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Sexual Attraction and Psychological Adjustment in Dutch Adolescents: Coping Style as a Mediator

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Abstract

This study examined whether feelings of same-sex attraction (SSA) in 12- to 15-year-old Dutch adolescents were related to psychological health (self-esteem and psychological distress) and whether this relation was mediated by coping styles and moderated by biological sex. Data were collected from 1,546 high school students (802 boys and 744 girls; *M* age = 13.57 years) by means of standardized measurements. SSA was found to predict lower levels of self-esteem and higher levels of psychological distress. Further analyses showed that passive coping style partly mediated these associations. This mediation was not moderated by biological sex. The findings suggest that in understanding and addressing mental health disparities between sexual minorities and heterosexual youth attention should be paid to intrapersonal psychological factors such as coping styles.

Keywords

Same-sex attraction; coping; psychological adjustment; adolescents

INTRODUCTION

Adolescents who have feelings of same-sex sexual attraction (SSA) or identify as lesbian, gay or bisexual (LGB) are more vulnerable to psychological problems, such as depression, anxiety, reduced self-esteem, and suicidal thoughts, than their counterparts who do not have these feelings or who identify as heterosexual (e.g., Russell, Seif, & Truong, 2001; Sandfort, Bos, Collier, & Metzelaar, 2010; Ueno, 2005; Williams & Champman, 2011). The minority stress model offers an explanatory framework for the processes underlying these differences (Meyer, 1995, 2003). It postulates that sexual minority persons experience specific stressors related to their SSA or LGB identity. The model identifies several types of stress, including experiences of victimization related to having a minority status, such as bullying, discrimination, and rejection. Studies informed by the minority stress model have

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consistently documented mental health disparities between LGB and heterosexual (adult) populations and also found these differences were mediated by experiences of victimization (Meyer, 2003; for an overview, see King et al., 2008). These findings were also confirmed in studies among adolescents (for an overview, see Collier, Van Beusekom, Bos, & Sandfort, 2013).

An alternative approach to understanding sexual orientation-related mental health disparities is offered by the psychological mediation framework, which focuses on general psychological processes (e.g., Diamond, 2003; Hatzenbuehler, 2009; Savin-Williams, 2001). According to this framework, the stigma that sexual minorities are confronted with results in increased stress, which negatively affects general intra- and interpersonal psychological processes, which, in turn, induce psychological problems.

Most studies that have investigated general psychological processes that mediate mental health differences between sexual minority and heterosexual youth focused on interpersonal factors, especially quality of relationships with parents and peers (e.g., Bos, Sandfort, de Bruyn, Hakvoort, 2008; Diamond & Lucas, 2004; Russell et al., 2001; Ueno, 2005). One Dutch study, for example, found that having an open and warm relationship with the father was a significant mediator of the association between SSA and psychological adjustment (Bos et al., 2008). The same study found that the association between SSA and psychosocial functioning and school performance was partly mediated by the quality of the adolescents' social relationships with peers. Diamond and Lucas showed that worries about friendships and never finding a romantic partner mediated the relationship between sexual orientation and health outcomes.

Few studies have explored intrapersonal psychological factors that might mediate the relationship between sexual minority status and psychological outcomes. In one of the studies that focused on these processes, SSA adolescents were found to exhibit greater deficits in emotion regulation (rumination and poor emotional awareness) compared to heterosexual youth and that emotion regulation in turn mediated the relationship between sexual minority status and symptoms of depression and anxiety (Hatzenbuehler, McLaughin, & Nolen-Hoeksema, 2008). In the present study, we explored whether coping styles, as an intrapersonal characteristics, function as mediators of the relationship between same-sex attraction and psychological well-being.

Coping is a process by which an individual responds to stimuli appraised as taxing and exceeding his/her resources (Lazarus & Folkman, 1984). Coping includes cognitive, behavioral, and emotional attempts to manage the demands imposed by a stressor and refers to thoughts and actions that people employ to deal with stress (Lazarus, 1993, 1998; Lazarus & Folkman, 1984). Some scholars distinguish two broad dimensions of coping, such as emotion-focused and problem-focused coping (e.g., Carver, 1997). Other scholars conceive of coping as multidimensional and encompassing a variety of cognitive and behavioral patterns (e.g., Zimmer-Gembeck & Locke, 2007). Such a multidimensional approach of coping informed the Utrechtse Coping List (UCL), which includes the following coping styles: confrontation or problem focused coping (disentangling the situation and purposefully working to solve the problem), seeking social support (seeking comfort and

understanding from others), reassuring thoughts (using comforting thoughts), expression of emotion (showing irritation and anger about the problem), avoidance (leaving the problem to what it is or running away from it), palliative reaction (seeking a distraction to not have to think about the problem), and passive reaction (being totally overwhelmed by the problem) (Schreurs, Van de Willige, Brosschot, & Grau, 1993).

