ED 317 915   CG 022 433

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TITLE   Value Differences across Tobacco Use Levels among
                Rural Adolescents.
SPONS AGENCY   Department of Education, Washington, D.C.
PUB DATE   28 Apr 90
GRANT   G008720244
NOTE   18p.; Paper presented at the Annual Meeting of the
                Western Psychological Association (70th, Los Angeles,
                CA, April 26-28, 1990).
PUB TYPE   Reports - Research/Technical (143) --
                Speeches/Conference Papers (150)

EDRS PRICE   MF01/PC01 Plus Postage.
DESCRIPTORS   *Adolescents; Differences; Predictor Variables; Rural
                Areas; Secondary Education; Secondary School
                Students; *Smoking; Social Values; *Tobacco;
                *Values

ABSTRACT
                Given the increase of tobacco use among adolescents,
the understanding of the personality variables and characteristics
which are associated with tobacco use is a critical issue today. This
study attempted to identify differences and similarities among the
value hierarchies of adolescents who have never tried tobacco,
adolescent tobacco experimenters, and adolescents who use tobacco
daily. A questionnaire assessing tobacco usage, selected demographic
information, and terminal values with the Rokeach Value Survey, was
administered to 5,128 adolescents from grades 7 through 12. The
priority placed on the terminal values of health, family security, a
comfortable life, a world at peace, a sense of accomplishment, an
exciting life, mature love, pleasure, social recognition, national
security and salvation were statistically significant in
differentiating the three groups of adolescents. Experimenters placed
significantly higher priorities on the terminal values of health and
a world at peace as compared to the daily users. Daily users placed
significantly higher levels of emphasis on the values of a sense of
accomplishment, mature love, and salvation than the tobacco
experimenters did. Non-users placed significantly higher priorities
on family security, a world at peace, a sense of accomplishment, and
salvation as compared to experimental users. Terminal value
hierarchies of abstainers stressed health, family security, a world
at peace, salvation, and national security more than indicated by
daily users. (Author/ABL)

Value Differences Across Tobacco Use Levels

Among Rural Adolescents

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A paper presented at the annual meeting of the Western

Psychological Association, Los Angeles, CA., April 28, 1990.

Abstract

Values are a central concept in understanding and predicting human behavior. Given the increase of tobacco use among adolescents, the understanding of the personality variables and characteristics which are associated with tobacco use is a critical issue today. The purpose of this study was to identify differences and similarities among the value hierarchies of adolescents who have never tried tobacco, adolescent tobacco experimenters, and adolescents who use tobacco daily. A large written questionnaire was administered to a sample of 5128 adolescents from grades 7 through 12 in the rural inland northwest. The questionnaire assessed reported tobacco usage, selected demographic information, and terminal values with the Rokeach Value Survey. The priority placed on the terminal values of health, family security, a comfortable life, a world at peace, a sense of accomplishment, an exciting life, mature love, pleasure, social recognition, national security and salvation were statistically significant in differentiating the three groups of adolescents.

Value Differences Across Tobacco Use Levels

Among Rural Adolescents

The age at which Americans start to use tobacco, the so-called "age of initiation," is getting younger. As a nation, we have become more laissez-faire in our legislation limiting access of children to cigarettes and other forms of tobacco. States with laws restricting children's access to cigarettes have dropped from 48 in 1964 to 43 at present.

And yet, research continues to point to tobacco as a gateway drug. Kandel and Logan (1984) demonstrated the use of tobacco as a predictive variable for those who move on to use marijuana, cocaine, hallucinogens, or narcotics. The profound association between current cigarette use and drug use has been frequently documented (e.g. Miller et al., 1983; Johnston, 1988). Collins (1987) described two stage sequences of substance use onset. One of the sequences identified tobacco use as a precursor to the use of "harder" drugs. In the 1989 study conducted by the Northwest Regional Educational Laboratory (Deck and Nichol, 1989), early onset of use of alcohol and tobacco was seen to be strongly related to abuse later in life. Gee (1987) also identified tobacco use as a top predictor of "harder" drugs.

