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## **Is Being Queer Gay? Sexual Attraction Patterns, Minority Stressors, and Psychological Distress in Non-Traditional Categories of Sexual Orientation**

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## **Abstract**

This study examined characteristics of cisgender people who use non-traditional sexual orientation labels and investigated minority stress in these groups. Pansexual (n = 160), queer (n = 80), and asexual (n = 98) participants were compared with heterosexual (n = 1,021), bisexual (n = 1,518), and lesbian/gay (n = 2,730) individuals recruited from a cross-sectional survey. Participants were compared on sexual attraction, age, gender and childhood gender nonconformity. Hierarchical regression models with psychological distress as the dependent variable and outness, prejudice events, expectations of rejection, self-stigma, and rumination as independent variables were then tested in pansexual, queer, and asexual individuals. Sexual attraction, age, gender and recalled childhood gender nonconformity were significant predictors of group identity. Pansexual individuals were not significantly distinct from bisexual individuals in sexual attraction. Queer individuals fell between bisexual and lesbian/gay individuals in sexual attraction scores. Prejudice events and rumination were significantly associated with distress in all three non-traditional groups. Rumination scores attenuated the relationship between prejudice events and distress in all groups. These findings help characterize pansexual, asexual and queer individuals and suggest indirect effects of prejudice events on distress via rumination represent a worthy avenue for future minority stress research in these groups.

*Keywords:* minority stress, pansexual, queer, asexual, sexual orientation

## **Introduction**

Though most individuals in the West consider themselves to be heterosexual, a small minority do not. For example, it is estimated that as many as 1.1% of women and 2.2% of men identify as lesbian/gay and 2.2% of women and 1.4% of men identify as bisexual (Gates, 2011). Traditionally, these three categories have been used in research and theory on sexual orientation (Bailey et al., 2016). However, a growing a minority in recent times identify with other sexual orientation terms. Specific estimates are difficult as representative samples generally have not provided options beyond the traditional three, but one representative study estimated that 5.8% of sexual minority adults in the U.S. identify as queer and 6.7% identify with another non-traditional label (Goldberg, Rothblum, Russell, & Meyer, 2019). This compares with 46.9% of sexual minority adults who identified as bisexual and 40.6% of sexual minority adults who identified as lesbian/gay in the same study. Two other major non-traditional labels are asexual and pansexual. “Pansexual” is thought to mean sexual attraction to all genders or regardless of gender (Belous & Bauman, 2016), “queer” a previously a derogatory term, has come to be understood in recent decades as an intentionally vague rejection of sexual orientation categorization systems altogether (Callis, 2014), and “asexual” refers to a lack of sexual attraction (Bogaert, 2015).

Several studies have attempted to characterize which individuals identify with non-traditional sexual orientation labels. Thus far, research has found that cisgender women and gender minority individuals are more likely to identify with labels other than lesbian, gay or bisexual than cisgender men (Bosse & Chiodo, 2016; Galupo, Mitchell, & Davis, 2018; Galupo, Ramirez, & Pulice-Farrow, 2017; Goldberg et al., 2019; Morandini, Dar-Nimrod, & Blaszczyński, 2017) and that younger people are more likely to identify with these non-traditional labels than older people in some studies (Goldberg et al., 2019; Morandini et al., 2017; Watson, Wheldon, & Puhl, 2020).

Beyond these studies looking at “who” uses these labels, it has been suggested that they may be adopted for practical and political reasons, and that they may not represent any distinct underlying pattern of attractions (Callis, 2013; Morandini et al., 2017). For example, a queer individual could have a pattern of attractions consistent with typical bisexual, lesbian/gay or even heterosexual individuals, but have chosen *queer* as an identity because they do not believe in the existence of distinct sexual orientation categories. They also may wish to explicitly reject concepts associated with the traditional sexual orientation labels, such as the illegitimacy of non-binary and/or intersex people. Similarly, a pansexual individual could display a pattern of attractions typical for a bisexual individual but identify as pansexual as an explicit acknowledgement of intersex or non-binary individuals. Indeed, some individuals express these as reasons for their use of *pansexual* or *queer*, though there is diversity amongst bisexual people regarding whether they consider bisexuality to do this as well (Flanders, LeBreton, Robinson, Bian, & Caravaca-Morera, 2017; Galupo et al., 2017).

Research on the sexual attraction and behavior patterns of these individuals has also been limited. A single study investigated the self-reported sexual orientation responses of cisgender pansexual and queer individuals empirically, compared to lesbian/gay and bisexual individuals (Morandini et al., 2017). Using 7-point scales based on Kinsey’s (Kinsey, Pomeroy, Martin, & Gebhard, 1954; Kinsey, Pomeroy, Martin, & Sloan, 1948) Heterosexual–Homosexual Rating Scale, participants rated the relative proportion of same- and opposite-gender individuals that they were sexually attracted to, romantically attracted to, and had sex with. These responses were then categorized into three ranges, a “heterosexual range,” “bisexual range,” and “homosexual range.” The majority of pansexual individuals in this study demonstrated sexual orientation responses within the bisexual range (54.7-88.9%, depending on gender and measure), and these participants were not more or less likely to fall into this range than bisexual individuals (47.0-81.4%). In contrast, queer individuals were

less likely to be in the bisexual range than both pansexual and bisexual individuals (13.8-42.4%), and indeed these individuals were most likely to give responses in the homosexual range (52.2-72.4%).

The same year as Morandini et al.'s study (2017), another piece of research examined difference between bisexual and queer women (without specificity regarding sex assigned at birth; Mereish, Katz-Wise, & Woulfe, 2017). This study found that queer women were more likely to be attracted to and have had sex with transgender and non-binary people relative to bisexual women. Most recently, a representative sample examining people who identify as queer found that such individuals are much more likely to be sexually attracted to and to have sex with both transgender men and women than lesbian, gay or bisexual people, that most queer cisgender women were attracted to and partnered with both women and men and more likely than other groups to be attracted to and partnered with both cisgender and transgender people, and that queer men were about half attracted exclusively to men, and half to both men and women despite the majority partnering with men only (Goldberg et al., 2019). A limitation of these studies, however, is that rather than testing whether sexual attraction patterns function as predictors of these identity labels, they merely examined patterns across groups. Crucially, it is unclear whether these effects remain while controlling for other factors. As such, queer and pansexual identities have not been exhaustively examined.

As for asexual individuals, one might infer that such people would experience no romantic desires or sexual behavior at all. Despite this, empirical research has suggested that as many as 27% reported having engaged in sexual activity (Brotto, Knudson, Inskip, Rhodes, & Erskine, 2010) and asexual individuals in qualitative studies have report experiencing "romantic attraction" and engaging in romantic relationships (Brotto et al., 2010; Robbins, Low, & Query, 2016; Scherrer, 2008). This may seem contradictory, but some theoretical models of sexual orientation development posit that romantic and sexual

feelings may diverge, at least in some individuals (Diamond, 2003; van Anders, 2015; Weinrich, 1988). Furthermore, research indicates that humans often have sex for reasons other than sexual attraction (Meston & Buss, 2007).

