

The Academic College of Tel Aviv-Yaffo

School of Behavioral Sciences

Are Highly Sensitive Persons More Vulnerable to the Effects of Social Stigma?

The Interaction of Minority Stress and Sensory-Processing Sensitivity in
Predicting Mental Health among Gay and Bisexual Men

Final Project Submitted for M.A. Degree in Clinical Psychology

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Table of Contents

| | Page |
|---|------|
| Acknowledgements | 3 |
| Abstract | 4 |
| Introduction | 5 |
| Minority Stress | 5 |
| Sensory-Processing Sensitivity | 6 |
| The Current Investigation | 8 |
| Study Hypotheses | 9 |
| Method | 10 |
| Participants and Procedure | 10 |
| Measures | 10 |
| Results | 15 |
| Description of Independent and Dependent Variables | 15 |
| Means, Standard Deviations, Internal Consistencies and Correlation Matrix | 15 |
| Associations between Sociodemographic Variables and the Dependent Variables | 16 |
| Hierarchical Linear Regression Analyses | 19 |
| Psychological Distress as the Dependent Variable | 20 |
| Social Interaction Anxiety as the Dependent Variable | 21 |
| Social Phobia as the Dependent Variable | 23 |
| Discussion | 27 |
| References | 34 |
| Appendix: Questionnaire (in Hebrew) | 38 |

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Thank you,

Michael

Abstract

According to the minority stress model, stress related to being a member of a stigmatized minority group (such as discrimination or fear or rejection) increases negative mental health outcomes. This study sought out to investigate whether sensory-processing sensitivity (SPS), an inherited trait, moderates this relationship. SPS is best represented as a dichotomous variable, as it is estimated that about 25% of people are highly sensitive persons (HSPs) and the rest are non-highly sensitive. HSPs tend to process a variety of information more strongly and deeply than others. They also have higher rates of mental health problems, although it has been suggested that HSPs are not necessarily predisposed to negative affect, but rather more sensitive to poor parenting or an adverse childhood environment. However, the effects of social stigma on highly sensitive persons have not been examined yet. In this study, 289 gay or bisexual men were given a series of questionnaires measuring minority stress, SPS, parental bonding, psychological distress, social interaction anxiety, and social phobia. The results suggest that both SPS and minority stress predict psychological distress, social interaction anxiety, and social phobia among gay and bisexual men. In addition, the hypothesis that highly sensitive gay and bisexual men would be more vulnerable to the effects of minority stress on mental health was partially supported, as it was revealed that SPS moderates the relationship between minority stress and social phobia among gay and bisexual men. However, no evidence was found that SPS moderates the relationship between minority stress and psychological distress, or the relationship between SPS and social interaction anxiety. This suggests that highly sensitive sexual minority men are more vulnerable to some, but not all, of the effects of minority stress on mental health, and that they are particularly at a higher risk for developing social phobia as a result of minority stress experiences. Theoretical and clinical implications concerning high sensitivity, social stigma, and the challenge of being both highly sensitive and a member of a stigmatized group, are discussed.

1. Introduction

In the past half century, societal acceptance of sexual minorities, i.e. lesbians, gays, and bisexuals (LGB) in many western countries has shown a steady increase. As a result, LGBs are coming out to their friends, family, and colleagues, sharing their sexual orientation and/or their same-sex relationship in increasing numbers (Harper & Schneider, 2003; Kama, 2000; Peplau & Fingerhut, 2007). Nonetheless, negative social attitudes and behavior toward sexual minorities are still widespread (e.g., Costa & Davies, 2012; Norman, 2012). These attitudes can be manifested in individual or institutional discrimination or harassment, and are referred to as *heterosexism*.

1.1 Minority Stress

In addition to the heterosexist attitudes experienced by LGBs, several studies have shown higher rates of mental health problems or psychological distress among this population, compared to their heterosexual peers (e.g., Cochran, Sullivan, & Mays, 2003; Fergusson, Horwood, Ridder, & Beautrais, 2005). Meyer (1995, 2003) suggested that societal heterosexist attitudes and the higher rates of mental health problems found among LGBs are related to one another, and that this association is mediated by stressors that are unique to members of a stigmatized minority group. This proposed impact of the social environment on the well-being of individual members of stigmatized minority groups has been conceptualized by Meyer under the term *minority stress*.

Meyer's minority stress model (2003) relied on previous research on the association between stress, social environment, and mental health. Firstly, extensive empirical research has shown that experiencing chronic stress can increase the chance of suffering from mental illness (e.g., Dohrenwend, 1998; Dohrenwend, 2000; Kessler, 1997). Secondly, social scientists have drawn upon this extensive literature and proposed that conditions of the social environment may create daily stress that can adversely affect the physical or mental health of minority group members (Aneshensel, 1992; Balsam, Beadnell, & Molina, 2013). Additionally, in his conceptualization of minority stress, Meyer tried to incorporate two disparate approaches in the stress discourse – the objective approach, which views stress as a real and observable phenomenon experienced under certain circumstances that most

people would agree are "stressful", and the subjective approach, which views stress as an experience that depends on appraisal processes applied by the individual as well.

Thus, Meyer's conceptualization of minority stress is composed of one relatively objective component – experiencing actual events of prejudice or discrimination, and three other more subjective components – internalized homophobia, expectations of rejection, and concealment of sexual orientation (Balsam, Beadnell, & Molina, 2013; Meyer, 1995; Meyer, 2003). Subsequent studies have indeed shown, in accordance with Meyer's model (1995, 2003), an association between elevated levels of minority stress in LGB individuals and negative mental health outcomes (e.g., Diaz, Ayala, Bein, Henne, & Marin, 2001; Hatzenbuehler, Nolen-Hoeksema, & Erickson, 2008; Pachankis, & Goldfried, 2006).

Some of these researchers developed tools for the assessment of minority stress levels, usually based on at least one component of Meyer's four-component conceptualization and combining the objective and subjective approaches. For example, the recent Daily Heterosexist Experiences Questionnaire, developed by Balsam, Beadnell, & Molina (2013), asks subjects whether they experienced certain events in the past year and, in addition, how much it bothered them.

If minority stress is at least partly subjective, it raises the question of whether some variables can moderate its negative mental health outcomes. Meyer's model (2003) indeed suggested that variables such as coping and social support can moderate minority stress's effect on mental health and recommended further investigation. Accordingly, follow-up studies have shown that minority stress's negative outcomes can be buffered or exacerbated by moderating variables, such as parental acceptance/rejection of LGB youth's sexual orientation (Espelage, Aragon, & Birkett, 2008; Hershberger & D'Augelli, 1995; Shilo & Savaya, 2011), self-esteem, and coping strategies (Wei, Ku, Russel, & Mallinckrodt, 2008). However, further investigation of moderating variables is needed. In particular, it would be interesting to evaluate the interaction of personality variables with minority stress in predicting mental health and psychological difficulties among LGBs.

1.2 Sensory-Processing Sensitivity

One personality variable that has not been studied yet as a moderator of the effect of minority stress on mental health is a temperament characteristic known as *Sensory-Processing Sensitivity* (SPS). SPS is a term coined by Aron and Aron (1997) to describe an individual difference in temperament. According to Aron and Aron, people who are high on SPS (i.e., "highly sensitive") are exceptionally sensitive to minor stimuli, can be overstimulated by them in comparison to people who are not high on SPS, are prone to "pause to check" in novel situations, and favor to reflect and revise their cognitive maps after an experience (Aron & Aron, 1997; Aron, Aron, & Jagiellowicz, 2012).

Aron et al. suggest that SPS in human adults, as measured by the Highly Sensitive Person Scale (HSPS), roughly encompasses other previous terms that had been used to describe a higher tendency for inhibitory behavior among infants and animal species. This assumption goes in line with the hypothesis that there is an evolutionary advantage to some percentage of a population being inherently more cautious.

SPS seems to be best represented as a dichotomous (rather than continuum) variable, namely dividing populations into highly sensitive and non-highly sensitive, as shown by studies of infants, adults and animals (e.g., Aron, Aron, & Davis, 2005; Renger, Yao, Sokolowski, & Wu, 1999). Aron and Aron estimate that approximately 25% of people are highly sensitive persons (HSP).

There is a tendency to confuse SPS with "negative emotionality" constructs, such as neuroticism, fearfulness, and reactivity, because both highly sensitive persons and fearful or neurotic persons may pause when faced with a novel situation (Aron & Aron, 1997; Liss, Timmel, Baxley, & Killingsworth, 2005). In addition, high SPS has been shown to be associated with negative mental health outcomes, such as experiencing social phobia or avoidant personality disorder (Neal, Edelmann, & Glachan, 2002; Meyer & Carver, 2000).

Nonetheless, studies show that SPS is closely related but not identical to negative emotionality constructs, and, according to Aron and Aron (Aron & Aron, 1997; Aron, Aron, & Davis, 2005), HSPs are vulnerable to mental health problems or negative emotionality only in the context of an adverse family environment. In accordance with Aron and Aron's claim, adverse childhood environment has been shown to be a moderating variable in the association between SPS, negative affectivity, and

adult shyness (Aron, Aron, & Davis, 2005) and parental care has been shown to be a moderating variable in the association between SPS and depressive symptoms (Liss, Timmel, Baxley, & Killingsworth, 2005).

If HSPs are more vulnerable to adverse childhood environment, it may be postulated that they are also more vulnerable to stress related to social stigmatization, such as minority stress. Namely, highly sensitive LGBs could react in a more severe way than non-highly sensitive LGBs to experiencing higher levels of minority stress. However, no research has yet focused on the moderating effect of sensory-processing sensitivity on the association between minority stress and negative mental health outcomes.

1.3 The Current Investigation

The current study's research question was whether high sensory-processing sensitivity strengthens the association between minority stress and negative mental health outcomes among sexual minority men. Accordingly, the research's main aim was to examine the interaction between sensory-processing sensitivity and minority stress in predicting negative mental health outcomes among sexual minority men, i.e. gay and bisexual men. In accordance with Meyer's (2003) four-component model, the interaction of each minority stress component with SPS in predicting negative mental health outcomes was also examined.

A secondary aim of this study was to replicate, in a sample of Israeli gay and bisexual men, the previous results that elevated minority stress levels and high sensitivity are associated with psychological difficulties, and that a positive parental bonding weakens the association between SPS and psychological difficulties.

For the purpose of this study, I focused solely on gay and bisexual men, as opposed to lesbian or bisexual women, because the minority stress experiences of sexual minority men have been shown to be quite different from the minority stress experiences of sexual minority women. For example, sexual minority women confront stigma and prejudice related to their gender in addition to their sexual orientation that sexual minority men do not (Meyer, 2003), while on the other hand, men who

violate gender or sexuality norms are more likely to face hostility than women who do so (Herek, 1988).

1.4 Study Hypotheses

Hypothesis 1: Sensory-processing sensitivity will predict negative mental health outcomes. Namely, highly sensitive persons (those who score higher on the HSPS), will score higher on the Hopkins Symptoms Checklist-10 (HSCL-10), measuring psychological distress, the brief Social Interaction Anxiety Scale (SIAS-6), measuring social interaction anxiety, and the brief Social Phobia Scale (SPS-6), measuring social phobia, in comparison to non-highly sensitive persons.

Hypothesis 2: Minority stress will predict negative mental health outcomes as well. Namely, those who will have a higher average score on the Daily Heterosexist Experiences Questionnaire (DHEQ) measuring an average of five minority stress components, or on the Revised Internalized Homophobia Scale (IHP-R) measuring internal homophobia, will score higher on the HSCL-10, the SIAS-6, and the SPS-6.

Hypothesis 3: Positive parental bonding in childhood will weaken the association between sensory-processing sensitivity and negative mental health outcomes. Namely, the gap between highly sensitive and non-highly sensitive persons in measures of mental health (see Hypothesis 1) will be reduced with an increase in maternal or paternal care levels or a decrease in maternal or paternal over-control levels, as measured by the brief Parental Bonding Instrument (PBI-BC).

Hypothesis 4: High sensitivity will strengthen the association between minority stress and negative mental health outcomes. Namely, highly sensitive persons will have a greater risk of negative mental health outcomes as a result of higher minority stress levels in comparison to non-highly sensitive persons.

2. Method

2.1 Participants and Procedure

Three hundred and one individuals volunteered to fill out an online anonymous survey for gay and bisexual men. They were recruited through online groups and forums for LGBTQ persons, and through friends and colleagues. The participants completed a series of questionnaires, approximately 10-15 minutes long. Links to two versions of the questionnaire were randomly sent to participants. The only difference between them was that in version 1 the mental health measures appeared first and the minority stress measures second, whereas the order was reversed for version 2. The rest of the measures appeared after the mental health and minority stress measures, in the same order for both versions.

Of the 301 participants, six participants reported that they were mainly attracted to women on the Kinsey scale, five participants were under the age of 18, and one participant identified as a woman. These 12 participants were therefore excluded from the final sample, which consisted of 289 gay and bisexual Israeli men aged 18-67 ($M = 31.31$, $SD = 10.09$). Among them, 283 were cisgender men and six were transgender (FTM) men. Thirty four of the participants in the final sample reported that they were attracted both to men and women on the Kinsey scale (see section 2.2.5) and were thus regarded as bisexuals for the purpose of sociodemographic analyses, whereas 255 participants reported that they were exclusively or significantly attracted to men versus women and were thus regarded as gay men. Nearly half of the participants (144) filled out version 1 of the questionnaire, and the rest (145) filled out version 2.

