

Locus of Control and College Students' Use of Alcohol, Cigarettes and Drugs

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Submitted: 23 Mar 2018; Accepted: 29 Mar 2018; Published: 05 Apr 2018

Abstract

Past studies have shown that an external locus of control (LOC) is associated with health-threatening behaviors, such as the use of alcohol, cigarettes and drugs. Results of research on the relationship between perceived control and substance use in high school and college students have been mixed and inconclusive. 32 male and 98 females undergraduates, ages 17-25, who volunteered (with informed consent) to take part in the study were given the Dimension (Physical, Psychological, Social, Moral) X Outcome LOC Inventory and a questionnaire assessing use of alcohol, cigarettes, drugs and demographic information. Results indicated that 84% of the participants reported use of alcohol, 22% cigarettes and 17% drugs. No differential effects were found for cigarette or drug use. There were significant positive relationships between alcohol use and Physical and Psychological LOC, especially for males. Heavier alcohol use was associated with a more external LOC. There were no significant differential effects for participants over the legal age limit. (>21) For "underage" participants, there was a significant positive relationship between alcohol use and Psychological LOC. Demographically, a higher Economic level was associated with heavier alcohol use for males, females and underage participants. For participants >21, a strong religious belief was associated with less use of alcohol. Past inconsistent findings can be attributed to differences in substance in question, gender, demographics (age, economic level and strength of religious belief) and the measure and dimension of perceived control.

Keywords: Alcohol, Cigarette and drug use, Locus of Control, College-age participants

According to past research, perceived control of event outcomes (LOC), quantified on a unidimensional Internal-External continuum is associated with physical and mental well-being. Perception of being in control ("internal") leads to favorable results, such as greater ego strength, less prone to mental health problems and better therapy outcomes; perception of lack of control ("external") results in less favorable outcomes, such as anxiety and depression [1]. People with an "internal" LOC believe they are in control of life's events, while people with an "external" LOC believe that fate or others determine their lives. Findings that LOC is significantly related to, or is a predictor of, behavior must be tempered with the understanding as to how LOC was measured. Scales that purport to examine LOC fail to take into account that an individual may perceive expectancies differently, dependent upon dimension (Physical, Psychological, Social or Moral) and outcome (Positive or Negative). Leventhal and DeMarco developed a multidimensional LOC Inventory which took these factors into account and found differential results for personality, anxiety and depression, and alcohol abuse [2-5].

Past studies have investigated the relationship between alcohol,

cigarette and drug use and LOC. Most have shown that an external LOC was associated with these health-threatening behaviors. It has been suggested that people who perceive that they have control over their lives have a higher sense of self-worth and therefore avoid harmful risks. Those who perceive that their lives are beyond their control, are more apt to engage in risky behavior, abuse substances and are strongly affected by peer or social pressure [6-12]. Results of research on the relationship between perceived control and substance use in high school and college students have been mixed and inconclusive. Most studies on this population have shown that poor impulse control was associated with risk for alcohol, tobacco and illegal drug use [13]. However Webster, et al. found no association between LOC and alcohol use [11]. Some studies have found that students with an external LOC consume alcohol more, while other studies indicated that students who reported heavier wine consumption were associated with an internal LOC [14,15]. It has been suggested, that mixed results may be due to gender. Cox and Baker, who investigated the relationship between LOC and quantity and frequency of male and female undergraduates' beer, wine and liquor consumption found that male students who reported heavier wine consumption were significantly associated with an internal locus of control, while females were associated with an external locus of control [16]. In their review of 22 studies, Archer and

Waterman found no gender differences in LOC in 15 studies, six studies where boys were more internal and one study where girls were more internal [17].

In terms of smoking and the use of drugs, studies have shown that adolescents who feel little personal control over their lives, (more external LOC) were more likely to smoke [11, 18-20]. However, Cox and Luhrs found this to be true only for male students. While male marijuana and hashish users have been associated with an internal LOC, external boys were found to try illicit drugs more often than did girls [21,22].

Contradictory findings have been attributed to differences in the substance in question, gender, culture and the measure of perceived control. Surgenor, et.al. has suggested using a multidimensional measure of LOC to examine the relationship of perceived control in different domains (body, mind, relationships, self, etc.) to alcohol (ab) use [23]. The present study investigated the relationship between LOC, as measured by a Dimension x Outcome Inventory and alcohol, cigarette and drug use by 32 male and 98 female college students, ages 17-25.

Method
Participants

130 undergraduates (32 males, 98 females), age 17-25 (M = 19.41, SD = 1.58), who volunteered (with informed consent) to take part in the study. Twenty-eight participants were 21 yrs or older, while 102 participants were under 21 (i.e. legally underage).

