviors. Four of the six scales were severely negatively skewed. These were SMOKE, DRUG, EAT, and SEX. The percentages of respondents indicating low involvement in these behaviors were as follows: 77.3% said no on smoking (SMOKE), 92.4% said no on marijuana use (DRUG), 74.4% said no on eating disorder (EAT) and 51.7 % said no to sexual activity (SEX).

The MANOVA found that there was not a statistically significant difference between Group I and Group II in the self-destructive behaviors reported by the students. Only two of the six variables had F values that were significant: ALCO and FEEL had significance at .053 and .005 levels respectively. The result is in Table 6.

Table 6

MANOVA Between Gardiner/West Yellowstone and Clyde Park /Wilsall

	Value	Approx F	DF	Error DF	Sig. of F
Hotellings	.063	1.75	6	165	.112

Two separate MANOVAs were conducted to test the hypothesis that there is no difference in the self-destructive behaviors between similar communities. The MANOVA for the communities of Gardiner and West Yellowstone found no statistically significant difference between these two communities when these six scales were examined together. See Table 7.

Table 7

MANOVA Between Gardiner and West Yellowstone

	Value	Approx F	DF	Error DF	Sig. of F
Hotellings	.122	1.86	6	91	.097

The MANOVA for the communities of Clyde Park and Wilsall also found no statistically significant difference. The significance of F was .056. The result is in Table 8.

Table 8

MANOVA Between Clyde Park and Wilsall

	Value	Approx F	DF	Error DF	Sig. of F
Hotellings	.194	2.17	6	67	.056

Due to the lack of normally distributed dependent variables we cannot put too much faith in these outcomes. Based on these results, the hypotheses would be rejected. However, because of the lack of normal distributions in four of the scales, another method of analysis was indicated. A nonparametric test, chi-square, was chosen to look at the six dependent variables independently. Chi-square is a nonparametric procedure that can be applied to nominal levels of measurement. Nominal measurement is a means of naming or categorizing people, objects, events, or characteristics (Huck et al., 1974). Chi square compares results that are actually obtained with those that were expected. The criterion level of significance established for this analysis was $p < .05$.

The chi-square analysis of these variables revealed a significant difference for the FEEL scale, a nearly significant difference for the SMOKE scale, and no significant differences for the ALCO, DRUG, EAT, and SEX scales (See Table 9).

The FEEL scale revealed a significant difference in that the students in Gardiner/West Yellowstone overall tended to

be happier about themselves than the students in Clyde Park and Wilsall. The other scales show really no differences.

Table 9

Contingency Tables for Self-Destructive Behaviors and Level-of-Happiness

	Yes	No	Yes	No
	SMOKE		ALCO	
Gard/West Y.	17	81	77	21
Clyde P/Wil.	22	52	62	12
	X2=3.68, NS		X2=14.09, NS	
	DRUG		SEX	
Gard/West Y.	5	93	45	53
Clyde P/Wil.	8	66	38	36
	X2=1.96, NS		X2=.498, NS	
	EAT			
Gard/West Y.	22	76		
Clyde P/Wil.	22	52		
	X2=1.17, NS			

Level-of-happiness

	Very Happy	Pretty Happy	Not Too Unhappy	Really Unhappy
		FEEL		
Gard/West Y.	39	50	8	1
Clyde P/Wil.	15	46	11	2
		X2=8.456, $p < .05$		

The Pearson Product Moment Correlation is a parametric statistical technique using continuous data. This statistic was chosen for this study to test the hypothesis that the behaviors measured by the six scales of the Adolescent Survey were correlated. It is an especially robust test that is able to deal with skewed distributions (Ferguson & Takane, 1989). The Pearson correlation technique does not attempt to infer causation. A correlation matrix for the self-destructive behavior scales (smoking (SMOKE), alcohol abuse (ALCO), marijuana abuse (DRUG), sexual activity (SEX), eating disorders (EAT)) and level-of happiness (FEEL) scale is shown in Table 10.

Table 10

Intercorrelations of Self-destructive Behaviors and Level-of-Happiness

	SMOKE	ALCO	DRUG	SEX	EAT	FEEL
SMOKE	1.00	.39*	.43*	.13	.24*	.11
ALCO		1.00	.34*	-.01	.26*	.19*
DRUG			1.00	.22*	.44*	.13
SEX				1.00	.26*	-.01
EAT					1.00	.25*

N of cases: 172 * $p < .05$ 1-tailed Signif: $r = .164$

The statistical significance measures the likelihood that the behaviors did not happen by chance alone. Ten of the fourteen correlations were statistically significant at the .05 level.

