

Social Cognitive Predictors of Alcohol Related Disease Perception Among Students at a Faith Based University

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ABSTRACT

Alcohol-related diseases (ARDs) remain a significant public health concern among young adults, particularly university students who are navigating developmental transitions, social pressures, and identity formation. Faith-based universities present a unique context in which religious values, institutional norms, and psychosocial factors interact to shape alcohol-related perceptions and behaviors. Guided by Social Cognitive Theory (SCT), this study examined predictors of ARD perception among students at a faith-based university. A cross-sectional survey of 391 students assessed SCT constructs and ARD perception. Logistic regression revealed that knowledge (OR = 3.12, 95% CI 1.87-5.21), self-efficacy (OR = 2.67, 95% CI 1.34-5.31), outcome expectations (OR = 2.41, 95% CI 1.34-4.32), and goal setting (OR = 2.05, 95% CI 1.22-3.45) significantly predicted ARD perception. Observational learning showed a modest, non-significant association (OR = 1.58, $p = .08$). Peer pressure and social gatherings also emerged as influential socio-structural factors. Findings highlight the need for culturally sensitive, faith-integrated prevention strategies that strengthen health literacy, refusal skills, and goal formation. SCT-aligned interventions may enhance how young adults make alcohol-related decisions in faith-based settings.

Keywords: Alcohol consumption, Psychosocial Behavior, Health Knowledge, Disease Perceptions, Public Health.

INTRODUCTION

Alcohol-related diseases (ARDs) constitute a major global health burden, contributing to more than 3 million deaths annually and accounting for approximately 5% of global mortality (World Health Organization, 2020). In the United States, excessive alcohol use results in more than 178,000 deaths each year and imposes an economic burden exceeding \$249 billion due to healthcare expenditures, lost productivity, and law-enforcement costs (Centers for Disease Control and Prevention, 2023). Young adults, particularly university students, represent a population at heightened risk for alcohol misuse due to developmental transitions, increased autonomy, and exposure to peer influence (Rehm et al., 2020). Nearly half of full-time college students report alcohol use within the past month, and more than one-quarter engage in binge drinking, behaviors associated with academic decline, interpersonal violence, risky sexual behavior, and long-term health consequences such as liver disease, cardiovascular complications, and mental health disorders (National Institute on Alcohol Abuse and Alcoholism, 2023; Tapper & Parikh, 2020).

Although alcohol use among college students has been widely studied, faith-based universities represent a unique and understudied environment. These institutions often enforce strict behavioral codes prohibiting alcohol consumption, grounded in religious doctrine and moral expectations. Such environments may reduce opportunities for alcohol use, yet they do not eliminate exposure to peer influence, social gatherings, or off-campus environments where alcohol is accessible (Barry & Jackson, 2020). Research reveals that religiosity may serve as a protective factor against alcohol misuse, though its effect varies with the degree of belief internalization, the strength of institutional communication, and the broader social context (Kim-Spoon &

Farley, 2021). Students may experience tension between institutional expectations and social realities, creating a paradox in which alcohol use persists despite moral and behavioral prohibitions.

Understanding alcohol-related perceptions within faith-based settings is essential because perceptions of disease severity strongly influence health behaviors. Students who perceive ARDs as severe are more likely to avoid risky drinking behaviors, engage in protective strategies, and support prevention initiatives. However, perceptions are shaped by multiple psychosocial determinants, including knowledge, self-efficacy, outcome expectations, and environmental influences.

Social Cognitive Theory (SCT) provides a comprehensive framework for examining these determinants. SCT posits that behavior results from dynamic interactions among personal factors, environmental influences, and behavioral patterns (Bandura, 2021). Key constructs such as knowledge, self-efficacy, outcome expectations, goal formation, observational learning, and sociostructural factors have been shown to predict substance-related behaviors among adolescents and young adults (Merrill & Carey, 2020; Kuntsche & Kuntsche, 2020). Knowledge enhances risk appraisal; self-efficacy strengthens refusal skills; outcome expectations shape motivation; goal formation supports self-regulation; and sociostructural factors influence opportunities and constraints.