Since the onset of the "war on drugs" in the mid-1980s, we have been bombarded with media campaigns aimed at readjusting individual value constructs in relation to the consumption of drugs. For any effort to reduce drug use and abuse to become

successful, it is critical that the target population be identified as well as the accual values requiring readjustment.

Since values are a central concept in understanding and predicting human behavior, it is not surprising that value priority differences have been shown to predict important political, social, and economic attitudes and behavior (c g. Ball-Rokeach, Rokeach, & Grube, 1984; Rokeach, 1973, 1979). Over the last twenty years a small but substantial body of drug research has attended to the issue of values while trying to understand causes of drug use and to design prevention and treatment programs (Brook and Whitehead, 1983; Carman, 1974; Hindelang and Carman, 1980; Jones, 1973; Kimlicka and Cross, 1978; Klerman, 1970; Kristiansen, 1985; Martini and Brook, 1978; Miller et al, 1973; Martini and Brook, 1978; Mayton, 1989; Toler, 1975). Numerous studies have investigated value differences across levels of drug usage for various populations and for various drugs.

When comparing the drug using to the non-using population, value differences have usually been ascertained (Brook and Whitehead, 1983; Carman, 1974; Cochrane, 1974; Hindelang and Carman, 1980; Jones, 1973; Kristiansen, 1985; Martini and Brook, 1978; Martini and Brook, 1978; Mayton, 1989; Toler, 1975). Carman (1974) described the relationship between low expectations and high value for recognition and achievement in a study of high school students in a rural setting. Those who reported this

inconsistency also reported higher drug usage. Martini & Brook
(1978) observed the alcoholic to value higher self-control,
social recognition, and a sense of accomplishment. In
comparison, the non-alcoholic sample group placed a higher value
on being cheerful and loving, and on mature love. Toler's (1975)
research described a general population with significantly higher
value placed upon societal goals (a world at peace, equality,
freedom, and national security) as opposed to the greater
emphasis placed upon personal goals (an exciting life, inner
harmony, mature love, self-respect, and wisdom) by the addicted
sample group. The results from Jones (1973) study reinforced
these findings by reporting that the non-using population was
seen to be very committed to societal values where a
present-orientation increased significantly as the use level
increased.

Studies investigating discrepancies in the value hierarchies
of among different levels of use for drug users are more
equivocal, although reported results generally indicate value
similarity (Jones, 1973; Kimlicka and Cross, 1978; Miller et al,
1973; Toler, 1975). For example, heavy users of LSD-25 (Jones,
1973) did not vary greatly from the less frequently using sample.
Chronic and "casual" marijuana users reported generally the same
value hierarchies (Kimlicka & Cross, 1978). Toler (1975)
reported that the values of drug addicts and alcoholics were
similar. However, Mayton (1989) reported numerous value

differences between adolescents who indicated being experimenters, regular users, and heavy users of alcohol.

Tobacco users have been observed to have a lower value for preventive health issues and demonstrate a tendency to be oriented toward satisfaction and outer-directedness (Kristiansen, 1985). Heavy smokers also appear to prefer an ends-over-means reasoning process (McKillip, 1980). Dignan et al (1986) investigated the locus of control for adolescent smokeless tobacco users in comparison with non-using adolescents. They found that "occasional" users possessed a significantly higher internal locus of control than those reporting "regular" use.

The purpose of this study was to identify differences and similarities among the value hierarchies of adolescents who have never tried tobacco, adolescent tobacco experimenters, and adolescents who use tobacco daily. Based on the available literature on this topic, tobacco non-users were expected to differ from users on societal values and on personally-oriented values. More specifically, it was hypothesized that tobacco usage would be associated with less emphasis placed on the value of health and the more socially-oriented values such as equality, family security, freedom, a world at peace, a world of beauty, and national security. It was also hypothesized that tobacco usage would be associated with more emphasis placed on the more personally-oriented values with more of a short term focus such as a comfortable life, an exciting life, inner harmony, pleasure,

self-respect, and social recognition. Based on the existing

literature, predicting the presence or lack of differences

between levels of tobacco use for adolescents is more

problematic. Despite the equivocal results in differentiating

various levels of use for drug users, it was hypothesized that

light and heavy users of tobacco would differ from each other on

the societally-oriented values which function to keep the

experimenters from becoming heavy users. It was also

hypothesized the light and heavy tobacco users would not differ

on the personally-oriented values which functioned to motivate

the adolescent to try tobacco in the first place.