Summary

The statistical analysis of the data collected for this study revealed that:

1. the ANOVA found a significant difference in the self-reported degree of influence on self-destructive behaviors between Gardiner/West Yellowstone and Clyde Park/Wilsall therefore the hypothesis that there would be a difference was accepted;

2. the ANOVA found no significant differences in the self-reported degree of influence on self-destructive behaviors between Gardiner and West Yellowstone therefore the hypothesis that there would be no differences is accepted;

3. the ANOVA found no significant differences in the self-reported degree of influence on self-destructive behaviors between Clyde Park and Wilsall therefore the hypothesis that there would be no differences is accepted;

4. the MANOVA found no significant differences in the self-destructive behaviors between Gardiner/West Yellowstone and Clyde Park and Wilsall therefore the hypothesis that there would be differences is rejected; Chi-square found no significant differences in the analysis of the self-destructive

behaviors separately either, with the exception of the FEEL scale;

5. the MANOVA found no significant differences in the self-destructive behaviors between Gardiner and West Yellowstone therefore the hypothesis that there would be no differences is accepted;

6. the MANOVA found no significant differences in the self-destructive behaviors between Clyde Park and Wilsall therefore the hypothesis that there would be no differences is accepted;

7. and finally that, the Correlation Matrix revealed relationships in ten of the fourteen correlations. The hypotheses that the behaviors are correlated would be accepted for all but four of the correlations (SMOKE to SEX, SMOKE to FEEL, ALCO to SEX, DRUG to FEEL and SEX to FEEL).

CHAPTER 5

SUMMARY, DISCUSSION, AND RECOMMENDATIONS

Summary

This study examined the social influence teenagers have on each other toward involvement in self-destructive behaviors in four small rural communities in Park and Gallatin counties. The participants were 172 ninth through twelfth graders attending high school during the 1989-1990 academic year in Gardiner, West Yellowstone, Clyde Park and Wilsall.

The social influence of non-resident youth on local youth toward participation in self-destructive behaviors was examined. Self-destructive behaviors (smoking, marijuana and alcohol abuse, eating disorders, sexual activity), and the level-of-happiness of students in these communities were measured through a self-report questionnaire. The study intended to generate evidence regarding the influence of social learning on adolescents' self-destructive behaviors and demonstrate the interrelatedness of these variables.

Literature was reviewed regarding adolescence and self-destructive behaviors. The areas reviewed include: (a) adolescent development, (b) cognitive-developmental theory, (c) psychosocial theory, (d) social learning theory, (e) self-destructive behaviors and (f) syndrome of deviant

behaviors. Minimal research was found concerning social influence on adolescent sexual activity, eating disorders, and level-of-happiness. Research was found concerning social influence on alcohol and marijuana use and suggests that for adolescents, these behaviors are associated with social learning.

The Adolescent Survey questionnaire was used to measure social influence and the dependent variables (self-destructive behaviors and level-of-happiness). The questionnaire was administered by the investigator and statistically analyzed with ANOVA, MANOVA, Chi-square, and a Correlational Matrix.

Limitations

The study was designed to demonstrate correlation, not causation. The results were affected by several factors including the non-participation of some students in each community, the self-reporting format of the data collection (which relies on the honesty of the respondents) and the failure to include other variables that could also have an effect on adolescent behavior. The sample was not acquired through random selection limiting generalizability to adolescents in other areas. The study was conducted in rural areas and consisted of all caucasian participants. Results could not be generalized to non-rural or non-white adolescents.

Limitations in the statistical analysis arose when several of the dependent variables (the six scales that

measured self-destructive behaviors) were highly skewed instead of approaching normal distributions. Despite the skewed distributions, a MANOVA was run on these variables. Because of the skewed nature of the distributions, it made sense to view responses more as categorical "yes" or "no" answers, rather than as points along a normally distributed continuum. Because use of MANOVA was potentially inappropriate for categorical data, it was decided to use a non-parametric test, chi-square, because chi-square is more appropriate with data that is more categorical than continuous.