Another limitation of these studies is their lack of attention to minority stress or psychological mediation in these groups. Minority stress refers to the chronic additional stress faced by members of stigmatized minority groups, including sexual minorities (Meyer, 2003) and psychological mediation refers to the way minority stressors can cause mental health issues by elevating general risk factors such as rumination (Hatzenbuehler, 2009). Despite authors arguing that attention needs to be paid in minority stress research to ensure measures include these groups (Morandini et al., 2017), that scientists need to examine the potentially different lives that these groups may have to lesbian, gay, and bisexual (LGB) individuals (Goldberg et al., 2019), and that queer individuals may experience more negative health effects of minority stressors (Mereish et al., 2017), no studies have tested the links between minority stressors and mental health outcomes in these groups, let alone their relationship with any psychological mediators.

It might be assumed that the results from minority stress research on LGB individuals can easily generalize to those with other sexual minority identities and indeed, some research on sexual minority stress has included pansexual and queer individuals as a matter of course (Denton, Rostosky, & Danner, 2014; Edwards & Sylaska, 2013; Feinstein, Xavier Hall, Dyar, & Davila, 2020; Garvey et al., 2018; Lehavot & Simoni, 2011; Walls, Kane, & Wisneski, 2010). However, there are good reasons to question this assumption. Firstly, if these groups are distinct from traditional sexual orientation groups, it follows that that would have a different experience of sexual marginalization. Indeed, even the experiences of LGB individuals aren't homogenous. For example, bisexual and lesbian/gay individuals appear to differ in (1) prevalence of mental health disorders (Plöderl & Tremblay, 2015), (2) levels of

disclosure of sexual minority status (Herek, Norton, Allen, & Sims, 2010; Taylor, 2013), (3) types and sources of prejudice events (Brewster & Moradi, 2010; Dyar, Feinstein, & London, 2014), and, crucially (4) strength of relationships between different minority stress variables (Timmins, Rimes & Rahman, 2020) . Secondly, though determining the degree to which these groups are like and distinct from traditional sexual minority groups would have implications for minority stress in these novel groups, they may be subject to different forms or amounts of prejudice specifically due to adopting a non-traditional identity. Indeed, research has suggested that pansexual, queer and “fluid” individuals, collapsed into a single group, experience unique discrimination from lesbian and gay individuals for being “plurisexual” but they experience this at lower rates than bisexual individuals (Mitchell, Davis, & Galupo, 2015). Research with college students has further found worse mental health in these groups than in LGBs (Borgogna, McDermott, Aita, & Kridel, 2019), though such work has not determined if this is true in cisgender individuals specifically, which may be crucial given the worse mental health and stigma experienced by transgender and non-binary individuals (Lefevor, Boyd-Rogers, Sprague, & Janis, 2019). Finally, some research has suggested that asexual individuals experience prejudice events from both heterosexual and sexual minority people (Robbins et al., 2016), go through a coming out process similar to that experienced by lesbian/gay individuals, but with some unique qualities (Robbins et al., 2016), and report more mental health problems relative to heterosexual individuals (Brotto et al., 2010; Carvalho, Lemos, & Nobre, 2016; Nurius, 1983; Yule, Brotto, & Gorzalka, 2013). Simply put, minority stress should not be assumed to play out identically across non-traditional identities, let alone across traditional LGB groups.

In summary, as alternative sexual orientation identity labels appear in contemporary Western society, it is not clear whether they constitute empirically meaningful group distinctions from traditional categories, nor is it clear if minority stressors are linked to



mental health issues in these groups in the same way as they are for traditional sexual minority groups. Both questions have important implications for how we understand these groups and their needs. Thus, it is crucial that researchers examine minority stress in these categories without collapsing them into general sexual minority groups, starting with the associations between minority stressors and mental health, the primary relationships posited by minority stress theory (Meyer, 2003). Furthermore, initial tests of the tenants of Hatzenbuehler's (2009) psychological mediation framework will also need to be performed to establish if interventions based on this framework may also be applicable to pansexual, queer and asexual individuals' minority stress-related mental health issues.

### ***Present Study***

Sub-study 1: The aim of sub-study 1 was to better characterize cisgender individual who use new and non-traditional sexual orientation categories based on participants' responses to typical sexual orientation measures (sexual attractions, romantic attachments, romantic infatuations, and sexual behavior), age, gender and recalled childhood gender nonconformity (CGN), a variable associated with both sexual minority status and associated experiences of stigma (Gordon & Meyer, 2008; Li, Kung, & Hines, 2017) which has previously not been examined in these novel groups. This is the first study to use multivariate approaches to do this systematically. To do this, data from cisgender pansexual, asexual and queer individuals were compared with data from the cisgender heterosexual, bisexual and lesbian/gay individuals gathered from a study aiming to investigate minority stressors and mental health in gender and sexual minority individuals. Previously only data from the cisgender LGB (Timmins et al., 2020) and transgender individuals (Timmins, Rimes & Rahman, 2017) had been analyzed using techniques appropriate to their much larger samples.

It was hypothesized that (1) pansexual individuals would score similarly to bisexual individuals on measures of sexual orientation and CGN, based on the findings of Morandini

et al. (2017) and the similarity of common definitions of these two labels (Belous & Bauman, 2016); (2) queer individuals would score between lesbian/gay and bisexual individuals on these same measures, based on the findings of Morandini et al. (2017); and (3) asexual individuals would be substantially less likely to report sexual attraction than allosexual (non-asexual) individuals, and less likely to report previous sexual partners, romantic attachments and romantic infatuations than allosexual individuals, based on theory on asexuality and empirical research suggesting such (Bogaert, 2015). Finally, based on Morandini et al. (2017) it was hypothesized that (4) being a woman and (5) being younger would be associated with greater reporting of pansexual and queer identities.