The study was approved by the ethics committee of the Academic College of Tel Aviv-Yaffo (approval number: 2014001).

2.2 Measures

2.2.1 Minority Stress

Both the *Daily Heterosexist Experiences Questionnaire* (DHEQ; Balsam, Beadnell, & Molina, 2013) and the *Revised Internalized Homophobia Scale* (IHP-R; Herek, Gillis, & Cogan, 2009) were used to assess minority stress levels.

The original DHEQ has 50 items divided into 9 subscales and measures minority stress levels. Participants are presented with various events (such as, "being treated unfairly in stores or restaurants because of your sexual orientation") and asked whether they experienced the event during the past 12 months, and in case they did, to rate how much it bothered them, on a scale of 0 ("did not happen") to 5 ("happened, bothered me extremely").

For the purpose of brevity, only five of the nine DHEQ subscales were used in this study, comprising a total of 28 DHEQ items out of the original 50 items. Three of the subscales were chosen based on their compatibility to the minority stress components conceptualized by Meyer (Meyer, 1995; Meyer, 2003). Namely, the discrimination/harassment subscale was chosen as a measure of the "actual events of prejudice or discrimination" component in Meyer's model, vigilance was chosen as a measure of the "expectations of rejection" component, and isolation was chosen since it had the highest resemblance to the "concealment of sexual orientation" component. In addition, two more subscales were included – family of origin and vicarious trauma. These subscales were included since it was thought that they would add more valuable information about the effects of minority stress experiences with close family members (family of origin subscale) as well as vicarious experiences (vicarious trauma) on the mental health of highly sensitive persons.

A high average score on the five DHEQ subscales reflected high levels of experienced minority stress, with scores ranging from 0 ("did not happen") to 5 ("happened, bothered me extremely"). In the original investigation of the DHEQ (Balsam, Beadnell, & Molina, 2013), the scores ranged from 1 to 5, since 0 ("did not happen") and 1 ("happened, did not bother me all") were both coded as a score of 1. However, for the purpose of this study it was decided to treat these two scores (0 and 1) as different in order to increase the variance of the results and allow for a differentiation in scoring between participants who did not experience the event and those who experienced it but were not

bothered by it. In addition, Cronbach's alphas (reported on the Results chapter) for the DHEQ and for the five subscales were similar for both methods of calculation.

Internal homophobia (the fourth and final component in Meyer's minority stress model), which does not have a corresponding subscale on the DHEQ, was measured by the IHP-R. The IHP-R has 5 items in which participants are presented with statements and asked to rate how much the statements are relevant to them, such as "I feel that being gay/bisexual is a personal shortcoming for me", on a scale of 1 to 5. A high score on the IHP-R reflects high levels of internalized homophobia, with scores ranging from 5 to 25. In the original investigation, Cronbach's alpha for the 50-item version of the DHEQ was 0.92, with internal reliability scores for the 5 subscales that were used in this investigation ranging from 0.76 to 0.86. Cronbach's alpha for the IHP-R in the original investigation was 0.82.

2.2.2. Sensory-Processing Sensitivity

The *Highly Sensitive Person Scale* (HSPS; Aron, & Aron, 1997) was used to assess SPS. This is a 27-item scale with scores ranging from 27 to 135 (higher scores indicating greater SPS) in which participants are asked to rate their agreement with a variety of statements on a scale of 1 to 5. Items reflect sensitivity to a variety of internal and external factors such as noises, life changes, tastes, and other people's moods. Cronbach's alpha in the original investigation was 0.87. HSPS scores can be analyzed either as a continuous variable or as a dichotomized variable with two values: highly sensitive persons versus non-highly sensitive persons. In this study, SPS was treated as a continuous variable for the purpose of calculating correlations with other variables and as a dichotomous variable for the purpose of examining the research hypotheses. For a detailed explanation of the method by which the SPS variable was dichotomized, see section 3.4 in the Results chapter.

2.2.3. Childhood Parental Bonding

A revised version of *Parental Bonding Instrument* (PBI-BC; Parker, Tupling, & Brown, 1979) constructed by Klimidis, Minas, Ata, & Stuart (1992) was used to assess childhood parental bonding. The PBI-BC has 16 items measuring perceived attachment to parents using the two dimensions of

care/rejection and control/autonomy. A previous investigation by Heaven, Newbury, and Mak (2003) showed internal reliability scores ranging from 0.6 to 0.72. Four scores were calculated for each participant: maternal care, maternal over-control, paternal care, and paternal over-control, with the score on each of the components ranging from 4 to 16.

2.2.4 Mental Health

The *Hopkins Symptoms Check List-10* (HSCL-10; Syed, Zachrisson, Dalgard, Dalen, & Ahlberg, 2008), the *Social Interaction Anxiety Scale*, and the *Social Phobia Scale* (SIAS-6/SPS-6; Peters, Sunderland, Andrews, Rapee, & Mattick, 2012), were used to assess psychological distress, social interaction anxiety and social phobia, respectively. The HSCL-10 has 10 items measuring symptoms of psychological distress and its scores, based on the total average of items, range from 1 to 4, with higher scores indicating higher levels of psychological distress. Cronbach's alpha for HSCL-10 in Syed et al.'s investigation was 0.86.

The combined SIAS-6/SPS-6 is a 12-item brief measure of two components relating to social anxiety: social phobia measured by the SPS-6 and social interaction anxiety measured by the SIAS-6. The scores for each component range from 0 to 24. Cronbach's alpha for this tool, in a recent investigation by Johnston, Titov, Andrews, Dear, & Spence (2013), was 0.92.

2.2.5 Sociodemographic Questionnaire and Kinsey Scale

The last part of the questionnaire included a self-report of sociodemographic features. A list of the sociodemographic questions/items is displayed in Table 3 of the Results chapter. The sociodemographic questionnaire also included an assessment of sexual orientation, indicated on a seven-point self-report scale ranging from 0 (exclusively attracted to men) to 6 (exclusively attracted to women).

2.2.6 Translation and Adaptation of Measures to the Hebrew Language

The Hebrew version of the PBI-BC used in this study was based on a previously validated translation into Hebrew of a 32-item version of the PBI as part of Ofer's (2008) M.A. thesis. The Hebrew versions of the SIAS-6 and SPS-6 were based on previously validated translations into Hebrew of 20-item versions of these scales as part of Ravid's (2009) M.A. thesis. The items of the DHEQ, IHP-R, HSPS, and HSCL-10 were translated into Hebrew by the author-experimenter, back-translated into English by a translator fluent in both English and Hebrew, and then compared to the original items in English in order to validate their compatibility with the original versions in English.

3. Results

The data accumulated from the series of questionnaires was used to calculate three dependent variables – psychological distress (as measured by the HSCL-10), social interaction anxiety, and social phobia (as measured by the two subscales of the SPS-6/SIAS-6); plus, seven independent variables – minority stress (as measured by the DHEQ), internal homophobia (as measured by the IHP-R), sensory-processing sensitivity (as measured by the HSPS), and the four components of parental bonding – maternal care, maternal over-control, paternal care, and paternal over-control (as measured by the PBI-BC).

3.1. Means, Standard Deviations, Internal Consistencies and Correlation Matrix for the Independent and Dependent Variables.

| Table 1 | | | | | | | | | | |
|--|------------------------|----------------------------|---------------|--------------------------------|-------------|---------------------|-------------|---------------------|---------------------|-----------------|
| Means, standard deviations, internal consistencies and correlations for the dependent and independent variables (N=289). | | | | | | | | | | |
| | Dependent Variables | | | Independent Variables | | | | | | |
| | Psychological Distress | Social Interaction Anxiety | Social Phobia | Sensory-Processing Sensitivity | Mother Care | Mother Over-Control | Father Care | Father Over-Control | Internal Homophobia | Minority Stress |
| Psychological Distress | 1.00 | 0.48** | 0.52** | 0.52** | -0.27** | 0.24** | -0.18** | 0.28** | 0.22** | 0.34** |
| Social Interaction Anxiety | | 1.00 | 0.62** | 0.38** | -0.21** | 0.22** | -0.16** | 0.18** | 0.23** | 0.30** |
| Social Phobia | | | 1.00 | 0.51** | -0.20** | 0.16** | -0.14* | 0.13* | 0.16** | 0.40** |
| Sensory-Processing Sensitivity | | | | 1.00 | -0.18** | 0.25** | -0.18** | 0.23** | 0.11 | 0.30** |
| Mother Care | | | | | 1.00 | -0.31** | 0.30** | -0.17** | -0.08 | -0.15* |
| Mother Over-Control | | | | | | 1.00 | -0.16** | 0.25** | 0.14* | 0.20** |
| Father Care | | | | | | | 1.00 | -0.23** | 0.03 | -0.03 |
| Father Over-Control | | | | | | | | 1 | 0.18** | 0.18** |
| Internal Homophobia | | | | | | | | | 1.00 | 0.32** |
| Minority Stress | | | | | | | | | | 1.00 |
| M | 2.02 | 5.83 | 4.67 | 82.42 | 11.45 | 8.8 | 9.31 | 8.08 | 6.49 | 1.76 |
| SD | 0.7 | 5.37 | 5.31 | 16.97 | 3.32 | 3.28 | 3.45 | 3.15 | 3.57 | 0.86 |
| Coefficient alpha | 0.89 | 0.86 | 0.87 | 0.89 | 0.8 | 0.78 | 0.78 | 0.75 | 0.84 | 0.91 |
| Score range | 1-4 | 0-24 | 0-24 | 46-133 | 4-16 | 4-16 | 4-16 | 4-16 | 4-20 | 0.11-4.46 |
| **p<0.01; *p<0.05 | | | | | | | | | | |

Table 1 shows the means, standard deviations, internal consistencies and correlation matrix for the dependent and independent variables. As the table shows, the coefficient alphas were all above 0.8 for

the mental health, sensory-processing sensitivity, internal homophobia, and minority stress measures. However, the coefficient alphas for the components of parental bonding were lower, and ranged from 0.75 to 0.8.

All three dependent variables correlated with all the independent variables, either positively (with sensory-processing sensitivity, maternal and paternal over-control, internal homophobia, and minority stress) or negatively (with maternal and paternal care). All three dependent variables had a strong positive correlation with one another.

Subsequently, means, standard deviations, internal consistencies, and correlations with the dependent variables were calculated for the five subscales of the Daily Heterosexist Experiences Questionnaire, and they are presented in Table 2. As the table shows, four subscales of the DHEQ positively correlated with all three dependent variables, while the vicarious trauma subscale correlated only with psychological distress and social phobia (and not with social interaction anxiety). The correlation effect sizes of the five components with the dependent variables ranged from small-sized to medium-sized.

| Table 2 | | | | | |
|---|-----------|-----------|------------------|-------------------------------|------------------|
| Means, standard deviations, internal consistencies, and correlations with the dependent variables for the five subscales of the Daily Heterosexist Experiences Questionnaire (N=289). | | | | | |
| | Isolation | Vigilance | Vicarious Trauma | Discrimination/ Harassment | Family of Origin |
| Psychological Distress | 0.29** | 0.17** | 0.18** | 0.34** | 0.25** |
| Social Interaction Anxiety | 0.37** | 0.23** | 0.07 | 0.19** | 0.24** |
| Social Phobia | 0.33** | 0.25** | 0.23** | 0.42** | 0.2** |
| M | 1.85 | 1.86 | 3.12 | 0.95 | 1.04 |
| SD | 1.26 | 1.4 | 1.23 | 1.12 | 1.15 |
| Coefficient alpha | 0.71 | 0.89 | 0.84 | 0.86 | 0.83 |
| Score range | 0-5 | 0-5 | 0-5 | 0-5 | 0-4.67 |
| **p<0.01; *p<0.05 | | | | | |

3.2. Associations between Sociodemographic Variables and the Dependent Variables

Independent t-tests, one-way Analyses of Variance (ANOVA), and Pearson correlations were used to examine associations between thirteen sociodemographic variables and the dependent variables (see

full details in Table 3). Four sociodemographic variables (marked in bold in Table 3) significantly predicted mental health outcomes. Namely, having children (participants who have children reported lower levels of psychological distress, social interaction anxiety, and social phobia, in comparison with participants who do not have children), education level (participants with a higher education level reported lower levels of social interaction anxiety and social phobia), age (older participants reported lower psychological distress and social phobia levels compared to younger ones), and relationship status (married or coupled participants reported lower psychological distress levels than single or divorced ones).

3.3. Comparisons between the Two Versions of the Questionnaire

Chi-square and independent t-tests were run to test for differences between the participants who filled out the two versions of the questionnaire.

No significant differences were found between the sociodemographic characteristics of participants who filled out the two versions. That is, there were no significant differences in education level [$\chi^2(2) = 0.22, p = 0.9$], country of birth [$\chi^2(1) = 1.57, p = 0.21$], area in Israel in which the participant was raised [$\chi^2(3) = 1.44, p = 0.7$], area in Israel in which the participant is currently residing [$\chi^2(3) = 1.91, p = 0.59$], parents average income [$\chi^2(2) = 0.42, p = 0.81$], sexual orientation [$\chi^2(1) = 0.50, p = 0.48$], religiosity at childhood home of the participant [$\chi^2(1) = 0.3, p = 0.58$], religiosity today [$\chi^2(1) = 0.3, p = 0.58$], relationship status [$\chi^2(1) = 0.69, p = 0.41$], religiosity status change in comparison to childhood home [$\chi^2(1) = 0.91, p = 0.34$], having children [$\chi^2(1) = 0.18, p = 0.67$], outness level [$t(287) = -1.46, p = 0.14$], and age [$t(287) = 1.41, p = 0.16$].