Measure

Dimension X Outcome LOC Inventory: Fifty six statements, half with positive, half with negative Outcomes, relating to the Physical, Psychological, Social and Moral Self, randomly presented within the Inventory [2]. Participants were instructed to read the statements, and rate each from 1-7, from (1) strongly disagree to (7) strongly

agree. For half the items, a rating of (1) indicated more “Internal”; for half, a rating of (1) indicated more “External. After completing the LOC inventory, they were given a questionnaire assessing use of alcohol, cigarettes and drugs: ((1) Never, (2) Rarely, (3) Sometimes, (4) Often) and demographic information: (sex, age, race, religion, religious beliefs, socio-economic class and parental discipline).

Results

In the sample, 84% of the participants reported use of alcohol, 22% cigarettes and 17% drugs. No significant differential effects were found for cigarette or drug use.

A two factor repeated measures ANOVA (Dimension X Outcome) indicated a significant Dimension {F(3,381) = 48.64, p<.001} and Outcome {F(1,127) = 93.70, p<.001} effect and a significant Dimension X Outcome interaction {F(3,381) = 39.60, p<.001}. Locus of Control is not a unitary construct. It is dependent on the nature of the dimension of the self involved (Physical, Psychological, Social and/or Moral) and the potential outcome of the event (Positive or Negative).

A four factor ANOVA (Alcohol X Sex X Dimension X Outcome), with repeated measures on two factors, indicated a significant effect of Alcohol {F(3,120) = 3.72, p< .02} (Table 1) and a significant Alcohol X Dimension interaction {F(9,360) = 2.62, p<.006}. There were significant positive relationships between Alcohol and Physical {r(127) = .18, p<.05} and Psychological LOC {r(128) = .25, p<.005}. For Males: A two factor ANOVA (Alcohol X Dimension), with repeated measures on one factor, found a significant Alcohol effect {F(3,27) = 3.69, p<.03} (Table 1). There were significant positive relationships between Alcohol and Physical {r(29) = .36, p<.05} and Psychological LOC {r(30) = .64, p< .001}. For Females: A two factor ANOVA (Alcohol X Dimension), with repeated measures on one factor, found a significant Alcohol X Dimension interaction {F(9,279) = 2.35, p<.02} (Figures 1-4).

Table 1: ALCOHOL LOC Means(SDs)

	MALE	FEMALE	> 21	< 21	
	Mean(SD)	Mean(SD)	Mean(SD)	Mean(SD)	Mean(SD)
NEVER	3.53(.04)	3.84(.07)	3.75(.22)	3.77(.06)	3.69(.07)
RARELY	3.49(.16)	3.64(.06)	3.78(.09)	3.58(.06)	3.56(.08)
SOMETIMES	3.72(.07)	3.70(.04)	3.82(.05)	3.66(.05)	3.71(.04)
OFTEN	3.97(.10)	3.80(.07)	3.88(.11)	3.85(.06)	3.88(.06)

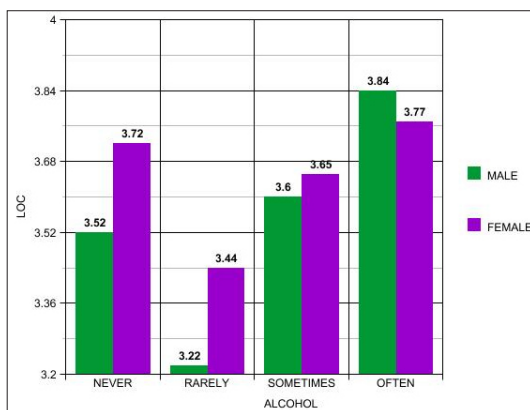


Figure 1: Physical locus of control for males and females by alcohol use

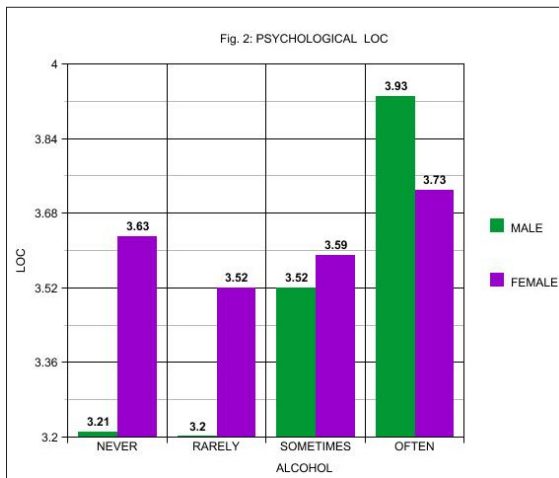


Figure 2: Psychological locus of control for males and females by alcohol use.

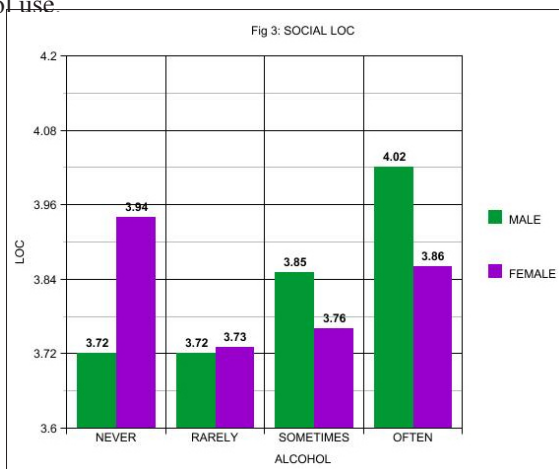


Figure 3: Social locus of control for males and females by alcohol use.