Sub-study 2: The aim of sub-study 2 was to conduct exploratory tests of the applicability of the concept of minority stress to these groups. To do this, data from the same cisgender pansexual, asexual and queer individuals were compared with data from the cisgender heterosexual, bisexual and lesbian/gay individuals. Hypotheses draw on results found in Timmins et al. (2020) and the modified integrative mediation framework from this study, a derivative of minority stress (Hatzenbuehler, 2009; Meyer, 2003; Timmins et al., 2020). Timmins et al.'s (2020) results suggested that outness and prejudice events are both associated with psychological distress, and that CGN is associated with psychological distress through prejudice events and outness. It was also found that self-stigma and expectations of rejection are associated with psychological distress, which partially explained the associations between psychological distress and both prejudice events and outness. Finally, it was found that rumination was associated with psychological distress, which partially explained the associations between psychological distress and each of prejudice events, self-stigma and expectations of rejection. As such, in the present study of asexual, pansexual and queer individuals, it was hypothesized that (6) CGN would be positively associated with psychological distress; (7) lower levels of outness and higher levels of prejudice events

would be associated with higher levels of psychological distress; the addition of outness and prejudice events to the model would attenuate the relationship between CGN and psychological distress, (8) the addition of expectations of rejection and self-stigma would attenuate those relationships added in the previous step and both would be positively associated with psychological distress; and (9) rumination would be positively associated with psychological distress and the addition of rumination would attenuate those relationships added in the previous step.

## **Methods**

### ***Procedures***

Participants were subject to the procedures and measures outlined in previous publications (Timmins et al., 2017, 2020). In brief, data were collected by means of an online survey. Participants were recruited via targeted and general advertisements on online gender and sexual minority press websites, Internet forums, listservs, mailings lists, and social media sites. Participants were required to be aged 16 years or older to participate. Potential participants were invited to enroll regardless of sexual orientation, gender identity or geographical location. Ethical approval for the study was obtained from the King's College London Psychiatry, Nursing and Midwifery university research ethics committee.

### ***Participants***

Participants consisted of cisgender pansexual ( $n = 160$ ), queer ( $n = 80$ ), asexual ( $n = 98$ ), heterosexual ( $n = 1,021$ ), bisexual ( $n = 1,518$ ), and lesbian/gay ( $n = 2,730$ ) individuals, drawn from a previous online survey study (Timmins et al., 2017, 2020). Data from cisgender pansexual, asexual and queer individuals in this study had not been previously analyzed. Sexual identity in both sub-studies was determined using answers to the following question: "Think about how you identify your sexual orientation. Would you say that you are" with response options "Heterosexual (straight)" "Bisexual", "Homosexual (gay/lesbian)",

“Asexual” and “Other sexual orientation (please specify)”, the latter of which had an open field for participants to write their identity. As in previous work, transgender participants were not included in order to directly examine effects related to sexual minority status without conflating these with gender minority status (Timmins et al., 2017, 2020).

Participants ranged from age 16 to 82,  $M = 29.9$  ( $SD = 11.57$ ). In terms of gender, 53.3% were men and 46.7% were women. Regarding race, 88.3% were white, 1.5% were Black, 3.2% were Asian, 2.3% were Latino/Hispanic, 3.8% were Mixed Race/Ethnicity and .9% were of other races/ethnicities. Full demographic information, sexual orientation, and gender nonconformity measures for each group can be seen in Table 1.

[Table 1 near here]

### **Sub-study 1 - Analysis of Sexual Orientation Responses and Group Classification**

#### ***Measures***

##### *Sexual Orientation Dimensions.*

Participants reported the relative frequency with which they experience sexual attraction, romantic attachments, and romantic infatuations for male and female individuals with three respective items. Ratings were given on a 7-point scale, 0 = “always male,” 3 = “equally male and female,” 6 = “always female” with an eighth option of X “little or no [sexual attraction]”. Finally, participants indicated on two 8-point scales ranging from “0 (none)” to “over 50” the numbers of male and female sex partners they had during their lifetime. Ratings were converted to 7-point summary scores in line with other sexual orientation measures, including an eighth option of X for “no sexual partners”. Ratings of each measure were reverse scored for men, converting them to Kinsey style summary scores, with 0 = “exclusively opposite gender,” 3 = “equally same and opposite gender,” 6 = “always same gender”, and X = “little or none”. These items were created for the original studies

(Timmins et al., 2017, 2020) and loosely based on the classic Heterosexual–Homosexual Rating Scale (Kinsey et al., 1954; Kinsey et al., 1948).

### *Childhood Gender Nonconformity*

CGN was measured using the 10 item Recalled Childhood Gender Nonconformity scale (Hassan & Rahman, 2007). Participants rated their levels of CGN from as early as they can remember to 12 years old on various 5-point scales ranging from 1 to 5. Higher averaged scores reflected more gender non-conforming childhood behavior and interests.

### *Data Preparation and Analysis*

A multinomial logistic regression was performed to test (1) whether Kinsey summary scores and CGN were predictive of sexual orientation identity while controlling for age and gender and (2) the ability of a model including these factors to predict sexual orientation identity. This was preferable to a discriminant function analysis (DFA), as this has an assumption of homogenous multivariate covariances, which is strict unless sample sizes are equal across groups (Tabachnick & Fidell, 2007). In a preliminary test, Box's M indicated that the data did not meet this assumption ( $p < .001$ ) required by DFA.

Individuals who gave "X" responses for sexual attraction were treated as having missing data and excluded from the multinomial regression, and so asexual individuals were excluded as a whole group due to their high levels of this response (86.4%). Separate analyses were performed which compared asexual and traditionally identified individuals' likelihood of giving this response on these measures (see below). Sexual attraction, romantic infatuations, and romantic attachments displayed collinearity in this sample (all  $r_s > .90$ ) and sexual partners approached collinearity with each of these variables ( $r_s = .83-.85$ ).

Additionally, a strict assumption of logistic regression is that there is not collinearity between independent variables. The inclusion of such sets of variables can result in the calculation of very large standard errors for parameter estimations and consequent difficulty in the

interpretation of results (Tabachnick & Fidell, 2007). As such, sexual attraction was retained as the theoretical principal component of sexual orientation (Diamond, 2003) and romantic infatuations and romantic attachments were excluded from both analyses. While the sexual partners variable was not collinear to the same degree as other sexual orientation dimensions, a non-negligible number of participants reported having had no sexual partners (12.0%) and issues of collinearity occur as low as  $r > .70$  (Dormann et al., 2013). Additionally, the gender of sexual partners is thought to be more susceptible to social factors than sexual attraction (Zietsch, Verweij, Bailey, Wright, & Martin, 2011). As such, this variable was also excluded.

The multinomial regression was performed with sexual orientation identity group membership as the dependent variable and sexual attraction, CGN, age and gender as the independent variables. Similar regressions with age squared included as an independent variable were also tested to allow for the possibility that there was an exponential relationship between age and sexual orientation identity. This would be the case if there is a sharply accelerating increase in the number of individuals who identify as pansexual or queer as age decreases. Correlation matrices were subsequently generated for each novel sexual orientation group in order to determine the bivariate relationships between variables.