In addition, the results showed no significant difference between the two groups in psychological distress [$t(287) = -0.2, p = 0.84$], social interaction anxiety [$t(287) = 1.50, p = 0.13$], social phobia [$t(287) = -0.52, p = 0.60$], internal homophobia [$t(287) = 0.77, p = 0.44$], and in the four components of parental bonding: maternal care [$t(287) = -1.04, p = 0.30$], maternal over-control [$t(287) = 0.03, p = 0.97$], paternal care [$t(287) = 0.19, p = 0.85$], and paternal over-control [$t(287) = 0.08, p = 0.94$].

However, significant differences were found between the minority stress levels of the two groups [$t(287) = -2.6, p = 0.01$], as measured by the Daily Heterosexist Experiences Questionnaire. Namely, participants who filled out the minority stress and internal homophobia measures before the mental health measures reported higher minority stress levels than those who filled out the mental health measures first. Subsequent t -tests comparing the levels of the five subscales of the Daily Heterosexist Experiences Questionnaire between the two groups showed that, on one hand, there were

| Table 3 | | | | |
|--|--|-------------------------------------|--|-----|
| Associations between sociodemographic variables and the dependent variables | | | | |
| | Psychological Distress | Social Interaction Anxiety | Social Phobia | N |
| Have Children (Yes/ No) | $t(287) = 2.12^*$ | $t(287) = 2.34^*$ | $t(287) = 3.48^{**}$ | 289 |
| Education Level (Non-Academic/ Undergraduate Level/ Graduate Level) | $F(2) = 2.15$ | $F(2) = 3.54^*$ | $F(2) = 3.64^*$ | 286 |
| Age | $r = -0.15^*$ | $r = -0.11$ | $r = -0.15^{**}$ | 289 |
| Relationship Status (Single or Divorced/ Married or in a Committed Relationship) | $t(286) = 3.54^{**}$ | $t(286) = 1.75$ | $t(286) = 1.67$ | 288 |
| Sexual Orientation (Gay/ Bisexual) | $t(287) = -0.71$ | $t(287) = 0.31$ | $t(287) = -0.18$ | 289 |
| Country of Birth (Israel/ Other) | $t(287) = 0.70$ | $t(287) = 0.98$ | $t(287) = 0.75$ | 289 |
| Parents Income (Low/ Medium/ High) | $F(2) = 0.08$ | $F(2) = 0.76$ | $F(2) = 0.36$ | 289 |
| Religiosity at Childhood Home (Secular or No Religion/ Traditional or Religious) | $t(281) = -1.24$ | $t(281) = 0.04$ | $t(281) = 0.09$ | 283 |
| Religiosity Today (Secular or No Religion/ Traditional or Religious) | $t(275) = -1.52$ | $t(275) = -1.21$ | $t(275) = -0.16$ | 277 |
| Religiosity Status Change (Less Religious/ No Change) | $t(268) = -0.13$ | $t(268) = -1.68$ | $t(268) = -0.50$ | 270 |
| Outness Level (0 to 8) | $r = 0.02$ | $r = -0.06$ | $r = 0.05$ | 289 |
| Area Raised In (Haifa and the Northern Israel/ Tel Aviv District/ Jerusalem/ Southern Israel) | $F(3) = 1.12$ | $F(3) = 0.74$ | $F(3) = 1.27$ | 274 |
| Area of Current Residence (Haifa and the Northern Israel/ Tel Aviv District/ Jerusalem/ Southern Israel) | $F(3) = 0.94$ | $F(3) = 1.39$ | $F(3) = 0.3$ | 274 |
| **$p < 0.01$; *$p < 0.05$ | | | | |

no significant differences between the groups on the isolation [$t(287) = -0.1, p = 0.92$], and family of origin [$t(287) = -0.65, p = 0.52$] subscales, but on the other hand, significant differences were found between the groups on the vigilance [$t(287) = -1.99, p = 0.047$], vicarious trauma [$t(287) = -3.19, p = 0.002$], and discrimination/harassment [$t(287) = -2.61, p = 0.009$] subscales – all in the same direction as the effect found for the total Daily Heterosexist Experiences Questionnaire score.

Another significant difference between the groups was found in reported levels of sensory-processing sensitivity [$t(287) = 2.00, p = 0.046$]. Participants who filled out the mental health measures before the minority stress and internal homophobia measures reported higher sensory-

processing sensitivity levels than those who filled out the minority stress and internal homophobia measures first.

3.4. Hierarchical Linear Regression Analyses

A total of six hierarchical linear regressions were conducted for the purpose of investigating how well each of the independent variables predicts mental health levels, and in order to investigate whether the interaction of sensory-processing sensitivity and parental bonding or the interaction of sensory-processing sensitivity and minority stress predicts negative mental health outcomes, above and beyond the combined contribution of parental bonding, sensory-processing sensitivity, and minority stress (the regressions are presented in Tables 4, 5, 6, 7, 8, and 9).

For each regression, one of three measures of mental health was used as the dependent variable. In order to test for their effect, the sociodemographic variables that were found to be significantly associated with the dependent variable for each regression (see section 3.2) were entered simultaneously as independent variables in the first step of each regression.

In the second step, SPS was entered into the regression, since on average it had the strongest correlation with the dependent variables (see section 3.1). SPS was entered as a dichotomous variable (rather than a continuum) into the regression. According to Aron, Aron, and Davis (2005), highly sensitive people make about 10% to 35% of the population, and most studies that focused on the general population or undergraduate students used a cut-off of 25%. However, this figure is dependent on the targeted population. For example, it has been shown that women report higher SPS levels than men (Aron & Aron, 1997) and psychology students report higher levels than the general population (Aron, Aron, & Davis, 2005). Therefore, since this study focused on a specific population (highly sensitive sexual minority men) that has not been specifically examined in this context before, a nominal cut-off score of 89 (out of 135) and above was used, based on a previous study, which used a cut-off of 124 and above out of 189 (Liss, Timmel, Baxley, & Killingsworth, 2005). Therefore, 31.83% of the participants in the current sample were defined as highly sensitive ($N = 92$, $M =$

102.39, SD = 10.08) and the rest as non-highly sensitive (N = 197, M = 73.10, SD = 10.06), $t(287) = -23.05$, $p < 0.001$.

For step three, minority stress and internal homophobia were entered simultaneously, since on average they had the second-strongest correlations with the dependent variables. The fourth step included the final independent variables to enter the model – the four parental bonding components. In the fifth and final step, a stepwise method was employed. Namely, the interaction terms of parental bonding and sensory-processing sensitivity, minority stress and sensory-processing sensitivity, or internal homophobia and sensory-processing sensitivity, were entered into the model only if they made a significant contribution (the stepwise stage was set at $p = 0.05$ for entry and at $p = 0.1$ for removal of variables).

3.4.1 Hierarchical Linear Regression Analyses for Variables Predicting Psychological Distress

Detailed results of the first hierarchical regression for predicting psychological distress levels are presented in Table 4. The model was significant ($p < 0.001$) and was able to explain 35% of the variance in psychological distress. As the table shows, age, relationship status, sensory-processing sensitivity, minority stress, maternal care, and paternal over-control were found to be significant predictors of psychological distress in the final model. Furthermore, sensory-processing sensitivity, minority stress, and the components of parental bonding contributed to a significant change in R^2 when they were entered into the model, above and beyond the effect of the previously entered variables.

| Variables | Model 1 | | | | Model 2 | | | | Model 3 | | | | Model 4 | | | |
|---------------------------------------|--|--------------|-------|--------|---|--------------|-------|--------|---|--------------|-------|--------|---|--------------|-------|--------|
| | Unstandardized | Standardized | | | Unstandardized | Standardized | | | Unstandardized | Standardized | | | Unstandardized | Standardized | | |
| | b | SE b | Beta | p | b | SE b | Beta | p | b | SE b | Beta | p | b | SE b | Beta | p |
| Have Children (No/Yes) | -0.05 | 0.17 | -0.02 | 0.75 | -0.05 | 0.15 | -0.02 | 0.76 | 0.04 | 0.15 | 0.02 | 0.80 | 0.05 | 0.14 | 0.02 | 0.70 |
| Age | -0.01 | <0.001 | -0.13 | 0.06 | -0.01 | <0.001 | -0.12 | 0.04 | -0.01 | <0.001 | -0.11 | 0.07 | -0.01 | <0.001 | -0.16 | 0.01 |
| Relationship Status | -0.28 | 0.08 | -0.20 | <0.001 | -0.21 | 0.07 | -0.15 | 0.01 | -0.18 | 0.07 | -0.13 | 0.01 | -0.16 | 0.07 | -0.11 | 0.03 |
| Sensory-Processing Sensitivity | | | | | 0.65 | 0.08 | 0.43 | <0.001 | 0.56 | 0.08 | 0.38 | <0.001 | 0.49 | 0.08 | 0.33 | <0.001 |
| Minority Stress | | | | | | | | | 0.16 | 0.04 | 0.20 | <0.001 | 0.13 | 0.04 | 0.16 | <0.001 |
| Internal Homophobia | | | | | | | | | 0.01 | 0.01 | 0.08 | 0.15 | 0.01 | 0.01 | 0.05 | 0.31 |
| Maternal Care | | | | | | | | | | | | | -0.04 | 0.01 | -0.17 | <0.001 |
| Maternal Over-Control | | | | | | | | | | | | | 0.01 | 0.01 | 0.04 | 0.51 |
| Paternal Care | | | | | | | | | | | | | <0.001 | 0.01 | -0.02 | 0.70 |
| Paternal Over-Control | | | | | | | | | | | | | 0.03 | 0.01 | 0.13 | 0.02 |
| R^2 | 0.06 | | | <0.001 | 0.25 | | | <0.001 | 0.30 | | | <0.001 | 0.35 | | | <0.001 |
| Change Statistics | F (3,284) = 6.171 R ² Change = 0.061 | | | <0.001 | F (1,283) = 69.045 R ² Change = 0.184 | | | <0.001 | F (2,281) = 10.365 R ² Change = 0.052 | | | <0.001 | F (4,277) = 5.911 R ² Change = 0.05 | | | <0.001 |

However, all of the interaction terms (between sensory-processing sensitivity and parental bonding, between sensory-processing sensitivity and minority stress, and between sensory-processing sensitivity and internal homophobia) were excluded from the model, since none of them made a significant ($p < 0.05$) contribution when entered into the model.

| | Model 1 | | | | Model 2 | | | | Model 3 | | | | Model 4 | | | |
|---------------------------------------|--|--------------|-------|--------|---|--------------|-------|--------|--|--------------|-------|--------|--|--------------|--------|--------|
| Variables | Unstandardized | Standardized | | | Unstandardized | Standardized | | | Unstandardized | Standardized | | | Unstandardized | Standardized | | |
| | b | SE b | Beta | p | b | SE b | Beta | p | b | SE b | Beta | p | b | SE b | Beta | p |
| Have Children (No/Yes) | -0.05 | 0.17 | -0.02 | 0.75 | -0.05 | 0.15 | -0.02 | 0.76 | 0.08 | 0.15 | 0.03 | 0.60 | 0.08 | 0.14 | 0.03 | 0.57 |
| Age | -0.01 | 0.005 | -0.13 | 0.06 | -0.01 | 0.004 | -0.12 | 0.04 | -0.01 | <0.001 | -0.10 | 0.09 | -0.01 | <0.001 | -0.14 | 0.02 |
| Relationship Status | -0.28 | 0.08 | -0.20 | <0.001 | -0.21 | 0.07 | -0.15 | 0.01 | -0.16 | 0.07 | -0.11 | 0.03 | -0.15 | 0.07 | -0.10 | 0.05 |
| Sensory-Processing Sensitivity | | | | | 0.65 | 0.08 | 0.43 | <0.001 | 0.53 | 0.08 | 0.35 | <0.001 | 0.47 | 0.08 | 0.31 | <0.001 |
| Isolation | | | | | | | | | 0.06 | 0.04 | 0.10 | 0.11 | 0.04 | 0.03 | 0.07 | 0.25 |
| Vigilance | | | | | | | | | -0.04 | 0.03 | -0.09 | 0.19 | -0.02 | 0.03 | -0.04 | 0.54 |
| Vicarious Trauma | | | | | | | | | 0.003 | 0.03 | 0.01 | 0.93 | -0.002 | 0.03 | <0.001 | 0.96 |
| Discrimination/Harassment | | | | | | | | | 0.12 | 0.04 | 0.19 | <0.001 | 0.11 | 0.04 | 0.18 | <0.001 |
| Family of Origin | | | | | | | | | 0.05 | 0.03 | 0.08 | 0.14 | 0.02 | 0.03 | 0.03 | 0.58 |
| Internal Homophobia | | | | | | | | | 0.02 | 0.01 | 0.12 | 0.06 | 0.01 | 0.01 | 0.08 | 0.20 |
| Maternal Care | | | | | | | | | | | | | -0.03 | 0.01 | -0.16 | 0.01 |
| Maternal Over-Control | | | | | | | | | | | | | 0.01 | 0.01 | 0.04 | 0.48 |
| Paternal Care | | | | | | | | | | | | | -0.002 | 0.01 | -0.01 | 0.84 |
| Paternal Over-Control | | | | | | | | | | | | | 0.03 | 0.01 | 0.12 | 0.02 |
| R ² | 0.06 | | | | 0.25 | | | | 0.32 | | | | 0.37 | | | |
| Change Statistics | F (3,284) = 6.171 R ² Change = 0.061 | | | | F (1,283) = 69.045 R ² Change = 0.184 | | | | F (6,277) = 5.243 R ² Change = 0.077 | | | | F (4,273) = 4.935 R ² Change = 0.046 | | | |

Because minority stress was found to be a significant predictor of psychological distress, a second hierarchical linear regression was conducted in order to investigate the relative contribution of the five minority stress components, as well as to examine possible interactions between the different minority stress components and sensory-processing sensitivity in predicting psychological distress. Detailed results of this regression are presented in Table 5. The model was significant ($p < 0.001$) and was able to explain 37% of the variance in psychological distress. As the table shows, age, relationship status, sensory-processing sensitivity, discrimination/harassment (minority stress component), maternal care, and paternal over-control were found to be significant predictors of psychological distress. However, all of the interaction terms (between sensory-processing sensitivity and parental bonding and between sensory-processing sensitivity and minority stress) were excluded from the model, since none of them made a significant ($p < 0.05$) contribution to the final model.

