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## Gender Nonconformity, Homophobic Peer Victimization and Mental Health: How Same-Sex Attraction and Biological Sex Matter

Gabriël van Beusekom, MSc<sup>1</sup>, Laura Baams, MSc<sup>2</sup>, Henny M.W. Bos, PhD<sup>3</sup>, Geert J. Overbeek, PhD<sup>4</sup>, and Theo G.M. Sandfort, PhD

<sup>1,3,4</sup>University of Amsterdam, Research Institute of Child Development and Education

<sup>2</sup>Utrecht University, The Division of Developmental Psychology

<sup>3</sup>Columbia University, Department of Psychiatry, Division of Gender, Sexuality, and Health

### Abstract

We assessed whether homophobic name-calling accounts for the relationship between gender nonconformity and mental health (social anxiety and psychological distress) in a sample of 1,026 Dutch adolescents (boys:  $n = 517$ ) aged 11–16 years ( $M_{\text{age}} = 13.4$ ). We also explored whether this hypothesized mediation differs by sexual attraction and biological sex. Data were collected by means of paper–pencil questionnaires at five secondary schools located in urban areas in the Netherlands. Mediation analysis indicated that gender nonconformity was related with both social anxiety and psychological distress partially via homophobic name-calling. Moderated mediation analysis further showed that the mediating role of homophobic name-calling varied according to levels of same-sex attraction (SSA) and biological sex. The mediation effects increased in magnitude when levels of SSA increased and were significant only for adolescents with mean and high levels of SSA. The mediation effects were significant for boys and girls in general, although the mediation effects were stronger for boys than for girls. Our findings emphasize the importance of research and school-level interventions to focus on factors that promote acceptance of cross-gender behaviour among adolescents.

### Keywords

adolescence; gender identity; sexual minorities

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Research has shown that gender nonconformity is associated with impaired mental health among both sexual minority and heterosexual youth (Rieger & Savin-Williams, 2012). Experiences with homophobic peer victimization have been found to account for the relation between gender nonconformity and mental health among sexual minority adolescents and young adults (e.g. Baams, Beek, Hille, Zevenbergen, & Bos, 2013; Toomey, Ryan, Diaz, Card, & Russell, 2010). It remains unclear, however, whether homophobic peer victimization also accounts for the relation between gender nonconformity and mental health

among heterosexual youth. Further, there is a gap in the literature with regard to possible sex differences in this mediation. Therefore, the current study will assess the moderating role of sexual attraction and biological sex in the mediated relation between gender nonconformity and mental health by homophobic peer victimization.

Gender nonconformity refers to the expression of characteristics and/or behaviours that do not conform to traditional societal expectations of one's biological sex (Bailey & Zucker, 1995; Lippa, 2000, 2002). Studies among children and adolescents have linked gender nonconformity with poor mental health, including higher levels of psychological distress, depression symptoms, and lower self-worth (Collier, Bos, & Sandfort 2013; Roberts, Rosario, Slopen, Calzo, & Austin, 2013; Smith & Leaper, 2006).

The higher prevalence of mental health problems among gender-nonconforming youth could be understood from a minority-stress perspective (Meyer, 1995, 2003). The minority stress model (Meyer, 1995, 2003) posits that the higher incidence of mental health problems found among sexual minority individuals is the result of several unique stressors related to their minority status (e.g., homophobic victimization). Indeed, studies among children and adolescents found gender nonconformity to be associated with more peer victimization (e.g., being bullied, or picked on, and to be called names by peers) (Aspenlieder, Buchanan, McDougall, & Sippola, 2009; Ewing Lee & Troop-Gordon, 2011; Young & Sweeting, 2004). In line with the minority-stress theory, peer victimization has also been found to mediate the relation between childhood gender nonconformity and depressive symptoms in early adolescence (Roberts et al., 2013).

Gender-nonconforming individuals are often perceived by others as gay or lesbian, while gender-conforming individuals are more often perceived as heterosexual (Johnson & Ghavami, 2011; Valentova, Rieger, Havlicek, Linsenmeier, & Bailey, 2011). The tendency to perceive gender-nonconforming individuals as gay or lesbian might explain the increased risk of peer victimization for gender-nonconforming youth. Research has shown that peer victimization that is directed toward adolescents' gender nonconformity often includes elements of homophobia (Pascoe, 2007; Plummer, 2001; Wyss, 2004). For example, adolescents use homophobic epithets, such as "faggot", to label a boy whose mannerisms are perceived as feminine (Plummer, 2001). Furthermore, studies among lesbian, gay, bisexual, and transgender (LGBT) adolescents and young adults indicate that greater gender nonconformity is associated with increased exposure to verbal victimization related to their sexual minority status (D'Augelli, Grossman, & Starks, 2006; Toomey et al, 2010). Several studies also identified peer victimization based on an actual or perceived sexual minority status as a mediator of the relation between gender nonconformity and mental health in samples of LGB/LGBT adolescents and (young) adults (Baams et al., 2013; Sandfort, Melendez, & Diaz, 2007; Toomey et al., 2010).

Although gender nonconformity and same-sex attraction (SSA) are correlated (Bailey & Zucker, 1995; Rieger, Linsenmeier, Gygax, & Bailey, 2008; Steensma, Van Der Ende, Verhulst, & Cohen-Kettenis, 2013), this does not imply that all sexual minority individuals are gender nonconforming, nor that gender nonconformity is absent among heterosexual individuals. Therefore, in relation to mental health, it is vital to understand the independent

contributions of both gender nonconformity and SSA. To our knowledge only a handful of studies have investigated the relations of gender nonconformity, homophobic peer victimization, and mental health explicitly in samples of both sexual minority and heterosexual youth. Their results indicate that independent of adolescents' sexual attraction, greater gender nonconformity is associated with increased frequency of homophobic name-calling (Van Beusekom, Roodenburg, & Bos, 2012) and lower wellbeing (Rieger & Savin-Williams, 2012; Roberts et al., 2013). These findings suggest that the negative consequences of gender nonconformity may not only affect the peer relationships and mental health of sexual minority youth, but also those of heterosexual youth. In the current study we therefore examine sexual attraction differences in the mediated relation between gender nonconformity, and mental health by homophobic peer victimization.

Research that explored sex differences in the associations of gender nonconformity with peer victimization and mental health generally found stronger associations for boys than for girls (D'Augelli et al., 2006, Ewing Lee & Troop-Gordon, 2011; Roberts et al., 2013; Young & Sweeting, 2004). For instance, Young and Sweeting (2004) reported in their study of 15-year-olds (sexual orientation was not assessed) that, especially among boys, gender nonconformity was related with more peer victimization, more loneliness, and lower levels of psychological well-being. Research on LGB adolescents also shows that gay and bisexual boys experienced more negative rejections due to their gender nonconformity than lesbian and bisexual girls (D'Augelli et al., 2006). In contrast, a study among LGBT young adults (aged 21–25) did not find biological sex to moderate the relation between gender nonconformity and peer victimization due to sexual minority status (Toomey et al., 2010). Another study among LGB adolescents and young adults (aged 16–24) also did not find differences in the mediation process in relation to biological sex (Baams et al., 2013); for both male and female participants gender nonconformity was related to sexual orientation-based peer victimization, which resulted in poorer well-being (Baams et al., 2013). Based on these contrasting findings in the literature, our study explores potential sex differences in the mediated relation between gender nonconformity and mental health by homophobic peer victimization.

## The current study

Previous studies that assessed the mediating role of homophobic peer victimization in the relation between gender nonconformity and mental health used samples of self-identified LGB or LGBT adolescent and adult persons (Baams et al., 2013; Toomey et al., 2010). In contrast, the current study focuses on adolescents in general and included youth who may have varying levels of SSA. We also focus on younger adolescents, because peer pressure (Gavin & Furman 1989; Steinberg & Monahan, 2007) and adherence to gender role conventions might be more critical in the early adolescent years than in later stages of adolescent development (Barret & White, 2002; Pleck, 1975; Rebecca, Hefner, & Oleshansky, 1976). Furthermore, studies that investigated homophobic peer victimization often include items about verbal, physical and other types of peer victimization in one scale, which makes it difficult to assess their separate effects. We have chosen to focus on adolescents' exposure to homophobic name-calling in particular as it is one of the most

frequent forms of peer victimization within schools (e.g., McMaster, Connolly, Pepler, & Graig, 2002).

The goals of the current study were: (a) to investigate whether homophobic peer victimization mediates the relationship between gender nonconformity and mental health among adolescents; (b) to explore whether this hypothesized mediation was moderated by sexual attraction and biological sex. Figure 1 presents our conceptual moderated mediation model. We expected that adolescents with high levels of gender nonconformity would report lower mental health, via experiences with homophobic name-calling. Furthermore, we explored moderated mediation by assessing whether the path from gender nonconformity to homophobic name-calling varied according to adolescents' sexual attraction and biological sex.

## Method

### Participants

Participants in this study were 1,026 Dutch secondary school students (boys:  $n = 517$ ). The mean age of participants was 13.4 ( $SD = 0.93$ ) and ranged from 11 to 16 years. Participants attended secondary education at various levels: 20.1% attended preparatory vocational secondary education; 27.4% senior general secondary education; and 52.5% university preparatory education. In total 92.5% of the participants reported that their parents had a Dutch or Western ethnic background and 7.5% of the participants reported that either their father or mother had a non-Western ethnic background. The two most commonly reported non-Western ethnic backgrounds for parents were Surinamese (7.0%) and Moroccan (5.5%).

### Procedure

Several schools for secondary education throughout the Netherlands were randomly selected from a listing of schools available on the website of the Netherlands Ministry of Education. The selected schools were contacted by phone and asked to participate in the study. If a school was interested, a letter concerning the content and procedure of the study was sent to the school. In total 38 schools were contacted and five agreed to participate. Most of the schools that refused to participate did so because they were already enrolled in another study; a few refused due to the subject of the study (SSA). In the participating schools, first-, second-, and third-year students were qualified to participate.

Before data collection started, the board of each school sent a letter to all parents containing information about the date, purpose, and subject of the study. The letter informed parents that their children's participation in the study was voluntary. Parents were asked to contact the researchers if they did not want their child to participate. Fourteen parents did not allow their children to participate. Research assistants at each participating school explained the subject of the study and stressed the voluntary nature and confidentiality of participation. They informed students that their individual responses would not be shared with their teachers, parents, or other students. None of the students declined to participate.

Data were obtained by means of a paper-pencil questionnaire, which was distributed by research assistants during class. The questionnaires were filled out in an exam setting so

students could not observe each other's answers. Students that were not given permission by their parents to participate remained in the classroom and were asked to work in private on school assignments. The institutional review board of [masked reference] had approved the study design and protocol.

## Measurements

**Gender nonconformity**—Gender nonconformity was assessed with a modified and translated version of the Childhood Gender Nonconformity Scale (Collier et al., 2013; for original version see Rieger et al., 2008). The scale consists of five separate items for boys and girls (e.g., for boys: “I am a feminine boy”; and for girls: “I am a masculine girl”). Responses were rated on a 7-point Likert scale (1 = *absolutely not* to 7 = *always*). A mean score of the five items was computed, with a higher score indicating greater gender nonconformity. Cronbach's alpha was .61 for boys and .73 for girls. Table 1 presents the percentages and means of the gender nonconformity scores separately for boys and girls.

**Homophobic name-calling**—A modified and translated version of the Homophobic Content Target Subscale was used to assess participants' experiences with being called homophobic names by peers within the past month (Collier et al., 2013, see for original version Poteat & Espelage, 2005). Homophobic epithets that are commonly used in the Netherlands were presented to participants in Dutch. Items were preceded with the following stem: “Some youth call each other names such as ‘fag’, ‘gay’, ‘lesbo’ or ‘dyke’. How many times in the past month were you called these names?”. Using a 5-point Likert scale (1 = *never* to 5 = *seven times or more*), participants indicated whether they were called names by several types of peers at school: (1) a friend; (2) a class member (3) a fellow student from a different class; (4) someone at their school they do not know; (5) someone they do not like. The mean scores of the five items was computed, with a higher score reflecting more exposure to homophobic name-calling. Cronbach's alpha was .81.

**Mental health**—Mental health was operationalized as social anxiety and psychological distress. A shortened and translated version of the Social Interaction Anxiety Scale (for original version see Mattick & Clarke, 1998) was used to assess participants' anxiety in situations involving social interactions with others. The shortened scale consisted of 10 items on which participants rated how anxious they felt in social situations (e.g., “I get nervous when I need to speak with someone in authority”). One item that asked participants to indicate the extent to which they felt nervous when they need to speak with “attractive members of the opposite sex,” was changed to “with attractive people.” Response options ranged on a 5-point Likert scale: 1 = *not true of me* to 5 = *very true of me*. The mean score of the 10 items was computed, with a higher score representing more social anxiety. Cronbach's alpha was .88

Psychological distress was assessed with a shortened and translated version of the Brief Symptom Inventory (Sandfort, Bos, Collier, & Metselaar, 2010; for the original version, see Derogatis, 1993). Using a 5-point Likert scale (1 = *not at all* to 5 = *extremely*), participants were asked to rate the occurrence in the past week of 24 symptoms (e.g., “Having difficulty

making decisions”). The mean score of the 24 items was computed, with a higher score indicating greater psychological distress. Cronbach’s alpha was .93.

**Same-sex attraction**—We measured same-sex attraction (SSA) with the following single item: “Have you ever had romantic and/or sexual feelings for someone of the same sex?” (1 = *never*, 2 = *rarely*, 3 = *sometimes*, 4 = *frequently*, 5 = *very often*). This question has been used successfully in previous research on same-sex attracted youth in the Netherlands (e.g., Collier et al., 2013). Table 2 presents the distribution of SSA scores separately for boys and girls and adolescents in general.

**Demographics**—Several demographic characteristics were assessed. These included biological sex, ethnic background, age, and educational level.

## Analyses

To examine whether homophobic name-calling mediated the relation between gender nonconformity and mental health, bootstrapped mediation analyses were carried out using an SPSS PROCESS macro provided by Hayes (2012, 2013). These analyses were carried out separately for each mental health outcome (social anxiety and psychological distress). Bootstrapping generates random samples of the original data (in the current analysis, 10,000 random samples). Mediation effects were computed for each random sample. The distribution of these effects was then used to obtain 95 % bias-corrected confidence intervals (CI’s) for the size of the mediation effects. The obtained CI’s confidence intervals were used to infer whether the mediation effects were significant (i.e., did not contain the value 0). We used the kappa squared ( $\kappa^2$ ) statistic as a measure of effect size for the mediation effects, as recommend by Preacher and Kelley (2011). This statistic calculates the magnitude of the observed mediation effect in proportion to the maximum mediation effect possible that could be calculated from the data. In addition,  $\kappa^2$  can be interpreted in the same way as squared correlation coefficients to describe mediation effect sizes, with small, medium, and large effect sizes corresponding to values of .01, .09, and .25 respectively (Preacher & Kelley, 2011).

We subsequently used the PROCESS macro to carry out bootstrapped moderated mediation analyses (Hayes, 2012, 2013) to examine whether the mediating role of homophobic name-calling in the relations of gender nonconformity with mental health, were moderated by SSA and biological sex. These analyses were carried out, separately for each mental health outcome and each potential moderator variable, in which gender nonconformity and the potential moderator variable, as well as the interaction of gender nonconformity  $\times$  the potential moderator variable (using mean centered variables) were entered into the model to predict homophobic name-calling. With regard to the continuous moderator of SSA, PROCESS produced mediation effects for values of SSA equal to the sample mean as well as one standard deviation above and below the mean. For the dichotomous variable of biological sex, PROCESS produced mediation effects separately for boys and girls.

## Results

### Descriptive analyses

**Sociodemographic characteristics and studied variables**—Analyses of variance (ANOVAs) and chi-square ( $\chi^2$ ) tests of independence were carried out to assess whether our potential moderator variables (i.e. SSA and biological sex) were related to various sociodemographic characteristics. Results showed that SSA was not significantly related to participants' biological sex, cultural background, educational level, and age (see Table 3). We further found no significant difference between boys and girls in their cultural background, educational level, and age (see Table 4).

Pearson  $r$  correlations and ANOVAs were carried out to assess whether our potential moderator variables (i.e. SSA and biological sex) were related to our studied variables (gender nonconformity, homophobic name-calling, social anxiety, and psychological distress). The intercorrelations among the studied variables are presented in Table 5 for the overall group and for boys and girls and separately. SSA was significantly correlated with gender nonconformity, homophobic name-calling, social anxiety and psychological distress. Adolescents who reported higher levels of SSA reported greater gender nonconformity, more exposure to homophobic name-calling, more social anxiety and more psychological distress. Furthermore, boys reported lower levels of gender nonconformity and higher levels of homophobic name-calling when compared to girls. Boys also reported lower levels of social anxiety and lower levels of psychological distress than girls did (see Table 4).

**Associations between gender nonconformity, homophobic name-calling, and mental health**—As expected, gender nonconformity was significantly correlated with social anxiety and psychological distress (see also Table 5). Adolescents who reported higher levels of gender nonconformity also reported higher levels of social anxiety and psychological distress. Furthermore, gender nonconformity was found to be significantly correlated with homophobic name-calling. Those who reported higher levels of gender nonconformity also reported higher levels of homophobic name-calling. Homophobic name-calling was also significantly correlated with social anxiety and psychological distress. Adolescents who reported higher levels of homophobic name-calling also reported higher levels of social anxiety and psychological distress.

### Mediation of Homophobic Name-calling in the Relation between Gender Nonconformity and Mental Health

Results for the bootstrapped mediation analyses are presented in Figure 2. Homophobic name-calling significantly mediated the relations between gender nonconformity and social anxiety, and gender nonconformity and psychological distress. Both mediated effects indicated a small effect size (social anxiety:  $\kappa^2 = .01$ ,  $SE = .01$ , bootstrap 95% CI [.002, .036]; psychological distress:  $\kappa^2 = .04$ ,  $SE = .01$ , bootstrap 95% CI [.016, .069]). The mediation effects were in the expected direction: greater gender nonconformity predicted more exposure to homophobic name-calling, which in turn predicted more social anxiety and more psychological distress. Homophobic name-calling only partially mediated the relations between gender nonconformity and mental health, as gender nonconformity was

still significantly related with social anxiety and psychological distress, although not as strong as without homophobic name-calling being accounted for.

### **Sexual Attraction and Biological Sex as Moderators for the Mediation of Homophobic Name-calling in the Relation between Gender Nonconformity and Mental Health**

**Sexual attraction as a moderator**—Results for the moderated mediation analyses with sexual attraction as a moderator are presented in Figure 3. A significant interaction of gender nonconformity  $\times$  sexual attraction on homophobic name-calling in the first phase of the mediation models was found ( $\beta = .06$ ,  $SE = .01$ ,  $t = 4.69$ ,  $p < .001$ ). Simple slope analysis indicated that the relation between gender nonconformity and homophobic name-calling was consistently positive and increased in magnitude with increasing levels of same-sex attraction (SSA). This relation was significant for adolescents with mean and high levels of SSA, but not significant for adolescents with low levels of SSA. The significant moderation effect of gender nonconformity with sexual attraction indicated that the mediated effects are also moderated by sexual attraction. This is because the mediated effects are the product of the relation between gender nonconformity and homophobic name-calling (which varied between levels of SSA) and the relation between homophobic name-calling and mental health.

Results showed that the mediated effects of gender nonconformity on social anxiety through homophobic name-calling were positive and increased in strength when the level of SSA increased, being significant at mean and high levels of SSA, but not at low levels of SSA. The mediated relations of gender nonconformity on psychological distress through homophobic name-calling were also positive and the strength of these mediated effects increased along with feelings of SSA. The mediations were significant for adolescents with mean and high levels of SSA, but not for adolescents with low levels of SSA. These results indicate that homophobic name-calling partially mediated the relations between gender nonconformity and mental health for youth with mean and high levels of SSA, but not for youth with low levels of SSA, because gender nonconformity was only significantly associated with more experiences with homophobic name-calling for adolescents with mean and high levels of SSA.

**Biological sex as a moderator**—Figure 4 presents the results for the moderated mediation analysis with biological sex as a moderator. A significant interaction of gender nonconformity  $\times$  biological sex on homophobic name-calling in the first phase of the mediation models confirmed the moderating role of biological sex in the mediating relations ( $\beta = -.12$ ,  $SE = .03$ ,  $t = -3.91$ ,  $p < .001$ ). Greater gender nonconformity was significantly related to more experiences with homophobic name-calling for both boys and girls, but this relation was stronger for boys than for girls. Accordingly, the mediated relation from gender nonconformity to social anxiety via homophobic name-calling was significant for both boys and girls, but the magnitude of the mediation effect was stronger for boys than it was for girls. The mediated relation from gender nonconformity to psychological distress via homophobic name-calling was also significant for both boys and girls, yet again the magnitude of the mediation effect was found to be stronger for boys than for girls. Thus, homophobic name-calling partially mediated the relations between gender nonconformity



and mental health for both boys and girls. These mediations, however, were stronger for boys, because greater gender nonconformity was more strongly associated with exposure to homophobic name-calling for boys than for girls.

## Discussion

Our results showed that in a general sample of Dutch adolescents, homophobic name-calling by peers partially mediated the relations of gender nonconformity with social anxiety and psychological distress. The magnitude of these mediation effects increased with increasing levels of SSA, being significant only for adolescents with mean and high levels of SSA. The mediation effects were also stronger for boys than for girls.

While previous studies among LGB/LGBT youth and adult participants identified homophobic peer victimization as a mediator of the relation between gender nonconformity and mental health (Baams et al., 2013; Sandfort et al., 2007; Toomey et al., 2010), the current study demonstrates that the mediating role of homophobic name-calling only holds for adolescents with mean and high levels of SSA. The mediation effects were not significant for adolescents with low levels of SSA, because for these adolescents, gender nonconformity was not significantly associated with homophobic name-calling. These findings are surprising as one would expect that adolescents with mostly other-sex attraction (i.e., low levels of SSA) would also be the target of homophobic peer victimization when they are seen by others as being gay or lesbian, due to their gender expression. It thus seems that adolescents were not solely targeted with homophobic names by peers because of their gender expression, but also because of their same-sex attracted feelings. It could have been that the same-sex attracted youth with high levels of gender nonconformity in our sample were more likely to be open about their same-sex attracted feelings (Savin-Williams, 2005), thus experiencing rejection of both their gender expression and their sexual orientation. Openness about a same-sex sexual orientation has been linked with more peer victimization in school (e.g. D'Augelli, Pilkington, & Hershberger, 2002) and might explain the increased risk of homophobic name-calling for youth with mean and high levels of SSA. Similarly, those youth with low levels of SSA may not have felt the need to "come out" or explicitly disclose their sexual orientation since they are most likely assumed to have a heterosexual sexual identity. However, Bogaert and Hafer (2009) found that low beliefs in "a just world" was associated with a delayed coming-out process for gender-nonconforming gay men. These findings suggest that instead of being more likely to disclose their feelings of SSA, gender-nonconforming youth might also keep their same-sex attracted feelings concealed out of fear for future victimization. Future research is needed to clarify the role the coming-out process plays in the relation between gender nonconformity, homophobic peer victimization and mental health.

Our current findings contrast those from prior studies that found no differences between same-sex attracted and other-sex attracted adolescents in the relations of gender nonconformity with homophobic name-calling (Van Beusekom et al., 2012) and mental health (Rieger & Savin-Williams, 2012). These latter studies, however, were based on samples of late adolescents. It could be that the combination of SSA and gender nonconformity increases the chances of peer victimization during the early adolescent years

in which peer relations becomes increasingly salient (Brown, 1990; Cairns, Xie, & Leung, 1998) and gender role adherence might be more important (Barret & White, 2002; Pleck, 1975; Rebecca et al., 1976). In other words, it may be that in early adolescence, a deviation from society's gender roles is met with more rejection from peers, while at the same time being accepted by peers is crucial. For future research it would be important to focus on these age differences in order to study why it is gender nonconformity among young same-sex attracted adolescents that seems to elicit these negative responses.

We also found that the mediating role of homophobic name-calling in the relations of gender nonconformity with social anxiety and psychological distress was stronger for boys than it was for girls, because for boys gender nonconformity was more strongly associated with homophobic name-calling. These findings align with previous studies among youth and adults that have indicated that gender nonconformity is less socially accepted and associated with more mental health problems in male than in female participants (e.g., D'Augelli et al., 2006; Skidmore; Linsenmeier, & Bailey, 2006). The stronger rejection of gender nonconformity in adolescent boys could be connected to the notion that boys tend to think of masculinity as rejecting femininity, whereas for girls femininity does not involve the rejection of masculinity (Maccoby, 1998). In other words, accepting some degree of femininity – as gender nonconforming adolescent boys do – is a direct rejection of masculinity. Consequently, it can be difficult for boys to express or accept any femininity alongside their masculinity. Namaste (1996) argues that, due to the confusion of gender nonconformity with a same-sex sexual orientation, boys use homophobic peer victimization as a means to regulate the gender expression of other boys. The recipients of homophobic peer victimization may have varying levels of SSA, but they are exposed to homophobia for not living up to the acceptable degree of masculinity (Namaste, 1996). In contrast to our findings, one previous study found no differences between male and female LGB adolescents and young adults in the mediation of gender nonconformity and mental health through homophobic peer victimization (Baams et al., 2013). The discrepancy in findings may be due to the age range of participants (young adolescents versus late adolescents and young adults). During late adolescence and early adulthood gender roles might be more flexible (e.g., Pleck, 1975). As a consequence, differences in acceptance of male and female gender nonconformity might be less pronounced.

Homophobic name-calling was only found to be a partial mediator of the relation between gender nonconformity and mental health. This indicates that other factors, not examined in this study, may also influence the relation between gender nonconformity and mental health. For a more accurate view of the victimization experiences of gender-nonconforming youth, future studies should include other forms of peer victimization. For instance, Horn (2005) found that adolescents may be more likely to use relational or indirect forms of peer victimization (exclusion) towards their gender-nonconforming peers than verbal or physical forms.

Aside, from the quality of adolescents' peer relations, their mental health is also affected by the quality of their social relations with other actors in their social network, such as parents or teachers (Bronfenbrenner, 1979, 2005). Furthermore, community-level factors (e.g., schools and youth organizations), and the broader societal context (e.g., general beliefs

about sexuality and gender nonconformity) can also contribute to adolescents' mental health (Bronfenbrenner, 1979, 2005; Krieger, 2001). In order to develop a better understanding of the relation between gender nonconformity and mental health, it is important to replicate this study and to further investigate the mediating role of multiple contextual factors of adolescents' surrounding environment. Knowledge about factors that explain the mental health problems associated with gender nonconformity, and the antecedents of poorer mental health, is important to understand the ways in which the development of these mental health problems can be prevented.

### Strengths and limitations

The current study has several strengths. First, we were able to include a large sample of both same-sex attracted and other-sex attracted adolescents – this enabled us to test the moderation by sexual attraction and biological sex. Although we were not able to use random selection of participants within the schools, we were still able to avoid some of the selection biases that occur when recruiting participants from LGBT venues.

Our study also has some limitations. First, we questioned adolescents about their feelings of SSA and we did not assess other indicators of sexual orientation, such as identification as LGB or heterosexual, or having sexual experiences with the same or opposite sex. As such, we do not know, for example, whether the same-sex attracted adolescents in the current study identify as LGB, and/or engage in same-sex sexual behaviour. It is likely, however, that many same-sex attracted adolescents in our sample given their age (11–16 years), did not identify as LGB or had not experienced same-sex sexual experiences.

Second, we also did not assess the extent to which adolescents disclosed their same-sex attracted feelings to their peers. Therefore, we could not assess whether the relation between gender nonconformity and homophobic name-calling was different for adolescents with different levels of disclosure of their same-sex attracted feelings. Future research among same-sex attracted adolescents that examines whether differences in disclosure of same-sex attracted feelings relates to differences in the relation between gender nonconformity, peer victimization and mental health is needed.

A final limitation pertains to the cross-sectional design of the study, which does not allow drawing conclusions about the temporal order of the effects. In one longitudinal study, for instance, it was found that some forms of peer victimization predicted increases, rather than decreases, of gender nonconformity over time (Ewing Lee & Troop-Gordon, 2011). More longitudinal research is needed to examine how the relations between gender nonconformity, homophobic name-calling and mental health develop over time.

In conclusion, our findings indicate that among young adolescents with mean and high levels of SSA, gender nonconformity is related to poor mental health outcomes, partly due to experiences with homophobic name-calling. Furthermore, homophobic name-calling also partially explains the relationships between gender nonconformity and poor mental health outcomes among both adolescent boys and girls, although stronger for boys.

These findings are important as gender-nonconforming youth's experiences with peer victimization during adolescence can also be a precursor of deteriorated mental health conditions in young adulthood (Roberts et al., 2013). The relation between gender nonconformity and homophobic name-calling found in the current study, underscores that homophobia not only encompasses negative attitudes toward same-sex sexuality, but also negative attitudes toward gender nonconformity. Given the interrelatedness of these two constructs, school programs aimed at reducing homophobia among adolescents should therefore not only focus on sexual diversity but also on adolescents' attitudes toward gender nonconformity.

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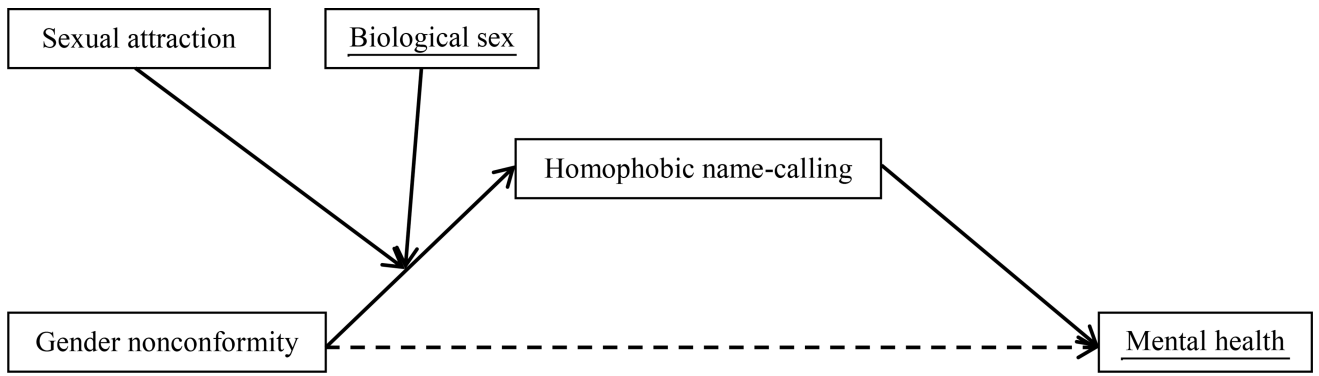
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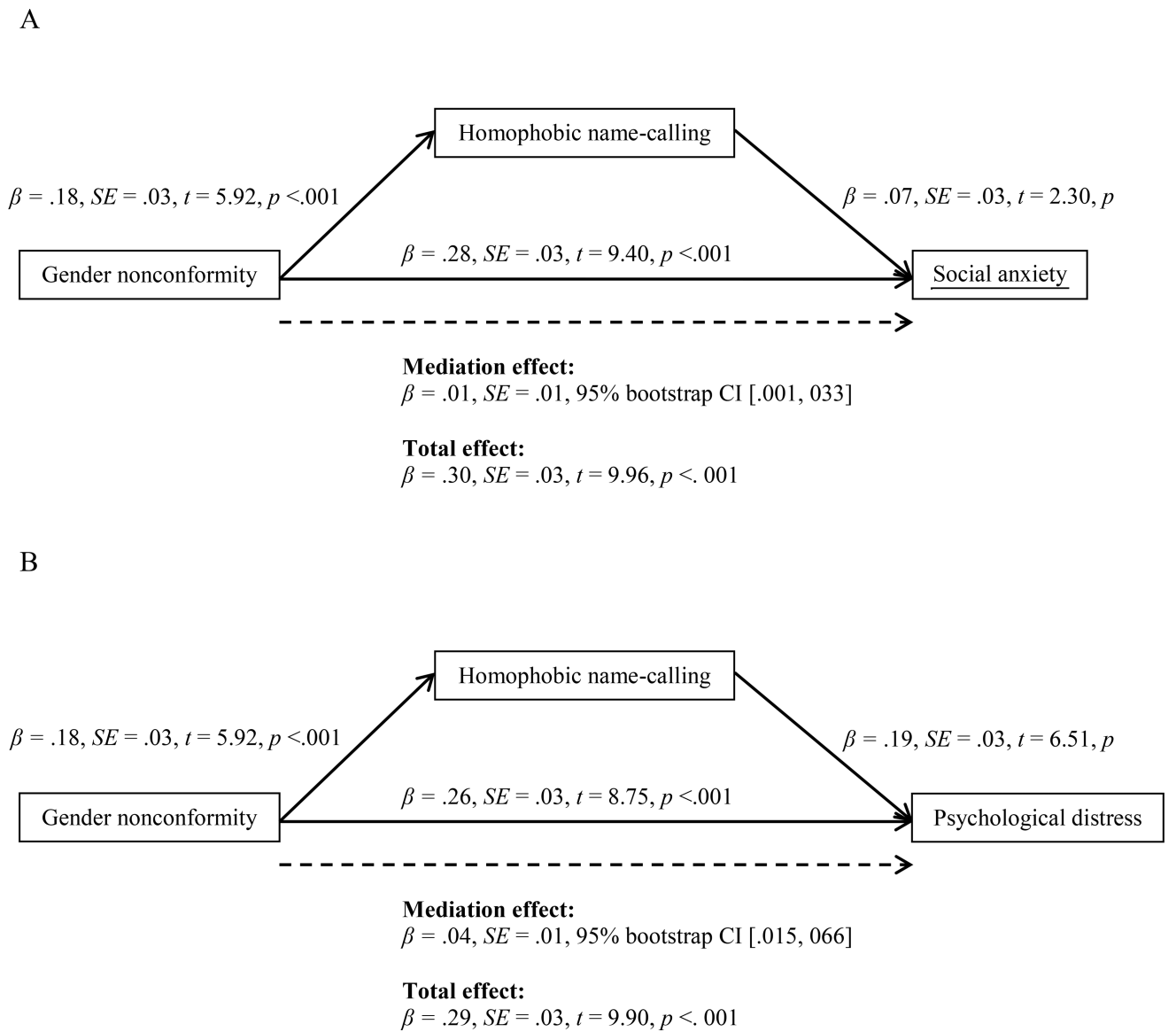
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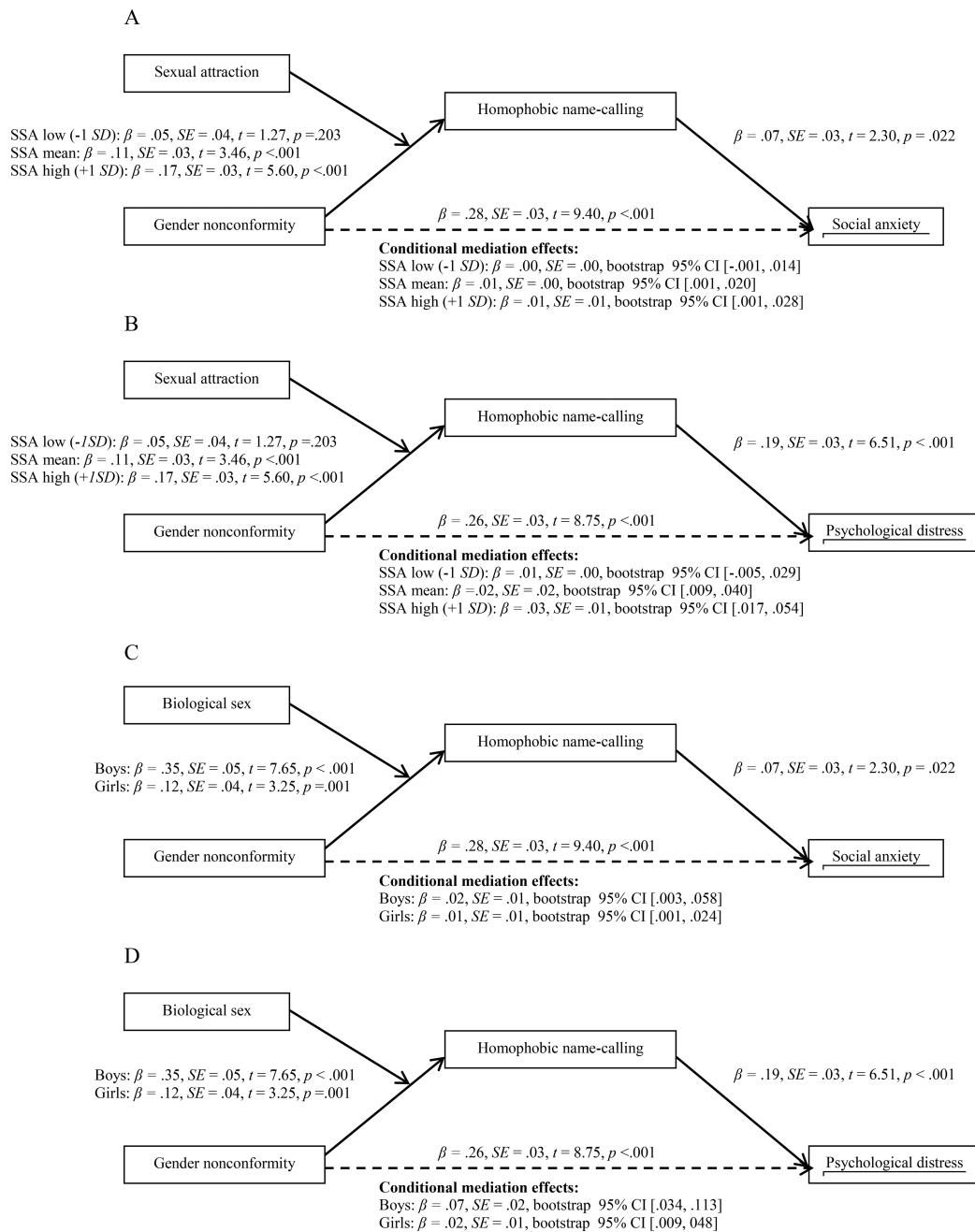


**Figure 1.** Conceptual moderated mediation model. The relation of gender nonconformity with mental health mediated by homophobic name-calling and moderated by sexual attraction and biological sex.



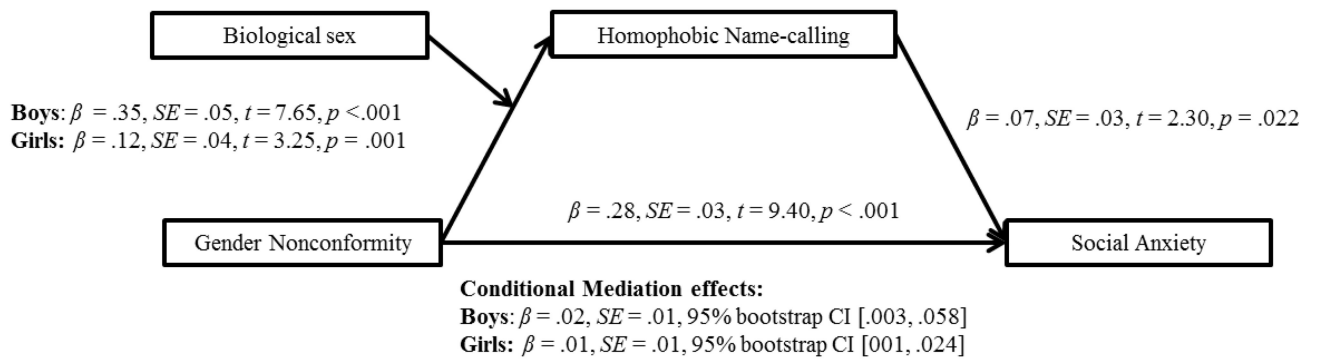
**Figure 2.** Results for the bootstrapped mediation analyses for homophobic name-calling as a mediator of the relation between gender nonconformity and social anxiety (A) and gender nonconformity and psychological distress (B).



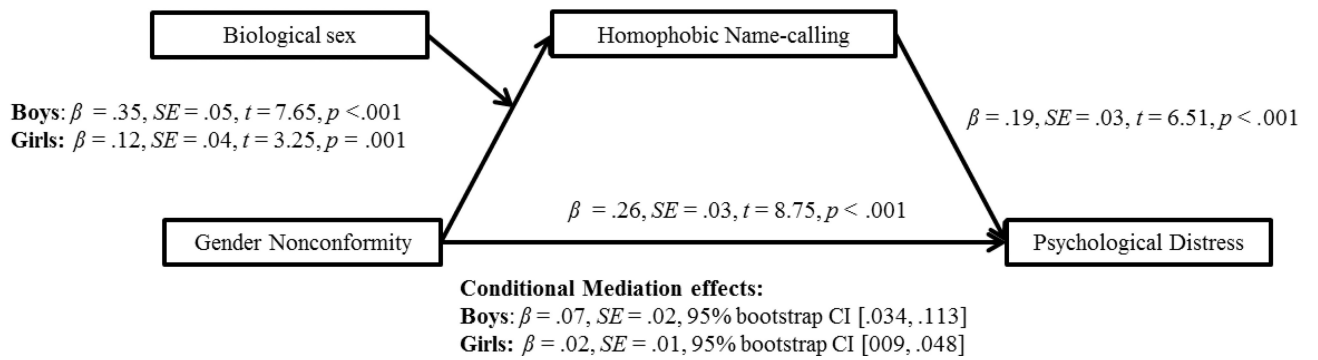


**Figure 3.** Bootstrapped moderated mediation results for sexual attraction as a moderator of the mediated relation between gender nonconformity and social anxiety (A) and gender nonconformity and psychological distress (B). Biological sex as a moderator of the mediated relation between relation between gender nonconformity and social anxiety (C) and gender nonconformity and psychological distress (D) by homophobic name-calling.

A



B



**Figure 4.** Bootstrapped moderated mediation results for biological sex as a moderator of the mediated relation between gender nonconformity and social anxiety (A) and gender nonconformity and psychological distress (B) by homophobic name-calling.