Results

Analysis of variance found a significant difference in the self-reported degree of influence on self-destructive behaviors between Gardiner/West Yellowstone and Clyde Park/-Wilsall. No differences were found between the two similar communities in each of the pairs. These findings were expected by this investigator. Unexpectedly, multiple analysis of variance found no significant differences in the self-destructive behaviors between Gardiner/West Yellowstone and Clyde Park/Wilsall. As expected, no differences were found between the two similar communities in each of the pairs. Similar to MANOVA, chi-squares found no statistically significant differences between the two groups except on the FEEL scale. The correlational matrix revealed significant relationships in ten of the fourteen correlations.

Discussion

The following section will include discussions of the demographics, the descriptive statistics and each of the hypotheses of this project.

Demographics

The sample of participants was very representative of the student population in each community. The majority of students were from moderate to low socio-economic level families. The participants were primarily Caucasian except for two Native American Indian students. No other minority people were represented. There was one exchange student from Holland in the sample. There were some students not participating due to personal choice and lack of parental consent forms. The number of non-participants was 1/4 of the total available students. The sample was well balanced on the ratio of males to females and for age differences. The sample fit well with the investigator's expectations for the study. The demographics of the sample were similar to those reviewed in the literature (adolescent males and females) with the exception that the communities in this study were very small and rural. Part of the rationale for conducting this study was to examine rural adolescent involvement in, and social influence toward, self-destructive behaviors, so the rurality of the communities was considered an asset rather then a problem in the study.

Descriptive statistics

The scales for the self-destructive behaviors can be described overall as seriously negatively skewed. This resulted because of the large percentage of respondents indicating no participation in several of the self-destructive behaviors. On each scale a rating of #1 meant no involvement. The means for the six scales were: SMOKE 1.46 (range 1. to 6.), ALCO 5.35 (range 2. to 12.), DRUG 1.19 (range 1. to 6.), EAT 3.44 (range 3.to 9.), SEX 2.55 (range 1. to 7.) and FEEL 1.83 (range 1. to 4). The assumption of equal dispersion of the dependent variables was not found in the scales. The large number of respondents indicating no involvement in many of the self-destructive behaviors lowered the means. The skewed distributions were surprising. It was expected by this investigator that the dependent variables (the self-destructive behaviors and the level-of happiness) would have been more normally distributed. However, this did not occur. Only 19.2% of the respondents in this study indicated that they had never drunk alcohol (79.8% had). This is lower than recent national figures which indicate that 93% of the students had used alcohol (Gibbons et al., 1986).

The percent of students indicating they had tried marijuana was small in this study. Only 7.6% said they had tried the drug, compared to the national rate of "approximately 60 % of all high school students" (VanHasselt & Hersen, 1987, p. 317). It is possible that because this be-

havior carries a misdemeanor label in the eyes of the law, accurate and honest responses did not occur. It is also possible that the sample in this study is simply not involved with marijuana use.

Almost half (48.3%) of the entire sample said yes to the question of having had sexual intercourse. This is comparable to other studies that found adolescent sexual activity nationally between 40 and 50% (Van Hasselt & Hersen, 1987).

Hypotheses

The findings indicate that for the adolescents in this study, social influence toward self-destructive behaviors is present, but that overall their involvement in the behaviors is not dependent on these influences. The results of this study lend support to social learning theory but are not as conclusive as the other studies reviewed. Previous research (Akers et al., 1979, Greeson & Williams, 1986, and Akers & Cochran, 1985) has indicated that social learning theory is strongly supported in adolescent deviant behavior. The Akers et al. (1979) study strongly supported social learning theory through testing with survey data on adolescent alcohol and marijuana use. Greeson and Williams (1986) found support for social learning theory on attitudes of adolescents, including attitudes related to premarital sexual activity and peer group conformity.

The results of this study likewise give credance to Erikson's theoretical concepts regarding the societal demands and social forces encountered in daily living (Salkind, 1981). The identity formation stage of his theory includes a concern with "overidentification with heroes, cliques, and crowds" (Erikson, 1968, p. 262). The influence acknowledged by the adolescents in this research may be testimony to this theory.