3.4.2 Hierarchical Linear Regression Analyses for Variables Predicting Social Interaction Anxiety

| | Model 1 | | | | Model 2 | | | | Model 3 | | | | Model 4 | | | | Model 5 | | | |
|---|--|--------------|-------|-------|---|--------------|-------|--------|---|--------------|-------|--------|--|--------------|-------|--------|--|--------------|-------|------------------|
| | Unstandardized | Standardized | | | Unstandardized | Standardized | | | Unstandardized | Standardized | | | Unstandardized | Standardized | | | Unstandardized | Standardized | | |
| Variables | b | SE b | Beta | p | b | SE b | Beta | p | b | SE b | Beta | p | b | SE b | Beta | p | b | SE b | Beta | p |
| Have Children (No/Yes) | -2.34 | 1.10 | -0.13 | 0.03 | -2.22 | 1.04 | -0.12 | 0.03 | -1.31 | 1.03 | -0.07 | 0.20 | -1.37 | 1.04 | -0.07 | 0.19 | -1.30 | 1.03 | -0.07 | 0.209 |
| Education Level | -0.84 | 0.44 | -0.11 | 0.06 | -0.57 | 0.42 | -0.08 | 0.18 | -0.58 | 0.41 | -0.08 | 0.16 | -0.55 | 0.41 | -0.07 | 0.18 | -0.53 | 0.41 | -0.07 | 0.202 |
| Sensory-Processing Sensitivity | | | | | 3.80 | 0.64 | 0.33 | <0.001 | 3.17 | 0.64 | 0.27 | <0.001 | 2.68 | 0.66 | 0.23 | <0.001 | 2.82 | 0.66 | 0.24 | <0.001 |
| Minority Stress | | | | | | | | | 0.97 | 0.37 | 0.15 | 0.01 | 0.81 | 0.37 | 0.13 | 0.03 | 0.83 | 0.37 | 0.13 | 0.027 |
| Internal Homophobia | | | | | | | | | 0.19 | 0.07 | 0.15 | 0.01 | 0.17 | 0.07 | 0.14 | 0.02 | 0.18 | 0.07 | 0.14 | 0.013 |
| Maternal Care | | | | | | | | | | | | | -0.18 | 0.10 | -0.11 | 0.05 | -0.19 | 0.09 | -0.11 | 0.050 |
| Maternal Over-Control | | | | | | | | | | | | | -0.11 | 0.10 | 0.07 | 0.26 | 0.10 | 0.10 | 0.06 | 0.279 |
| Paternal Care | | | | | | | | | | | | | -0.08 | 0.09 | -0.05 | 0.37 | -0.08 | 0.09 | -0.05 | 0.370 |
| Paternal Over-Control | | | | | | | | | | | | | 0.05 | 0.10 | 0.03 | 0.60 | 0.20 | 0.12 | 0.12 | 0.103 |
| Paternal Over-Control * Sensory-Processing Sensitivity | | | | | | | | | | | | | | | | | -0.38 | 0.19 | -0.14 | 0.046 |
| R ² | 0.032 | | | 0.011 | 0.139 | | | <0.001 | 0.198 | | | <0.001 | 0.227 | | | <0.001 | 0.238 | | | <0.001 |
| Change Statistics | F (2,283) = 4.623 R ² Change = 0.032 | | | 0.011 | F (1,282) = 35.090 R ² Change = 0.107 | | | <0.001 | F (2,280) = 10.246 R ² Change = 0.059 | | | <0.001 | F (4,276) = 2.654 R ² Change = 0.030 | | | 0.033 | F (1,275) = 4.003 R ² Change = 0.011 | | | 0.046 |

Detailed results of the first hierarchical linear regression for predicting social interaction anxiety levels are presented in Table 6. The model was significant ($p < 0.001$) and was able to explain 23.8% of the variance in social interaction anxiety. As the table shows, sensory-processing sensitivity, minority stress, internal homophobia, and maternal care were found to be significant predictors of social interaction anxiety. In addition, there was a significant contribution to the model when the interaction between parental over-control and sensory-processing sensitivity was entered. However, the interactions between sensory-processing sensitivity and the other components of parental bonding, between sensory-processing sensitivity and minority stress, or between sensory-processing sensitivity

| | Model 1 | | | | Model 2 | | | | Model 3 | | | | Model 4 | | | | Model 5 | | | |
|---|--|--------------|-------|-------|---|--------------|-------|--------|--|--------------|-------|--------|--|--------------|-------|--------|--|--------------|-------|--------------|
| | Unstandardized | Standardized | | | Unstandardized | Standardized | | | Unstandardized | Standardized | | | Unstandardized | Standardized | | | Unstandardized | Standardized | | |
| Variables | b | SE b | Beta | p | b | SE b | Beta | p | b | SE b | Beta | p | b | SE b | Beta | p | b | SE b | Beta | p |
| Have Children (No/Yes) | -2.34 | 1.10 | -0.13 | 0.03 | -2.22 | 1.04 | -0.12 | 0.03 | -0.71 | 1.02 | -0.04 | 0.49 | -0.80 | 1.04 | -0.04 | 0.44 | -0.71 | 1.03 | -0.04 | 0.490 |
| Education Level | -0.84 | 0.442 | -0.11 | 0.06 | -0.57 | 0.420 | -0.08 | 0.18 | -0.65 | 0.41 | -0.09 | 0.11 | -0.67 | 0.42 | -0.09 | 0.11 | -0.63 | 0.42 | -0.08 | 0.131 |
| Sensory-Processing Sensitivity | | | | | 3.80 | 0.64 | 0.33 | <0.001 | 3.04 | 0.63 | 0.26 | <0.001 | 2.65 | 0.65 | 0.23 | <0.001 | 2.76 | 0.65 | 0.24 | 0.001 |
| Isolation | | | | | | | | | 1.04 | 0.28 | 0.24 | <0.001 | 0.95 | 0.29 | 0.22 | <0.001 | 0.96 | 0.28 | 0.22 | 0.001 |
| Vigilance | | | | | | | | | 0.05 | 0.27 | 0.01 | 0.85 | 0.15 | 0.27 | 0.04 | 0.58 | 0.12 | 0.27 | 0.03 | 0.662 |
| Vicarious Trauma | | | | | | | | | -0.413 | 0.28 | -0.09 | 0.14 | -0.401 | 0.29 | -0.09 | 0.16 | -0.41 | 0.29 | -0.09 | 0.151 |
| Discrimination/Harassment | | | | | | | | | 0.18 | 0.32 | 0.04 | 0.57 | 0.14 | 0.32 | 0.03 | 0.66 | 0.20 | 0.32 | 0.04 | 0.532 |
| Family of Origin | | | | | | | | | 0.44 | 0.28 | 0.09 | 0.12 | 0.26 | 0.29 | 0.06 | 0.36 | 0.27 | 0.29 | 0.06 | 0.356 |
| Internal Homophobia | | | | | | | | | 0.10 | 0.08 | 0.08 | 0.21 | 0.08 | 0.08 | 0.06 | 0.35 | 0.09 | 0.08 | 0.07 | 0.273 |
| Maternal Care | | | | | | | | | | | | | -0.15 | 0.10 | -0.09 | 0.13 | -0.15 | 0.10 | -0.09 | 0.123 |
| Maternal Over-Control | | | | | | | | | | | | | 0.12 | 0.10 | 0.07 | 0.20 | 0.12 | 0.10 | 0.07 | 0.218 |
| Paternal Care | | | | | | | | | | | | | -0.047 | 0.09 | -0.03 | 0.61 | -0.05 | 0.09 | -0.03 | 0.617 |
| Paternal Over-Control | | | | | | | | | | | | | 0.06 | 0.10 | 0.04 | 0.54 | 0.21 | 0.12 | 0.12 | 0.087 |
| Paternal Over-Control * Sensory-Processing Sensitivity | | | | | | | | | | | | | | | | | -0.38 | 0.19 | -0.14 | 0.044 |
| R ² | 0.032 | | | 0.011 | 0.139 | | | <0.001 | 0.242 | | | <0.001 | 0.263 | | | <0.001 | 0.274 | | | <0.001 |
| Change Statistics | F (2,283) = 4.623 R ² Change = 0.032 | | | 0.011 | F (1,282) = 35.090 R ² Change = 0.107 | | | <0.001 | F (6,276) = 6.283 R ² Change = 0.103 | | | <0.001 | F (4,272) = 1.950 R ² Change = 0.021 | | | 0.103 | F (1,271) = 4.099 R ² Change = 0.011 | | | 0.044 |

and internal homophobia were excluded from the model, since none of them made a significant ($p < 0.05$) contribution.

Because minority stress was found to be a significant predictor of social interaction anxiety, a second hierarchical linear regression was conducted in order to investigate the relative contribution of minority stress components, as well as to examine possible interactions between minority stress components and sensory-processing sensitivity in predicting social interaction anxiety. Detailed results of the regression are presented in Table 7. The model was significant ($p < 0.001$) and was able to explain 27.4% of the variance in social interaction anxiety.

As the table shows, sensory-processing sensitivity and isolation (minority stress component) were found to be significant predictors of social interaction anxiety in the final model. In addition, there was a significant contribution to the model when the interaction between parental over-control and sensory-processing sensitivity was entered, in the fifth model. However, the interactions between sensory-processing sensitivity and the other components of parental bonding, between sensory-processing sensitivity and minority stress, or between sensory-processing sensitivity and internal homophobia were excluded from the model, since none of them made a significant ($p < 0.05$) contribution. A graphic presentation of the interaction between paternal over-control and sensory-processing sensitivity in predicting social phobia is displayed in Figure 1.

3.4.3 Hierarchical Linear Regression Analyses for Variables Predicting Social Phobia

| | Model 1 | | | | Model 2 | | | | Model 3 | | | | Model 4 | | | | Model 5 | | | |
|---|--|----------------------|----------------------|------|---|----------------------|----------------------|--------|---|----------------------|----------------------|--------|--|----------------------|----------------------|--------|--|----------------------|----------------------|------------------|
| Variables | Unstandardized b | Standardized SE b | Standardized Beta | p | Unstandardized b | Standardized SE b | Standardized Beta | p | Unstandardized b | Standardized SE b | Standardized Beta | p | Unstandardized b | Standardized SE b | Standardized Beta | p | Unstandardized b | Standardized SE b | Standardized Beta | p |
| Have Children (No/Yes) | -1.88 | 1.27 | -0.10 | 0.14 | -1.52 | 1.16 | -0.08 | 0.19 | -0.73 | 1.11 | -0.04 | 0.51 | -0.63 | 1.11 | -0.03 | 0.57 | -0.65 | 1.11 | -0.04 | 0.556 |
| Education Level | -0.95 | 0.46 | -0.13 | 0.04 | -0.57 | 0.42 | -0.08 | 0.17 | -0.58 | 0.40 | -0.08 | 0.15 | -0.47 | 0.41 | -0.06 | 0.24 | -0.41 | 0.41 | -0.05 | 0.316 |
| Age | -0.03 | 0.04 | -0.05 | 0.48 | -0.04 | 0.04 | -0.07 | 0.26 | -0.03 | 0.03 | -0.05 | 0.38 | -0.05 | 0.03 | -0.09 | 0.17 | -0.05 | 0.03 | -0.10 | 0.135 |
| Sensory-Processing Sensitivity | | | | | 4.77 | 0.61 | 0.42 | <0.001 | 3.93 | 0.60 | 0.35 | <0.001 | 3.77 | 0.61 | 0.33 | <0.001 | 3.63 | 0.61 | 0.32 | <0.001 |
| Minority Stress | | | | | | | | | 1.73 | 0.35 | 0.28 | <0.001 | 1.65 | 0.35 | 0.27 | <0.001 | 1.07 | 0.46 | 0.17 | 0.021 |
| Internal Homophobia | | | | | | | | | 0.05 | 0.07 | 0.04 | 0.49 | 0.05 | 0.07 | 0.04 | 0.48 | 0.04 | 0.07 | 0.03 | 0.568 |
| Maternal Care | | | | | | | | | | | | | -0.20 | 0.09 | -0.13 | 0.03 | -0.21 | 0.09 | -0.13 | 0.019 |
| Maternal Over-Control | | | | | | | | | | | | | -0.04 | 0.09 | -0.02 | 0.68 | -0.03 | 0.09 | -0.02 | 0.755 |
| Paternal Care | | | | | | | | | | | | | -0.06 | 0.09 | -0.04 | 0.51 | -0.05 | 0.09 | -0.03 | 0.545 |
| Paternal Over-Control | | | | | | | | | | | | | -0.03 | 0.09 | -0.02 | 0.72 | -0.04 | 0.09 | -0.02 | 0.701 |
| Minority Stress * Sensory-Processing Sensitivity | | | | | | | | | | | | | | | | | 1.27 | 0.64 | 0.14 | 0.049 |
| R ² | 0.042 | | 0.007 | | 0.215 | | <0.001 | | 0.294 | | <0.001 | | 0.311 | | <0.001 | | 0.320 | | <0.001 | |
| Change Statistics | F (3,282) = 4.150 R ² Change = 0.042 | | 0.007 | | F (1,281) = 61.648 R ² Change = 0.172 | | <0.001 | | F (2,279) = 15.682 R ² Change = 0.079 | | <0.001 | | F (4,275) = 1.669 R ² Change = 0.017 | | 0.157 | | F (1,274) = 3.923 R ² Change = 0.010 | | 0.049 | |

Detailed results of the first hierarchical linear regression for predicting social phobia levels are presented in Table 8. The model was significant ($p < 0.001$) and was able to explain 32% of the variance in social phobia. As the table shows, sensory-processing sensitivity, minority stress, and maternal care were found to be significant predictors of social phobia in the sample. In addition, there was a significant contribution to the model when the interaction between minority stress and sensory-processing sensitivity was entered. However, the interactions between sensory-processing sensitivity and the components of parental bonding and between sensory-processing sensitivity and internal homophobia were excluded from the model, since none of them made a significant ($p < 0.05$) contribution. A graphic presentation of the significant interaction found between minority stress and sensory-processing sensitivity in predicting social phobia is displayed in Figure 2.