That coping styles are associated with psychological health has been demonstrated by many studies (for an overview, see Clarke, 2006). For example, concentrating on resultant emotions (e.g., becoming angry or upset) and avoiding problems have been found to be positively associated with depression and anxiety (e.g., Cosway, Endler, Sadler, & Deary, 2000). Differential coping styles are usually also seen as contributing to health disparities between men and women: higher levels of depression in women are understood to result from their response to stress through becoming angry or upset, while men are more likely to focus on disentangling the situation and purposefully working to solve the problem (Nolen-Hoeksema & Rusting, 1999; Rosenfield, 1999; Sigmon, Stanton, & Snyder, 1995).

There is also evidence that suggests that belonging to a minority group and experiences of stigmatization reinforce certain coping styles and discourage others (Miller & Kaiser, 2001). Sandfort, Bakker, Schellevis, and Vanwesenbeeck (2009) found that emotion-oriented and avoidance coping strategies were more strongly applied by homosexual men than by heterosexual men. For the women in this study, however, sexual orientation was not significantly related to coping styles. Sandfort et al. also found that emotion-focused coping mediated the differences in mental and physical health between heterosexual and homosexual adult men. While this study was conducted among adults, less is known about sexual minority adolescents and their coping styles, even though adolescence is an important stage with respect to the development of both coping strategies and sexual identities.

During adolescence, there is an improvement of cognitive capabilities and skills to recognize and regulate emotions (e.g., Kuhn, 2009), which allow adolescents to cope with complex challenges. Adolescents, however, are also easily flooded by emotions and their self-image is easily damaged. In particular, they are often worried about social relationships with peers and frequently internalize negative experiences (Skinner & Zimmer-Gembeck, 2007). Because adolescents also have fewer experiences with complex situations, compared to adults, their repertoire of coping strategies to be used in challenging circumstances is also limited (Garnefski, Legerstee, Kraaij, Van den Kommer, & Teerds, 2002).

Coping styles among LGB adolescents have hardly been studied. One study among 1,769 high school students (ages 12–18 years) found that LGB adolescents reported higher rates of avoidance and approach coping compared to heterosexual adolescents (Lock & Steiner, 1999). Lock and Steiner attributed these differences to the disadvantaged social position of LGB adolescents and suggested that in order to deal with the stresses and difficulties associated with their sexual minority status LGB adolescents might more strongly need these coping styles compared to heterosexual adolescents. In another study among 1,539 adolescents (ages 17–19; 4% identified as LGB), Hatzenbuehler, Corbin, and Fromme (2010) focused specifically on coping motives related to the strategic use of alcohol to escape, avoid, or otherwise regulate negative emotions. Hatzenbuehler et al. found that these

coping motives mediated the relationship between discrimination and alcohol-related problems and that this finding applied to multiple groups that encounter status-based discrimination, including women, racial/ethnic minorities, and LGB individuals.

The above-mentioned studies were all conducted among adolescents who identified as lesbian, gay or bisexual. The present study, however, focused on younger adolescents with SSA who may or may not have self-identified or publicly identified as LGB. In adolescence, many sexual minority youth recognize that they are different from their peers. That recognition is partially engendered by factors that make all adolescents feel different (e.g., physical appearance, abilities, and personality characteristics); another major contributor, however, is sex-atypical behaviors and interests, including SSA (for an overview, see Savin-Williams & Cohen, 2007). The realization that the feelings of being different are linked to one's sexuality might be a stressful experience for some adolescents because of the heteronormative or homonegative characteristics in their environment (e.g., Cox, Dewaele, van Houtte, & Vincke, 2010; Shilo & Savaya, 2012). For this reason, we focused on younger adolescents for whom discovering feelings of same-sex attraction might be challenging and negatively impacting their coping styles.

The aim of the present study was to investigate whether feelings of SSA were related to mental health through different coping styles. In line with other studies in adolescents, we operationalized coping as a multiple dimensional concept. To assess possible differences in biological sex, we also examined whether relations between SSA and the mental health, through the different coping styles, were moderated by biological sex.

