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Examining the Relationship between Social Anxiety, Fear of Negative Evaluation, Fear of Positive Evaluation and Minority Stress in LGB versus Heterosexual Adults

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Psychological research within the LGBTQ+ community is a relatively recent phenomenon due to the stigma that has been historically placed on this population. Sexual minority populations experience a plethora of mental health problems ranging from mood disorders to personality disorders and have a greater risk of suicide as compared to their heterosexual counterparts (Gilman et al., 2001; Meyer, 2003; Steele et al., 2017). Specifically, significant differences in social anxiety levels have been found while comparing sexual minority individuals to heterosexual individuals, which may be associated with factors such as Fear of Negative Evaluation (FNE), Fear of Positive Evaluation (FPE) and minority stress (Pachankis & Goldfried, 2006; Bostwick et al., 2010). Due to the limited current research in this aspect, the current study aimed at further exploring the relationship between these variables and the extent to which they predict social anxiety. Furthermore, it delved into the differences in levels of social anxiety reported by LGB individuals as compared to heterosexuals. The study found that fear of evaluation and minority stress are significant predictors of social anxiety in the general population, however it found no significant differences between the levels of social anxiety and fear of evaluation (negative or positive) experienced by the participants based on their sexual identity.

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Psychological research within the LGBTQ+ community is a relatively recent phenomenon due to the stigma that has been historically placed on this population. Sexual minority populations experience a plethora of mental health problems ranging from mood disorders to personality disorders and have a greater risk of suicide as compared to their heterosexual counterparts (Gilman et al., 2001; Meyer, 2003; Steele et al., 2017). Specifically, significant differences in social anxiety levels have been found while comparing sexual minority individuals to heterosexual individuals, which may be associated with factors such as Fear of Negative Evaluation (FNE), Fear of Positive Evaluation (FPE) and minority stress (Pachankis & Goldfried, 2006; Bostwick et al., 2010). Due to the limited current research in this aspect, the current study aimed at further exploring the relationship between these variables and the extent to which they predict social anxiety. Furthermore, it delved into the differences in levels of social anxiety reported by LGB individuals as compared to heterosexuals. The study found that fear of evaluation and minority stress are significant predictors of social anxiety in the general population, however it found no significant differences between the levels of social anxiety and fear of evaluation (negative or positive) experienced by the participants based on their sexual identity.

Examining the Relationship between Social Anxiety, Fear of Negative Evaluation, Fear of

Positive Evaluation and Minority Stress in LGB versus Heterosexual Adults

There is an ever-growing body of research that demonstrates health disparities among sexual and gender minority populations (e.g., lesbian, gay, bisexual, transgender), specifically around mental health (King et al., 2008; McCabe et al., 2009; Meyer, 2003; Steele et al., 2017). Historically, the concept of a gender binary with individuals being categorized as either male or female has been the societal norm. Individuals who do not identify with just one of these groups have been termed "deviant" or "abnormal" and subjected to discriminatory and marginalization experiences by society (McCann & Sharek, 2016). Continued exposure to these experiences places individuals from these groups at a greater risk of poor mental health and increased psychosocial problems when compared to other groups (Lombardi, 2009; Spicer, 2010). For example, "homosexuality" was classified as a mental disorder in the Diagnostic and Statistical Manual of Mental Disorders II in 1973 (DSM_II; APA, 1973) (Meyer, 2003).

However, homosexuality once pathologized is still consistently stigmatized. Due to the stigma, research in this area has historically been silenced which has led to neglect of critical issues (Pachankis & Goldfried, 2006; Puckett, et al. 2016). However, recently, researchers have redirected their attention to this issue and their findings highlight that, when compared to heterosexual individuals, sexual minority individuals report a higher prevalence of mental health problems including mood disorders (social anxiety, depression, generalized anxiety, bipolar disorder) and schizoaffective disorders, as well as behavioral problems (substance abuse, eating disorders) (Gilman et al., 2001; Meyer, 2003; King et al., 2008; Bostwick et al., 2014).

Notably, mental health problems constitute one of the strongest risk factors of suicidal behaviors. Research on the rates of suicidality over the past years have shown to be contingent on

the type of population being investigated. The rate of suicidal ideation among the LGBTQ+ community is twice as that of heterosexuals, and they report a 5 to 32% rate of suicide attempt as compared to heterosexuals who report a rate of only 2% (Gilman et al., 2001; King et al., 2008; Paul et al., 2002). These elevated levels of mental health disorders and deliberate self-harm are typically attributed to societal discrimination and rejection, stigma, minority stress, lack of peer support, fear of negative evaluation from the public, internalized homophobia, reduced parental acceptance and difficulty accessing inclusive and culturally sensitive mental health services (Liao et al., 2015; Steele et al., 2017). Of these factors, fear of evaluation and discrimination have been considered as the most crucial factors due to feelings of hopelessness and loneliness arising from discriminatory and victimization experiences.