Because minority stress was found to be a significant predictor of social phobia, a second hierarchical linear regression was conducted in order to investigate the relative contribution of minority stress components, as well as to examine possible interactions between minority stress components and sensory-processing sensitivity in predicting social phobia. Detailed results of the best-fitted model are presented in Table 9. The model was significant ($p < 0.001$) and was able to explain 37.6% of the variance in social phobia. As the table shows, sensory-processing sensitivity, isolation (a minority stress component), and maternal care were found to be significant predictors of social phobia in the final model. The discrimination/harassment component of minority stress was also found to be a significant predictor of social phobia when it was entered into the regression,

| | Model 1 | | | | Model 2 | | | | Model 3 | | | | Model 4 | | | | Model 5 | | | |
|---------------------------------------|--|--------------|-------|------|---|--------------|-------|--------|--|--------------|-------|-------------|--|--------------|--------|------------------|---|--------------|-------|--------------|
| Variables | Unstandardized | Standardized | Beta | p | Unstandardized | Standardized | Beta | p | Unstandardized | Standardized | Beta | p | Unstandardized | Standardized | Beta | p | Unstandardized | Standardized | Beta | p |
| Have Children (No/Yes) | -1.88 | 1.27 | -0.10 | 0.14 | -1.52 | 1.16 | -0.08 | 0.19 | -0.43 | 1.10 | -0.02 | 0.70 | -0.44 | 1.10 | -0.02 | 0.69 | -0.35 | 1.08 | -0.02 | 0.749 |
| Education Level | -0.95 | 0.455 | -0.13 | 0.04 | -0.57 | 0.416 | -0.08 | 0.17 | -0.39 | 0.39 | -0.05 | 0.33 | -0.32 | 0.40 | -0.04 | 0.42 | -0.22 | 0.40 | -0.03 | 0.590 |
| Age | -0.03 | 0.039 | -0.05 | 0.48 | -0.04 | 0.035 | -0.07 | 0.26 | -0.02 | 0.03 | -0.03 | 0.62 | -0.03 | 0.03 | -0.06 | 0.32 | -0.04 | 0.03 | -0.08 | 0.206 |
| Sensory-Processing Sensitivity | | | | | 4.77 | 0.61 | 0.42 | <0.001 | 3.72 | 0.59 | 0.33 | 0.00 | 3.58 | 0.60 | 0.31 | <0.001 | 3.47 | 0.59 | 0.30 | 0.000 |
| Isolation | | | | | | | | | 0.68 | 0.26 | 0.16 | 0.01 | 0.60 | 0.26 | 0.14 | 0.02 | 0.71 | 0.26 | 0.17 | 0.007 |
| Vigilance | | | | | | | | | 0.19 | 0.25 | 0.05 | 0.44 | 0.27 | 0.25 | 0.07 | 0.27 | 0.27 | 0.25 | 0.07 | 0.275 |
| Vicarious Trauma | | | | | | | | | -0.039 | 0.26 | -0.01 | 0.88 | 0.013 | 0.27 | <0.001 | 0.96 | 0.01 | 0.26 | 0.00 | 0.966 |
| Discrimination/Harassment | | | | | | | | | 1.38 | 0.30 | 0.29 | 0.00 | 1.34 | 0.30 | 0.28 | <0.001 | 0.51 | 0.39 | 0.11 | 0.198 |
| Family of Origin | | | | | | | | | -0.27 | 0.26 | -0.06 | 0.31 | -0.41 | 0.27 | -0.09 | 0.13 | -0.45 | 0.27 | -0.10 | 0.095 |
| Internal Homophobia | | | | | | | | | 0.02 | 0.07 | 0.02 | 0.75 | 0.02 | 0.07 | 0.02 | 0.80 | -0.01 | 0.07 | -0.01 | 0.888 |
| Maternal Care | | | | | | | | | | | | | -0.22 | 0.09 | -0.14 | 0.02 | -0.23 | 0.09 | -0.14 | 0.013 |
| Maternal Over-Control | | | | | | | | | | | | | -0.03 | 0.09 | -0.02 | 0.74 | -0.02 | 0.09 | -0.01 | 0.827 |
| Paternal Care | | | | | | | | | | | | | -0.027 | 0.08 | -0.02 | 0.75 | -0.03 | 0.08 | -0.02 | 0.763 |
| Paternal Over-Control | | | | | | | | | | | | | -0.02 | 0.09 | -0.01 | 0.82 | -0.03 | 0.09 | -0.02 | 0.722 |
| Discrimination/Harassment * | | | | | | | | | | | | | | | | | 1.53 | 0.48 | 0.24 | 0.002 |
| Sensory-Processing Sensitivity | | | | | | | | | | | | | | | | | | | | |
| R ² | 0.042 | | | | 0.215 | | | | 0.336 | | | | 0.353 | | | | 0.376 | | | |
| Change Statistics | F (3,282) = 4.150 R ² Change = 0.042 | | | | F (1,282) = 61.648 R ² Change = 0.172 | | | | F (6,275) = 8.387 R ² Change = 0.121 | | | | F (4,271) = 1.762 R ² Change = 0.017 | | | | F (1,270) = 10.058 R ² Change = 0.023 | | | |

although its contribution was no longer significant in the final model – when the interaction term between discrimination/harassment and sensory-processing sensitivity was entered into the regression.

There was a significant contribution to the model when the interaction between discrimination/harassment (a minority stress component) and sensory-processing sensitivity was entered, in the fifth model. However, the interactions between the other components of minority stress and sensory-processing sensitivity, as well as all the interaction between sensory-processing sensitivity and the components of parental bonding were excluded from the model, since none of them made a significant ($p < 0.05$) contribution. A graphic presentation of the interaction between discrimination/harassment and sensory-processing sensitivity in predicting social phobia is displayed in Figure 3.

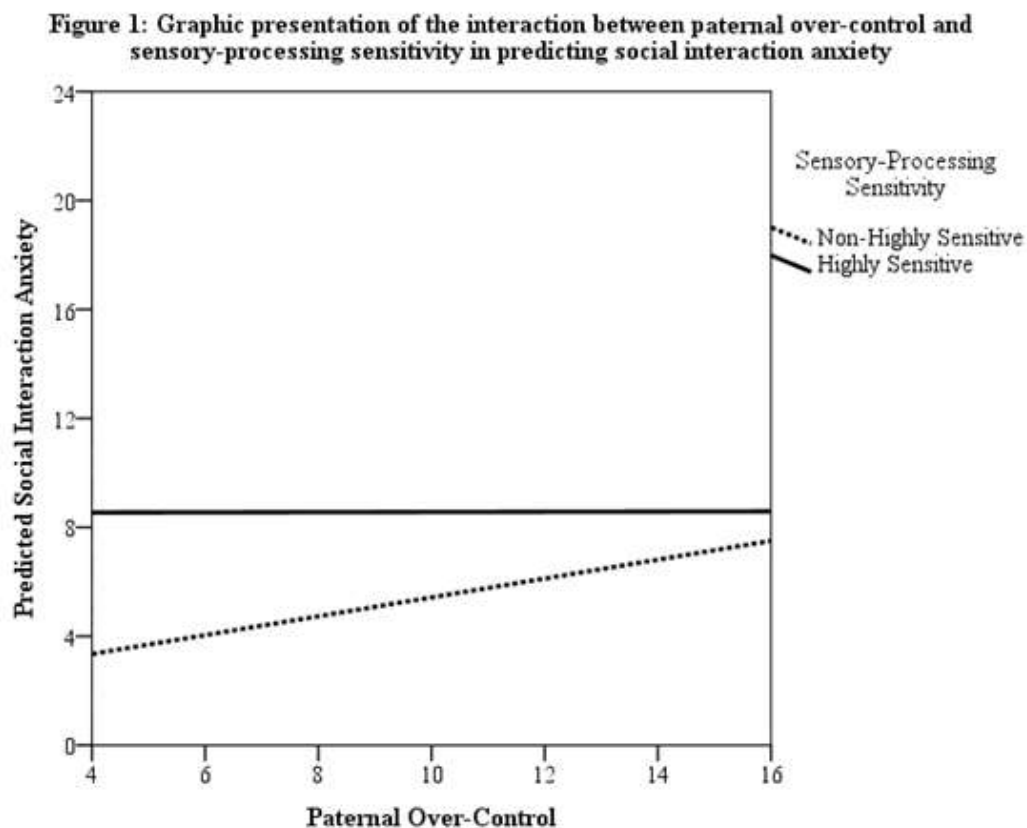


Figure 2: Graphic presentation of the interaction between minority stress and sensory-processing sensitivity in predicting social phobia

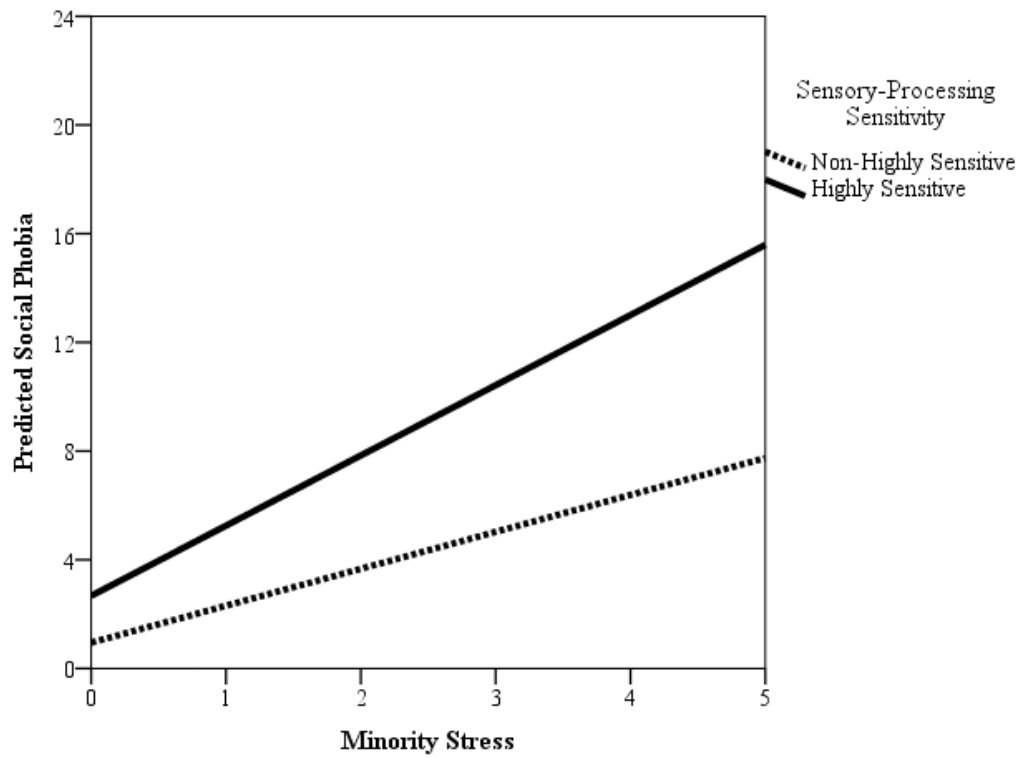
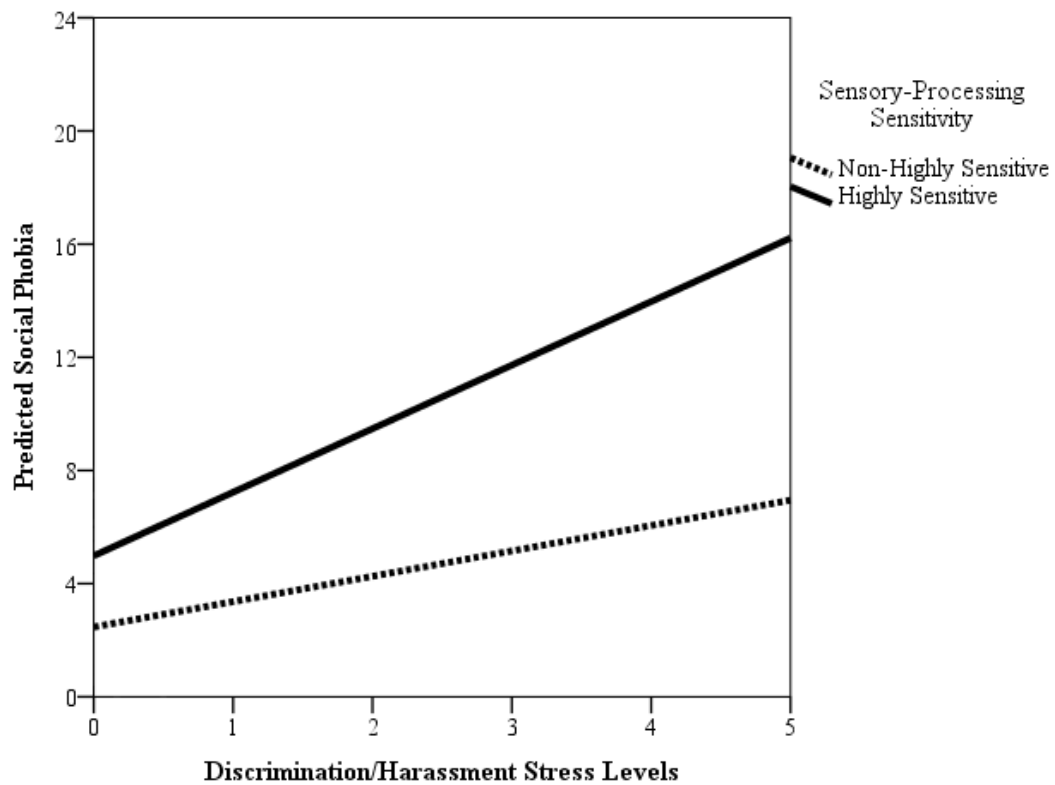


Figure 3: Graphic presentation of the interaction between discrimination/harassment and sensory-processing sensitivity in predicting social phobia



4. Discussion

This study examined minority stress and sensory-processing sensitivity (SPS) as predictors of negative mental health outcomes among gay and bisexual men. Its results reaffirmed previous findings regarding the relationship between minority stress and mental health, as well as regarding the relationship between SPS and mental health. In addition, the study's findings provide partial but intriguing evidence for the increased risk for negative mental health outcomes among highly sensitive persons who face social stigma, in comparison to non-highly sensitive persons. As discussed below, these findings may have theoretical and clinical implications regarding the challenges of being both highly sensitive and a member of a stigmatized group.

Several findings were revealed in this study. Firstly, the prediction (Hypothesis 4) that highly sensitive gay and bisexual men would be more vulnerable to the effects of minority stress on mental health was partially supported, as it was revealed that SPS moderates the relationship between minority stress and social phobia among gay and bisexual men. However, no evidence was found that SPS moderates the relationship between minority and psychological distress, or the relationship between minority stress and social interaction anxiety.

This suggests that highly sensitive minority group members are vulnerable to some, but not all, of the effects of minority stress on mental health, and that they are particularly at a higher risk for developing social phobia as a result of minority stress experiences. In this study only three mental health constructs were measured: psychological distress, social phobia, and social interaction anxiety. Future studies can examine the interaction between SPS and minority stress in predicting mental health constructs that were not measured in this research, such as depression, anxiety, or PTSD, and thus help identify the specific negative mental health outcomes that highly sensitive minority group members are at a high risk for.

It should be noted that out of the six different scales of minority stress that were measured in this study (isolation, vigilance, vicarious trauma, discrimination/harassment, family of origin, and internal homophobia), only the discrimination/harassment subscale of the Daily Heterosexist Experiences Questionnaire significantly interacted with SPS to predict social phobia when all the

other interactions and independent variables were taken into account. This suggests that highly sensitive sexual minority men are particularly vulnerable to the relatively objective aspect in Meyer's minority stress model (i.e., actual events of discrimination or harassment), rather than to its more subjective aspects, such as internalized homophobia or fear of rejection (Balsam, Beadnell, & Molina, 2013; Meyer, 1995; Meyer, 2003).

The findings of this study also revealed that, in line with Hypothesis 1, high sensitivity predicted higher levels of psychological distress, social interaction anxiety, and social phobia. These findings are consistent with previous studies that found that SPS is associated with higher levels of various negative mental health outcomes, such as depression (Bakker & Moulding, 2012; Liss, Timmel, Baxley, & Killingsworth, 2005), anxiety (Bakker & Moulding, 2012; Liss, Mailloux, & Erchull, 2008; Liss, Timmel, Baxley, & Killingsworth, 2005), the generalized type of social anxiety disorder (Hofmann & Bitran, 2007), and stress (Bakker & Moulding, 2012).

In line with Hypothesis 2, increased minority stress levels predicted higher psychological distress, social interaction anxiety, and social phobia levels. These findings are consistent with previous studies that examined the association between minority stress and mental health and achieved similar results (e.g., Diaz, Ayala, Bein, Henne, & Marin, 2001; Hatzenbuehler, Nolen-Hoeksema, & Erickson, 2008; Pachankis, & Goldfried, 2006). They also strengthen Meyer's (2003) minority stress model, which predicts that minority stress will be related to negative mental health outcomes.

Nonetheless, a further examination of the six different scales of minority stress that were measured in this study revealed that only two of them predicted negative mental health outcomes above and beyond the contribution of the other scales – the discrimination/harassment and isolation subscales of the Daily Heterosexist Experiences Questionnaire. That is, when all six scales were taken into account, only discrimination/harassment and isolation uniquely predicted social phobia, only discrimination/harassment predicted psychological distress, and only isolation predicted social interaction anxiety.

One theoretical explanation for these surprising results could be that the "actual events of prejudice or discrimination" component (measured in this study by the discrimination/harassment subscale) and the "concealment of sexual orientation" component (measured in this study by the isolation subscale) of Meyer's minority stress model (2003) are stronger predictors of mental health outcomes among gay and bisexual men than the other two components in Meyer's model ("expectations of rejection" and "internal homophobia").

Another possible interpretation for these findings is that the relatively low minority stress levels of the participants in the current sample made it more difficult to identify significant relationships between minority stress components and negative mental health outcomes. Future studies, which will include a sample with higher levels of minority stress (by recruiting more participants who conceal their sexual orientation, for example) and examine the unique contribution of each minority stress component to the prediction of mental health outcomes, could shed more light on this issue.

Aron and Aron (1997, 2005) claimed that SPS only leads to negative mental health outcomes in the context of poor family environments, and indeed some studies have shown that parental care or an adverse childhood environment moderate the relationship between SPS and negative mental health outcomes, such as depression (Liss, Timmel, Baxley, & Killingsworth, 2005) or adult shyness (Aron, Aron, & Davis, 2005). Therefore, the fact that lower levels of paternal over-control increased (instead of decreased) the gap in levels of social interaction anxiety between highly and non-highly sensitive persons in the current investigation is surprising. In addition, no other significant interaction was found in this study between the four components of parental bonding and SPS in predicting psychological distress, social phobia, or social interaction anxiety.

One possible reason for the unexpected direction of the interaction between paternal over-control and SPS, and for the fact that no other interaction between the parental bonding components and SPS was found, could be that minority stress experiences inside the family overshadow the effects of parental bonding on the mental health of highly sensitive sexual minority men. Namely, it may be that the process of coming out as gay or bisexual to parents is such a significant event in the lives of

sexual minority men that its results (such as acceptance or rejection by the parents) are more crucial to the well-being of highly sensitive sexual minority men than their bonding with the parents in childhood.

However, one other explanation may be that the memories of coming out to parents and the way this experience affected the relationship (whether positive or negative) are so strong, that it makes it harder for sexual minority men to describe or rate their parental bonding experiences in childhood in a way that is disconnected from their "coming out" and/or other minority stress experiences with their parents. Future studies could help clarify these questions. For example, qualitative methods could be employed to conduct interviews with highly sensitive and non-highly sensitive LGBs on their relationships with their parents in various periods, before and after the process of "coming out".

Although this study did not aim to examine the correlation between SPS and minority stress, a significant correlation was found between these two variables, suggesting that highly sensitive sexual minority men are not only more vulnerable to minority stress experiences, but also face higher minority stress levels than their non-highly sensitive peers. This unexpected result may be associated with previous findings that discrimination against sexual minority men results not only from their sexual orientation per se, but also from their real or perceived violations of traditional male gender roles (Blashill & Powlishta, 2009a; Blashill & Powlishta, 2009b; D'Augelli, Pilkington, & Hershberger, 2002; Lehavot & Lambert 2007). According to researchers of gender role stereotypes, one of the stereotypical aspects of femininity is the possession of expressive traits, such as empathy, nurturance, affection, and sensitivity (Blashill & Powlishta, 2009a; Blashill & Powlishta, 2009b). Therefore, highly sensitive sexual minority men may be exposed to discrimination because of their so-called violation of gender norms (as men who are more sensitive than most), in addition to discrimination based on sexual orientation.

This study focused solely on sexual minority men. Therefore, more research is needed in order to generalize its findings to sexual minority women as well. In addition, the fact that no differences were found in the current sample between gay men and bisexual men in levels of

psychological distress, social interaction anxiety, or social phobia is surprising and requires consideration because previous studies have found that bisexuals have the highest likelihood of mental health problems among LGBs (e.g., Jorm, Korten, Rodgers, Jacomb, & Christensen, 2002). There are also some indications that the minority stress experiences of gay and bisexual men are different. For example, Lea, de Wit, and Reynolds (2014) found in a study of Australian LGBs that bisexual men had higher levels of internal homophobia than gay men, lesbians, and bisexual women, while on the other hand lesbians and gay men were more likely than bisexual participants to report having ever experienced homophobic verbal abuse.

Nonetheless, the fact that no difference in mental health levels of gay and bisexual men was found in this study may be related to the high percentage (88.25%) of gay participants in the sample, as opposed to bisexual ones. This also means that conclusions regarding bisexual men from this study should be taken with precaution. In addition, although the Kinsey scale was used in this study only for the purpose of differentiating between gay and bisexual participants, some of the bisexual participants reported that it did not enable them to describe their sexual orientation in the most accurate way. For example, one participant commented, "I am not equally attracted to men and women nor am I more attracted to men than women or to women than men. I am attracted to both genders. I think that question (the Kinsey scale) is unidimensional and misleading". Future studies of minority stress and SPS among bisexual men or women should consider using other methods of assessing sexual orientation that are more sensitive to differences within this group.

The current investigation was unique because this study examined high sensitivity as a predictor of negative mental health outcomes in a sample of sexual minority men from a wide age range, whereas previous studies of SPS examined this temperamental trait in samples that were based primarily on recruitment from the general population (e.g., Bakker & Moulding, 2012; Evers, Rasche, & Schabracq, 2008), on students (e.g., Aron, Aron, & Davis, 2005; Gerstenberg, 2012; Liss, Timmel, Baxley, & Killingsworth, 2005), or on clinical populations such as participants with social anxiety disorder (e.g., Hofmann & Bitran, 2007).

This investigation was innovative since it attempted to integrate two areas of research that have so far been studied only separately – Meyer's (2003) minority stress model regarding the mental health of stigmatized groups, and Aron and Aron's conceptualization and studies of highly sensitive persons (Aron & Aron, 1997; Aron, Aron, & Davis, 2005), to which Aron referred in her book (2011) as "that minority of people who are the majority of (psychotherapy) clients".

If highly sensitive persons are indeed the majority of psychotherapy clients as Aron (2011) claims, then it is likely that they also constitute a large percentage of minority group members who choose to come to therapy following minority stress experiences such as discrimination, rejection, or internalized homophobia. Thus, studying SPS among minority groups in general and among LGBs in particular, such as was done in this research, is important in order to increase awareness among clinicians and therapists to the role that minority stress plays in the lives and well-being of highly sensitive minority group members.

One limitation of this study concerns the Daily Heterosexist Experiences Questionnaire, which is a recently developed questionnaire (Balsam, Beadnell, & Molina, 2013), and therefore may require further examination to be validated and improved. It should also be noted that differences were found in the average levels of minority stress reported on the DHEQ between participants who filled it out as the first measure and those who filled it out after the mental health measures. As mentioned, the scores of the DHEQ were calculated in a different method than the original one in this study, but these differences based on the order the questionnaires were filled out remained significant even when the scores on the DHEQ were calculated by the original method. However, the significant correlations between the DHEQ and the mental health measures, as well as the interaction found between minority stress and SPS in predicting social phobia, may provide preliminary evidence for its strength as a measure of minority stress.

In conclusion, the study's findings suggest that highly sensitive sexual minority men are more vulnerable to social phobia as a result of minority stress experiences than non-highly sensitive sexual minority men. In addition, the results strengthened the claims that minority stress and SPS are each related to negative mental health outcomes. More research is needed in order to replicate these results

and broaden the conclusions that could be made to other populations and other mental health constructs. However, the results of this study could assist clinicians in their work with highly sensitive minority group members, and bring more awareness to the vulnerability of highly sensitive persons to social stigma, in addition to their vulnerability to an adverse childhood environment.

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פתיח לשאלון

שלום רב,

אני מודה לך על הסכמתך להשתתף במחקר זה. המחקר נערך במסגרת עבודת הגמר שלי לתואר שני בפסיכולוגיה במכללה האקדמית תל-אביב-יפו, בהנחיית ד"ר עופר פיין מסגל המכללה. נכוונתך להשתתף במחקר מהווה עבורי תרומה חשובה. מטרת המחקר היא להעשיר את הידע הקיים בתחום הפסיכולוגיה בנוגע לבריאות נפשית בקרב גברים (בני 18 ומעלה) הומוסקסואלים וביסקסואלים, תוך כדי בחינת הנושא מהיבטים שונים.

מילוי שאלון זה מבטא את הסכמתך להשתתפות במחקר, אולם במידה ותרגיש אי נוחות מסיבה כלשהי הנך רשאי להפסיק את מילוי השאלון בכל שלב, ובמקרה זה לא יעשה כל שימוש בפרטים שמילאת. לתשומת לבך, חלק מהשאלות עוסקות בתכנים רגישים כמו דיכאון או מצבי רוח. ייתכן כי שאלות מסוימות בקובץ שאלונים זה ייראו לך דומות מאוד זו לזו. אף על פי כן, אבקשך להתייחס לכל שאלה בנפרד לפי התוכן המיוחד לה.

ההשתתפות במחקר היא אנונימית והנתונים שיתקבלו מהמחקר הם לצרכי מחקר זה בלבד ולא יעשה בהם שימוש נוסף. הנך מתבקש לקרוא בעיון את ההוראות ולענות על השאלות לפי הסדר. המענה על השאלון כולו אורך בממוצע כעשר דקות. על מנת שלא להטות את תוצאותיו, לא הוצגו כאן מטרות המחקר המפורטות.

בתום המחקר תוכל לקבל עליו פרטים נוספים דרך פנייה לוועדת האתיקה של המכללה האקדמית תל-אביב-יפו בבקשה לקבל את טופס ה "Debriefing"- כמו כן, ניתן לפנות אליי למידע נוסף או עם שאלות שעולות בעקבות ההשתתפות במחקר לכתובת המייל המצורפת.

שאלון החוויות ההטרוסקסיסטיות היומיומיות

The Daily Heterosexist Experiences Questionnaire

לפניך רשימה של משפטים. הנך מתבקש לציין עד כמה הבעיה המתוארת בכל משפט הטרידה אותך או הפריעה לך במהלך 12 החודשים האחרונים. נא סמן את התשובה המתאימה על פי הסולם הבא:

| 5 | 4 | 3 | 2 | 1 | 0 |
|---------------------------------|----------------------------|--------------------------------|------------------------------|----------------------------|------------------------|
| קרה, והטריד אותי במידה רבה מאוד | קרה, והטריד אותי במידה רבה | קרה, והטריד אותי במידה בינונית | קרה, והטריד אותי במידה מועטה | קרה, אך לא הטריד אותי בכלל | לא קרה/לא רלוונטי אליי |

| 5 | 4 | 3 | 2 | 1 | 0 | |
|--|----------------------------|--------------------------------|------------------------------|----------------------------|------------------------|---|
| קרה, והטריד אותי במידה רבה מאוד | קרה, והטריד אותי במידה רבה | קרה, והטריד אותי במידה בינונית | קרה, והטריד אותי במידה מועטה | קרה, אך לא הטריד אותי בכלל | לא קרה/לא רלוונטי אליי | |
| א. בידוד (פריטים 1,2,3,24) | | | | | | |
| 5 | 4 | 3 | 2 | 1 | 0 | 1. חווית קושי למצוא בן זוג או בת זוג בגלל נטייתך המינית |
| 5 | 4 | 3 | 2 | 1 | 0 | 2. חווית קושי למצוא חברים בעלי נטייה מינית דומה לשלך |
| 5 | 4 | 3 | 2 | 1 | 0 | 3. היו מעט מאוד אנשים בחיך איתם היית יכול לדבר על נטייתך המינית |
| 5 | 4 | 3 | 2 | 1 | 0 | 4. חשת שאינך משתלב עם אנשים אחרים בעלי נטייה מינית דומה לשלך |
| ב. דריכות (פריטים 5,25,26,27,55,58) | | | | | | |
| 5 | 4 | 3 | 2 | 1 | 0 | 5. נזהרת בדברים שאתה אומר ועושה ליד אנשים הטרוסקסואלים |
| 5 | 4 | 3 | 2 | 1 | 0 | 6. העמדת פנים שיש לך מערכת יחסים עם אדם מהמין השני |
| 5 | 4 | 3 | 2 | 1 | 0 | 7. העמדת פנים שאתה הטרוסקסואל |
| 5 | 4 | 3 | 2 | 1 | 0 | 8. הסתרת את מערכת היחסים שלך מאנשים אחרים |
| 5 | 4 | 3 | 2 | 1 | 0 | 9. נמנעת מלדבר על מערכות היחסים הנוכחיות או |

| | | | | | | |
|--|---|---|---|---|---|---|
| | | | | | | הקודמות שלך כאשר היית בעבודה |
| 5 | 4 | 3 | 2 | 1 | 0 | 10. הסתרת חלק מהחיים שלך מאנשים אחרים |
| ג. טראומה עקיפה (פריטים 10,12,13,16,17,53) | | | | | | |
| 5 | 4 | 3 | 2 | 1 | 0 | 11. שמעת שאנשים שאתה מכיר מקבלים יחס לא הוגן בגלל נטייתם המינית |
| 5 | 4 | 3 | 2 | 1 | 0 | 12. שמעת שאנשים שאינך מכיר מקבלים יחס לא הוגן בגלל נטייתם המינית |
| 5 | 4 | 3 | 2 | 1 | 0 | 13. שמעת על פשעי שנאה (כגון, השחתת רכוש, תקיפה פיזית או תקיפה מינית) אשר קרו לאנשים שאינך מכיר בגלל נטייתם המינית |
| 5 | 4 | 3 | 2 | 1 | 0 | 14. שמעת שקוראים לאחרים בשמות גנאי בגלל נטייתם המינית |
| 5 | 4 | 3 | 2 | 1 | 0 | 15. שמעת מישהו מספר בדיחות על הומוסקסואלים או בייסקסואלים |
| 5 | 4 | 3 | 2 | 1 | 0 | 16. שמעת פוליטיקאים אומרים דברים שליליים על הומוסקסואלים או בייסקסואלים |
| ד. אפליה/הטרדה (פריטים 15,29,44,45,46,49) | | | | | | |
| 5 | 4 | 3 | 2 | 1 | 0 | 17. קראו לך בשמות גנאי הקשורים בנטייתך המינית |
| 5 | 4 | 3 | 2 | 1 | 0 | 18. אנשים נעצו בך מבטים כשהיית בציבור בגלל נטייתך המינית |
| 5 | 4 | 3 | 2 | 1 | 0 | 19. הוטרדת מילולית על ידי זרים בגלל נטייתך המינית |
| 5 | 4 | 3 | 2 | 1 | 0 | 20. הוטרדת מילולית על ידי אנשים שאתה מכיר בגלל נטייתך המינית |
| 5 | 4 | 3 | 2 | 1 | 0 | 21. קיבלת יחס לא הוגן בחנויות או במסעדות בגלל נטייתך המינית |
| 5 | 4 | 3 | 2 | 1 | 0 | 22. אנשים צחקו עליך או סיפרו בדיחות על |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | חשבונך בגלל נטייתך המינית |
| ה. משפחת המקור (פריטים 18,21,38,39,40,41) | | | | | | |
| 5 | 4 | 3 | 2 | 1 | 0 | 23. בני המשפחה לא קיבלו את בן הזוג שלך כחלק מהמשפחה |
| 5 | 4 | 3 | 2 | 1 | 0 | 24. משפחתך נמנעה מלדבר על נטייתך המינית |
| 5 | 4 | 3 | 2 | 1 | 0 | 25. נדחית על ידי אמך בגלל נטייתך המינית |
| 5 | 4 | 3 | 2 | 1 | 0 | 26. נדחית על ידי אביך בגלל נטייתך המינית |
| 5 | 4 | 3 | 2 | 1 | 0 | 27. נדחית על ידי אחד או יותר מאחיך/אחיותיך בגלל נטייתך המינית |
| 5 | 4 | 3 | 2 | 1 | 0 | 28. נדחית על ידי קרובי משפחה אחרים בגלל נטייתך המינית |

שאלון הומופוביה מופנמת

Revised Internalized Homophobia Scale

לפניך רשימה של משפטים. הנך מתבקש לציין עד כמה כל משפט רלוונטי עבורך. נא סמן את התשובה המתאימה על פי הסולם הבא :

| 1 | 2 | 3 | 4 | 5 |
|---------------|-------------|-----------------------------|----------|------------|
| בכלל לא מסכים | די לא מסכים | לעתים מסכים ולעתים לא מסכים | די מסכים | מאוד מסכים |

| 5 | 4 | 3 | 2 | 1 | |
|------------|----------|-----------------------------|-------------|---------------|--|
| מאוד מסכים | די מסכים | לעתים מסכים ולעתים לא מסכים | די לא מסכים | בכלל לא מסכים | |
| | | | | | 1. הלוואי שנטייתי המינית הייתה שונה |
| | | | | | 2. ניסיתי בעבר לגרום לעצמי להפסיק להימשך לגברים |
| | | | | | 3. אני מרגיש שנטייתי המינית היא חסרון אישי שלי |
| | | | | | 4. הייתי רוצה לקבל עזרה מקצועית בכדי לשנות את נטייתי המינית |
| | | | | | 5. אם מישהו היה מציע לי את ההזדמנות להפוך להטרוסקסואל לגמרי, הייתי לוקח אותה |

רשימת הסימפטומים של הופקינס – HSCL-10 – Hopkins Symptoms Check List-10

לפניך רשימה של תחושות. הנך מתבקש לדרג אותן לפי המידה בה חווית תחושות אלה במהלך השבוע האחרון. נא סמן את התשובה המתאימה על פי הסולם הבא:

| 4 | 3 | 2 | 1 |
|-----------|---------------|-------------|--------|
| במידה רבה | במידה בינונית | במידה מועטה | כלל לא |

| 4 | 3 | 2 | 1 | |
|-----------|---------------|-------------|--------|------------------------------------|
| במידה רבה | במידה בינונית | במידה מועטה | כלל לא | |
| 4 | 3 | 2 | 1 | 1. בהלה פתאומית ללא סיבה |
| 4 | 3 | 2 | 1 | 2. תחושה שהנך אחוז פחד |
| 4 | 3 | 2 | 1 | 3. עלפון, סחרחורת או חולשה |
| 4 | 3 | 2 | 1 | 4. תחושת מתח או עצבים |
| 4 | 3 | 2 | 1 | 5. להאשים את עצמך בדברים |
| 4 | 3 | 2 | 1 | 6. קושי להירדם או להישאר ישן |
| 4 | 3 | 2 | 1 | 7. תחושת דכדוך |
| 4 | 3 | 2 | 1 | 8. תחושה של חוסר ערך |
| 4 | 3 | 2 | 1 | 9. תחושה שכל דבר דורש מאמץ |
| 4 | 3 | 2 | 1 | 10. תחושה של חוסר תקווה לגבי העתיד |

שאלון החרדה מאינטראקציה חברתית המקוצר – SIAS-6

לפניך רשימת משפטים. הנך מתבקש לדרג את המשפטים לפי המידה בה הם מאפיינים אותך באופן אישי. נא סמן את התשובה המתאימה על פי הסולם הבא :

| 4 | 3 | 2 | 1 | 0 |
|----------------------------|-----------------------|---------------------------|-------------------------|---------------------|
| מאפיין אותי במידה רבה מאוד | מאפיין אותי במידה רבה | מאפיין אותי במידה בינונית | מאפיין אותי במידה מועטה | לא מאפיין אותי בכלל |

| 4 | 3 | 2 | 1 | 0 | |
|----------------------------|-----------------------|---------------------------|-------------------------|---------------------|--|
| מאפיין אותי במידה רבה מאוד | מאפיין אותי במידה רבה | מאפיין אותי במידה בינונית | מאפיין אותי במידה מועטה | לא מאפיין אותי בכלל | |
| | | | | | 1. קשה לי ליצור קשר עין עם אחרים |
| | | | | | 2. אני מתקשה להשתלב בנוחות עם האנשים עימם אני עובד |
| | | | | | 3. אני נעשה מתוח אם אני פוגש מכר/ה ברחוב |
| | | | | | 4. אני מרגיש מתוח אם אני נמצא בחברת אדם אחד בלבד |
| | | | | | 5. קשה לי לדבר עם אנשים אחרים |
| | | | | | 6. אני מוצא את זה קשה לחלוק על נקודת המבט של אדם אחר |

שאלון הפוביה החברתית המקוצר – SPS-6 – Social Phobia Scale

לפניך רשימת משפטים. הנך מתבקש לדרג את המשפטים לפי המידה בה הם מאפיינים אותך באופן אישי. נא סמן את התשובה המתאימה על פי הסולם הבא :

| 4 | 3 | 2 | 1 | 0 |
|----------------------------|-----------------------|---------------------------|-------------------------|---------------------|
| מאפיין אותי במידה רבה מאוד | מאפיין אותי במידה רבה | מאפיין אותי במידה בינונית | מאפיין אותי במידה מועטה | לא מאפיין אותי בכלל |

| 4 | 3 | 2 | 1 | 0 | |
|----------------------------|-----------------------|---------------------------|-------------------------|---------------------|---|
| מאפיין אותי במידה רבה מאוד | מאפיין אותי במידה רבה | מאפיין אותי במידה בינונית | מאפיין אותי במידה מועטה | לא מאפיין אותי בכלל | |
| | | | | | 1. אני נעשה חרד שאנשים נועצים בי מבטים בזמן שאני הולך ברחוב |
| | | | | | 2. אני מודאג מכך שארעד בזמן שאנשים אחרים צופים בי |
| | | | | | 3. הייתי נעשה מתוח אם היה עליי לשבת מול אנשים אחרים באוטובוס או ברכבת |
| | | | | | 4. אני מודאג שאני עלול לעשות משהו שימשוך את תשומת ליבם של אנשים אחרים |
| | | | | | 5. כאשר אני נמצא במעלית, אני נעשה מתוח אם אנשים מסתכלים עליי |
| | | | | | 6. אני יכול להרגיש בולט לעין כשאני עומד בתור |

סולם האדם הרגיש מאוד – Highly Sensitive Person Scale

לפניך רשימת משפטים. הנך מתבקש לדרג את המשפטים לפי האופן שבו אתה מרגיש באופן אישי. נא סמן את התשובה המתאימה על פי הסולם הבא:

| 5 | 4 | 3 | 2 | 1 |
|----------------|-----------|---------------|-------------|--------|
| במידה רבה מאוד | במידה רבה | במידה בינונית | במידה מועטה | כלל לא |

| 5 | 4 | 3 | 2 | 1 | |
|----------------|-----------|---------------|-------------|--------|---|
| במידה רבה מאוד | במידה רבה | במידה בינונית | במידה מועטה | כלל לא | |
| 5 | 4 | 3 | 2 | 1 | 1. אני מוצף בקלות כאשר עליי לקלוט מידע רב באמצעות החושים |
| 5 | 4 | 3 | 2 | 1 | 2. נראה שאני מודע לדקויות בסביבה שלי |
| 5 | 4 | 3 | 2 | 1 | 3. מצבי הרוח של אחרים משפיעים עליי |
| 5 | 4 | 3 | 2 | 1 | 4. אני נוטה להיות יותר רגיש לכאב מאחרים |
| 5 | 4 | 3 | 2 | 1 | 5. בימים עמוסים אני מרגיש צורך לפרוש הצידה למיטה, לחדר חשוך, או לכל מקום שבו אמצא מידה מסוימת של פרטיות והקלה מגירויים |
| 5 | 4 | 3 | 2 | 1 | 6. אני רגיש במיוחד להשפעות של קפאין |
| 5 | 4 | 3 | 2 | 1 | 7. אני מוצף בקלות מדברים כגון: אורות בהירים, ריחות חזקים, בדים מחוספסים או צפירות בקרבת מקום |
| 5 | 4 | 3 | 2 | 1 | 8. יש לי חיים פנימיים עשירים ומורכבים |
| 5 | 4 | 3 | 2 | 1 | 9. רעש חזק גורם לי לאי-נוחות |
| 5 | 4 | 3 | 2 | 1 | 10. אני מתרגש מאוד מאמנות או מוזיקה |
| 5 | 4 | 3 | 2 | 1 | 11. לעתים אני חש שמערכת העצבים שלי כה סחוטה, שעליי פשוט להירגע בכוחות עצמי |
| 5 | 4 | 3 | 2 | 1 | 12. אני אדם מצפוני |
| 5 | 4 | 3 | 2 | 1 | 13. אני נבהל בקלות |
| 5 | 4 | 3 | 2 | 1 | 14. אני נכנס ללחץ כשאני צריך לעשות הרבה בתוך זמן קצר |
| 5 | 4 | 3 | 2 | 1 | 15. כשאנשים חשים שלא בנוח בסביבתם הפיזית, אני יודע מה צריך לעשות כדי שהסביבה תהיה נוחה יותר עבורם (לדוגמא, לשנות את התאורה או את מקום הישיבה) |
| 5 | 4 | 3 | 2 | 1 | 16. מרגיז אותי כאשר אנשים דוחקים בי לעשות יותר מדי דברים בבת אחת |
| 5 | 4 | 3 | 2 | 1 | 17. אני מנסה בכל כוחי שלא לשכוח דברים ולהימנע משגיאות |

| | | | | | |
|---|---|---|---|---|--|
| 5 | 4 | 3 | 2 | 1 | 18. אני מקפיד להימנע מתוכניות טלוויזיה וסרטים אלימים |
| 5 | 4 | 3 | 2 | 1 | 19. אני חש עוררות לא נעימה כאשר דברים רבים קורים סביבי |
| 5 | 4 | 3 | 2 | 1 | 20. תחושת רעב עזה גורמת לי לתגובה חזקה ופוגעת בריכוז או במצב הרוח שלי |
| 5 | 4 | 3 | 2 | 1 | 21. שינויים בחיי מזעזעים אותי |
| 5 | 4 | 3 | 2 | 1 | 22. אני מבחין ונהנה מיצירות אמנות, ניחוחות, טעמים וצלילים עדינים או משובחים |
| 5 | 4 | 3 | 2 | 1 | 23. אני מוצא את זה לא נעים כאשר הרבה דברים קורים בבת אחת |
| 5 | 4 | 3 | 2 | 1 | 24. הצורך לארגן את חיי, כך שאוכל להימנע ממצבים שיגרמו לי לדאגה או הצפה, הוא בעדיפות גבוהה בשבילי |
| 5 | 4 | 3 | 2 | 1 | 25. אני מוטרד מגירויים עזים, כמו רעשים חזקים או אירועים של כאוס/בלגאן |
| 5 | 4 | 3 | 2 | 1 | 26. כשאני מוכרח להתחרות או לבצע משימה בזמן שאחרים צופים בי, אני נעשה כה לחוץ או רועד שרמת הביצועים שלי נמוכה במידה משמעותית מאשר אחרת |
| 5 | 4 | 3 | 2 | 1 | 27. בילדותי אמרו ההורים או המורים שלי שאני רגיש או ביישן |

מדד היקשרות הורית המקוצר – Parental Bonding Instrument – Brief Current (PBI-BC)
 לפניך רשימה של משפטים. הנך מתבקש לדרג את המשפטים על פי התנהגותה של אמך **בילדותך או נעורך**. נא סמן את התשובה המתאימה על פי הסולם הבא:

| 4 | 3 | 2 | 1 |
|----------------|-----------------|---------------------|------------------|
| דומה מאוד לאמי | דומה במקצת לאמי | לא דומה במיוחד לאמי | לא דומה כלל לאמי |

הערה: במידה ושאלה זו אינה רלוונטית עבורך, ניתן לענות בהתייחס לדמות הנשית שהייתה המשמעותית ביותר עבורך בילדותך או בנעורך.

| 4 | 3 | 2 | 1 | |
|------------------------------------|-----------------|---------------------|------------------|--|
| דומה מאוד לאמי | דומה במקצת לאמי | לא דומה במיוחד לאמי | לא דומה כלל לאמי | |
| דאגה/דחייה (Care/Rejection) | | | | |
| | | | | 1. היה נראה שהבינה את בעיותי ודאגותי |
| | | | | 2. יכולה הייתה לגרום לכך שארגיש טוב יותר כשהייתי מוטרד |
| | | | | 3. נראתה קרירה ברגשותיה כלפיי |
| | | | | 4. לא עזרה לי כפי שהייתי צריך |
| שליטה/אוטונומיה (Control/Autonomy) | | | | |
| | | | | 5. ניסתה לשלוט בכל דבר שעשיתי |
| | | | | 6. נטתה להתייחס אליי כמו לתינוק |
| | | | | 7. אהבה שאקבל החלטות בעצמי |
| | | | | 8. נתנה לי כמה חופש שרציתי |

לפניך רשימה של משפטים. הנך מתבקש לדרג את המשפטים על פי התנהגותו של אביך **בילדותך או נעוריך**. נא סמן את התשובה המתאימה על פי הסולם הבא:

| 4 | 3 | 2 | 1 |
|----------------|-----------------|---------------------|------------------|
| דומה מאוד לאבי | דומה במקצת לאבי | לא דומה במיוחד לאבי | לא דומה כלל לאבי |

הערה: במידה ושאלה זו אינה רלוונטית עבורך, ניתן לענות בהתייחס לדמות הגברית שהייתה המשמעותית ביותר עבורך בילדותך או בנעוריך.

| 4 | 3 | 2 | 1 | |
|------------------------------------|-----------------|---------------------|------------------|---|
| דומה מאוד לאבי | דומה במקצת לאבי | לא דומה במיוחד לאבי | לא דומה כלל לאבי | |
| דאגה/דחייה (Care/Rejection) | | | | |
| | | | | 1. היה נראה שהבין את בעיותיי ודאגתיי |
| | | | | 2. יכול היה לגרום לכך שארגיש טוב יותר כשהייתי מוטרד |
| | | | | 3. נראה קריר ברגשותיו כלפיי |
| | | | | 4. לא עזר לי כפי שהייתי צריך |
| שליטה/אוטונומיה (Control/Autonomy) | | | | |
| | | | | 5. ניסה לשלוט בכל דבר שעשיתי |
| | | | | 6. נטה להתייחס אליי כמו לתינוק |
| | | | | 7. אהב שאקבל החלטות בעצמי |
| | | | | 8. נתן לי כמה חופש שרציתי |

שאלון דמוגרפי

גיל:

מין:

א. המין שניתן לי בלידה הוא בן/זכר, וכיום אני מגדיר עצמי כגבר

ב. המין שניתן לי בלידה הוא בת/נקבה, וכיום אני מגדיר עצמי כגבר

ג. אחר:

השכלה:

א. תיכונית

ב. תעודת מקצוע

ג. במהלך תואר ראשון

ד. בוגר תואר ראשון

ה. תואר שני ומעלה

ו. אחר: _____

מקום לידה: ישראל/ אחר: _____

במידה ורלוונטי, שנת עלייה/הגירה לישראל:

מקום המגורים בו גדלת:

א. מחוז הצפון

ב. מחוז חיפה

ג. מחוז המרכז או מחוז תל-אביב

ד. מחוז ירושלים

ה. מחוז הדרום

ו. מחוז יהודה ושומרון

ז. אחר: _____

מקום מגוריד הנוכחי:

א. מחוז הצפון

ב. מחוז חיפה

ג. מחוז המרכז או מחוז תל-אביב

ד. מחוז ירושלים

ה. מחוז הדרום

ו. מחוז יהודה ושומרון

ז. אחר: _____

להערכתך, מה הייתה ההכנסה החודשית הממוצעת (ברוטו) הכוללת בבית הוריד?

1. 20,000 שח ומעלה

2. 12,000 עד 20,000 שח

3. 7,500 עד 12,000 שח

4. 5,000 עד 7,500 שח

5. עד 5,000 שח

נטייה מינית:

למי אתה נמשך מינית?

| | | | | | | | |
|------------|-------------|----------------|-------------------------|-----------------|--------------|-------------|------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | אחר: |
| לנשים בלבד | לנשים בעיקר | לנשים קצת יותר | לגברים ונשים באופן שווה | לגברים קצת יותר | לגברים בעיקר | לגברים בלבד | |

להערכתך, מי מבין הבאים מודע לנטייתך המינית?

ניתן לסמן יותר משובה אחת. כאשר פריט מתייחס לקבוצת אנשים (כגון, חברים במקום העבודה) ענה לפי הערכתך בנוגע למרבית חברי הקבוצה.

- א. אמי
- ב. אבי
- ג. אחי ואחיותי
- ד. חברי המשפחה המורחבת שלי (דודים, דודות, בני דודים וכן הלאה)
- ה. חבריי למקום העבודה, לימודים, התנדבות או מסגרות אחרות של פעילות
- ו. האדם האחראי עליי במקום העבודה, לימודים, התנדבות או מסגרות אחרות של פעילות
- ז. חברים הטרוסקסואלים ותיקים
- ח. מכרים או חברים הטרוסקסואלים חדשים
- ט. אף אחד

הערות:

מהי דתך?

- א. יהודי
- ב. נוצרי
- ג. מוסלמי
- ד. דרוזי
- ה. חסר דת

ו. אחר: _____

מה הייתה מידת הקרבה לדת/אמונה בבית בו גדלת?

- א. חילוני
- ב. מסורתי
- ג. דתי
- ד. חרדי
- ה. אחר: _____

כיצד אתה מגדיר את מידת קרבתך לדת/אמונה כיום?

- א. חילוני
- ב. מסורתי
- ג. דתי
- ד. חרדי
- ה. אחר: _____

מהו מצבך המשפחתי?

- א. רווק
- ב. במערכת יחסים ללא מגורים משותפים
- ג. במערכת יחסים עם מגורים משותפים
- ד. נשוי
- ה. גרוש
- ו. פרוד
- ז. אלמן
- ח. אחר: _____

במידה ורלוונטי, האם אתה נמצא במערכת יחסים עם גבר או עם אישה? גבר / אישה / אחר: _____

במידה ורלוונטי, כמה זמן אתה נמצא בזוגיות (בחודשים)? : _____

במידה ורלוונטי, מספר הילדים שלך: _____

תודה רבה על השתתפותך במחקר

מקום למשוב בסוף השאלון: "במידה ויש לך הערות נוספות, דברים שתרצה לחלוק או שחשוב לך שאדע, הנך מוזמן לחלוק זאת כאן. שים לב: למידע נוסף לגבי המחקר או שאלות שעולות בך בעקבות ההשתתפות במחקר ניתן גם לפנות למייל המצורף."