Despite the relevance of SCT, limited research has applied this framework within faith-based educational settings. Most studies on college drinking focus on secular institutions, where alcohol use is more visible and socially accepted. Faith-based environments may alter the salience of SCT constructs. For example, observational learning may be reduced due to fewer visible drinking behaviors, while outcome expectations may be shaped by moral teachings rather than personal experience. Understanding how SCT constructs operate in such contexts is critical for designing culturally sensitive, faith-integrated prevention strategies.

This study addresses this gap by examining SCT predictors of ARD perception among students at a faith-based university.

METHODS

Measured Variables

A structured questionnaire was developed based on core constructs of Social Cognitive Theory (SCT) and adapted from previously validated instruments used in alcohol-related research (Jones & Gordon, 2020). The primary outcome variable was students' perception of alcohol-related diseases (ARDs), assessed using a binary measure indicating whether participants viewed ARDs as life-threatening. Predictor variables reflected key SCT domains. Knowledge of ARDs captured students' awareness of alcohol-associated health risks, including chronic diseases and physiological consequences. Self-efficacy assessed students' confidence in their ability to refuse alcohol in social situations. Outcome expectations measured beliefs about the anticipated physical, social, and emotional consequences of drinking or abstaining from alcohol use. Goal setting evaluated students' personal intentions and behavioral plans regarding alcohol use. Socio-structural factors encompassed environmental influences such as peer pressure, social gatherings, and perceived institutional norms surrounding alcohol. Observational learning assessed the extent to which students were exposed to or influenced by others' alcohol-related behaviors. Demographic covariates included age, gender, race/ethnicity, year of study, and religious affiliation, all of which were controlled for in multivariable analyses.

Data Collection and Ethical Approval

Data were collected electronically over four weeks using a secure, university-supported survey platform. All study procedures, including recruitment and informed consent, were reviewed and approved by the university's Institutional Review Board. Participation in the study was anonymous and confidentiality was maintained.

Statistical Analysis

Descriptive statistics summarized participant characteristics. Binary logistic regression assessed predictors of ARD perception, adjusting for demographic covariates. Odds ratios (ORs), 95% confidence intervals (CIs), and p-values were reported.

RESULTS

Table 1. Demographic Characteristics of Participants (N = 391)

Demographics	Response Category	n	%	95% CI
Age group	18-20	277	70.84	66.15 - 75.13
	21-23	87	22.25	18.29 - 26.71
	24-26	7	1.79	0.87 - 3.57
	27-29	8	2.05	1.00 - 3.99
	30+	12	3.07	1.69 - 5.30
Gender	Female	178	45.52	40.66 - 50.48
	Male	212	54.22	49.52 - 59.34
	Prefer not to say	1	0.26	0.01- 1.44
Race/Ethnicity	White	315	80.56	76.10 - 84.00
	Black/African American	34	8.70	6.10 - 0.1210
	Asian	19	4.86	3.00 - 7.50
	Other	16	4.09	2.40 - 6.60
	American Indian/Alaska Native	5	1.28	0.46 - 3.05
	Native Hawaiian/Pacific Islander	2	0.51	0.14 - 1.85
Mode of study	Online	14	3.58	2.09 - 5.97
	Residential	377	96.42	94.03 - 97.91
Year of study	Freshman	125	31.97	27.54 - 36.75
	Sophomore	83	21.23	17.40 - 25.70
	Junior	79	20.20	16.40 - 24.60
	Senior	75	19.18	15.50 - 23.60
	Graduate	29	7.42	5.00 - 10.60

Percentages represent the proportion of respondents within each demographic category. Confidence intervals (95% CI) were calculated using binomial estimates to reflect the precision of each proportion. Most participants were aged 18-20 years, predominantly White, and primarily residential students.