For asexual individuals, four Fisher's exact tests of independence were used to determine whether individuals that report a traditional sexual orientation identity (i.e., heterosexual, bisexual, lesbian and gay individuals) were more likely to report experiencing sexual attraction, romantic attachments, romantic infatuations, and having sexual partners on the four Kinsey summary scores. Scores of 0-6 were recoded as 1 and scores of X (i.e. "little or no [sexual attractions]") were recoded as 0 for the purposes of this analysis. Bonferroni correction was used to control for familywise error ( $.05/4 = .0125$ ).

## ***Results***

Age squared was not a significant predictor of sexual orientation identity group membership in the original multinomial regression ( $\chi^2 [4] = 5.60, p = .232$ ). As such, it was excluded, and the regression was run again. The results of this multinomial logistic regression can be seen in Table 2. Sexual attraction Kinsey score ( $\chi^2 [4] = 6961.52, p < .001$ ), CGN ( $\chi^2 [4] = 36.96, p < .001$ ), age ( $\chi^2 [4] = 68.47, p < .001$ ) and gender ( $\chi^2 [4] = 97.52, p < .001$ ) were all significant predictors of group membership. Goodness of fit was excellent, McFadden's  $R^2 = .66, p < .001$ . Participants with lower sexual attraction scores (i.e. closer to exclusively opposite gender attractions) were significantly more likely to report identifying heterosexual than any other category (Panel A). Similarly, participants with lower scores (i.e. closer to exclusively same gender attractions) were significantly more likely to report identifying as lesbian/gay than any other category (Panels A-C). Participants with higher scores were significantly more likely to identify as queer relative to bisexual and pansexual (Panels B, D), however sexual attraction Kinsey score did not significantly differentiate bisexual and pansexual identity from each other (Panel B).

[Table 2 near here]

Older age was associated with a significantly greater likelihood to be bisexual, lesbian/gay, or queer than heterosexual, and to be lesbian/gay relative to bisexual (Panel A). Younger age was associated with a significantly lower chance of being pansexual than lesbian/gay, bisexual, or queer (Panels B-D), and to be queer than lesbian/gay (Panel C). No other significant differences for age were found.

Higher levels of CGN were significantly associated with a higher chance of being bisexual, lesbian/gay or pansexual than heterosexual (Panel A), and a higher chance of being lesbian/gay compared to both being bisexual and being queer (Panels B-C). Being a woman was significantly associated with a lower chance of being bisexual or lesbian/gay relative to

heterosexual (Panel A), a lower chance of being lesbian/gay relative to bisexual (Panel B), and a higher chance of being queer or pansexual relative to both lesbian/gay and bisexual (Panels B-C).

The multinomial regression correctly classified the sexual identities of 94.3% of heterosexual individuals, 79.7% of bisexual individuals and 97.7% of lesbian/gay individuals. However, it did not correctly predict the identities of any pansexual or queer individuals. Instead, 5.9% of pansexual and 6.5% queer individuals were classified as heterosexual, 82.9% of pansexual and 53.2% of queer individuals were classified as bisexual, and 11.2% of pansexual and 40.3% of queer individuals were classified as lesbian/gay (Panel E).

All four Fisher's exact tests comparing asexual individuals to those who identify with traditional sexual orientation identities were significant (all  $ps < .001$ ). Asexual individuals were more likely than allosexual individuals to give Kinsey "X" ("little or no [sexual attraction]") responses for sexual attraction (86.5% vs. .6%, OR = 1151.43), romantic attachments (29.2% vs. 1.2%, OR = 33.94), romantic infatuations (23.7% vs. 1.3%, OR = 23.75), and sexual partners (61.2% vs. 11.1%, OR = 12.64).

## **Sub-study 2 - Psychological Distress and Minority Stressors in Queer, Pansexual and Asexual Individuals**

### ***Measures***

#### ***Minority Stress***

Several minority stress measures were included in the present study. These include a five-item outness measure (Meyer, Rossano, Ellis, & Bradford, 2002),  $\alpha = .78-.83$  in asexual, pansexual and queer participants; the Heterosexist Harassment, Rejection, and Discrimination Scale (HHRDS; Szymanski, 2006),  $\alpha = .82-.90$  in asexual, pansexual and queer participants; the Sexual Minority subscale of the Gender and Sexual Minority Microaggressions scale (Timmins et al., 2020),  $\alpha = .80-.88$  in asexual, pansexual and queer participants; the Revised



Internalized Homophobia scale identity (Herek, Gillis, & Cogan, 2009; Timmins et al., 2020),  $\alpha = .78-.81$  in asexual, pansexual and queer participants, the Acceptance Concerns subscale of the Lesbian, Gay, and Bisexual Identity Scale (Mohr & Kendra, 2011),  $\alpha = .88-.90$  in asexual, pansexual and queer participants; the Vigilance for Others' Suspicions scale (Timmins et al., 2020),  $\alpha = .81-.86$  in asexual, pansexual and queer participants. These cover the breadth of the four major minority stressors outlined by (Meyer, 2003).

### *Rumination*

A potential psychological mediator variable was included in the present study in line with Hatzenbuehler (2009). Rumination was selected due to strong previous research supporting its potential function as a mediator between minority stressors and mental health in sexual minorities (Hatzenbuehler, Nolen-Hoeksema, & Dovidio, 2009; Timmins et al., 2017). This was a version of the brooding subscale of the Ruminative Responses Scale (Treyner, Gonzalez, & Nolen-Hoeksema, 2003) modified to refer to broad psychological distress rather than just depression and negative mood. Cronbach's  $\alpha$  ranged from .81 to .83 in asexual, pansexual and queer participants.

### *Mental Health*

The Patient Health Questionnaire 9-item scale (Kroenke, Spitzer, & Williams, 2001) and the Generalized Anxiety Disorder 7-item scale (Spitzer, Kroenke, Williams, & Löwe, 2006) were included as measures of depression and anxiety respectively. For use as an outcome measure in the present study, the PHQ-9 and GAD-7 were combined into a single, recently developed scale known as the Patient Health Questionnaire - Anxiety and Depression Scale (PHQ-ADS; Kroenke et al., 2016). This was performed to avoid increasing the familywise error rate, which would occur if the PHQ-9 and GAD-7 were used as separate outcomes, and to remain consistent with the previous empirical work using this sample, which has investigated psychological distress broadly (Timmins et al., 2017, 2020). Scale

scores range from 0 to 48, with higher scores indicating more symptoms of distress.

Cronbach's  $\alpha$  ranged from .95 to .95 in asexual, pansexual and queer participants.