METHOD

Participants

Participants were 1,546 Dutch students (802 boys and 744 girls; M_{age} = 13.58 years, SD = 1.03, range = 11 to 17 years, median = 14 years) attending 12 different secondary schools in the Netherlands. Data were collected by paper-pencil questionnaire on 1,576 students; 30 (1.9%) students who did not answer the question about same-sex attraction (n = 29) or gender (n = 1) were excluded from our analyses.

The schools had the following educational orientations: pre-vocational secondary (26% of the 1,546 participants), general secondary (21.1%), and pre-university (52.9%). Only students in Years 1 (29%), 2 (41.8%), and 3 (29.4%) of these secondary schools participated in this study. In the Dutch secondary school system, Year 1 students are 12–13 years old, and Year 2 and Year 3 students are 13–14 and 14–15 years old, respectively. In terms of ethnicity, 80.6% of the sample was Dutch or Western European and 19.4% was non-Dutch and non-Western European.

Procedure

To recruit participants, two research assistants (master students at the Department of Child Development and Education at the University of Amsterdam) called officials at secondary schools. These schools were randomly selected from a listing available on the website of the Netherlands Ministry of Education. After being informed about the topic of the study (same-

sex attracted youth, coping styles, and psychological well-being), each school official was asked whether it would be possible to recruit adolescents for the present study through their school. Officials were also informed that if they were willing to assist with recruitment, this would mean that data collection would take place during class hours. Research assistants contacted 40 schools of which 12 were willing to participate (response rate 30%). The other schools declined because they had already participated in other studies, because of the subject of the study, and/or because their teachers would be too busy in their classrooms at the time of data collection.

To obtain parental consent, the board of each participating school wrote to all parents and described the study as one on the psychological problems of adolescents and sexual minority adolescents. If parents did not want their offspring to participate, they were asked to sign a form and return it to the researchers by post or email. The letter made clear to parents that their offspring's participation in the study was voluntary and that their offspring would be told this. Thirteen parents refused to allow their children to participate. According to Dutch legislation, institutional review board approval was not required given the non-experimental nature of the study.

Questionnaires were completed during regular class time. Two research assistants (students in the Department of Child Development and Education at the University of Amsterdam) were present to describe the study, distribute the questionnaires, explain the voluntary nature and confidentiality of the students' participation, and emphasize that students' individual responses would not be disclosed to teachers, parents, or other students. Students were also told that they could decline to participate; none of the students, however, did so. To create sufficient privacy, seating in the classrooms was arranged as though the students were taking an exam; this arrangement also prevented the students from discussing the questionnaire. Students put their filled-out questionnaire in a blank envelope (with no name on it), sealed it, and returned it to the supervising research assistants. This procedure was adopted to safeguard the students' sense of privacy because some students might experience the topic of this survey as too sensitive.

Measures

Same-Sex Attraction—Same-sex attraction was assessed with the question "Do you feel sexually attracted to someone of your own sex?" (1 = *never, 2 = rarely, 3 = sometimes, 4 =frequently, 5 = very often*). This question has been used successfully in previous studies among youth in the Netherlands (e.g., Bos et al., 2008; Kersten & Sandfort, 1994; Sandfort et al., 2010). Table 1 shows the distribution and frequency of the scores on this variable, separately for boys and girls.

Mental Health—Mental health was assessed with the Rosenberg Self-Esteem Scale (Rosenberg, 1979; Rosenberg, Schooler, & Schoenbach, 1989) and items from a shortened version of the Brief Symptom Inventory (Derogatis, 1993, Derogatis & Spencer, 1982; Kersten & Sandfort, 1994). The Rosenberg Self-Esteem Scale and the Brief Symptom Inventory have demonstrated good reliability and validity across different sample groups and has been validated for use with adolescents (Blascovich & Tomaka, 1991; Hagborg, 1993;

Handal, Gist, Gilner, & Searight, 1993; Rosenberg, 1989). The Rosenberg Self-Esteem Scale consists of 10 items (e.g., "I take a positive attitude toward myself" where, 1 = *strongly disagree*, 4 = *strongly agree*). Cronbach's alpha in this study was .85. The shortened version of the Brief Symptom Inventory asked students about the occurrence of 24 symptoms in the preceding week. The items were rated on a 5-point scale ranging from 1 (*not at all*) to 5 (*extremely*). The mean score was used as an overall indicator of psychological distress. Cronbach's alpha was .93.