**Table 1**

Frequencies and means of the gender nonconformity scores

	n (%)						M (SD)	
	Absolutely not	Mostly not	Rarely	Sometimes	Often	Very often	Always	
<b>Scale items for boys</b>								
I am being called a girlish by my peers	372 (72.0)	100 (19.3)	22 (4.3)	20 (3.9)	-	2 (0.4)	1 (0.2)	1.43 (0.84)
I sometimes wish I had been born a girl rather than a boy	478 (92.5)	25 (4.8)	4 (0.8)	7 (1.4)	-	-	3 (0.6)	1.14 (0.63)
I prefer hanging out with girls rather than boys	239 (46.3)	115 (22.3)	74 (14.3)	77 (14.9)	5 (1.0)	4 (0.8)	2 (0.4)	2.06 (1.23)
I avoid wearing typical men's/boys clothing	397 (76.9)	77 (14.9)	13 (2.5)	16 (3.1)	4 (0.8)	5 (1.0)	4 (0.8)	1.42 (1.00)
I am a feminine boy	441 (85.5)	51 (9.9)	7 (1.4)	6 (1.2)	3 (0.6)	2 (0.4)	6 (1.2)	1.27 (0.89)
<b>Scale items for girls</b>								
I am being called a boyish by my peers	357 (69.3)	87 (16.9)	42 (8.2)	21 (4.1)	1 (0.2)	4 (0.8)	3 (0.6)	1.54 (1.01)
I sometimes wish I had been born a boy rather than a girl	436 (84.7)	49 (9.5)	12 (2.3)	16 (3.1)	-	2 (0.4)	-	1.25 (0.70)
I prefer hanging out with boys rather than girls	236 (45.9)	112 (21.8)	78 (15.2)	70 (13.6)	5 (1.0)	7 (1.4)	6 (1.2)	2.10 (1.32)
I avoid wearing typical women's/girls' clothing	354 (68.9)	77 (15.0)	33 (6.4)	36 (7.0)	3 (0.6)	3 (0.6)	8 (1.6)	1.64 (1.20)
I am a masculine girl	385 (74.9)	76 (14.8)	24 (4.7)	22 (4.3)	3 (0.6)	1 (0.2)	3 (0.6)	1.43 (0.93)
<b>Total score gender nonconformity</b>								<b>1.53 (0.66)</b>

**Table 2**

Levels of same-sex attraction

	Never n (%)	Rarely n (%)	Sometimes n (%)	Frequently n (%)	Very often n (%)
Boys	485 (93.8)	14 (2.7)	13 (2.5)	3 (0.6)	2 (0.4)
Girls	463 (91.0)	23 (4.5)	10 (2.0)	9 (1.8)	4 (0.8)
Combined	948 (92.4)	37 (3.6)	23 (2.2)	12 (1.2)	6 (0.6)

**Table 3**

Demographic characteristics by feelings of same-sex attraction

	Same-sex attraction	<i>F</i>	<i>p</i>	$\eta^2$
Biological sex <sup>1</sup> <i>M</i> ( <i>SD</i> )		2.90	.089	.003
Boys	1.11 (.48)			
Girls	1.17 (.62)			
Cultural background <sup>1</sup> <i>M</i> ( <i>SD</i> )		.246	.620	.000
Dutch/Western	1.14 (.54)			
Non-Dutch/non-Western	1.11 (.53)			
Educational level <sup>1</sup> <i>M</i> ( <i>SD</i> )		2.66	.071	.005
Preparatory vocational	1.13 (.58)			
Senior general	1.20 (.69)			
University preparatory	1.11 (.45)			
Age <sup>2</sup>	.02		.633	

Note:

<sup>1</sup> ANOVA;<sup>2</sup> Pearson correlation.

Same-sex attraction: 1 = low, 5 = high;

**Table 4**

Demographic characteristics and studied variables by biological sex

	Biological sex		$\chi^2/F$	<i>p</i>	Effect size
	Boys	Girls			
Cultural background <sup>1</sup> <i>n</i> (%)			.041	.839	-.006 <sup>3</sup>
Dutch/Western	471 (92.4)	469 (92.7)			
Non-Dutch/non-Western	39 (7.6)	37 (7.3)			
Educational level <sup>1</sup> <i>n</i> (%)			.322	.851	.018 <sup>4</sup>
Preparatory vocational	105 (20.4)	100 (19.7)			
Senior general	137 (26.7)	143 (28.2)			
University preparatory	272 (52.9)	264 (52.1)			
Age <sup>2</sup>					
<i>M</i>	13.35	13.36	.021	.855	.000 <sup>5</sup>
<i>SD</i>	.96	.90			
Gender nonconformity <sup>2</sup>			9.83	.002	.010 <sup>5</sup>
<i>M</i>	1.46	1.59			
<i>SD</i>	.59	.73			
Homophobic name-calling <sup>2</sup>			99.99	<.001	.089 <sup>5</sup>
<i>M</i>	1.70	1.27			
<i>SD</i>	.82	.53			
Social anxiety <sup>2</sup>			18.65	<.001	.0185
<i>M</i>	1.79	1.94			
<i>SD</i>	.52	.58			
Psychological distress <sup>2</sup>			58.08	<.001	.054 <sup>5</sup>
<i>M</i>	1.52	1.79			
<i>SD</i>	.49	.63			

Note:

<sup>1</sup> Chi-square test of independence;

<sup>2</sup> ANOVA;

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<sup>3</sup>Phi;

<sup>4</sup>Cramér's V;

<sup>5</sup>Eta-squared.

Gender nonconformity: 1 = low, 7 = high; homophobic name-calling: 1 = low, 5 = high; social anxiety: 1 = low, 5 = high; psychological distress: 1 = low, 5 = high.

**Table 5**

Intercorrelations among the studied variables

	1	2	3	4	5
<b>Overall group</b>					
1. Gender nonconformity	-				
2. Same-sex attraction	.19**	-			
3. Homophobic name-calling	.18**	.18**	-		
4. Social anxiety	.30**	.19**	.12**	-	
5. Psychological distress	.30**	.29**	.24**	.53**	-
<b>Boys and girls/</b>					
1. Gender nonconformity	-	.06	.18**	.24**	.24**
2. Same-sex attraction	.37**	-	.24**	.15**	.30**
3. Homophobic name-calling	.28**	.19**	-	.09*	.25**
4. Social anxiety	.35**	.23**	.24**	-	.53**
5. Psychological distress	.35**	.26**	.43**	.50**	-

Note:

*r* Intercorrelations for boys are presented below the diagonal, and intercorrelations for girls are presented above the diagonal.

Gender nonconformity: 1 = low, 7 = high; same-sex attraction: 1 = low, 5 = high; homophobic name-calling: 1 = low, 5 = high; social anxiety: 1 = low, 5 = high; psychological distress: 1 = low, 5 = high.

\*  $p < .05$ ,

\*\*  $p < .01$