### *Data Preparation and Analysis*

Hierarchical regressions were used to test minority stress factors in the novel sexual orientation groups. A hierarchical regression was run for each group, with psychological distress included as the dependent variable. These regressions included CGN, outness, prejudice events, expectations of rejection, self-stigma, and rumination, with gender and age as control variables. No more than these eight variables were included as it is recommended that a minimum of 10 participants per independent variable are used in regression analyses (VanVoorhis & Morgan, 2007) and there were only 80 queer individuals. Notably, larger sample sizes are still recommended when investigating small effects (VanVoorhis & Morgan, 2007), and some effects of minority stressors on psychological distress were relatively small in previous work on cisgender sexual minority participants from this survey (Timmins et al., 2020). Variables were entered in the following order (1) gender, age and CGN, (2) outness and prejudice events, (3) expectations of rejection and self-stigma, (4) rumination. This ordering was chosen in line with previous research and theory regarding LGB individuals which suggests indirect effects of the earlier variables on distress via the later variables (Hatzenbuehler, Nolen-Hoeksema, & Dovidio, 2009; Timmins et al., 2020). This allowed for the attenuation effects of adding later variables to be examined.

The Vigilance for Others' Suspicions scale and the Sexual Minority subscale of the Gender and Sexual Minority Microaggressions scale were only included in descriptive analyses due to their heavy overlap with the Acceptance Concerns scale and HHRDS respectively and limitations on the number of variables that could be included in other analyses. These have been reported so that these data can be used to inform future research with these underserved populations.

## *Results*

Means and standard deviations for distress and minority stress factors for each of the three groups can be seen in Table 3 (see Timmins et al., [2020] for comparison data for the traditional sexual orientation identity groups). Results of bivariate correlations within each of the three groups for the distress and minority stress variables are also shown in Table 3. The results of the hierarchical regressions examining psychological distress in pansexual, queer and asexual participants are shown in Table 4. For pansexual individuals, CGN was positively associated with psychological distress, however this was no longer the case once outness and prejudice events were added. The addition of acceptance concerns and self-stigma attenuated the strength of the relationship between prejudice events and psychological distress, but it remained significant. The relationship between acceptance concerns and psychological distress was also significant, though the relationship between self-stigma and psychological distress was not. These relationships were attenuated by the addition of rumination, though both significant relationships remained such. Rumination and CGN were significantly positively associated with psychological distress in the final model.

[Tables 3 and 4 near here]

For queer individuals, CGN was not significantly associated with distress. Prejudice events were significantly positively associated with distress when added to the model. However, outness was not significantly associated and both relationships were non-significant once acceptance concerns and self-stigma were added. Acceptance concerns were positively associated with distress, but self-stigma was not. Acceptance concerns were no longer significantly associated with distress once rumination was added to the models, and rumination was the only variable significantly associated with distress in the final model.

For asexual individuals, CGN was not significantly associated with psychological distress. Once added to the model, prejudice events were positively associated with

psychological distress. This relationship became non-significant when self-stigma and acceptance concerns were added, although neither was significantly associated with psychological distress. Once added to the final model, rumination was positively associated with psychological distress. Gender also became a significant predictor in the final model, with being a man being associated with greater distress.

### **Discussion**

The goals of this study were to (1) characterize cisgender individuals who identify as pansexual, queer and asexual in terms of gender, sexual attractions, gender nonconformity, and age and (2) conduct exploratory tests of minority stressors in these groups, based on the modified integrative mediation framework (Timmins et al., 2020) , an expansion of Hatzenbuehler's (2009) framework which proposes a cascade of sequelae leading from CGN to mental health outcomes via minority stressors and general psychological processes.

#### ***Sub-study 1***

Sexual attraction, measured as proportion of same- to opposite-gender targets of sexual attraction, appeared to be a useful variable in predicting and classifying traditional sexual orientations and played a role in predicting non-traditional identities in addition to age and gender, consistent with previous studies on traditional sexual orientations' latent structure (Gangestad, Bailey, & Martin, 2000) and previous bivariate analyses in a mostly Australian sample (Morandini et al., 2017). Notably, while this dimension of attraction had some predictive power for identifying as queer relative to all other orientations, it did not significantly differentiate bisexual and pansexual participants. Perhaps most interestingly, being a woman was associated with identifying as pansexual or queer relative to bisexual, and being younger was associated with identifying as pansexual relative to bisexual, suggesting that there are factors for these identities beyond those that result in women identifying as bisexual more than men (Gates, 2011).

One possible explanation for the relationship between gender, age and non-traditional identity could be that the main drivers for their use are social. For example, younger individuals and women may be less likely to harbor negative attitudes to non-binary people, based on the fact that younger people and women have less negative attitudes towards transgender people broadly (King, Winter, & Webster, 2009; Landén & Innala, 2000; Norton & Herek, 2013). Such individuals may adopt these labels in order to explicitly indicate inclusion of non-binary people (though notably, some bisexual and pansexual individuals define the term “bisexual” to include people of all genders and sexes and some do not [Flanders et al., 2017; Galupo et al., 2017]). Alternatively, these individuals could be genuinely characterized by attractions to targets not easily encapsulated by traditional labels, such as non-binary, intersex, transgender and/or gender nonconforming individuals and such attractions may be more common depending on gender or age. Indeed, some research suggests that sexual attraction to a mixture of male and female characteristics may represent a phenomenon distinct from bisexuality (Hsu, Rosenthal, Miller, & Bailey, 2016), and women are less category specific in their sexual attraction patterns than men (Chivers, 2017), which may play a role. However, little is known regarding category specificity and age.

Another potential explanatory variable for these age and gender findings is sexual fluidity. Women are considered more likely than men to experience changes in sexual attraction (Diamond, 2016), which can end in less traditional identifications (Diamond, 2008). Younger people may also be more likely to experience changes in sexual attraction (Diamond, 2008), particularly given that changes self-reported attractions are well documented in adolescents and young adults (Katz-Wise & Hyde, 2015; Ott, Corliss, Wypij, Rosario, & Austin, 2011; Rosario, Schrimshaw, Hunter, & Braun, 2006; Savin-Williams, Joyner, & Rieger, 2012; Stewart, Spivey, Widman, Choukas-Bradley, & Prinstein, 2019). Finally, there also may be specific interactions between the subdimensions of sexual

orientation which we did not include in our analysis due to their collinearity with sexual attraction. Future researchers with larger samples may consider taking a broad range of social and sexual measures and creating combined categories such as “sexually attracted to men, but without romantic infatuations with men” to circumvent these issues. However, given our small subsamples and the dataset’s origin, this was not possible for the present study.

Another important novel finding is the role CGN played in predicting identity. While not all comparisons were significant, perhaps owing to sample size, higher levels of CGN were associated with higher likelihood of lesbian/gay identity and lower levels of CGN were associated with higher likelihood of heterosexual identity. A lack of relevant literature makes interpretation difficult, but given that sexual attraction was controlled for, this may imply that some individuals consider not only their attractions but also their gendered behavior when self-labelling, whether consciously or not. At the same time, it is also possible that CGN predicts sexual identity because it more easily facilitates specific kinds of coming out or self-realization processes. Either way, gendered behavior, gender nonconformity and their interactions with attraction patterns represent understudied factors in self-labelling which should be studied in detail in future research with a longitudinal design or larger sample size.