Coping Styles—A shorted version of the Utrecht Coping List for Adolescents was used to measure coping styles (Bijstra, Jackson, & Bosma, 1994; Mavroveli, Petrides, Rieffe, & Bakker, 2007). Seven behavioral coping styles were measured: confrontation (6 items; e.g., "Seeking a way to solve a problem"; Cronbach's alpha = .79); seeking social support (6 items; e.g., "Asking someone for help"; Cronbach's alpha = .87); reassuring thoughts/ optimistic coping (2 items; "Imagining that things could be worse"; Cronbach's alpha = . 65); expression of emotion (2 items; e.g., "Expressing angers and annoyance"; Cronbach's alpha = .59); avoidance (3 items; e.g., "Avoiding difficult situations"; Cronbach's alpha = . 66); palliative reaction (4 items; e.g., "Looking for distraction"; Cronbach's alpha = .76); and passive reaction (4 items; e.g., "Worrying about the past"; Cronbach's alpha = .75). Responses were scored on a 4-point Likert scale (1 = *rarely or never*; 4 = *very often*).

Demographic Information

The questionnaire also elicited demographic data, including age, biological sex, and ethnicity. In the Netherlands, the standard procedure for assessing a person's ethnicity is to ask in which country one's mother and father were born. In the present study, the youth was regarded as having a Western ethnic background if one's mother and father were both born in the Netherlands or another Western country. If the mother and/or the father were not born in the Netherlands or in another Western country the youth was considered as having a non-Western ethnic background.

Analyses

For the descriptive analyses, independent sample *t*-tests, were used to assess differences between boys and girls on the studied variables. Pearson *r* correlations were conducted to explore associations between the key variables SSA, the seven coping styles, and the mental health variables. The Pearson *r* correlations were conducted for the total group and for boys and girls separately.

We used a bootstrapped mediation analysis for multiple mediations through the Indirect macro (Hayes, 2013) to examine whether SSA was related to the mental health variables and whether the seven coping styles mediated the direct effect of SSA on the mental health variables. In this analysis, age was used as a covariate. This analysis was done separately for self-esteem and psychological distress as dependent variables. This bootstrap method is recommended because it is suggested to be more appropriate than traditional mediation approaches (Baron & Kenny, 1986; Hayes, 2009;) in models with more than one possible mediator (Preacher & Hayes, 2008; Shrout & Bolger, 2002). In bootstrapping, random samples are generated based on the original data. In the current analysis, the bootstrapped

mediation was done with 10,000 resamples. For each random sample, the mediated effects were computed. The distribution of these effects was then used to obtain 95% confidence intervals (CI) for the size of indirect effects of the different coping styles on the relation between SSA and the mental health variables. The indirect effect for a mediator is significant when the obtained CI does not contain the value 0 (Hayes, 2013).

To analyze whether biological sex moderated the relations between SSA and the mental health variables, through the different coping styles, moderated mediation analyses were conducted using the MODMED macro as developed by Hayes (2013). With this macro, we first assessed whether biological sex moderated the association between SSA and the different coping styles (after controlling for age) and, subsequently, whether biological sex moderated the associations between coping styles and self-esteem and psychological distress (after controlling for age and SSA).

RESULTS

Any Same-Sex Attraction versus Exclusively Attracted to Opposite Sex

Table 2 shows the demographic characteristics for participants who reported any SSA (i.e., who felt “rarely”, “sometimes”, “frequently”, or “very often” attracted to someone of the same-sex) versus those with no sexual attraction to someone of the same-sex. The breakdown into these two groups was done for the descriptive analyses on the demographic characteristics; for subsequent analyses, we used the continuous metric of SSA. Of the 1,546 participants, 8.9% reported any SSA; 7.7% of the boys reported at least some SSA as did 10.0% of the girls. There were no significant differences between non-SSA and SSA participants on biological sex, mean age, ethnic background, kind of education (prevocational, general, or pre-academic) they were attending, or the class (first, second or third year) in which they were.

Descriptive Analyses

Differences between Boys and Girls on Coping Styles, and Mental Health— Separate *t*-tests with biological sex as independent variable and the coping styles and mental health variables as dependent variables showed that girls scored higher on reassuring thoughts and lower on avoidance as coping styles than boys (see Table 3) and that girls reported lower self-esteem and higher psychological distress compared to boys.

Associations between Same-sex Attraction, Coping Styles, and Mental Health —Table 3 also shows the Pearson *r* correlations between SSA, coping styles, and the mental health variables for the overall group and for boys and girls separately. For the total group, SSA was positively correlated with passive reaction as a coping style but not with any other coping style; the findings were the similar for boys and girls. SSA was also negatively correlated with self-esteem and positively correlated with psychological distress; these correlations were also significant for boys and girls separately.