The first hypothesis, that self-reported degree of influence toward self-destructive behaviors by non-resident youth in Gardiner/West Yellowstone would be significantly higher than the self-reported degree of influence toward self-destructive behaviors by non-resident youth in Clyde Park/Wilsall was supported. A significant difference between these groups was found. This outcome suggests that outsiders who are present in the communities near Yellowstone Park have an impact on local residents. The adolescents acknowledged their influence on them toward self-destructive behavior. There was significantly less acknowledged influence of outsiders in Clyde Park and Wilsall which are more distant from the Park. Other studies reviewed in the literature found similar results regarding peer influence and deviant behaviors (Akers & Cochran, 1986, Gibbons et al., 1986, Robinson, et al., 1987, Sarvela, et al., 1982, Van Hasselt & Hersen, 1987, Akers, et al., 1979, Lester, 1987). The awareness of the presence of this influence in communities where outsiders are coming in for either employment or visitation, should alert

parents, school administrators and other professionals to the potential impact on the resident youth in these communities. Planning for such impact can then be approached with more commitment to alternative activities, needed counseling services, assertiveness education and health education needs.

The second and third hypotheses were that there would be no significant differences in the self-reported degree of influence toward self-destructive behaviors between the two pairs of similar communities, Gardiner and West Yellowstone, and Clyde Park and Wilsall were accepted. Gardiner and West Yellowstone are both communities with high tourist activity and many outside youth workers present during the summer season. It was expected that the reported social influence in these two communities would be similar. Peer influence toward deviant behaviors was found in other studies reviewed (Robinson, et al., 1987, Akers, et al., 1979, Lester, 1987).

The fourth hypothesis was that the measure of self-destructive behaviors of teenagers in the communities proximal to Yellowstone Park (Gardiner/West Yellowstone) would be significantly higher than would be the measure of self-destructive behaviors of teenagers in the rural communities away from the Park (Clyde Park/Wilsall). MANOVA found no significant differences between the self-destructive behavior of the adolescents in the two groups. Chi-square found only one significant difference in the FEEL scale between the two groups. Therefore the hypothesis was rejected. The social

influence factor did not appear to significantly affect the overall involvement in self-destructive behaviors. The students from the communities with less self-reported social influence indicated they were involved in deviant behaviors at about the same level as the students that did report social influence. It is suspected that rural youth in communities without non-resident influence are capable of becoming involved in self-destructive behaviors on their own. The literature review found similar results for small-town and rural youth behavior regarding alcohol use (Gibbons, et al., 1986 and Sarvela, et al., 1982). Also, a much larger community, Livingston is 21 miles from Clyde Park and 29 miles from Wilsall. It is possible that the students are mobile enough to engage in these behaviors in Livingston. Another explanation is that in the communities where social influence was acknowledged (Gardiner/West Yellowstone), other variables beyond the scope of this project such as family cohesion, stable two-parent households, parents who don't use substances themselves, and emotional support from others may be impacting students' involvement in the self-destructive behaviors. Perhaps these variables offset the effect of social influence toward participation within these communities.

Due to the skewedness of the dependent variables and the potential that use of MANOVA was inappropriate, Chi-square was also used to test this hypothesis. Chi-square found a significant difference in the FEEL scale only. This difference

however was found to be in the opposite direction of what was expected. The adolescents reporting more social influence towards involvement in self-destructive behavior also reported feeling better about themselves than did the students reporting less social influence to participate in these behaviors. The two groups however had similar involvement reported in the level of participation in self-destructive behavior. The investigator suspects that a level of acceptance of the behaviors may be higher for the students in Gardiner and West Yellowstone than for those in Clyde Park and Wilsall. Perhaps the ongoing non-resident influence in these communities may have created in the local youth a desensitized response to deviant behaviors, and subsequently their level-of-happiness is not negatively affected by participating in negative behaviors.

For the fifth and sixth hypotheses MANOVA found no significant differences in the self-destructive behaviors between Gardiner and West Yellowstone, and between Clyde Park and Wilsall. Research done by Donovan & Jessor (1985), Jessor & Jessor (1977), and Blau, et al., (1988) revealed similar findings among adolescents in their studies. The similarities between these two pairs of communities fit what was expected to be found by the investigator.

Correlational coefficients were used to examine the interrelatedness of the self-destructive behaviors and level-of-happiness among the adolescents in the study. The Pearson

Product Moment correlation technique was used despite the skewedness of the distributions because it is robust and is capable of handling variables with skewed distributions. The Correlation Matrix revealed significant relationships in ten of the fourteen correlations. Thus it appears that the syndrome effect of the behaviors was largely confirmed.