METHOD

Participants

The participants in this study were 5128 adolescents from

31 schools in a eight county region of north central Idaho and

southeastern Washington. A total of 52.3% of the participants

were male and 47.7% were female. The majority of the

participants were Caucasian (89.5%), with 5% being Native

American Indian, and less than 6% being either Asian, Black, or

Hispanic. Seventh graders made up 12.4% of the sample, 8th

graders 21%, 9th graders 14.2%, 10th graders 16.8%, 11th graders

18%, and 12th graders 16.8%. Except for two larger schools in

the study, which selected representative courses across all

ability levels for the administration of the questionnaire, all

students present in the school on the day of the administration

were given the questionnaire to complete. Only a handful of the students present refused to participate in the survey. The number of students absent, plus those refusing to complete the questionnaire, varied between 2% and 8% of the official enrollment of each school.

Design

This study utilized a written, 12 page questionnaire which was administered as part of the needs assessment phase of a Drug Education Infusion Grant funded by the U. S. Department of Education. The questionnaires were anonymously administered to adolescents during school time in the spring of 1988. The items on the questionnaire assessed demographic information, drug use levels over the previous six months, attitudes towards drugs and their use, perception of community use levels, basic knowledge about drugs, other selected risk factors, and general values. Of particular concern for this paper are the terminal values as assessed by the Rokeach Value Survey (Form G) and the reported levels of tobacco use.

Instrumentation

The Rokeach Value Survey - Form G (RVS) requires respondents to rank 18 terminal values (end-states) according to their importance as a guiding principle in their lives. The highest value is assigned a number 1, the second highest value a number 2, and so on until the lowest value is assigned the number 18.

The adolescents indicated on a five-point scale whether over

the last 6 months they had used tobacco without a doctor's order.
Respondents completed this scale by circling never, a few times,
once a month, once a week, or once or more a day. Respondents
who indicated they had never used tobacco were assigned to the
never tried group. Respondents who indicated they had tried
tobacco either a few times, monthly or weekly were assigned to
the experimenters group. Respondents indicating they had used
daily were assigned to daily user group.

RESULTS

The composite ranks for the terminal value hierarchies were
determined for each of the three tobacco use groups using the
median rankings given by the respective group members. When the
medians for any particular pair of values were equal, the means
for the pair were consulted to derive the group hierarchies. The
terminal value hierarchies for the adolescents who never tried,
who experimented, and who used daily are presented in Table 1.

Insert Table 1 about here

Eighteen separate Kruskal-Wallis nonparametric, one-way
analysis of variance tests were completed for each terminal value
across the three groups. Eleven of the 18 terminal values
reached significance of at least the .05 level. These values,
which significantly separated the three groups, are noted in
Table 1.

Mann-Whitney U tests were performed for every possible paired comparison within the groups for each of the 11 values that had significant results using the Kruskal-Wallis test. Significant Mann-Whitney U tests are also noted in Table 1. Each pair of group composite ranks within each row of the table that are immediately followed by identical letters, are significantly different from each other at the .05 probability level.

Differences Between Tobacco Non-Users vs. Users

Adolescents who indicated they did not use tobacco during the last six months differed the occasional users on eight terminal values. Non-users placed significantly higher priorities on the terminal values of family security, a world at peace, a sense of accomplishment, and salvation as compared to the experimental users. Abstainers also placed significantly lower priorities on the values of a comfortable life, an exciting life, mature love, and pleasure than the experimenters did.

Tobacco abstainers and heavy users significantly differed from each other on nine terminal values. Heavy users held terminal value hierarchies which stressed a comfortable life, an exciting life, mature love, and pleasure more than did abstainers. The terminal value hierarchies of abstainers stressed health, family security, a world at peace, salvation, and national security more than indicated by daily users.