The term "LGBTQ+ community" is an umbrella term used to encompass all the different sexual and gender minority populations. Research conducted on these populations have varied in terms of the target population being studied. The literature review section of this study covers research evidence that has studied limited populations (exclusively lesbian, gay, etc.) as well as the entire LGBTQ+ community. However, the sexual minority participants of the current study were exclusively LGB adults, i.e., individuals who self-identify as either lesbian, gay or bisexual.

Social Anxiety

Social anxiety (also known as social phobia) accounts for the most common type of anxiety and has widespread prevalence rates starting in early childhood and increasing into adolescence. Studies have established a current prevalence of clinically diagnosed social anxiety between 5 and 10%, and lifetime prevalence between 8.4 and 15% (Stein et al., 2017; Koyuncu et al., 2019). People who experience symptoms of social anxiety intensely fear and avoid the evaluation of others as they often assume for the evaluations to be negative, and which would result in

embarrassment, shame, or humiliation (American Psychiatric Association, 2013). This fear often causes the individual to avoid most interpersonal situations and often endures such situations with feelings of intense discomfort. Once largely identified as merely shyness, the general society's and the medical community's understanding of social anxiety has now moved to a more sophisticated acknowledgement of its widespread prevalence, chronic prognosis, neurobiological foundation, and detrimental outcomes (Stein & Stein, 2008). Individuals who experience social anxiety have the tendency to perceive and interpret all kinds of social information in a negative way and often attribute any positive feedback to factors other than their own personal abilities (Alden & Wallace, 1995; Hirsch & Clark, 2004; Beard & Amir, 2009).

From a cognitive-behavioral perspective, Clark and Wells (1995) posited that when an individual encounters a feared situation, it activates a set of beliefs and assumptions that have been developed through the course of their prior life experiences. These beliefs and assumptions dictate how the individual should behave in social situations which leads to them appraising social situations as unrealistically dangerous and believe that they will not be able to make a positive impression on others, leading to possible rejection from them. Moreover, their focus of attention shifts from the overall social situation to being overly preoccupied with monitoring themselves and engaging in self-checking behaviors. This aligns with recent evidence which suggests that individuals with social anxiety experience extreme levels of fear in response to both negative and positive evaluation which implicates the strong relationship between Fear of Negative Evaluation (FNE), Fear of Positive Evaluation (FPE) and social anxiety (Weeks et al., 2010).

Members of minority groups (sexual, racial, etc.) experience a multitude of discriminatory events daily which can lead to elevated levels of minority stress. Recent studies have shown strong associations between such minority stress and elevated social anxiety amongst minority groups

(Mahon et al., 2020; Hatzenbuehler & Pachankis, 2016; Puckett et al., 2016). Thus, social anxiety is maintained for extended periods of time due to an amalgamation of both personal biases that individuals hold at different levels of cognition, attention, interpretation and thought content along with environmental stressors.

Fear of Negative Evaluation and Social Anxiety

Social evaluations constitute a fundamental aspect of an individual's daily interactions in both one-on-one and group settings. They also represent a way of organizing social networks in a hierarchical way (Schoeneman, 1983; Dickerson, Gruenewald, & Kemeny, 2004). Gilbert's (2014) evolutionary perspective posits that monitoring such evaluations and using them as a guide for behavioral regulation serves beneficial to the human population. However, an individual holding extreme perceptions and cognitions associated with these evaluations could potentially turn harmful for them, both physically and psychologically. Pronounced fearful cognitions regarding the nature and consequences of others' evaluations about oneself is referred to as the Fear of Negative Evaluation (FNE). These extreme fears have been found to impair several areas of functioning, including social, emotional, and cognitive (Reichenberger, Smyth & Blechert, 2017).

FNE represents a psychological construct that encompasses an overarching apprehension about others' evaluations, heightened distress over perceived negative judgements and the resultant avoidance of potentially evaluative situations (Watson & Friend, 1969). The fear of being negatively evaluated in social situations stems from and is maintained by the negative beliefs and evaluations that an individual holds about themselves. In particular, individuals with social anxiety often demonstrate negative biases about themselves. They have been found to engage in excessive self-monitoring, show increased attentivity to threatening social stimuli, exhibit selective retrieval

of negative traits and have a tendency to interpret social cues in an overly negative way, often to an unrealistic extent (Clark and Wells 1995, Heimberg et al. 2010; Asmundson and Stein 1994; Hope et al. 1990; Beard and Amir 2009; Hirsch and Clark 2004). Collectively, these perceptions and behaviors indicate biased information processing patterns. Thus, cognitive models posit that FNE results from socially anxious maladaptive patterns (Clark and McManus, 2002; Rapee and Heimberg, 1997). However, some researchers have claimed that the relationship between FNE and social anxiety can be viewed as that of social anxiety being an emotional and physiological response to the perceived negative evaluation by others (Kumar et al., 2015). This is indicative of the potential bidirectional influence between FNE and social anxiety. Currently, there exists a limited research base on the complex nature and correlates of such evaluation-focused fears. However, the extent of its consequences on the human mind and behavior has sparked an interest in researchers to study further into its workings.