The Pearson correlation revealed which behaviors were related to which. Significant relationships are described below in descending order with strongest relationships first: marijuana and eating disorders, smoking and marijuana, smoking and alcohol, alcohol and marijuana, alcohol and eating disorders, sexual activity to eating disorders, eating disorders to level-of-happiness, smoking to eating disorders, marijuana to sexual activity, and alcohol to level-of-happiness.

It is of interest to note that involvement with marijuana correlated significantly with involvement in four of the other behaviors (eating disorders, cigarette smoking, alcohol and sexual activity). The level-of-happiness scale correlated with both eating disorders and alcohol which was not surprising to the investigator. Alcohol correlated significantly with cigarette smoking, marijuana, eating disorders and level-of-happiness. The results supported findings in previous research on the concept of a syndrome of deviant behaviors (Jessor & Jessor, 1977, Donovan & Jessor, 1985, and Donovan, et al., 1988). Surprisingly there was no relationship

between alcohol and sexual activity. This investigator expected to find that students actively involved with alcohol would have had a corresponding involvement in sexual activity. This did not hold true for the sample in this study. This connection was, however, noted in the surveys for a few of the respondents. It is suspected that some of the individual uniquenesses pertaining to this aspect of the syndrome of the behaviors were not evident in the analysis due to the very small percentage of students reporting higher involvement in both alcohol and sex.

Recommendations

Overall the study revealed that social influence, as measured by self-report, does occur and is indeed a consideration in regard to adolescent self-destructive behaviors. However, this social influence, overall, does not seem to affect adolescent involvement in self-destructive behaviors. Also, this study showed some support for the validity of the concept that there is a syndrome of adolescent self-destructive behaviors.

It is recommended that for the communities with knowledge of the presence of social influence toward self-destructive behaviors of their adolescents (Gardiner and West Yellowstone) that it may be advantageous for them to establish a cooperative task-force between adolescents, parents, schools, law enforcement, and perhaps the Park Service. The task force

could examine options for coping with adolescent involvement in self-destructive behaviors. Increasing health education programs, (both school and community), assertiveness workshops, additional counseling services, student participation in programs such as the "Montana Teen Institute" and "Teens in Partnership" camps, (sponsored by the Center for Adolescent Development in Helena), and other alternative activities are a few potential options available for these communities.

Several of the above options might be helpful to the other two communities due to the reported similar level of involvement in self-destructive behaviors. The factors that promote involvement there may not be outsider influence so perhaps options such as assertiveness training would not be as effective there. Other interventions, such as a local teen center or facility available to youth for activities, might be helpful and could be explored by task forces in these communities.

Further research into the interrelatedness of deviant or self-destructive behaviors could shed more light on factors influencing adolescent participation in such behaviors. Such research could include individual interviews with students if they agreed to be identified. Further research could also include examining some of the other variables that may be factors in adolescent deviant behavior such as family stress, divorce, abuse or frequent relocations. Pursuing other measures such as the more comprehensive Adolescent Health

Survey, to use in research in this area might be helpful in view of how skewed the results were with using the measure designed for this study.

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APPENDICES

APPENDIX A

Adolescent Survey

ADOLESCENT SURVEY

1. How old were you on your last birthday?

____ 13 or younger	____ 17
____ 14	____ 18
____ 15	____ 19

2. What is your gender?

____ Male
____ Female

3. What is your grade in school?

____ 9
____ 10
____ 11
____ 12

4. How frequently have you smoked cigarettes during the past 30 days?

____ not at all
____ less than 1/day
____ 1 to 5 per day
____ 1/2 pack per day
____ 1 pack per day
____ more than 1 pack per day

5. On how many occasions have you had alcoholic beverages to drink in the past year?

0	1-2	3-5	6-9	10-19	20-39	40+
___	___	___	___	___	___	___

6. On how many occasions have you used marijuana in the past year?

0	1-2	3-5	6-9	10-19	20-39	40+
___	___	___	___	___	___	___

7. On the occasions that you drink alcoholic beverages, how often do you drink enough to feel pretty high?

____ on none of the occasions
____ on few of the occasions (2 or 3)
____ on half of the occasions
____ on most of the occasions
____ nearly all of the occasions