Perception of ARDs As Life Threatening Among Study Participants Aged 18 and Older

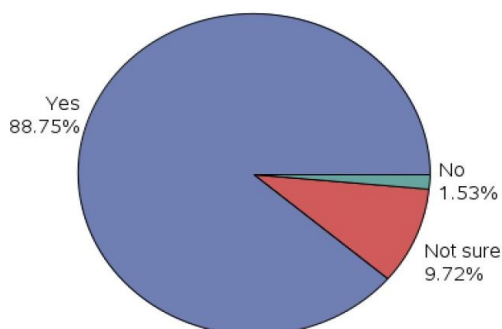


Figure 1. Perception of ARDs as Life-Threatening. Nearly 89% of the participants perceived ARDs as life-threatening.

Table 2: Social Cognitive Theory Constructs and Perception of Alcohol Related Diseases

SCT Construct	OR	95% CI	p-Value
Knowledge	3.12	1.87-5.21	<.001
Self-Efficacy	2.67	1.34-5.31	.004
Outcome Expectations	2.41	1.34-4.32	.004
Goal Formation	2.05	1.22-3.45	.007
Observational Learning	1.58	0.95-2.63	.080
Socio-Structural Factors	1.32	0.84-2.07	.210
Circumstantial Influences			
Peer pressure	2.41	1.34-4.32	.004
Social gathering	2.5	1.22-3.45	.007

Odds ratios (OR) and 95% confidence intervals (CI) were obtained from binary logistic regression models assessing how Social Cognitive Theory (SCT) constructs predict the perception of alcohol-related diseases as severe. Statistical significance was defined as $p < .05$. Circumstantial influences (peer pressure and social gatherings) were analyzed as contextual subcomponents of socio-structural factors.

DISCUSSION

The demographic distribution of the study sample provides essential context for interpreting predictors of alcohol-related disease (ARD) perception within a faith-based university environment. Most participants were between 18 and 20 years old (70.84%), representing traditional-aged college students who are developmentally susceptible to peer influence, identity exploration, and social experimentation (Schulenberg & Patrick, 2021). This developmental stage is strongly associated with increased risk-taking behaviors, including alcohol use, even in environments where institutional norms discourage such behaviors (National Institute on Alcohol Abuse and Alcoholism, 2023; Tapper & Parikh, 2020). The gender distribution was relatively balanced, with slightly more males (54.22%) than females (45.52%). Prior research suggests females often report greater awareness of health

risks and stronger protective attitudes toward alcohol-related harms (White & Hingson, 2020), which may partially explain the high proportion of students perceiving ARDs as life-threatening.

The racial and ethnic composition was predominantly White (80.56%), reflecting the demographic profile of many faith-based institutions, where cultural norms surrounding alcohol use and conformity to institutional expectations may differ from more diverse or secular campuses (Barry & Jackson, 2020; Lee et al., 2022). Nearly all participants were residential students (96.42%), indicating strong exposure to institutional norms and religious expectations. Freshmen constituted the largest group (31.97%), suggesting many respondents were early in their college experience a period when attitudes toward alcohol are still forming and may be particularly sensitive to peer dynamics (Kuntsche & Kuntsche, 2020). Collectively, these demographic characteristics highlight a student population positioned to be influenced by both SCT constructs and the unique moral environment of a faith-based university.

The findings demonstrate that Social Cognitive Theory (SCT) constructs significantly predict students' perceptions of ARD severity, reinforcing SCT's utility for understanding alcohol-related cognition among young adults (Bandura, 2021; Hagger & Hamilton, 2020). Knowledge emerged as the strongest predictor of ARD perception, consistent with evidence that health literacy enhances risk appraisal and motivates protective behavior (Jones & Gordon, 2020; White & Hingson, 2020). Students with greater awareness of alcohol-related health risks were substantially more likely to perceive ARDs as life-threatening. However, knowledge alone does not guarantee behavioral change. Knowledge-based interventions often increase awareness without reducing alcohol consumption (Patrick & Terry-McElrath, 2021), suggesting that knowledge must be paired with motivational and environmental strategies. In faith-based institutions, high knowledge levels may reflect curricular emphasis or institutional messaging rather than personal experience with alcohol-related harms.