Coping styles were also related to mental health (see Table 3). For the total group, self-esteem was positively related with the coping styles confrontation, seeking support, and reassuring thoughts, and negatively with passive reaction. For the total group, psychological

distress was negatively associated with confrontation and positively with expression of emotions, avoidance, palliative, and passive reactions. For boys and girls, the findings regarding the associations between self-esteem and psychological distress and palliative (positively correlated with psychological distress) and passive reaction (negatively correlated with self-esteem and a positively with psychological distress) were similar. The significant associations of self-esteem with confrontation, seeking support, and reassuring thoughts were found for both boys and girls, as was the association between expression of emotion and psychological distress. Some differences were found between boys and girls regarding the other correlations. For girls, but not for boys, the correlations of psychological distress with confrontation, seeking support, and reassuring thoughts were significant. The associations between expression of emotions and self-esteem and between avoidance and psychological distress were only significant for boys.

The Mediation of Coping Styles on the Relation between SSA and Mental Health—Bootstrapping analyses were used to assess whether the associations between SSA and the mental health variables were mediated by one or more of the coping style variables; age was used as a control variable in these analyses. Confirmation was found that SSA was significantly associated with self-esteem ($B = -.16$, SE = .02, $t(1496) = -6.94$, $p < .0001$) and psychological distress ($B = .26$, SE = .02, $t(1496) = 10.83$, $p < .0001$)(see Table 4). Adolescents with higher scores on SSA scored lower on self-esteem and higher on psychological distress.

It was also found that passive reaction (and none of the other coping styles) mediated the relation between SSA and self-esteem ($B = -.09$, SE = .02, $t(1496) = -4.40$ $p < .0001$, bootstrap 95%, CI = −.09; −.03). Passive reaction also mediated the association between SSA and psychological distress ($B = .18$, SE = .02, $t(1496) = 8.62$ $p < .0001$, bootstrap 95%, CI = .05; .11). Because the associations between SSA and self-esteem and psychological distress remained significant in the bootstrapping analyses, passive reaction is only a partial mediator (see Table 4).

Biological Sex as a Moderator for the Mediation of Coping Styles on the Relation between SSA and Mental Health—The MODMED models with biological sex as moderator were only computed for the mediation of passive reaction on the association between SSA and self-esteem and psychological distress. The reason for this was that the other coping styles did not mediate these relations. For the MODMED analysis, which examined whether biological sex moderates the association between SSA and passive reaction, SSA and biological sex were entered into the equation followed by the interaction of SSA and biological sex (see Table 5A; age was included as covariate). The interaction of SSA x biological sex was not significant ($B = -.05$, SE = .04; $t(1496) = -1.21$). To examine whether biological sex was a moderator for the associations between passive reaction as coping style and self-esteem (see Table 5B) and psychological distress (see Table 5C) using MODMED analyses, the following predictors were entered in the models: passive reaction (coping style), biological sex, and passive reaction x biological sex (and SSA and age as covariates). The interaction between passive reaction and biological sex was not significant

for self-esteem ($B = -.03$, SE = .04; $t(1496) < 1$) or for psychological distress ($B = -.02$, SE = .05; $t(1496) < 1$).

DISCUSSION

Our findings showed that Dutch adolescents between 12 and 15 years with higher levels of SSA experienced lower self-esteem and more psychological distress. These results were in line with other studies among young adolescents who experience same-sex sexual attraction (e.g., Bos et al., 2008; Sandfort et al., 2010). We also found that the relation of SSA with self-esteem and psychological distress was partially mediated by one coping style, namely passive reaction, indicating that SSA was associated with passive reaction as coping style, which, in turn, was negatively related with self-esteem and positively with psychological distress. The mediation findings were not moderated by biological sex, indicating that the mediation effect of passive coping was similar for boys and girls.