As expected, asexual individuals were less likely than those who identify with traditional sexual orientation labels to report sexual attraction, romantic attachments, romantic infatuations or sexual partners, although a majority did report romantic attachments and infatuations. Additionally, about a third reported having had sexual partners. These findings are in line with research showing some asexual individuals experience “romantic attraction” (a broader term than the romance measures used here) and have engaged in sexual activity despite an absence of sexual attraction (Brotto et al., 2010; Robbins et al., 2016; Scherrer, 2008). As mentioned, asexual people could have sex for any of the multitude of non-sexual reasons humans do, such as altruism, expression of love, or social pressures (Meston

& Buss, 2007). Some may also have previously experienced sexual attraction, but no longer do. It is also possible that some individuals reported non-consensual sexual interactions in their response to this measure, as some asexual individuals have reported “giving into sex” or engaging in sex when they didn’t want to (Robbins et al., 2016).

### *Sub-study 2*

The results of the analyses examining the relationship between minority stressors and distress in these novel groups were mixed. However, the overall pattern suggests that at least some minority stressors are associated with psychological distress in asexual, pansexual and queer individuals. Additionally, some aspects of the modified integrative mediation framework do apply to these groups. Firstly, for pansexual individuals CGN, prejudice events, expectations of rejection and rumination were all positively associated with psychological distress. Given the pattern of attenuation at each step, the results are consistent with the possibility that greater CGN leads to higher levels of prejudice events, which in turn causes pansexual individuals to expect rejection from others, causing them to ruminate and subsequently develop psychological distress. Notably, there were still direct associations between psychological distress and acceptance concerns, prejudice events and CGN in the final model, which implies that there may be direct paths or thus unidentified indirect paths from these variables to psychological distress. This contrasts with the findings for LGB individuals in this sample (Timmins et al., 2020) , which is surprising given the overlap in sexual attraction scores between pansexual and bisexual individuals here. This may be due to the above-mentioned unmeasured differences between these groups.

For queer individuals, there was no significant relationship between psychological distress and each of outness and self-stigma, but prejudice events and acceptance concerns were both significantly positively associated with distress. CGN was not positively associated with distress, the relationship between prejudice events and distress was weaker, and there

were no direct associations between psychological distress and any variable other than rumination in the final model. It may be the case that prejudice events cause queer individuals to expect rejection from others, which results in them ruminating and subsequently developing psychological distress, but that CGN is not involved in this and there are no other direct or indirect effects of these variables on each other.

For asexual individuals, CGN, outness, acceptance concerns, and self-stigma were not significantly associated with distress, but prejudice events and rumination were. At the same time, the addition of acceptance concerns and self-stigma to the model rendered the relationship between prejudice events and distress non-significant, despite neither variable being significantly associated with distress. Adding rumination to the model did attenuate the remaining positive relationships between prejudice events and distress, consistent with the possibility that prejudice events may increase rumination in asexual individuals leading to higher levels of distress. This arguably surprising, as asexual individuals were substantially less likely to report sexual attraction, romantic infatuations, romantic attachments or sexual partners than the allosexual participants and the same-gender nature of these attraction is the de factor focus of stigma in these groups. As such, this would seem to indicate that the specific stigma associated with the absence of these variables is associated with distress.

Finally, it is notable that self-stigma and outness were not significantly associated with psychological distress in any of these models. The latter finding is particularly notable, given that prejudice events were controlled for when these relationships were tested, which suggests that this is not due to competing indirect effects of outness on psychological distress through prejudice events and other minority stressors. This may be due to the low sample sizes used. While these did fit the 10 cases-per-variable rule of thumb (VanVoorhis & Morgan, 2007) larger samples would have been used if available so that small effects could



be identified. As such, the results from this sub-study should be interpreted as cautioned explorations of the modified integrative mediation framework in these populations.

Nevertheless, in this first investigation of minority stressors in asexual, pansexual and queer individuals, prejudice events and rumination were significantly associated with psychological distress in all three groups. The fact that the addition of rumination attenuated the relationship between prejudice events and distress in all models suggests that tests of indirect effects of prejudice events on anxiety and depression via rumination represent a worthy avenue for future research in each of these groups.

Of course, these results may represent departures from what we would expect based on the Minority Stress framework (Meyer, 2003). There may be something unique about individuals who identify with these alternative labels that protects them from the deleterious effects of self-stigma and non-disclosure of one's sexual orientation, as well as acceptance concerns in the case of asexual individuals. Perhaps something about what causes an individual to be able to identify with a label outside mainstream concepts of sexual orientation (e.g., access to sexual minority community, higher self-esteem, or less self-stigma) moderates these effects to the point that they simply do not apply. Alternatively, something about these unique individuals may cause these minority stressors to manifest themselves as other forms of mental health problems which we did not measure.

### ***Implications***

These findings have important implications for future research. Firstly, the findings that age, gender and gender nonconformity predict identity group independent of sexual attraction suggest that analyses which use sexual identity as a factor should consider that this variable may be tapping into some non-sexual factors in addition to sexual orientation. Secondly, the large overlap between pansexual and bisexual participants' relative sexual attractions to men and women indicate that, in some circumstances, it may be appropriate to

collapse these two groups together. The initial findings on the relationships between minority stressors, rumination and psychological distress in asexual, pansexual and queer individuals suggest that this is a promising area for future research, particularly for asexual individuals, who are not assumed to be subject to minority stressors as a matter of course.

### *Limitations*

This study had several important limitations. As the sample came from a study primarily on LGB and transgender mental health, the measures were not optimized for measurement of non-traditional dimensions of sexual orientation, such as changes in attraction over time or attraction to non-binary, intersex, transgender and/or gender nonconforming individuals, limiting what can be inferred from the results. The minority stress measures had also not been psychometrically validated with these populations in mind. However, the individual minority stress items were broadly phrased and displayed sufficient internal reliability, and the minority stressor and sexual orientation measures were standard.

The origin of the sample also meant that all three subsamples were quite small, limiting the power and sophistication of the analyses. This may have prevented the analyses from detecting potentially existent relationships and it limits the precision with which the effect sizes in this study could be calculated. Relatedly, the heterogeneous sample sizes limit how comparable the findings are across groups and the small subgroup sizes prevented tests of moderation. A high number of significant relationships were found for the pansexual subsample and this may be due to this sample being much larger than both the asexual and queer samples. A final sample size issue is that, while gender was controlled for in most analyses, there were few men in each subsample. This means it is unclear whether these results are more representative of the experiences of cisgender pansexual, queer and asexual women rather than all cisgender individuals who identify with these sexual orientation labels.