Fear of Positive Evaluation and Social Anxiety

Like the Fear of Negative Evaluation (FNE), Fear of Positive Evaluation (FPE) is also considered as a hallmark in social anxiety. However, research on FPE started in the recent past and has received considerably less attention than FNE which suggests its relative neglect in research and practice (Weeks & Howell, 2014). FPE represents a complementary construct to FNE and has been described as the sense of dread and discomfort associated with being evaluated favorably and which could implicate direct social comparison, along with the negative cognitions and feelings related to such evaluations and comparison (Weeks, Heimberg, & Rodebaugh, 2008; Reichenberger et al., 2017; Weeks & Zoccola, 2016). FPE has been explained from a psycho-evolutionary perspective wherein positive evaluations lead an individual to achieve an upward shift in the social domain which puts them in direct comparison and/or conflict with individuals

from higher-ranking social groups. The very nature of social anxiety is that individuals aim to avoid challenging the higher or more dominant members in a social setting such that they maintain their safety and go unnoticed. Thus, to avoid such conflict, FPE serves as a way for individuals, especially individuals with social anxiety to maintain an intermediate position in the social hierarchy (Gilbert, 2001; Weeks & Howell, 2014). Furthermore, when individuals exhibiting social anxiety behaviors are exposed to positive social feedback, they typically start worrying about expecting future raised expectations. Thus, this depicts a mindset of social anxious individuals who worry that initial positive appraisal will ultimately lead to a secondary negative appraisal (Wallace & Alden, 1997). To assess the distinct association between FPE and social anxiety, Cook and colleagues (2022) conducted a meta-analytic review of 147 studies and found that FPE accounts for a significant variance in social anxiety beyond that of FNE. Thus, the unique effects of FPE must be considered when conducting future research or treatment around individuals with social anxiety.

Minority Stress and Social Anxiety

Lesbian, gay, bisexual, transgender, questioning, etc. (LGBTQ+) individuals and other gender-nonconforming groups have continually been marginalized due to societal norms and struggle with diverse stressors (Puckett et al., 2016). In recent years, research around the mental health of sexual and gender minority groups has shown that minority stress is a significant predictor of their poor mental health (Alessi et al., 2013; Fulginiti et al., 2021; Gamarel et al., 2014). Meyer's (2013) minority stress theory provides a framework for addressing their adverse psychological distress. The theory assumes that minority stressors experienced by sexual minority groups are protracted and socially constructed. This framework explains that sexual minority individuals regularly experience situations related to internalized homophobia, rejection,

discrimination, and victimization which act as major stressors. These stressors are categorized into distal and proximal processes. Distal processes refer to the objective events (e.g., discrimination experiences, hate crimes) and proximal processes refer to the events that are dependent on the individual's perception (e.g., internalized homophobia, expectation of rejection, concealment of sexual orientation).

Research on Meyer's (2003) theory indicates that both types of processes are strong determinants of pathology among sexual minority populations, particularly perceived discrimination, and expectations of rejection (Liao et al., 2015; Mays & Cochran, 2001). Although discriminatory experiences are relatively common for all populations in the United States of America, studies have shown that sexual minority individuals (lesbian, gay, bisexual, etc.) are more likely than heterosexual individuals to report such discrimination in all aspects of their life (e.g., workplace, day-to-day social interactions, family environment). (Mays & Cochran, 2001; Almeida et al., 2009). These findings also highlight the mental health correlates (depressive symptomology, elevated levels of social anxiety, increased risk of suicide/self-harm, etc.) and negative quality of life experienced by LGBT individuals due to such perceived discrimination.

Expectations of rejection is the expectation of an individual regarding the likelihood of stigma being performed in given situations due to their minority status given their existing knowledge of society's usual actions towards minority groups (Herek et al., 2009). To further conceptualize this phenomenon, researchers integrated an extension of the rejection sensitivity (RS) framework to attempt to explain mental health disparities in sexual minority individuals (Downey and Feldman, 1996; Feinstein, 2019; Baams et al., 2020). This framework includes the feature of "anxiously" expecting rejection from others. Such a biased information-processing disposition can lead to individuals actively avoiding social interactions or experiencing elevated

levels of social anxiety in interactional contexts (Gao et el., 2017; Maiolatesi et al., 2022). Research on how expectations of rejection functions in the lives of sexual minority individuals is relatively scarce and is slowly gaining momentum but based on the extant research, there have been studies that indicate the positive association between psychological distress and expectation of rejection for this population (Bockting et al., 2013; Rood et al., 2016).

Social Anxiety in LGBTQ+

Social anxiety presents as a particularly important psychological concern within sexual minority populations. Sexual minority individuals (e.g., those who identify as gay, lesbian, or bisexual) report a higher prevalence of social anxiety disorder (Bostwick et al., 2010; Kerridge et al., 2017) and elevated social anxiety symptoms (Pachankis & Goldfried, 2006; Akibar et al., 2019) when compared to heterosexual individuals. As Meyer (2003) posited that sexual minority individuals experience greater levels of expectations of rejection, such has been found to be associated with greater levels of social anxiety in response to such expectations (Rood et al., 2016). Extensive epidemiological studies present evidence that gay men experience higher rates of social anxiety than heterosexual men (Graaf et al., 2001; Pachankis & Goldfried, 2006). Utilizing the data from the National Comorbidity Survey (NCS), Gilman and colleagues (2001) found that gay men were 1.6 times more likely to report a lifetime history of social anxiety disorder than heterosexual men. Subgroup analyses within the sexual minority population has presented nascent evidence that that bisexual individuals are at greater risk for developing social anxiety disorder and/or showing social anxiety symptoms than gay/lesbian individuals (Mahon et al., 2021).

Approach to Research and Data Collection within the LGBT community

The realm of scientific research has often modified its methodologies and principles based on changing times, needs, and demands of humans and technology. In recent times, there has been

an increase in public policy debates concerning civil rights, program evaluations and delivery of public health services to different populations (Williams Institute, 2009). Such services can only be provided effectively with credibile outcomes of scientific research. Thus, there has been a growing need for good quality data collection in the context of sexual minority populations given the severe lack of research conducted towards the same. Currently, there exists a lack of a standardized method of identifying sexual minority individuals which poses the greatest challenge to researchers to be able to collect data on the same (National Academies of Sciences, Engineering, and Medicine, 2022). Swan (2018) reported the latest count of sexual orientation measures and models at a little over 200. Individuals of the LGBT+ community face numerous challenges pertaining to harassment, discrimination, violence, etc. and thus, high quality measures must be devised and used to help identify and provide better care and services for them. Some of the existing measures which have received recognition include the Kinsey Scale (Kinsey et al., 1948), Klein Sexual Orientation Grid (KSOG) (Klein, 1993) and the Multidimensional Scale of Sexuality (Berkey et al., 1990). However, each of these measures possess various limitations and lack reliability which have led to their minimal use in research (Swan, 2018). Having reviewed all the measurement scales aiming to identify individuals of the LGBT+ community and working towards collecting better Sexual Orientation and Gender Identity (SOGI) data, the Williams Institute at the UCLA School of Law published a report in 2009 on the best practices to collect such data, specifically in a survey format. Moreover, the National Academies of Sciences, Engineering, and Medicine (2022) also published a consensus report that reiterated this approach to collecting more reliable SOGI data.

Current Study and Hypothesis

Significant differences have been established between the prevalence of social anxiety levels among sexual minority individuals and that of heterosexual individuals (Bostwick, Boyd, Hughes, & McCabe, 2010; Akibar et al., 2019). Despite this apparent disparity, there still exists a severe lack of research in the determinants of social anxiety amongst the former population. This study aimed at providing further research on the different factors that predict elevated levels of social anxiety in the sexual minority community along with a further exploratory analysis on the predicting factors of social anxiety in the general population. The study examined the relationship between Social Anxiety, Fear of Negative Evaluation (FNE), Fear of Positive Evaluation (FPE) and two variables of minority stress: perceived discrimination and expectations of rejection. Considering the current debates over the reliability of clinical measures aiming to identify sexual minority individuals, this study adopted the approach recommended by the Williams Institute and the National Academics to assess participants' sexuality. In recent times, the diversity within the sexual minority populations has been growing increasingly which has led to multiple debates and revisions over the appropriate conceptualizations and definitions of each identity (Swan, 2018; National Academics, 2022). Given this vast diversity within the sexual and gender identities/orientation and associated complexities in being able to identify the same, identification and analyses pertaining to all identities was out of the scope of this study and thus, the study had a narrow its focus on only identifying an individual's sexual identity (lesbian, gay, bisexual). The sample consisted of both heterosexual individuals and persons from sexual minority populations so that comparisons could be conducted.

Hypothesis 1: We predicted that the levels of Social Anxiety, Fear of Negative Evaluation and Fear of Positive Evaluation experienced by LGB individuals would be significantly higher than that of heterosexual individuals.

Hypothesis 2: We predicted that FPE and FNE would predict anxiety, even after controlling for demographic variables and minority stress. To test this hypothesis, we used hierarchical multiple regression models to examine predictors of social anxiety, using these blocks: (1) demographic variables, (2) minority stress, and (3) FPE and FNE. (Note: only persons who self-identify as part of a sexual minority group were presented the two minority stress measures; thus, these variables essentially were only tested for part of the sample).

Method

Participants

Participants were young adults ages 18 to 25 years recruited online through Amazon Mechanical Turk. An a-priori power analysis had suggested that a sample size of 74 (with atleast half the participants, i.e., 37 being part of the LGB population) was needed to provide an adequate power at the .05 level. The initial sample consisted of 139 participants. Data from 9 participants had to be excluded due to insufficient and missing data, thus yielding a final sample of 130 participants. All the participants received fifty cents remuneration for participating in the study.

The sample size was 41.6% female (N=54) and 58.4% male (N=76); 60.7% of the participants identified as heterosexual/straight (N=79) and 39.3% identified with an LGB sexual identity (N=51). Among the LGB participants, 88.2% of them identified as "bisexual" (N=45),

7.9% as "lesbian" (N=4) and just 3.9% as "gay" (N=2). Recent research on LGBTQ+ self-identification has found that individuals who do feel comfortable disclosing their sexual identity as something other than heterosexual are most likely to identify as bisexual, especially among the Generation Z adults (ages 18 to 25 years) (Jones, 2022; Moskowitz et al., 2022). Furthermore, in contrast to earlier prejudiced and stigmatized attitudes displayed towards the bisexual community from all other sexual orientations, society has become increasingly accepting and tolerant over the years, resulting in a higher identification with non-heterosexual labels (Monto and Neuweiler, 2023). With respect to age, 90% of the participants fell between the ages of 23 to 25 years (N=117) and 10% were aged 18 to 22 years (N=13). With regard to race/ethnicity, participants primarily identified as either Caucasian (N=89, 68.2%), Asian (N=28, 21.2%) or a mix of the two (N=1, 0.6%), collectively accounting for 90% of the participants, with the remaining 10% identifying as Hispanic/Latino (N=6, 5%) or Native American (N=6, 5%). There was no representation of the Black/African American population. Research on the demographic composition of MTurk workers has found that the populations most represented are Whites and Asian Americans with a significant underrepresentation of Latinos and African Americans (Berinsky et al., 2012; Difallah et al., 2018).

Procedure

The study was conducted online. Participants first were provided with a consent form describing the purpose of the study. Those who provided consent were then directed to complete a packet of questionnaires that included a demographic questionnaire along with measures of Social Anxiety, Fear of Negative Evaluation, Fear of Positive Evaluation, Perceived Discrimination and Expectation of Rejection. A debriefing form was included at the end of the

questionnaires to provide participants with information about the study and contact information in case they had any additional questions or concerns.

Measures

      Demographic Questionnaire. A demographic questionnaire designed for this study was used to gather participant information such as age, sex, and race/ethnicity, level of education, relationship status and sexual identity (See the Appendix for all study measures). The question on sexual identity was based on the recommendation by the UCLA Williams Institute and National Academics (Williams Institute, 2009) and asked the participant to choose the response that best represented their sexual identity.

      Social Interaction Anxiety Scale (SIAS). The 20-item self-reported Social Interaction Anxiety Scale (SIAS; Mattick & Clarke, 1989) was used to measure the level of social anxiety an individual experiences when having social interactions. Each item on the SIAS was rated from 0 *(not at all characteristic or true to me)* to 4 *(extremely characteristic or true to me)*, with possible total scores ranging from 0 to 80. Reverse scoring is done on 3 items: 5, 9 and 11. Sample items are "I feel tense if I am alone with just one other person" and "I have difficulty making eye contact with others." High scores on this scale represent high level of social interaction anxiety in an individual. The SIAS has demonstrated excellent internal consistency with $\alpha = .9$ (Carleton and colleagues, 2007). It has also been found to have high test-retest reliability and discriminant validity ($r > .90$) (Brown and colleagues, 1997).

      Brief Fear of Negative Evaluation Scale II (BFNE-II). The Brief Fear of Negative Evaluation Scale II (BFNE-II; Leary, 1983) is a 12-item self-report scale that was used to measure the level of fear an individual experiences of being negatively evaluated in social situations. Each item on the scale was rated from 1 (not at all characteristic of me) to 5 (extremely characteristic of

me), with possible total scores ranging from 12 to 60. Reverse scoring is done on 4 items: 2, 4, 7, and 10. Sample items are "I often worry that I will say or do the wrong things" and "I am usually worried about what kind of impression I make." The BFNE-II has found to demonstrate high internal consistency with α = .95 (Carleton and colleagues, 2007). Moreover, BFNE-II items correlate with independent measures of social anxiety (i.e., Social Phobia Scales & Social Interaction Anxiety Scales) and present moderate convergent validity (.50 < r < .69; Westgard, 1999). Little if any (r < .30) correlations have been found between the BFNE-II and other scales like the ISI-Illness, the ISI-Injury, or the ASI-Somatic subscales which indicates good discriminant validity (Westgard, 1999).

Fear of Positive Evaluation Scale (FPES). The Fear of Positive Evaluation Scale (FPES; Weeks & colleagues, 2008) was used to measure the extent of fear an individual experiences about being positively judged. The FPES is a 10-item self-report scale, and each item was rated from 0 (not at all true) to 9 (very true), with total possible scores ranging from 0 to 90. Reverse scoring is done on 2 items: 5 and 10. Sample items on the scale are "I generally feel uncomfortable when people give me compliments" and "I don't like to be noticed when I am in public places, even if I feel as though I am being admired." The scale has been found to demonstrate good internal consistency (α = .89) and test– retest reliability among wait-list participants (n = 27) over 4.5 months (r = .80; Weeks and colleagues, 2011). The scale shows strong discriminant validity in a clinical sample (Weeks & colleagues, 2011). The scale also demonstrates good convergent validity as it correlates positively with other social anxiety measures (Weeks and colleagues, 2011).

Perceived Discrimination. The 14-item Heterosexist Harassment, Rejection, and Discrimination Scale (HHRDS; Szymanski, 2009) was used to measure levels of perceived discrimination as experienced by the participants. Sample items include "How many times have

you been called an offensive heterosexist/transphobic name, like faggot, tranny, dyke or other names?" and "How many times were you denied a raise, a promotion, tenure, a good assignment, a job, or other such thing at work that you deserved because you are a lesbian?". Each item was rated on a six-point Likert type scale ranging from 1 (*the event has never happened to you*) to 6 (*the event happened almost all the time, more than 70% of the time*), resulting in a possible range of total scores of 14 – 84. The Harassment and Rejection subscale of the HHRDS has demonstrated high internal reliability (α = .89) and strong structural and construct validity (Szymanski, 2009). As the original scale was used solely for lesbian participants, the current study used a modified version of the scale with each item using the term "an LGB individual" instead of "a lesbian".

Expectations of Rejection. The 9-item Rejection Sensitivity Questionnaire, Adult version (A-RSQ) was used to measure participants' expectations of rejection from others. This measure was developed by Downey et al. in 2006 and is an adaptation of the original Rejection Sensitivity Questionnaire (RSQ) (Downey & Feldman, 1996) aimed to assess RS specifically in adult research participants. This measure is a two-part questionnaire which asked participants to first indicate their degree of concern and anxiety about the outcomes of certain situations and then rate their expectations of acceptance/rejection from the same. Sample items include "How concerned/anxious would you be over whether your friend will want to listen to you?, I would expect that he/she would listen to me". The response scale ranges from 1 (very unconcerned, very unlikely) to 6 (very concerned, very likely). The individual items were scored by multiplying the rejection concern with the rejection expectation and the total score is the mean of the scores across the 9 items. Thus, the total score could range from 1-36. The ARSQ has been found to correlate strongly with the original RSQ (r = 0.87) and had sufficient reliability (Cronbach alpha = 0.74) (Downey et al., 2006). The ARSQ also shows moderate associations with measures of social

avoidance/distress ($r = 0.34$), self-esteem ($r = 0.46$) and interpersonal sensitivity ($r = 0.45$) (Berenson et al., 2009).

Results

Preliminary Analysis

Descriptive statistics including the means, standard deviation and range were calculated for each scale (See Table 1). Cronbach's α's were calculated for all the scales to assess the internal consistency of each. The alpha values for all the scales, excluding the Brief Fear of Negative Evaluation Scale (BFNE-II) were good to excellent, ranging from 0.61 to 0.96. The BFNE-II Scale displayed an alpha of 0.22 which is considered extremely low and potentially unacceptable. Research that has focused on the difference between the psychometric properties of the straightforwardly-scored items (BFNE-S) and the reverse-scored items (BFNE-II) has found that the BFNE-S has better internal consistency and construct validity as compared to the BFNE-II which has often been found to display extremely low alpha levels (Pitarch, 2010; Harpole et el., 2015; Ercüment, 2020; Gok & Yalcinkaya, 2020). While further research is being done to assess the reasons behind the low internal consistency of the BFNE-II, researchers have recommended using the BFNE-S as a measure of assessing fear of evaluation in different populations. Hence, this study used the BFNE-S scores to run all the primary analyses.

Main Hypotheses

Hypothesis 1, which predicted that the levels of Social Anxiety, Fear of Negative Evaluation and Fear of Positive Evaluation experienced by LGB individuals would be significantly higher than that of heterosexual individuals was not supported. Results from a MANOVA concluded that there was no statistically significant difference between the levels of social anxiety, FPE or FNE experienced by the participants based on their sexual identity (LGB versus heterosexuals), F (3, 126) = 1.276, p = .286; Wilk's λ = .971, partial $\eta 2$ = .03. See Table 2 for means for the two groups.

Hypothesis 2 predicted that FPE and FNE would significantly predict levels of social anxiety beyond that of demographic variables and minority stress. Two separate hierarchical multiple regression analyses were conducted (See Table 3) for the two separate populations (i.e., LGB and heterosexuals). This hypothesis was supported for both the populations. For the heterosexual population, the model consisted of two blocks: Block 1 included demographic variables of age and sex and Block 2 included the addition of FPE and FNE. Block 1 was significant overall, i.e., demographic variables significantly predicted levels of social anxiety, F (2, 76) = 5.178, p = .008. Individually, only Age (β = .338, p = .002) was significant; Sex (β = -.051, p = .641) was not significant. The addition of FPE and FNE in Block 2 also significantly predicted levels of social anxiety and accounted for 63.2% of the variance after controlling for demographic variables, F (2,74) = 94.475, p < .001. Both FPE (β = .226, p = .021) and FNE (β = .649, p < .001) were significant predictors.

For the LGB population, the hierarchical multiple regression model used three blocks: Block 1 predicted Social Anxiety from demographic variables of sex and age, Block 2 added

minority stress variables of perceived discrimination and expectations of rejection, and Block 3 added fear of evaluation (FNE and FPE). Block 1 was not significant, i.e., demographic variables did not significantly predict levels of social anxiety, $F(2,48) = 2.307$, $p = .110$. The addition of minority stress variables in Block 2 significantly predicted levels of social anxiety and explained a significant proportion of variance in social anxiety levels, $R^2 = .679$, $F(2,46) = 66.974$, $p < .001$. However, only perceived discrimination ($\beta = .849$, $p < .001$) was a significant predictor while expectations of rejection ($\beta = -.116$, $p = .118$) was not. The addition of fear of evaluation in Block 3 continued to significantly predict levels of social anxiety and accounted for 5.8% of additional variance, $F(2,44) = 7.321$, $p = .002$. Individually, FPE ($\beta = .448$, $p = .001$) was significant but FNE ($\beta = -.024$, $p = .883$) was not.

Discussion

The purpose of this study was twofold in that it aimed to address the differences in elevated levels of social anxiety amongst the LGB population compared to their heterosexual counterparts, while also providing further research on the different factors that predict social anxiety in the general population. Although research around social anxiety has existed for several decades, new possible cognitive components keep arising which require further exploration. Moreover, addressing the varying levels of social anxiety among different minority populations is a relatively new phenomenon. In this section, we discuss the relationship between fear of negative evaluation, fear of positive evaluation and minority tress with social anxiety and how it looks different between populations depending on their sexual identity. We also address certain limitations of the current study along with clinical implications and conclude with a brief discussion on future research.

Our first hypothesis predicted significant differences between the levels of social anxiety and fear of evaluation (positive and negative) experienced by LGB individuals in comparison to

heterosexual individuals. Surprisingly, this difference was not upheld. In currently existing research based on social anxiety experienced by sexual minority populations, only a few have found no differences between these populations. This finding can be viewed in two ways, firstly, it is possible that society exhibiting more acceptable attitudes and behaviors towards sexual minority individuals has resulted in their levels of social anxiety being comparable with straight individuals. Contrastingly, individuals who identify with any sexual identity other than straight might have felt the need to respond in an overly favorable manner to avoid judgement or to simply "fit in" with what they perceive as mainstream behaviors/attitudes. Recent generations (millennials, Gen Z) have been known to be more accepting, and less prejudiced of unique sexual identities that were at one time under a lot of scrutiny (Jones, 2022). For instance, bisexuality was once looked down upon and was ostracized by all other identities due to them not being able to "pick a side" (Moskowitz et al., 2022). The current study's sample size of LGB individuals primarily identified as "bisexual" and thus, it could be possible that despite the increasing tolerance in society, bisexual individuals still responded dishonestly to evade scrutiny. Contrastingly, it could also be possible that bisexual individuals evade much of the scrutiny depending on their relationship status. Bisexual individuals in an opposite-sex relationship might endure lower levels of social anxiety and feel more comfortable with certain social behaviors (e.g., displaying public displays of affection) as compared to those in a same-sex relationship. Further research into this area would be beneficial in providing more conclusive insights.