That SSA was not related to confrontation/problem-focused coping and avoidance seems in contrast to other studies on coping styles in LGB adolescents (Lock & Steiner, 1999). A possible explanation for this contrast could be related to the assessment of SSA and the age of the participants in our study. The adolescents in the study by Lock and Steiner were between 12 and 18 years old and identified as lesbian, gay or bisexual. Lock and Steiner suggested that one reason for higher levels of problem-focused coping in LGB adolescents could be that adversity, in the sense of being harassed and stigmatized, increased the development of personal characteristics such as ego strength or feelings of being valued, characteristics that might be required for problem-focused coping. They furthermore suggested that higher levels of problem-focused coping could be understood as resulting from an increased need for vigilance and self-preservation in a hostile high school environment. Higher scores on avoidance coping in LGB adolescents were understood as a productive way to cope with specific difficulties that sexual minority adolescents encounter, such as homophobic treatment from their peers for being gay. Although we also focused on adolescents, our participants were younger, making it more likely that participants with SSA had not yet come out and did not yet identify as lesbian, gay, or bisexual. Consequently, our participants with SSA were less likely to have experienced stigmatization because of their sexual minority status.

Passive reaction—the prevalent coping strategy associated with SSA in our study—is a style in which an individual passively focuses on his/her symptoms of distress, similar to rumination (Nolen-Hoeksema, 1991, 1998). According to Hatzenbuehler (2009), the characteristics involved in managing a concealed identity such as homosexuality are likely to induce rumination. Hatzenbuehler stated that people with a concealed identity are preoccupied with whether their identity will be discovered. As this can be upsetting to them, they will attempt to suppress or inhibit thoughts about their identity, which then could lead to rumination. Although we did not examine this issue, it might explain why SSA among adolescents was related to higher scores on passive reaction as a coping style: Adolescents who reported SSA in our study were likely to be in the midst of sexual identity development and, although they might not have experienced LGB-related stigmatization, they might be aware that LGB persons have a disadvantaged social status (Schwartz & Meyer, 2010). It is

not clear, of course, whether all participants in our study who reported SSA will later engage in same-sex sexuality and develop a gay, lesbian, or bisexual identity.

Another interesting finding of our study was that passive reaction as a coping style functioned as a mediator in the relation between SSA and mental health outcomes: After controlling for this specific coping style, the association between SSA and mental distress became less strong. The mediation effect was only partial. This indicates that there are additional factors causing the relation between SSA and adolescents' psychological health. Hatzenbuehler (2009) suggested that, in addition to coping, there might be two other types of mediating resources, namely interpersonal relations—such as social isolation—and cognitive mechanisms, such as negative self-schemas. Subsequent studies should also include such mediating factors when exploring the associations between psychological health and SSA.

Our study had a few limitations. First, we attributed the relation we found between SSA and mental health problems (operationalized as low levels of self-esteem and high levels of psychological distress) to the stressors adherent to membership of a disadvantaged group. In other words, although reporting having feelings of sexual attraction for a person of the own sex status was a stand-in for the social stress process, we did not measure social stress itself (Schwartz & Meyer, 2010). Future research on this topic should also study the relationship between exposure to prejudice-related stress and psychological adjustment and the role of coping styles (Brondolo, Gallo, & Myers, 2009). One could do this as variability among a sample with SSA and non-SSA or as variability within SSA and LGB adolescents.

Another limitation of the study was our use of SSA as an indicator of sexual orientation, without assessing other dimensions of sexual orientation (such as self-labeling or behavior). As pointed out above, we do not know whether all the participants with SSA will later engage in same-sex sexuality and develop a gay, lesbian, or bisexual identity. We also do not know to what extent the participants had disclosed their SSA to peers or parents or had engaged in same-sex sexual behavior.

It should also be noted that our findings were based on self-report measures; this poses a limitation in the form of "shared method variance." As a consequence, the effect sizes of the association between passive reaction and the mental health variables might be larger than when different informants were used for assessing these variables (e.g., McHugh et al., 2011). Assessing coping and mental health variables from different or multiple perspectives is recommended to avoid potential bias (e.g., Hawker & Boulton, 2000).

The cross-sectional design of the study was a further limitation. It would be important to examine in a longitudinal design whether students with SSA develop an LGB identity, how coping styles and the associations between coping and SSA and LGB identity develop, and what the long-term consequences are for psychological health. Because of the cross-sectional design, we should be careful in drawing causal conclusions. Although it is possible that, for example, high levels of psychological distress and low levels of self-esteem are a result of passive reaction, these mental health outcomes might also contribute to such a coping style.

Furthermore, an important assumption of a mediation model could not be tested as a consequence of the cross-sectional design: In order for a variable to be considered a true mediator, the onset of that variable must precede the onset of the independent variable (e.g., Collins, Graham, & Flaherty, 1998). Although mediation analyses are commonly used with cross-sectional data, this should be kept in mind in the interpretation of our findings (Maxwell, Cole, & Mitchel, 2011). Future longitudinal studies should explore how the relation between SSA and mental health and the mediating role of coping develop over time.

Finally, the generalizability of the findings was limited because we conducted the study in the Netherlands where the social acceptance of homosexuality is higher than in many other countries (Kuyper, Iedema, & Keuzenkamp, 2013). However, even in this more tolerant social climate, we found that there was a relation between SSA and psychological outcomes in adolescents.

Although we did not test this in our study, it is assumed that stigma plays an important role in the association that we found between SSA and mental health. School counsellors and other practitioners working with SSA adolescents who are suffering from stigma-related stressors, should help them reduce their use of passive reaction as coping style. For example, from previous studies, it is known that high scores on self-efficacy are related to low levels of the coping style passive reaction (e.g., Romppel et al., 2013). Promotion of self-efficacy, especially among adolescents with romantic or sexual feelings towards someone of their own sex or who identify as LGB, might reduce passive reaction; this, in turn, could reduce the negative relation between SSA and mental health problems such as psychological distress.

Our findings underscore the importance of studying the mental health of adolescents with SSA from the perspective of a psychological mediation framework and paying attention to intra-personal characteristics. Longitudinal studies that include other mediating factors as well as experiences with specific minority stressors would make it possible to assess how in the context of sexual identity development the observed disparities in coping and psychological health develop over time.

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Table 1

Levels of Same-sex Attraction in Dutch Adolescents

	Never	Sometimes	Frequently	Often	Very often
	n (%)	*n* (%)	*n* (%)	*n* (%)	*n* (%)
Boys	687 (92.3)	23 (3.1)	19 (2.6)	6 (0.8)	9 (1.2)
Girls	722 (90.0)	42 (5.2)	16 (2.0)	16 (2.0)	6 (0.7)
Combined	1409 (91.0)	65 (4.2)	35 (2.3)	22 (1.4)	15 (1.0)

Table 2

Demographic Characteristics by SSA

	Non-SSA	SSA	χ^2/t	*p*
Gender, % (n)			2.56	ns
Boys	48.8 (687)	41.6 (57)		
Girls	51.2 (722)	58.4 (80)		
Age			−1.92	.055
M	13.56	13.74		
SD	01.02	01.09		
Ethnicity			1.91	ns
Dutch/West European	81.0 (1117)	76.0 (98)		
Other	19.0 (262)	24.0 (31)		
Educational level,% (n)			2.59	ns
Prevocational	25.6 (360)	30.1 (41)		
General	20.9 (294)	23.5 (32)		
Pre-academic	53.5 (752)	46.3 (63)		
Class, % (n)[1]			< 1	ns
First year	28.8 (386)	28.9 (37)		
Second year	41.9 (561)	40.6 (52)		
Third year	29.3 (393)	30.5 (39)		

[1] In Dutch secondary schools students are in the first year 12–13 year old, and in the second and third year 13–14 and 14–15, respectively

Table 3

Means and Standard Deviations, and Intercorrelations between Same-sex Attraction, Coping Styles and Mental Health Outcomes

	M	*SD*	1.	2.	3.	4.	5.	6.	7.	8.	9.
Overall											
1. Same-sex attraction[a]	1.17	0.62	-								
2. Confrontation[b]	2.41	0.56	−.02	-							
3. Seeking support[c]	2.20	0.66	−.03	.30***	-						
4. Reassuring thoughts[d]	2.33	0.72	−.04	.25***	.26***	-					
5. Expression of emotions[e]	2.14	0.69	.03	.09***	.26***	.11***	-				
6. Avoidance[f]	2.34	0.66	−.02	.16***	.09***	.15***	.03	-			
7. Palliative reaction[g]	2.41	0.60	−.02	.06*	.17***	.19***	.10***	.22***	-		
8. Passive reactions[h]	1.74	0.60	.16***	−.07**	.12***	.01	.31***	.14***	.15***	-	
9. Self-esteem[i]	3.16	0.54	−.18***	.29***	.21***	.15***	−.02	.00	.00	−.43***	-
10. Psychological distress[j]	1.67	0.61	.27***	−.12***	−.04	−.04	.21***	.05*	.12***	.54***	−.56***
Boys											
1. Same-sex attraction	1.15	0.61	-								
2. Confrontation	2.45	0.57	−.01	-							
3. Seeking support	2.05	0.63	.00	.29***	-						
4. Reassuring thoughts	2.29[k]	0.74	−.05	.21***	.28***	-					
5. Expression of emotions	2.14	0.71	.05	.11**	.26***	.12***	-				
6. Avoidance	2.35[k]	0.68	−.02	.20***	.12**	.15***	.09*	-			
7. Palliative reaction	2.37	0.61	.01	.07	.19***	.17***	.10**	.23***	-		
8. Passive reactions	1.64	0.57	.16***	−.04	.21***	.07	.37***	.16***	.16***	-	
9, Self-esteem	3.28[k]	0.50	−.16***	.24***	.21***	.15***	−.07*	−.01	.01	−.40***	-
10. Psychological distress	1.56[k]	0.56	.30***	−.07	.02	−.01	.27***	.11***	.13***	.54***	−.52***
Girls											
1. Same-sex attraction	1.18	0.63	-								
2. Confrontation	2.37	0.55	−.03	-							