Finally, this study is affected by broader methodological limitations, such as the cross-sectional nature of the data preventing tests of causality and temporal direction of relationships. The self-report nature of the data could also possibly have biased the results given that the study was advertised as being on sexual minority mental health. Despite these limitations, this study forms a promising foundation for future research with these subgroups.

### ***Conclusion***

In conclusion, this study provides evidence that non-traditional sexual orientation labels are associated with younger age and female gender. Sexual attraction to men and women was also implicated, with pansexual individuals appearing similar to bisexual individuals in this regard and queer individuals falling between lesbian/gay and bisexual individuals. The study also provided initial evidence for associations between minority stressors and mental health in pansexual, queer, and asexual individuals, as well as indicating that rumination may be worth exploring as a mediator. Future researchers are encouraged to investigate these relationships using larger samples, temporal direction testing, and nuanced measures of sexual orientation, social/contextual factors, and minority stress.

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Table 1  
*Demographic Information of Participants by Sexual Orientation*

	Het	Bi	Gay	Ace	Pan	Queer
Total <i>n</i>	1,021	1,518	2,730	98	160	80
Gender - %						
Man	49.8	39.3	67.0	16.3	14.4	21.3
Woman	50.2	60.7	33.0	83.7	85.6	78.8
Age						
Mean	28.0	27.6	32.6	24.7	24.1	27.1
Standard Deviation	10.1	10.5	12.3	8.8	7.0	8.5
Country of Residence - %						
United Kingdom	40.7	36.4	57.0	27.6	31.3	40.5
United States	32.1	39.5	20.5	45.9	44.4	38.0
Canada	4.5	5.2	3.2	8.2	2.5	6.3
Ireland, Republic of	8.0	5.7	5.8	6.1	8.8	6.3
Other	14.7	13.2	13.5	12.2	13.0	8.9
Relationship Status - %						
Single	38.8	41.5	45.9	77.6	34.0	37.5
Steady	18.3	17.0	12.9	10.2	17.6	17.5
Casual	5.1	5.1	3.5	2.0	9.5	11.3
Married	17.4	14.8	9.8	1.0	9.4	10.0
Living Together	16.7	14.3	19.9	4.1	17.0	20.0
Other Relationship	3.9	7.3	8.0	5.1	12.6	3.8
Race/Ethnicity - %						
White	86.9	88.5	89.5	85.1	81.9	78.9
Black	2.3	1.6	1.0	1.1	2.6	3.9
Asian	4.1	3.0	2.8	6.4	3.1	—
Latino/Hispanic	1.9	2.4	2.3	1.1	3.2	5.0
Mixed Race/Ethnicity	4.1	3.8	3.4	4.3	6.5	9.2
Other Race/Ethnicity	.6	.6	.9	2.1	2.6	2.6
Sexual Attraction						
Mean	.5	3.0	5.7	2.1	3.0	3.9
Standard Deviation	.7	1.2	.6	1.9	1.1	1.4
Little or none - %	.5	.7	.5	86.5	3.1	3.8
Romantic Attachments						
Mean	.3	2.6	5.7	3.1	2.8	4.1
Standard Deviation	.7	1.6	.7	2.0	1.5	1.6
Little or none - %	2.7	1.1	.7	29.2	3.2	1.3
Romantic Infatuations						
Mean	.3	2.9	5.8	3.0	2.8	4.0
Standard Deviation	.7	1.6	.5	2.0	1.4	1.5
Little or none - %	2.3	.9	1.2	23.7	5.0	3.8
Sexual Partners						
Mean	.4	2.3	5.0	2.1	2.0	3.3
Standard Deviation	.9	1.7	1.4	2.5	1.7	1.8
No sexual partners - %	13.2	13.5	9.0	61.2	11.9	11.3
Childhood Gender Nonconformity						
Mean	2.4	2.6	2.9	2.8	2.9	2.7
Standard Deviation	.6	.6	.7	.6	.6	.6

*Note.* Het = heterosexual, Bi = bisexual, Gay = lesbian/gay, Ace = asexual, Pan = pansexual.

Table 2  
*Unstandardized Betas/Conditional Odds Ratios, 95% Confidence Intervals and  
 Classification Predictions for Multinomial Logistic Regression*

<i>Panel A</i>					
Variable	Bisexual	Lesbian/Gay	Pansexual	Queer	
Comparison: Heterosexual					
Sexual A.	3.08***	5.84***	3.01***	3.65***	
Age	.02**	.06***	-.03	.03*	
CGN	.44**	.89***	.72***	.30	
Woman	.32 [.23, .46]	.19 [.12, .30]	1.13 [.63, 2.04]	.81 [.41, 1.60]	
<i>Panel B</i>					
	Lesbian/Gay	Pansexual	Queer		
Comparison: Bisexual					
Sexual A.	2.76***	-.07	.58***		
Age	.04***	-.05***	.01		
CGN	.46***	.28	-.13		
Woman	.59 [.45, .78]	3.51 [2.13, 5.80]	2.52 [1.40, 4.54]		
<i>Panel C</i>					
	Pansexual	Queer			
Comparison: Lesbian/Gay					
Sexual A.	-2.83***	-2.18***			
Age	-.08***	-.03*			
CGN	-.18	-.59**			
Woman	5.96 [3.43, 10.37]	4.28 [2.34, 7.84]			
<i>Panel D</i>					
	Queer (cf. Pansexual)				
Sexual A.	.64***				
Age	.06***				
CGN	-.41				
Woman	.72 [.34, 1.53]				
<i>Panel E</i>					
Classification					
Observed	Predicted				
	Heterosexual	Bisexual	Lesbian/Gay	Pansexual	Queer
<i>n</i>	1,008	1,500	2,693	152	77
Heterosexual	94.3%	5.2%	.5%	.0%	.0%
Bisexual	7.7%	79.7%	12.6%	.0%	.0%
Lesbian/Gay	.1%	2.2%	97.7%	.0%	.0%
Pansexual	5.9%	82.9%	11.2%	.0%	.0%
Queer	6.5%	53.2%	40.3%	.0%	.0%
Overall Accuracy	88.0%				

*Note:* % is per row. Sexual A. = Sexual Attraction, CGN = Childhood Gender Nonconformity.

For Sexual Attraction, Age and CGN, unstandardized betas are presented. For Women, odds ratios with confidence intervals are presented.