8. Have you ever eaten so much food in a short period of time that you felt out of control and would be embarrassed if others saw you? (binge-eating, gorging, or bulimia)

____ yes
____ no

9. How often, if ever, do you throw up on purpose after eating?
   ____ Never
   ____ 1 time per month
   ____ 2 to 3 times per month
   ____ 1 time per week
   ____ 2 or more per week

10. Do you go without eating a great deal to lose weight?
   ____ yes
   ____ no

11. Some teenagers have had sex and others have not. At any time in your life, have you ever had sexual intercourse (making love, or going all the way)?
   ____ yes
   ____ no

If your answer was no, skip #12 and go to question #13.....

12. How often do you have sexual relations?
   ____ more than once a week
   ____ once a week usually
   ____ 2 or 3 times a month
   ____ once a month usually
   ____ rarely

13. Taking all things in consideration, how would you say things are these days for you?
   ____ very happy most of the time
   ____ pretty happy most of the time
   ____ not too happy most of the time
   ____ really unhappy most of the time

14. To what extent have you been influenced to participate in any of the behaviors described above by teenagers who are not permanent residents of your community?

   ____ not at all
   ____ a little
   ____ somewhat
   ____ a lot
   ____ a great deal

Comments, if you have any:

_____

_____

_____

Thank you for participating in this survey.

APPENDIX B
Consent Form

SUBJECT CONSENT FORM
FOR
PARTICIPATION IN HUMAN RESEARCH
MONTANA STATE UNIVERSITY

A comparative study of adolescent behaviors in four rural communities.

by Penny Carpenter, Graduate Student

Dear Students in 9th - 12th grades:

You are being asked to anonymously participate in a study of adolescent behaviors that are self-destructive or harmful (tobacco, drug and alcohol use, eating disorders, depression, and sexual activity), by way of a self-report survey. This research may help us obtain a better understanding of how prevalent these problems are in your community and gain information about these behaviors as being interrelated. All students in 9th through 12th grades will be asked to participate in this study.

If you agree to participate you will be asked to have your parent or guardian read and sign this consent form and return it to the school. You will then anonymously complete a questionnaire of 13 items that will take approximately four to five minutes. The study is of no benefit to you individually and there is no punishment for not participating. You can stop participating and not complete the questionnaire, if you decide you do not want to continue.

All costs involved in this research will be met by me as investigator. There are no costs to you as a participant. Please feel free to ask any questions you may have about this project. You may contact me at home (222-2218) or at the Livingston Mental Health Services office (222-3332).

All questionnaires will be anonymous and kept by me as researcher. The results of this study will be submitted as my thesis for credit towards the requirements for the Master's degree

in Mental Health Counseling from Montana State University. School officials will also be informed of results by entire group only.

In the event your participation in this research directly results in problems for you, treatment consisting of counseling with the school counselor or with me will be available but there is no compensation for this. Further information about this treatment may be obtained by calling me at the above listed numbers.

AUTHORIZATION: I have read the above and understand the discomforts, inconveniences and risks of this study. I, _____ (parent/guardian), related to the subject as _____ (how related), agree to the participation of _____ (student) in the research. I understand that the subject or I may later refuse participation in the research and that the subject, through his/her own action or mine, may withdraw from the research at any time.

Signed _____
(Parent or guardian)

Date _____

APPENDIX C

Correspondence

TW RECREATIONAL SERVICES, INC.

April 11, 1990

Ms. Penny Carpenter
Rt. 38, Box 2106
Livingston, MT 59047

Dear Ms. Carpenter:

As you requested in your telephone conversation of April 10th, the following are the 1989 statistics for 18-22 year old employees.

We have approximately 2,700 employees seasonally of which 35 percent are 18 to 22 years old or a total of 945. Thirty percent of the 945 are Montana youths or 283. The balance of 70 percent or 662 are from across the country.

I do hope this helps with your thesis.

Sincerely,

Janice Hubbard
Director
Human Resources

JH/ss

Penny Carpenter
Rt.38 Box 2106
Livingston, Mt 59047

In reference to your questions relating to juvenile behavior in resort communities, the following is a list of personal observations:

I believe that because of the yearly influx of summer help that problems with drugs and alcohol are increased. Most of the summer help is high school or college students that bring large community problems with them when they arrive.