	M	*SD*	1.	2.	3.	4.	5.	6.	7.	8.	9.
3. Seeking support	3.35	0.67	−.06	.35***	-						
4. Reassuring thoughts	2.37	0.70	−.02	.29***	.24***	-					
5. Expression of emotions	2.15	0.68	.02	.08*	.28***	.10**	-				
6. Avoidance	2.33	0.63	−.02	.12**	.08*	.15***	.04	-			
7. Palliative reaction	2.44	0.57	−.04	.06	.13***	.20***	.09***	.21	-		
8. Passive reactions	1.83	0.61	.16***	−.08*	−.01	−.07*	.26***	.13***	.12***	-	
9. Self-esteem	3.04	0.55	−.20***	.32***	.31***	.18***	.04	.00	.01	−.43***	
10. Psychological distress	1.76	0.63	.26***	−.15***	−.16***	−.08*	.16***	.02	.10**	.51***	−.56***

[a] Absolute range is 1 – 5 (similar for boys and girls), where 1 = low score and 5 = high score on SSA;

[b] Absolute range: 1 – 4 (similar for boys and girls), where 1 = low score and 4 = high score on confrontation;

[c] Absolute range: 1 – 4 (similar for boys and girls), where 1 = low score and 4 = high score on seeking support;

[d] Absolute range: 1 – 4 (similar for boys and girls), where 1 = low score and 4 = high score on reassuring thoughts;

[e] Absolute range: 1 – 4 (similar for boys and girls), where 1 = low score and 4 = high score on expression of emotion;

[f] Absolute range: 1 – 4 (similar for boys and girls), where 1 = low score and 4 = high score on avoidance;

[g] Absolute range: 1 – 4 (similar for boys and girls), where 1 = low score and 4 = palliative reaction;

[h] Absolute range: 1 – 4 (similar for boys and girls), where 1 = low score and 4 = high score on passive reaction;

[i] Absolute range: 1 – 4 (similar for boys and girls), where 1 = low score and 4 = high score on self-esteem;

[j] Absolute range: 1 – 5 (overall and boys)/ 1– 4.52 (girls), where 1 = low score and 5 = high score on psychological distress;

[k] t test showed significant differences between boys and girls

* $p < .05$;

** $p < .001$;

*** $p < .0001$

Table 4

Bootstrapping Results of Direct and Indirect Effect of SSA on Self-esteem and Psychological distress

	B	Standard error (SE)	*t*	*p*
Self-esteem				
Direct effect of SSA	−.16	.02	−6.94	<.0001
Indirect effect of SSA	−.09	.01	−4.40	<.0001
Psychological distress				
Direct effect of SSA	.26	.02	10.83	<.0001
Indirect effect of SSA	.18	.02	08.62	<.0001

Table 5

Moderated Mediation Results for Biological Sex as Moderator on the Relationship between: SSA and Passive Coping (A)[1], Passive Coping and Self-esteem (B)[2], and Passive Coping and Psychological Distress (C)[2]

A	**Mediator variable: Passive coping style**		
	B	**SE**	***p***
SSA	.16	.03	<.0001
Biological sex	.20	.07	.003
SSA x Biological sex	−.01	.05	ns
B	Dependent variable: Self-esteem		
	B	SE	*p*
Passive coping	−.34	.03	<.0001
Biological sex	−.11	.08	ns
Passive coping x Biological sex	−.03	.04	ns
C	Dependent variable: Psychological distress		
	B	SE	*p*
Passive coping	.51	.03	<.0001
Biological sex	.13	.08	ns
Passive coping x Biological sex	−.02	.04	ns

[1] Age as covariate;

[2] Age and SSA as covariate