General support for our hypotheses regarding the differences between tobacco users and tobacco non-users was obtained.

Comparisons between the user and non-user groups for three of the six socially-oriented values reached statistical significance in the predicted direction. Four of the comparisons between the user and non-user groups for the six personally-oriented values reached statistical significance in the predicted direction. The non-users placed significantly higher value on health as compared to daily user of tobacco as predicted, but did not differ from the occasional user on the value placed on health. Thus, the value hierarchies of light and heavy tobacco users stress significantly more self-centered or personal terminal values and less society-centered values than those who never tried tobacco.

Differences In Values Across Tobacco User Levels

Adolescents indicating experimental use of during the last six months differed from daily users on five terminal values. Experimenters placed significantly higher priorities on the terminal values of health and a world at peace as compared to the daily users. Daily users placed significantly higher levels of emphasis on the values of a sense of accomplishment, mature love, and salvation than the tobacco experimenters did.

DISCUSSION

The findings of this study clearly outline strong value differences between the values held by adolescents who abstain from using tobacco and adolescents who have experimented with tobacco or adolescents who use tobacco daily. Adolescents who

use tobacco have a value structure which has a more personal orientation and which stresses more immediate (a comfortable life, an exciting life, pleasure, social recognition) and fewer long term values (a sense of accomplishment). This is very consistent with the relationships between sensation seeking needs and general drug use. Tobacco users have a value structure which places much less emphasis on values which reflect societal goals (family security, a world at peace, and national security).

The knowledge of significant value differences among adolescents across levels of tobacco usage has important implications for drug prevention programs. Changing values is possible using a self-confrontation procedure and the value changes which are triggered result in changes in related attitudes and behaviors (see Ball-Rokeach, Rokeach, and Grube, 1984 for a review).

Conroy (1979) demonstrated that by changing the priorities placed on the instrumental values of broadmindedness and self-discipline cigarette smoking behavior decreased significantly for heavy smoking adults. In the present study the strongest terminal value differences between adolescent tobacco users and non-users occurred on personally-oriented values. Drug education and prevention programs designed to keep adolescents who are tobacco non-users from becoming users should be encouraged to focus on changing these self-centered or personal values. Increasing the priority placed on family security might also

prove to be fruitful in these prevention efforts. The strongest difference between adolescent experimental tobacco users and daily users occurs on the value placed on health. Drug education programs designed to keep adolescents who are occasional users of tobacco from becoming daily users should be encouraged to focus on changing the value placed on health.

Keeping adolescent non-smokers from starting and keeping occasional smokers from becoming heavy users are worthwhile endeavors. Future value research using the self-confrontational value change procedure with the significant values identified in this study warrants careful consideration.

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Table 1

Composite Ranks for Terminal Value Hierarchies
of High School Students

Terminal Value	Tobacco Use Level		
	Never Tried (n = 3208)	Experimenter (n = 1055)	Daily User (n = 607)
HEALTH [1]	1 a	2 b	8 ab
TRUE FRIENDSHIP	2	1	3
FREEDOM	3	3	1
FAMILY SECURITY [1]	4 ab	6 a	6 b
A COMFORTABLE LIFE [1]	5 ab	4 a	2 b
SELF-RESPECT	6	7	7
A WORLD AT PEACE [1]	7 a	11 a	12 a
WISDOM	8	9	10
A SENSE OF ACCOMPLISHMENT [1]	9 a	12 ab	11 b
AN EXCITING LIFE [1]	10 ab	5 a	4 b
MATURE LOVE [1]	11 a	8 a	5 a
PLEASURE [1]	12 ab	10 a	9 b
EQUALITY	13	13	15
INNER HARMONY	14	15	14
SOCIAL RECOGNITION [1]	15 a	14 a	13
SALVATION [1]	16 a	18 a	17 a
A WORLD OF BEAUTY	17	16	16
NATIONAL SECURITY [1]	18 a	17	18 a

[1] Value significantly differentiates groups based on Kruskal-Wallis nonparametric analysis of variance.

Group composite ranks followed by identical letters are significantly different. In case of identical composite ranks the letter for the group with the highest priority is underlined.