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Black First-Year College Students' Alcohol Outcome Expectancies

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Abstract

Background: Alcohol outcome expectancies (AOEs) are associated with college students' varied alcohol consumption. Existing research on AOEs focuses primarily on heterosexual White students. Thus, it is important to explore how the intersection of multiple identities such as race, gender, and sexual orientation influence the endorsement of specific AOEs.

Purpose: This paper examines AOEs among Black first-year college students, with specific attention to the influence of gender and sexual orientation.

Methods: Participants were 307 Black students from four universities in the United States. We conducted bivariate analyses using the 2-factor and 4-factor B-CEOA scale.

Results: Most students did not hold positive AOEs such as tension reduction and sexual enhancement. They were more likely to endorse negative AOEs such as behavioral and cognitive impairment and social risk.

Discussion: Black first-year college students reported more negative expectations associated with alcohol use, including those related to negative social risks and consequences. Thus, AOEs may serve as a protective factor against alcohol use among Black college students.

Translation to Health Education Practice: Alcohol interventions should be tailored to focus on the intersection of race, gender, and sexual orientation. Culturally relevant alcohol interventions have the potential to reduce the immediate and long-term consequences of alcohol use.

Keywords

alcohol outcome expectancies; alcohol use; Black college students; interventions

BACKGROUND

The transition from high school to college has been recognized as a period of time when students experience more freedom and take greater risks, including increased alcohol

consumption.^{1,2} The National Institute on Alcohol Abuse and Alcoholism identified firstyear college students as a risk group for heavy episodic drinking (i.e., 4 drinks for females and 5 drinks for males on the same occasion) compared to the general college population.³ On average more than 42% of first-year college students reported one or more episodes of heavy episodic drinking in the past month. 4-6 Heavy episodic drinking in college can lead to a variety of preventable negative health outcomes, including: alcohol poisoning, interpersonal violence, sexually transmitted infections (STIs), car accidents, and alcohol dependency into adulthood.^{7,8} There are a variety of reasons postulated for students' motivations to drink alcohol including social environments, descriptive and injunctive norms, and alcohol outcome expectancies (AOEs). 9,10 AOEs are formulated by students' direct and indirect experiences with alcohol. 11 An individual's expectation about the positive and negative effects of alcohol helps determine the likelihood, amount, and frequency of consuming alcohol. ^{12,13} Positive AOEs, such as tension reduction, disinhibition, social assertiveness, and sexual enhancement, have been linked to increases in alcohol use during the first year of college. ^{4,14} AOEs are regarded as the strongest predictor of alcohol use during the first year of college. 4,14 However, negative AOEs have the potential to serve as protective factors against alcohol consumption and lead to lower rates of alcohol use.

Black college students' AOEs

Heavy episodic drinking patterns vary by student demographics (e.g., race, gender, sexual orientation). ^{10,15} Heavy episodic drinking is influenced by a system of culture and beliefs that may affect Black and White college students differently. ^{16–18} For instance, Black college students are more likely to abstain from alcohol consumption, have longer periods of non-drinking, and are less likely less likely to participate in heavy episodic drinking. ^{19,20} Black college students' drinking behaviors are likely affected by having fewer friends who engage in heavy episodic drinking and perceptions that drinking occurs in spaces occupied primarily by White students (e.g. fraternity parties or bars), both serving as protective factors. ^{19,21} Black college students avoid drinking in spaces where they will potentially encounter racism by intoxicated White students. ²² Further, Black college students may refrain from drinking due to the intersecting double standards of race and gender. ¹⁹ For instance, Black college men's negative description of women who participate in heavy episodic drinking may prevent Black women from drinking heavily. ¹⁹ In these cases Black students may be more likely to endorse negative AOEs than positive ones. ²³

Overall 64% of first-year college students' hookups involved alcohol consumption.²⁴ Black college students are less likely to hookup than their White counterparts,²⁵ thus underscoring the importance of understanding Black college students' AOEs specific to sexual behaviors and perceptions of intimacy. This understanding is particularly crucial given the link between alcohol use and sexual risk behaviors, which can result in negative sexual health outcomes (e.g., sexually transmitted infections, HIV, unintended pregnancies).²⁶ One study focused solely on sex-related AOEs, found Black women believed that alcohol: increased their pleasure, intensified their desire to give pleasure to their sexual partner, increased participation in a wider variety of sexual behaviors, including those they may not engage in while sober (e.g., condomless sex, having sex with a partner they usually would not have sex with, and having a one-night stand), and reduced the guilt of engaging in casual sex.²⁷ Thus,

Black college women might expect that consuming alcohol will enhance their sexual experiences, yet this may come at the expense of increased exposure to the potential negative consequences associated with alcohol consumption, such as increased STI transmission. Given the current sexual health disparities among Black college students, including higher rates of STIs, ²⁸ further work is needed to understand the role of AOEs on their health outcomes.

Intersecting identities and alcohol use

The utilization of an intersectional framework to understand AOEs and subsequent alcohol consumption among Black college students is critical for examining the complex social realities of this population. Intersectionality refers to the interconnected nature of social categories such as race, gender, and sexual identity of an individual with attention to the corresponding systems of oppression and disadvantage. ^{29,30} Thus, an intersectional framework allows for exploring the compounding effects of race, gender, and sexual identity that may affect alcohol consumption. 31,32 Research has shown that Black college students tend to drink to cope (drinking to reduce stress and negative affect)^{33–35} which rapidly escalates during the transition from adolescence to young adulthood and can lead to excessive alcohol use and alcohol-related problems into adulthood. ³⁶ Sexual orientation further complicates the alcohol behaviors of college students. Sexual minority students tend to drink more than heterosexual students, ^{37,38} thus their expectancies for alcohol consumption require further exploration. This is particularly relevant for multi-marginalized students, like Black sexual minority college students, who have higher rates of STIs than their White counterparts. ²⁸ Examination of the intersection of race, gender, and sexual orientation may be useful in understanding how AOEs operate to facilitate or challenge alcohol use among Black first-year college students to inform relevant interventions.

Despite the potential negative sexual health outcomes associated with alcohol consumption prior to sex ^{24,39,40} and Black populations higher rates of STIs and HIV,²⁸ limited research has focused on Black college students' AOEs. Understanding the AOEs of Black college students is useful informing culturally relevant programming. Interventions focused on both alcohol and sexual health present the opportunity to reduce sexual health disparities, reduce alcohol consumption, and mitigate the longer term effects of use (e.g., cancers and cirrhosis). Since alcohol use and heavy episodic drinking are not as prevalent for Black college students, ^{16–18,41} there is a need to understand what protective factors are associated with these differences including AOES. Addressing alcohol expectancies can help recorrect the miguided positive expectancies for alcohol use, reframe the negative expectancies as an opportunity to reduce alcohol use, and provide suggestions on alcohol-free activities that elicit similar positive expectancies.

PURPOSE

The purpose of this analysis was to examine the AOEs of Black first-year college students by specifically examining three questions:

1. What AOEs are endorsed by Black first-year college students?

2. Do AOEs differ by engagement in individual behaviors such as alcohol use, hookups, and sexual behaviors?

3. Is there an association between AOEs and alcohol use?

METHODS

Participants

This analysis included baseline data from the first optimization trial of the larger *itMatters* online STI and alcohol prevention intervention study that included 3,551 first-year students from four universities across the United States. For more detailed information about the intervention and procedures see Kugler et al. ⁹ The sample for this analysis was limited to students who identified as Black (N=317). Students who identified as transgender and "other" (n=2) were removed as their sample size was too small for analysis. Eight additional students were removed because they were not first-year students, resulting in a final analytic sample of 307 participants. Notably, these data were collected from students prior to exposure to the *itMatters* intervention. All procedures were approved by the University of North Carolina at Greensboro Institutional Review Board.

Procedures

Baseline data were collected in 2017 from first-year students across four geographically diverse four-year universities, three of which were predominantly white institutions (PWIs) and one minority serving institution. Following consent, the online baseline survey took approximately 10–15 minutes for students to complete. Upon completion of the survey, students received a \$5 gift card.

Measures

Demographics.—Participants were asked to report their gender (male, female, transgender, or other), their age, and their sexual orientation (heterosexual, bisexual, lesbian/gay, or other). For the purpose of the present analysis, sexual orientation was dichotomized as heterosexual (1) or sexual minority (0).

Lifetime Alcohol Use.—Participants were asked to report how often they used alcohol in the past 30 days. Answers were coded as: I have never used alcohol (0), I have used alcohol but not in the past 30 days (1), and I have used alcohol in the past 30 days (2). For the present analysis, a dichotomous "lifetime alcohol use" variable was created by combining those who had ever consumed alcohol into one group. A "30 day alcohol use" dichotomized variable was also created. To identify recent heavy episodic drinkers, participants were asked to report how many times in the past two weeks they consumed four (females) or five (males) or more drinks in a row within the last two weeks. Anyone who said one or more times was considered to have participated in recent heavy episodic drinking.

Alcohol Outcome Expectancies.—Positive and negative AOEs were assessed using the 15-item Brief Comprehensive Effects on Alcohol questionnaire (B-CEOA; α =.81), comprised of four subscales: *risk and sociability* (7 items; α =.74), *cognitive and behavioral impairment* (4 items; α =.71), *sexuality* (2 items; α =.74), and *tension reduction* (2 items;

 α =.76). ^{42,43} Negative expectations about the effects of alcohol use include *cognitive and behavioral impairment* (e.g., I would feel clumsy, I would feel dizzy). Positive expectations about the effects of alcohol use include items in *sexuality* (e.g. I would enjoy sex more), *tension reduction* (e.g., I would feel calm), and enhanced *sociability* (e.g., I would feel braving and daring and I would act sociable). Response options ranged on a 4-point Likert scale from disagree (1) to agree (4). Mean scores were computed for each subscale. Since some subscales contain both positive and negative expectancies (i.e., risk and sociability), we followed existing analytic procedure ^{43–45} and also created a 2-factor B-CEOA divided into positive (8 items; α =.82) and negative expectancies (7 items; α =.78) that has been used previously in other studies.

Sexual Behaviors.—Participants were asked to report the number of times they had oral, anal, or vaginal sex in the past 30 days. Answers were coded as: I have never had sex (1), I have had sex but not in the past 30 days (2), and I have had sex one or more times in the past 30 days (3). In the present analysis, a lifetime sexual behavior variable was dichotomized into those who reported ever having sex versus those who have not.

Hookups.—Participants were asked how many times they engaged in a hookup in the past 30 days. A hook up was defined for participants as non-penetrative (kissing, touching, oral sex) and/or penetrative (vaginal, anal) behaviors with someone with whom you are not in a committed relationship (friends with benefits) or with someone you just met (one night stand). Answers were coded as: I have never had a hookup (1), I have had a hookup but not in the past 30 days (2), and I have had one or more hookups in the past 30 days (3). For the present analysis, a lifetime hookup variable was dichotomized into those who reported ever having a hookup versus those who have not.

Analytic Plan

Descriptive statistics on sociodemographic variables were conducted and mean differences in AOEs by gender, sexual orientation, lifetime alcohol use, and sexual and hookup behaviors were analyzed through t-test and chi-square tests. In this analysis, we tested AOEs using both the 4-factor and 2-factor scale (as described above). Differences in AOEs mean scores for sexual behavior and hookup participation were only analyzed using the *sexuality* subscale because it was the only scale that included expectancies on how alcohol would affect sexual experiences. A binary logistic regression was conducted to examine the relationship between AOEs and lifetime and 30 day alcohol use. Analyses were conducted using SPSS version 26.

RESULTS

Demographics and behaviors.

The majority of the sample identified as heterosexual (n=280, 92.1%), female (n=214; 69.7%), were 18 years old (n=217, 88.3%), and attended a PWI (n=288; 93.8%.). Many participants had engaged in anal, oral, or vaginal sex in the last 30 days (n=139; 46.6%). Notably, 113 (36.8%) participants had sex but not in the last 30 days and 46 (15.4%) had never had sex. Overall, 133 (43.3%) participants had never consumed alcohol, 98 (31.9%)

participants had consumed alcohol but not in the last 30 days, and 70 (23.3%) consumed in the last 30 days. Only 23 (7.6%) of students reported participation in heavy epiosidic drinking in the last two weeks. The majority of students (n=194; 63.2%) reported no experience with a hookup, (n=61, 20.5%) reported having had a hookup in the last 30 days, and 7 (2.9%) reported having a hookup under the influence of alcohol. Demographic characteristics and behaviors are summarized in Table 1 by gender and sexual orientation.

AOEs.

Mean scores were calculated for all of the alcohol outcome expectancies subscales (range 1–4). For the 4-factor scale: a mean score of 2.53 (SD=.70) was calculated for the *risk and sociability* subscale, 2.72 (SD=.74) for the *cognitive and behavioral impairment* subscale, 1.86 (SD=.88) on the *sexuality subscale*, and 2.28 (SD=.88) on the *tension reduction* subscale. Additionally, mean scores were calculated for the 2-factor scale; mean scores were 2.31 (SD=.68) for *positive expectancies* and 2.52 (SD=.68) for *negative expectancies* (see Table 2).

The results of the independent sample t-test revealed no significant differences in AOEs between females and males using the 4-factor or 2-factor scales. There were significant mean differences in AOEs by sexual orientation; in the 4-factor scale analyses, heterosexual students had significantly lower scores on risk and sociability expectancies (M=2.80, SD=.67) than sexual minority students (M=2.49, SD=.70) (t(284)=1.99, p=.048). In the 2factor analyses, heterosexual students (M=2.28; SD=.68) had significantly lower scores on positive expectancies than sexual minority students (M=2.64, SD=.61) (t(282)=-2.32, p=.021). Additionally, there were significant mean differences in AOEs by previous alcohol use (both lifetime and 30 day use) for all subscales in the 2-factor and 4-factor subscales: cognitive and behavioral impairment (t(287)=2.30, p=.022), risk and sociability (t(287)= -2.11, p=.036), sexuality (t(293)=-2.90, p=.004), tension reduction (t(295)=-2.68, p=.008), positive expectancies t(285)=3.62, p<.001) and negative expectancies t(284)=-2.58, p=.01). Students who had never consumed alcohol had significantly higher cognitive and behavioral impairment scores (M=2.82, SD=.80) than those who had consumed alcohol (M=2.62, SD=.68). In addition, students who had consumed alcohol had significantly higher risk and sociability (M=2.59, SD=.67), sexuality (M=1.99, SD=.89), and tension reduction (M=2.41, SD=.82) scores than those who had never consumed alcohol (M=2.42, SD=.74; M=1.69, SD=.84; and M=2.15, SD=.93respectively). Students that had never consumed alcohol endorsed more negative expectancies (M=2.58, SD=.68) and less positive expectancies (M=2.23, SD-.67) than those who had consumed alcohol (M=2.56, SD=.65; M=2.33, SD=.65 respectively).

There were significant mean differences on the *sexuality* subscale between those who had ever had sex and those who had not (t(289)=-2.82, p=.005), with sexually experienced students reporting higher mean scores compared to students who reported never having sex (M=1.97, SD=.91, vs. M=1.68, SD=.77). Similarly, students who had ever had a hookup had significantly higher mean scores (M=2.12, SD=.91) than those who had not (M=1.72, SD=.82) (t(289)=-3.84, p<.001). The 2-factor scale also showed significant mean differences in *positive expectancies*, student who had ever had a hookup had higher mean

scores (M=2.57, SD=.66) than those who had not (M=2.17, SD=.66) (t(281)=4.81, p<.001). There were no significant differences in *positive* or *negative* expectancies by sexual behaviors or in *negative expectancies* by participation in hookups.

In the logistic regression, there were no significant associations between the 2-factor and 4-factor AOE scales and lifetime or 30 day alcohol use.

DISCUSSION

The purpose of this analysis was to examine the AOEs of Black first-year college students, how AOEs are related to behaviors, and whether AOEs predict alcohol use. Overall, Black students did not hold many positive AOEs (e.g., tension reduction, sexual enhancement, being more social). Thus, despite there being statistically significant differences in the results, there was little actual differences in the mean scores. Notably, Black sexual minority students were more likely to expect positive expectancies in both 2-factor and 4-factor analyses, than Black heterosexual students.

Only 7.5% of Black first-year college students engaged in heavy episodic drinking, compared to 42% in a national sample. Thus, our findings support previous research that Black college students are less likely to engage in heavy drinking behaviors compared to their White counterparts. 15 There was little variation in AOEs mean scores; the highest mean score was on behavioral and cognitive impairment. This finding suggests that even Black college students with no experience with alcohol use expect that alcohol will result in more negative consequences (e.g., becoming dizzy, clumsy, guilty or moody) than positive ones (e.g., make them more social, enhance sexual encounters). In addition to the listed negative expectancies, prior work has shown that Black college students expect other negative alcohol expectancies such as getting in trouble with campus authorities and reinforcing negative substance use stereotypes heldy by White students about Black students that attend PWIs. ^{19,46} At PWIs, Black students report needing to represent their race and risk being stereotyped if they consume alcohol, while White students do not have this burden in a White space. ^{22,46} The endorsement of negative expectancies in this analysis helps explain lower drinking behaviors as Black first-year college students may not want to risk behavioral or cognitive impairment associated with alcohol.

Contrary to previous research, our findings did not indicate significant gender differences in AOEs. However, there were significant differences by sexual orientation. Black sexual minority students may feel elevated discrimination due to the intersecting oppressions of race, gender, and sexual orientation resulting in higher alcohol use.⁴⁷ In our sample, sexual minority students had significantly higher expectations of alcohol increasing their desire to take risks and be social as well as having more positive outcomes compared to heterosexual students. For these students, alcohol may serve as "liquid courage" to interact with others and possibly buffer the effects of discrimination that they may face in social settings as well as allow them to feel a part of the larger college culture.^{48–50} For students who are beginning to explore their sexuality, they may use alcohol as a strategy to talk to prospective partners of the same sex and/or engage in sexual behaviors. Exploring the intersection of race, gender,

and sexual orientation further illuminates differences in AOEs and alcohol use which can be used to inform culturally relevant interventions.

The lowest mean AOEs score was on the sexuality subscale: overall, students did not feel that alcohol would enhance their sexual experiences. However, students who reported ever having sex, hooking up, or consuming alcohol had higher mean scores on these subscales than those who did not. the low number of people who have engaged in these behaviors in the present sample supports previous research suggesting Black college students are less likely to engage in casual sex and hookups compared to their White peers. ^{25,51} As Black students tend to have lower rates of drinking, ¹⁵ it is crucial to reinforce the notion that alcohol does not enhance sexual experiences for students who do drink. The overall low mean score on the *sexuality* subscale could be attributed to the low number of students who participated in these specific sexual behaviors or it might be possible that students do not feel that they need alcohol to have pleasurable sexual experiences.

Finally, we saw that AOEs were not a predictor of ever drinking alcohol or alcohol use in the last 30 days. This suggest that there may be better predictors of alcohol use among Black first-year college students such as norms around alcohol use and sexual behavior. Thus, if alcohol interventions contain modules related to alcohol expectancies, they may not be effective for Black college students since it is not a significant predictor of alcohol use. As research highlights the role of injunctive (the perceived approval of or attitudes about drinking) and descriptive norms (the perception of other's quantity and frequency of drinking) on college students' alcohol use, ^{52,53,54} future research should explore the influence of norms on Black college students' alcohol use.

Limitations

The results need to be considered within the limitations of the study. First, compared to the national averages our sample less students reported engaging in alcohol use and sexual behaviors. As such our results need to be interpreted with that in mind. ⁶

Second, it is possible that a more culturally relevant expectancies scale is needed when conducting studies with Black and other racial minority students. While the B-CEOA scale captured important alcohol outcome expectancies, there may be other expectancies specific to Black students that affect alcohol use and sexual behaviors. ^{22,27,46,55} Qualitative research on a sample of Black women has illuminated expectancies that are more comprehensive than captured by the subscales including to: increase sexual desire and sexual power and as an excuse to participate in sexual behaviors they would not do sober. ²⁷ Further, the measures of tension reduction could be expanded to include expectancies that Black college students endorsed in previous research such as "alcohol will help me cope," "will get me out of a negative mood," "will allow me to escape reality," or "will reduce my stress." ^{56,57}

Third, due to a limited number of students reporting alcohol use prior to a hook up or sex, we were unable to analyze if *sexuality* subscale predicted these behaviors. This limited our ability to assess the relationship between AOEs and sexual behaviors.

Fourth, although we were able to examine AOEs among Black sexual minority students, there was a small number in this sample which presents challenges when trying to generalize to larger populations. Similarly, we were not able look at AOEs for transgender students who have higher rates of alcohol consumption. Social identities are important predictors of alcohol use, thus, a focus on identities such as race, gender, and sexual orientation as well as the potential influence of other identities (e.g., Greek affiliation and religious identity) is warranted. Future research should continue to explore the role of these intersecting identities on AOEs, alcohol consumption, and sexual behaviors.

Finally, none of the participating universities were historically Black colleges or universities (HBCUs). Little is known about how AOEs may vary between Black college students who attend PWIs and those who attend HBCUs. Black college students often drink to as a response to racism and to reduce stress at PWIs. HBCUs offer a different and often more nurturing environment for Black students so their expectations of alcohol use may be different. ^{16,17}

TRANSLATION TO HEALTH EDUCATION PRACTICE

First-year college students are often mandated to participate in alcohol interventions which focus on addressing universal risk and protective factors for college students but are less effective at reducing alcohol use among Black students. ¹⁵ A traditional approach to interventions, which includes delivering "one-size-fits-all" programming without examining how specific populations might not be meeting the needs of students with various intersecting identities. Our results highlight the importance of ensuring that health education interventions consider the unique experiences of Black college students. Given the differences in both alcohol use and STI rates by race, gender, and sexual orientation, ^{21,28} differential messaging may be more effective and appealing to Black students, especially those who are highest need (e.g., participate in heavy episodic drinking or sexual minorities). ⁵⁸ Since Black college students reported lower than average rates of overall and heavy alcohol use, interventions could focus on delaying the onset of alcohol initiation and reducing higher risk drinking behaviors among lower risk students. This focus could result in a decrease in immediate (e.g., condomless sexual behaviors) and longer term (e.g., alcohol dependency) consequences across their lifetime. ^{7,8}

Researchers note that only providing interventions to high-risk individuals are not sufficient in addressing the broader negative alcohol use outcomes among college students. ⁵⁹ Thus, it is crucial that alcohol interventions are designed to be more culturally relevant and tailored to reduce alcohol use and sexual health disparities among Black students. ^{47,60} As such health educators should: (1) consider the behaviors and expectancies of college students focused on the intersection of race, gender, and sexual orientation, (2) address motivations to abstain or engage in alcohol use, and (3) include specific protective factors such as cultural values, religiosity, and family connectedness as well as consider the unique needs of multimarginalized students to promote health for all students. ⁷

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 $\label{eq:Table 1.} \textbf{Table 1.}$ Characteristics of Black First-Year College Students N=307

	Sexual Orientation N (%)		Gender N (%)	
	Heterosexual	Sexual Minority	Male	Female
Used alcohol in their lifetime	153 (55.4)	12 (54.5)	40 (43.5)	128 (61.2)
Ever engaged in a hookup	92 (33.8)	9 (40.9)	35 (38.5)	68 (33)
Had sex in their lifetime	172 (53)	11 (50)	61 (67)	124 (59.9)
Used alcohol during last sex	9 (5.3)	1 (9.1)	3 (4.9)	7 (5.7)
Used alcohol during last hookup	6 (6.6)	1 (12.5)	3 (8.6)	4 (6.1)
Had an STI test within last 6 months	83 (30.6)	6 (28.6)	24 (26.7)	66 (32.2)

Note. Only participants who reported ever having sexual intercourse were asked if they consumed alcohol before last sex. Only those who had a hookup were asked if they consumed alcohol during their last hookup.

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Table 2.

Black First-Year College Students Sum Mean Score of Expectancy Subscales and Individual Items (N=307)

	M	SD
Four Factor Scale		
Sociability and Risk		.70
I would take risks	2.39	1.11
I would be courageous *	2.41	1.02
I would be loud, boisterous, or noisy	2.55	1.10
I would be brave and daring*		1.05
I would act aggressively	1.90	1.02
It would be easier to talk to people *	2.45	1.11
I would act sociable *	2.68	1.09
Cognitive and Behavioral Impairment	2.71	.74
I would feel dizzy	2.94	1.00
I would be clumsy		.99
I would feel guilty	2.37	1.08
I would feel moody		.99
Sexuality	1.86	.88
I would enjoy sex more *	2.01	1.06
I would be a better lover*	1.70	.91
Tension Reduction	2.30	.88
I would feel peaceful*	2.33	.99
I would feel calm*	2.27	.97
Two Factor Scale		
Positive Expectancies	2.31	.68
Negative Expectancies	2.52	.68

Note: This table presents the mean and standard deviation for each item on the AOE scale as well as the four individual subscales.

Individual items denoted with a * are considered positive expectancies.