Self-efficacy was another significant predictor, aligning with literature demonstrating that confidence in resisting alcohol use is associated with lower consumption and reduced engagement in risky behaviors (Oei & Morawska, 2020; Kadden & Litt, 2020). Students who believed they could refuse alcohol were more likely to perceive ARDs as severe. However, directionality remains uncertain; students who already view ARDs as serious may develop stronger refusal confidence. Additionally, self-efficacy may be artificially elevated in faith-based environments where abstinence is socially reinforced and alcohol use is stigmatized (Lee et al., 2022). This raises questions about whether self-efficacy reflects genuine behavioral capability or conformity to institutional expectations.

Outcome expectations significantly predicted ARD perception, supporting SCT's assertion that anticipated consequences shape motivation and behavior (Lopez-Vergara et al., 2022). Students who expected negative outcomes from alcohol use were more likely to perceive ARDs as severe. However, negative expectancies may be influenced by institutional regulation emphasizing abstinence and moral responsibility. In contrast, research in secular institutions shows that positive expectancies, such as social bonding and stress relief, strongly motivate drinking (Patrick et al., 2023). Their relative absence here suggests possible social desirability bias or suppression of culturally disapproved attitudes.

Goal formation also significantly predicted ARD perception, aligning with SCT's emphasis on intentionality and self-regulation (Voogt et al., 2021). Students with clear behavioral intentions regarding alcohol use were more attuned to ARD severity. However, intentions may not translate into behavior when environmental pressures conflict with personal goals. Peer norms remain powerful determinants of drinking behavior, even in faith-based settings (Borsari & Carey, 2020; Rhew et al., 2022). The influence of peer pressure and social gatherings suggests that even students with strong intentions to avoid alcohol may struggle in socially charged environments.

Observational learning demonstrated a modest, nonsignificant association with ARD perception. This contrasts with findings from secular institutions, where observational learning strongly predicts alcohol use and risk perception (Merrill & Carey, 2020). The weaker association likely reflects reduced visibility of drinking behaviors in faith-based environments, where alcohol use is discouraged and often occurs off-campus or in private settings (Lee et al., 2022). Limited exposure to peers engaging in alcohol use may reduce opportunities for modeling and weaken observational learning's influence on risk perception.

Sociostructural factors, particularly peer pressure and social gatherings, were influential predictors of ARD perception. Peer pressure strongly predicted perceived severity, consistent with literature showing peer environments as powerful determinants of alcohol use (Borsari & Carey, 2020; Rhew et al., 2022). Social gatherings also significantly predicted ARD perception, suggesting that students frequently encountering alcohol-related social contexts may develop heightened awareness of associated risks (Rinker et al., 2024). These findings challenge assumptions that moral communities inherently protect against alcohol-related risk and highlight the need for environmental-level interventions such as peer-led programs and social norm campaigns.

This study's strengths include its large sample size, comprehensive application of SCT constructs, and focus on an understudied population. Limitations include the cross-sectional design, reliance on self-reported data, demographic homogeneity, and lack of behavioral measures. Despite these limitations, the findings underscore the importance of health literacy initiatives, skill-building programs, and faith-integrated prevention strategies that align cognitive, behavioral, and environmental components to reduce alcohol-related harms.

Authors' Contributions

O.E.O. conceptualized the study, designed the methodology, conducted data collection, performed statistical analysis, and drafted the initial manuscript. P.W.O. supervised the study, provided methodological guidance, and contributed to the interpretation of findings. E.N.C. and F.A.O. reviewed the analysis, contributed to the discussion and critical revisions, and ensured alignment with public health frameworks. All authors reviewed and approved the final manuscript.

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Competing Interests

The authors declare no competing interests.

Ethics Approval

This study was reviewed and approved by the Institutional Review Board of Liberty University. All participants provided informed consent before participation.

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