These summer young people associate with some of our resident juveniles and are a direct influence on them. Alcohol and drug consumption seem to follow. Large parties in the wooded areas around West Yellowstone occur all season long. Traffic accidents and disturbance calls become a direct result.

In the winter months these problems become less numerous. Most of the winter visitors are snowmobilers or skiers. These people are older college students or adults that do not have the same contact with our resident juveniles.

I have worked in West Yellowstone for the past six years. For ten years I was stationed in Cascade, Mt. Cascade is a small rural town about the size of West Yellowstone. The problems with young people are basically the same in each town, but in Cascade there was no influx of summer workers to have an influence on the residents. Any trouble the Cascade youths got into were of their own making. In West Yellowstone that is not the case by any means. The outside influence is clearly seen and felt in this resort town.

J. W. Tannehill #312
Montana Highway Patrol
West Yellowstone

Charley Johnson
~~BOB GARLAND~~
Sheriff

PARK COUNTY SHERIFF'S OFFICE

P. O. Box 443 — Livingston, Montana 59047

Penny Carpenter:

This letter is a response to your request for information on teenage behavior in Gardiner.

I have lived in the community of Gardiner for eighteen years. I attended high school at Gardiner High School. I have been a deputy sheriff in Gardiner for 71/2 years. I am also a commissioned Park Ranger for Yellowstone National Park.

During the summer, the community of Gardiner has a large influx of 18 to 22 year old kids who come to Yellowstone Park to work or to visit relatives or friends. These kids come from different areas, from all over the United States. There are also programs that T.W. Services, the concessioner and the Federal Government have in which they hire young men and women who are under priveleged or have been in trouble with Law Enforcement in other areas.

During the summer the local kids, work in Yellowstone with the kids from out of state. The locals start to run around and mingle with the kids from other areas. During this time, we as law enforcement officers in the area start to become more involved with the local teenagers in Law Enforcement situations. Also present in these situations are the non local kids. For the most part these situations are drug or alcohol involved situations. The percentage of local high school aged kids arrested or detained in drug and alcohol related situations is much higher during the summer, than it is during other times of the year, when the non local kids are not in the Yellowstone Area.

I have also had occasion to assist Park Rangers in the area. There is a swimming hole which sits between Gardiner and Mammoth, in Yellowstone Park. In this area the Park employees go swimming at night. There is a lot of substance abuse and sexual activity going on in this area at night. I have seen the local kids, partaking in the above mentioned activities. The local kids are generally with non local kids.

In the Gardiner Area, during the summer, I see local kids conducting themselves in behavior that they don't act like during other times of the year. In most of these situations they are involved with non local people. There is a large increase of drugs in the area, during the summer. I have seen local teenagers during the summer who are contemplating suicide and have mental problems because of a problem that they were having with persons of the opposite sex.

It is my opinion that the local kids behavior is very much influenced by the out of town or out of state kids who come to the area in the summer. I'm sorry, but I don't have the time to come up with any statistics for you at this time. I hope this letter will be of some help to you.

Sincerely
Gary Tanascu

Gary Tanascu

Park County Deputy Sheriff

Gardiner Substation

UNIVERSITY OF MINNESOTA
TWIN CITIES

Adolescent Health Program
Box 721 University of Minnesota
Hospital and Clinic
Harvard Street at East River Road
Minneapolis, Minnesota 55455
(612) 626-2820

June 28, 1989

Mrs. Penny Carpenter
Route 38, Box 2106
Livingston, MT 59047

Dear Mrs. Carpenter:

Thank you very much for your recent letter asking for information on the psychometric properties of the items in the Adolescent Health Survey. For your information, I have included a packet of information which details the psychometric properties of various scales and indices that we created off of the dataset. In addition, you will find a memo which explains the specific sources of items used in the Adolescent Health Survey along with a bibliography documenting the source.

I hope this material is helpful to you. We would be most interested in hearing about the use that you will make of items from the Adolescent Health Survey. Please keep us informed; particularly because of the interesting comparative analysis possibilities that your survey might represent alongside of ours.

Sincerely yours,

Michael D. Resnick, Ph.D.
Associate Professor & Director of
Research & Demonstration Programs
Adolescent Health Program;
Associate Professor
Program in Hospital & Health
Care Administration

cc: Robert Blum, M.D.

Enclosure

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