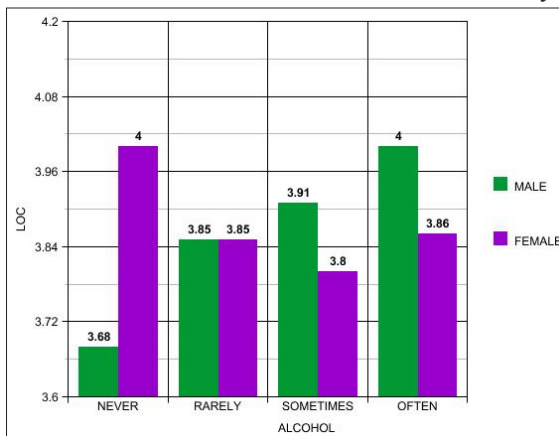


Figure 4: Moral locus of control for males and females by alcohol use.

There were no significant differential effects or relationships for participants over the “legal age” of 21. However, a two factor ANOVA (Alcohol X Dimension), with repeated measures on one factor, found a significant Alcohol effect $\{F(3,96) = 3.84, p<.02\}$

(Table 1) and a significant Alcohol X Dimension interaction $\{F(9,288) = 3.22, p<.001\}$ for those participants under age 21. There was also a significant positive relationship between Alcohol and Psychological LOC $\{r(100) = .25, p<.01\}$.

Demographics

There were significant positive relationships between Economic level and Psychological LOC $\{r(128) = .20, p<.03\}$ and Alcohol $\{r(128) = .27, p<.03\}$; and between Religious Belief and Physical LOC $\{r(127) = .19, p<.04\}$. For Males, there were significant positive relationships between Economic level and Alcohol $\{r(30) = .40, p<.03\}$, Physical $\{r(29) = .45, p<.01\}$, Psychological $\{r(30) = .40, p<.03\}$, and Social LOC $\{r(30) = .41, p<.03\}$; and between Religious Belief and Social $\{r(30) = .39, p<.03\}$ and Moral LOC $\{r(30) = .37, p<.04\}$. For Females, there was a significant positive relationship between Economic level and Alcohol $\{r(96) = .21, p<.04\}$. For participants >21, there were significant negative relationships between Religious Belief and Alcohol $\{r(26) = -.48, p<.01\}$; and between Parental Discipline and Physical $\{r(26) = -.40, p<.04\}$, Psychological $\{r(26) = -.45, p<.02\}$, Social $\{r(26) = -.42, p<.03\}$; and Moral LOC $\{r(26) = -.42, p<.03\}$. For participants <21, there were significant positive relationships between Economic level and Alcohol $\{r(100) = .29, p<.003\}$, Physical $\{r(99) = .21, p<.04\}$ and Psychological LOC $\{r(100) = .24, p<.02\}$; between Religious Belief and Physical LOC $\{r(99) = .26, p<.01\}$; and between Parental Discipline and Physical $\{r(99) = .24, p<.02\}$ and Psychological LOC $\{r(100) = .21, p<.04\}$.

Discussion

Past inconsistent findings of the relationship between alcohol, cigarette and drug use and Locus of Control can be attributed to differences in the substance in question, gender, demographics and the measure and dimension of perceived control. That no significant effects or correlations were found for cigarette or drug use may be due to the small number of participants who reported use of cigarettes (22%) or drugs (17%).

Overall, participants had a more internal LOC for Physical and Psychological items than for Social and Moral Items. The Physical and Psychological Dimensions are more self-related. i.e. more under the direct control of the participant. The Social and Moral Dimensions are necessarily tied to others, i.e. other people or a higher authority. Findings are consistent with studies that suggest that when the potential to control a situation is high, as for those situations involving the physical and psychological self, an individual will have a more internal locus of control [1].

Differential LOC effects for participants using alcohol occurred mainly for Physical and Psychological items. On the Physical and Psychological dimensions, participants who reported greater use of alcohol had a more external LOC. Males who used alcohol less often were more internal than females, while males who drank more often were more external than females. The Psychological LOC for females was consistent across the drinking continuum. On the dimensions that are more “other” related (Social and Moral), male and female LOC were consistent across the drinking continuum, with males more external than females. Thus it would appear that Alcohol use was more of a mediator variable for measures of LOC of behavior under the direct control of the person.

Demographically, males, females and participants below the legal drinking age, who came from a higher economic level drank more

often. For participants over 21, there were significant negative relationships between Religious Belief and Alcohol. Those with a stronger religious belief drank less often.

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