Table 3

*Bivariate Correlations and Descriptive Statistics for Pansexual, Queer and Asexual Individuals*

Pansexual ( <i>n</i> = 160)												
Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. CGN	—											
2. Outness	.14	—										
3. Victimization	.30***	.33***	—									
4. HHRDS	.18*	.22**	.50***	—								
5. Microaggress.	.19*	.27***	.49***	.65***	—							
6. Concealment	.33***	-.07	.30***	.52***	.35***	—						
7. Self-Stigma	-.07	-.23**	.05	.32***	.21*	.40***	—					
8. Acceptance C.s	-.02	-.09	.14	.38***	.50***	.31***	.42***	—				
9. Vigilance	.09	-.03	.23**	.47***	.46***	.49***	.36***	.63***	—			
10. Rumination	.00	.07	.23***	.19*	.34***	.10	.09	.32***	.15	—		
11. Distress	.16*	.08	.36***	.44***	.47***	.34***	.28***	.45***	.23**	.64***	—	
12. Age	.18*	.29***	.24**	.13	.00	-.02	-.12	-.07	.10	-.20*	-.15	—
13. Woman	.16*	.03	-.09	-.02	.11	-.02	.00	.12	-.05	.03	.03	-.21**
Queer ( <i>n</i> = 80)												
Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. CGN	—											
2. Outness	.11	—										
3. Victimization	.24*	.44***	—									
4. HHRDS	.20	.14	.47***	—								
5. Microaggress.	.20	-.01	.28*	.66***	—							
6. Concealment	.08	-.24*	-.13	.13	.29**	—						
7. Self-Stigma	.02	-.28*	.05	.05	.28*	.32**	—					
8. Acceptance C.s	.04	-.26*	.12	.28*	.31**	.51***	.39***	—				
9. Vigilance	.05	-.33**	.00	.30**	.29**	.51***	.35**	.66***	—			
10. Rumination	.01	-.17	-.06	.23*	.21	.15	.31**	.43***	.40***	—		
11. Distress	.02	-.13	.24*	.25*	.26*	.11	.21	.36***	.26*	.52***	—	
12. Age	.07	.42***	.40***	-.04	-.27*	-.30**	-.29**	-.13	-.26*	-.34**	-.21	—
13. Woman	-.16*	-.37***	-.40***	-.13	-.02	-.24*	-.01	-.14	-.05	-.04	-.02	-.15

Asexual ( <i>n</i> = 98)												
Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. CGN	—											
2. Outness	.04	—										
3. Victimization	.18	.20	—									
4. HHRDS	.09	.18	.66***	—								
5. Microaggress.	.04	.31**	.51***	.76***	—							
6. A. Concealment	.12	.02	.52***	.49***	.38***	—						
7. Self-Stigma	.12	-.13	.33***	.31**	.24*	.29**	—					
8. Acceptance C.s	.24*	-.02	.46***	.58***	.45***	.50***	.29**	—				
9. Vigilance	.21*	.03	.40***	.47***	.38***	.47***	.26*	.75***	—			
10. Rumination	.00	-.09	.24*	.35***	.26**	.37***	.22*	.37***	.36***	—		
11. Distress	-.14	-.05	.29**	.25*	.23*	.32**	.23*	.24*	.22*	.61***	—	
12. Age	.19	.06	.13	-.08	-.14	-.09	-.09	-.12	-.09	-.32**	-.18	—
13. Woman	.25*	.03	-.35***	-.16	-.07	-.14	-.10	.05	.00	.14	-.15	-.09
Variable	1	2	3	4	5	6	7	8	9	10	11	12
Pansexual												
<i>M</i>	2.86	2.68	.77	1.80	2.57	1.65	1.65	3.34	2.12	2.75	22.61	24.06
<i>SD</i>	.64	.78	.76	.73	.79	.79	0.79	1.42	.96	.76	12.22	6.98
Range	1-5	1-4	0-3	1-6	1-5	1-5	1-5	1-6	1-5	1-4	0-48	16-59
Queer												
<i>M</i>	2.73	2.95	0.75	1.71	2.50	1.80	1.67	3.43	2.26	2.59	21.50	27.05
<i>SD</i>	.58	.77	.69	.57	.72	.78	.80	1.38	1.01	.76	12.32	8.52
Range	1-5	1-4	0-3	1-6	1-5	1-5	1-5	1-6	1-5	1-4	0-48	17-55
Asexual												
<i>M</i>	2.82	2.02	.34	1.41	2.13	1.57	2.24	3.02	1.91	2.66	18.96	24.70
<i>SD</i>	.60	.84	.49	.45	.86	.78	1.02	1.45	.86	.83	12.60	8.75
Range	1-5	1-4	0-3	1-6	1-5	1-5	1-5	1-6	1-5	1-4	0-48	16-67

*Note.* CGN = Childhood Gender Nonconformity, HHRDS = Heterosexist Harassment, Rejection and Discrimination Scale, Microaggress = Microaggressions, Concealment = Active Concealment, Acceptance Cs = Acceptance Concerns, Vigilance = Vigilance for Others' Suspicions, Woman = Woman versus Man.

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ . \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .



Table 4

*Summary of Hierarchical Regression Analyses for Psychological Distress in Pansexual, Queer and Asexual Individuals*

	Pansexual ( <i>n</i> = 156)			Queer ( <i>n</i> = 79)			Asexual ( <i>n</i> = 95)		
	$\beta$	R <sup>2</sup>	$\Delta R^2$	$\beta$	R <sup>2</sup>	$\Delta R^2$	$\beta$	R <sup>2</sup>	$\Delta R^2$
Step 1		.06			.05			.07	
Woman	-.04			-.04			-.15		
Age	-.20*			-.22			-.18		
Childhood Gender Nonconformity	.20*			.03			-.07		
Step 2		.26	.20***		.11	.07		.12	.06
Woman	-.03			-.05			-.09		
Age	-.25**			-.16			-.15		
Childhood Gender Nonconformity	.12			-.01			-.11		
Outness	.04			-.12			-.08		
Heterosexist Experiences	.44***			.25*			.25*		
Step 3		.35	.10***		.18	.07		.16	.04
Woman	-.07			.02			-.10		
Age	-.23**			-.15			-.12		
Childhood Gender Nonconformity	.15*			-.01			-.16		
Outness	.11			.00			-.03		
Heterosexist Experiences	.28***			.17			.10		
Acceptance Concerns	.32***			.27*			.17		
Self-Stigma	.07			.05			.15		
Step 4		.57	.22***		.30	.12***		.45	.29***
Woman	-.04			.03			-.21*		
Age	-.11			-.04			.03		
Childhood Gender Nonconformity	.14*			.00			-.12		
Outness	.04			-.02			.04		
Heterosexist Experiences	.23***			.12			-.06		
Acceptance Concerns	.16*			.14			-.05		
Self-Stigma	.10			.01			.10		
Rumination	.51***			.41***			.64***		

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .