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**DOI**

[10.1080/00224499.2015.1020355](https://doi.org/10.1080/00224499.2015.1020355)

**Publication date**

2016

**Document Version**

Final published version

**Published in**

The Journal of Sex Research

[Link to publication](#)

**Citation for published version (APA):**

Bos, H., van Beusekom, G., & Sandfort, T. (2016). Drinking motives, alcohol use, and sexual attraction in youth. *The Journal of Sex Research*, 53(3), 309-312.  
<https://doi.org/10.1080/00224499.2015.1020355>

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## Drinking Motives, Alcohol Use, and Sexual Attraction in Youth

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*Sexual minority youth were found to be more likely to drink alcohol during weekdays compared to heterosexual youth. Drinking during weekdays was associated with consuming alcohol as a coping strategy. Sexual minority youth also more frequently consumed alcohol to eliminate personal worries (coping) and to not be excluded by their peers (conformity). Sexual orientation-related alcohol problems should be addressed at an early stage. Such efforts are likely to be effective if insecurities and stress related to sexual orientation are addressed as well.*

Same-sex-attracted youth have been shown to have higher rates of alcohol use than youth without same-sex attraction (e.g., Corliss, Rosario, Wypij, Fisher, & Austin, 2008; Goldbach, Tanner-Smith, Bagwell, & Dunlap, 2014). The minority stress model can help to understand such differences. According to this model, lesbian, gay, and bisexual persons experience specific stressors related to their social position as members of a sexual minority group; such stressors include rejection, internalization of negative attitudes, and emotional distress related to lack of acceptance (Meyer, 1995, 2003; Rosario, Schrimshaw, Hunter, & Gwadz, 2002). Having to cope with this array of social and psychological stressors might result in negative behavioral health outcomes, such as substance use (Hughes & Eliason, 2002).

Recent studies have explored the unique impact of minority stress as a risk factor for alcohol abuse. For instance, experiences with discrimination were found to be associated with alcohol-related problems, such as neglecting responsibilities as a result of drinking, among ethnic minorities and lesbian, gay, and bisexual adults (Borell et al., 2007; Gee, Delva, & Takeuchi, 2007; McCabe, Bostwick, Hughes, West, & Boyd, 2010). Findings from a study among college students suggest that this association is mediated by drinking to cope with negative emotions, and that this mediation is stronger in sexual minorities (Hatzenbuehler, Corbin, & Fromme, 2011).

Early and heavy use of alcohol has been found to predict difficulties with alcohol consumption in adulthood (e.g., Merline, Jager, & Schulenberg, 2008; Zucker, 2008). To understand early use from a developmental perspective, it is important to also consider reasons for using alcohol (Patrick, Schulenberg, O'Malley, Johnson, & Bachman, 2011; Schulenberg & Zarret, 2006). Four alcohol use motivations have been identified in adolescents, namely social (e.g., to have fun with friends), enhancement (e.g., experiencing excitement), coping (e.g., to forget problems), and conformity (e.g., to fit in with a peer group) (Cooper, 1994; Cooper, Russell, Skinner, & Windle, 1992; Patrick et al., 2011). Of particular interest are two motives—coping with personal worries and conformity or not to be excluded from the group—because these motives have been shown to be consistently and most strongly associated with alcohol-related problems (Kuntsche, Knibbe, Gmel, & Engels, 2005). However, little is known about how these motives vary with sexual orientation.

In the present study we explored sexual orientation-related differences in the prevalence and quantity of actual alcohol use and the drinking motives to cope with personal worries and to conform to or not to be excluded from the group. In addition, we examined whether differences in motives for drinking mediated the association between sexual orientation and actual use.

### Method

In total 703 Dutch adolescents, recruited at four secondary schools, took part in this study (305 boys, 398 girls;  $M_{\text{age}} = 16.38$ ,  $SD = 0.94$ ; range = 14–20 years).

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Only students in years 4 (52.2%), 5 (37.7%), and 6 (9.1%) of these secondary schools participated. In the Dutch secondary school system, year 4 students are 15 to 16 years old, year 5 students are 16 to 17, and year 6 students are 17–18. In terms of ethnicity, 86.6% of the sample was Dutch/Western European. Almost 47% of the adolescents attended schools of general education; 53.3% were enrolled in preacademic education. School principals informed parents of students about the study and asked them to notify the researchers if they did not want their offspring to participate. Assenting adolescents filled in a questionnaire during class hours.

As an operationalization of sexual orientation we asked participants to indicate how often they have feelings of same-sex attraction (1 = *Never*, 5 = *Very often*). Those who reported any attraction to someone of the same sex were grouped in the same-sex attraction category. Outcome variables were alcohol use in general (1 = *No*, 2 = *Yes*), use during weekdays (1 = *No*, 2 = *Yes*) and on weekends (1 = *No*, 2 = *Yes*), and quantity of use on weekdays and during weekends (answer categories for both variables: 1 = *1 glass*, 8 = *11 or more*). The time frame for all alcohol use assessments was the past four weeks. Participants who reported any alcohol use were asked to complete two scales of the Drinking Motives Questionnaire (Kuntsche & Kuntsche, 2009) that assessed drinking to cope with personal worries (e.g., “In the past 12 months, how often did you drink because it helped you when you felt depressed or nervous?”) and drinking to conform to or not to be excluded from the group (e.g., “In the past 12 months, how often did you drink so you wouldn’t feel left out?”) (both scales: 1 = *Never a motive*, 3 = *Almost always a motive*). Cronbach’s alphas were .78 (coping with personal worries) and .66 (conformity).

Analyses were conducted using SPSS, Version 20 statistical software (SPSS Inc., Chicago, Illinois). Chi-square tests and analyses of variance (ANOVAs) were used for the analyses of categorical and continuous variables, respectively. To investigate the mediation effect of both drinking motives on the association between sexual orientation and alcohol use, we carried out multiple mediation and bootstrap analysis using Hayes’s PROCESS macro for SPSS. In a bootstrapping analysis, random samples are generated based on the original data. In the current analysis, the bootstrapped mediation was done with 10,000 resamples. The mediator variables are significant when the obtained confidence interval (CI) does not contain the value 0 (Hayes, 2013).

## Results

Of the participants, 10.1% reported any same-sex attraction; more girls did so than boys. Youth with and without same-sex attraction did not differ in age, ethnicity, school type, or class (Table 1).

Most participants (84.1%;  $n = 591$ ) reported using any alcohol: 45.8% reported drinking during weekdays, and 76.9% reported drinking on weekends. As shown in Table 1, same-sex-attracted youth were more likely to drink on weekdays than heterosexual youth. The difference in drinking during weekends between same-sex-attracted and heterosexual youth was not significant. Quantity of alcohol used on a weekday or weekend day did not differ significantly in relation to sexual orientation. Same-sex-attracted youth scored higher on both drinking motives (coping with personal worries and conformity) (Table 1).

The mediation analysis confirmed that coping to deal with personal worries as a drinking motive mediated the relation between sexual orientation and drinking during weekdays (95% CI = .04 to .33). Conformity as a drinking motive was not found to be a mediator (95% CI = -.07 to .23). The mediation effect of the coping motive was in the expected direction. As shown in Figure 1, persons with same-sex attraction had higher levels of drinking to cope with personal worries; and the higher levels of this motive, the more likely alcohol had been consumed during weekdays. We also found that the direct significant effect of same-sex attraction on use of alcohol during weekdays disappeared after including this drinking motive in the mediation model, indicating that there was a full mediation (see Figure 1).

An additional bootstrapped-moderated mediation analysis (Hayes, 2013) showed that the established mediation effect was stronger for boys ( $b = .33$ , 95% CI = .09 to .75) than for girls ( $b = .09$ , 95% CI = .01 to .24). Because other outcome variables (drinking during weekends, quantity of alcohol consumption during weekdays and weekends) were not associated with sexual orientation, no further mediation analyses were conducted.

## Discussion

We found that same-sex-attracted youth were more likely than heterosexual youth to consume alcohol during weekdays and were also more likely to drink because of coping with personal worries and drinking to conform to or not to be excluded from the group. The association between sexual orientation and the drinking motive coping (but not conformity) predicted the higher prevalence of drinking during weekdays in sexual minority youth; this effect was stronger in boys than in girls. We did not find significant differences in relation to sexual orientation for the other alcohol variables (drinking during weekends, quantity of alcohol use).

The more frequent consumption of alcohol to cope with personal worries among sexual minority youth compared to heterosexual youth is in line with findings regarding other maladaptive coping styles that have been found to explain psychological health disparities

**Table 1.** Sample Demographic and Alcohol Usage by Same-Sex Attraction (SSA)

Sample Demographic	No SSA	SSA	X <sup>2</sup> or F	p
Gender, % (no.)			3.88	.049
Male	44.6 (282)	32.4 (23)		
Female	55.4 (350)	67.6 (48)		
Age, y, M (SD)	16.38 (0.94)	16.41 (0.97)	0.08	.785
Ethnic background, % (no.)			0.32	.573
Dutch/Western	86.3 (543)	88.7 (63)		
Non-Western	13.7 (086)	11.3 (08)		
School type, % (no.)			1.50	.221
General	45.9 (290)	53.5 (38)		
Preacademic	54.1 (342)	46.5 (33)		
Class, % (no.) <sup>a</sup>			0.77	.681
Fourth year	53.0 (335)	54.9 (39)		
Fifth year	38.1 (241)	33.8 (24)		
Sixth year	008.9 (056)	11.3 (08)		
Alcohol usage				
Prevalence				
General alcohol use, % (no.)	84.0 (531)	84.5 (60)	0.01	.915
Drinking during weekdays, % (no.) <sup>b</sup>	44.4 (235)	58.3 (35)	4.20	.040
Drinking during weekends, % (no.) <sup>b</sup>	77.3 (409)	73.3 (44)	0.48	.448
Quantity of alcohol use per day				
During weekdays <sup>c</sup>	2.54 (1.78)	2.44 (1.65)	00.07	.791
During weekends <sup>d</sup>	4.37 (2.08)	4.23 (2.38)	00.19	.667
Drinking motives <sup>b,e</sup>				
Coping, M (SD)	1.27 (0.41)	1.53 (0.58)	19.98	<.0001
Conformity, M (SD)	1.13 (0.29)	1.36 (0.50)	28.06	<.0001

<sup>a</sup>In Dutch secondary schools, students are in the fourth year at 15 to 16 year old; in the fifth year at 16 to 17; and in the sixth year at 17 to 18.

<sup>b</sup>Based on those adolescents who reported alcohol usage.

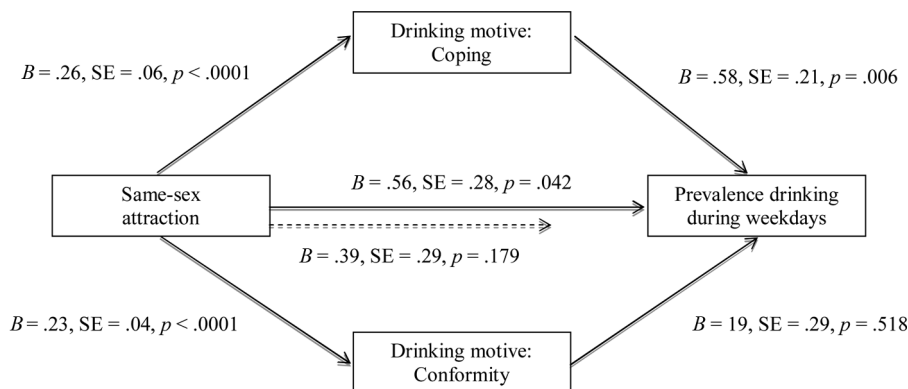
<sup>c</sup>Based on those adolescents who reported alcohol usage during weekdays during the past four weeks. Absolute range is 1 to 7 (similar for No SSA and SSA), where 1 = 1 glass and 7 = 7-10 glasses.

<sup>d</sup>Based on those adolescents who reported alcohol usage on weekends during the past four weeks. Absolute range is 1 to 8 (similar for No SSA and SSA), where 1 = 1 glass and 8 = 11 glasses.

<sup>e</sup>Absolute range is 1 to 3 (overall and SSA) and 1 to 2.33 (No SSA), where 1 = Low score and 3 = High score on drinking motive.

between sexual minority and heterosexual youth (Bos, Van Beusekom, & Sandfort, 2014). Our study also confirms the finding that the mediation effect of drinking to cope with negative emotions on the relationship between discrimination and alcohol-related problems was stronger for lesbian, gay, and bisexual students than for heterosexual students (Borell et al., 2007).

Compared to most other studies that looked at sexual orientation and alcohol use, our study sample was relatively young (Borell et al., 2007; Hatzenbuehler et al., 2011). Because of this relatively young age we operationalized same-sex sexual orientation as having feelings of same-sex attraction. Other dimensions of sexual orientation (such as self-labeling or behavior)



**Figure 1.** Findings of the multiple mediation analysis of drinking motives (a) coping and (b) conformity as mediators of the association between same-sex attraction and the prevalence of drinking during weekdays.

were not assessed. As a consequence it is not clear whether our findings speak to youth who identify as lesbian, gay, or bisexual.

Based on our findings we recommend that alcohol prevention targeting youth should pay specific attention to lesbian, gay, and bisexual youth. Furthermore, the findings suggest that in working with same-sex-attracted youth the focus should be on helping them create awareness of why they drink alcohol in order to reduce their alcohol behavior and encourage coping self-efficacy. Because alcohol consumption might be elevated in this population due to insecurities about sexual identity or experienced stigma (Corliss et al., 2008), interventions could also address identity formation and strengthen coping with stigma.

### Funding

The preparation of this manuscript was supported by NIMH center grant P30-MH43520 (P.I.: Robert Remien, PhD) to HIV Center for Clinical and Behavioral Research.

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