Our second hypothesis examined predictors of social anxiety in the two populations. Specifically, we predicted that fear of evaluation would predict social anxiety beyond the effect of demographic variables and minority stress. Fear of Evaluation, both positive and negative have been found to be hallmarks in the realm of social anxiety and often perpetuate high levels of the

same. We found this to be true of both heterosexual and LGB individuals. Within the LGB population, minority stressors of perceived discrimination and expectations of rejection collectively explained a significant proportion of social anxiety levels beyond demographic variables. However, the latter was not a significant predictor by itself. Research centered around the development of a measure to target rejection sensitivity specifically in sexual minority populations is still in its initial phases (Dyar et al., 2016; Kiekens, 2023). The ARSQ measure used in the current study is one that is generally used to study all minority populations, and thus could explain a lack of significance. In step 3 when fear of evaluation was added, despite the additional variance explained by these variables was low, it was still significant in its predictive power after controlling for the effect of minority stress.

Thus, we see that fear of evaluation and unique stressors that minority populations face daily continue to maintain high levels of social anxiety experienced by individuals. However, the lack of differences found between populations could suggest a potential initial shift in areas pertaining to societal acceptance of unique sexualities and/or sexual minority individuals having increased access to resources to process any anxiety or evaluation endured.

Limitations

One of the primary limitations of this study was the lack of diversity in the sample pertaining to race/ethnicity and sexual identity. The participants were primarily Caucasian and/or Asian and approximately 90% of the LGB participants were bisexual. Such underrepresentation of certain ethnicities and sexual identities results in the inability to offer generalizability of results in any capacity. Moreover, this limitation appears heightened when the sample size is also relatively smaller than other extensive studies.

Second, due to the narrow scope of the study in including only specific sexual identities, it eliminated the possibility of any significant findings pertaining to the level of fear and social anxiety in gender identities (e.g., trans) and how that compares with people who are cis-gender.

Third, the use of any online crowdsourcing platform to collect data presents the limitation of potentially unreliable data despite all measures taken to scan and clean the data. Workers registered on MTurk have been found to engage in behaviors such as misrepresenting demographic information to meet criteria, malingering, efforts to maximize monetary compensation received, careless/insufficient responses, etc. (Folmer et al., 2017; Kim & Oh, 2022). However, MTurk has also increasingly gained popularity in its ability to study hard-to-reach populations as it offers complete anonymity which allows participants to feel comfortable disclosing certain identities which would otherwise be concealed (e.g., sexual identities, disabilities, STD/STI information) (Smith et al., 2015). Studies that have previously been conducted with LGB samples on MTurk have found reliable data findings but have also advocated for further research to be done to establish more comparable and generalizable results that arise from such platforms to other forms of data collection (Skitka & Sargis, 2005; Vaughn et al., 2015).

Clinical Implications

The results indicate that fear of evaluation overall significantly predicted high levels of social anxiety in both heterosexual and LGB populations. However, it was interesting to see that although FPE was significant among all individuals, FNE was individually significant only in the heterosexual population and not among LGB individuals. Given that LGB individuals undergo unique minority stressors which also perpetuate social anxiety beyond other factors, we believe that clinicians should make conscious attempts to cater their therapeutic treatment to include coping with such stressors. Furthermore, as FPE is a relatively newer construct, mental health

treatment for all individuals regardless of their sexual identity should focus on how FPE manifests itself in an individual's daily functioning and explore ways to reduce said fears.

Future Research

Considering the limitations of the current study, additional research conducted on a similar online platform with sexual minority populations with a relatively larger and more diverse sample size would be beneficial in providing critical insights. Furthermore, it would be worth looking deeper into the extent and frequency of mental health services offered to and received by sexual minority individuals. This would provide some direction in being able to justify the comparable levels of anxiety experienced by different populations.

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Table 1: Descriptive Statistics of Main Variables

	Mean	SD	Possible Range	Observed Range	α
Social Anxiety	38.17	13.44	0-80	0-68	0.89
FNE (BFNE-II)	35.14	4.465	12-60	24-44	0.22
FNE (BFNE-S)	22.78	7.0	8-40	8-37	0.89
FPE	33.78	18.37	0-90	1-68	0.94
Perceived Discrimination	47.84	16.21	14-84	18-75	0.96
Expectations of Rejection	11.27	1.7	0-36	8-15	0.61

Note. Social Anxiety = Social Anxiety Interaction Scale (SIAS), FNE = Brief Fear of Negative Evaluation Scale-II (BFNE-II), Brief Fear of Negative Evaluation Scale – Straightforward (BFNE-S), FPE = Fear of Positive Evaluation Scale (FPES), Perceived Discrimination = Heterosexist Harassment, Rejection, and Discrimination Scale (HHRDS), Expectations of Rejection = Adult Rejection Sensitivity Questionnaire (ARSQ).

Table 2: Descriptive Statistics for MANOVA Analysis Variables

	Mean	SD	N
Social Anxiety	38.17	13.44	130
Heterosexual	37.05	13.84	79
LGB	39.9	12.72	51
FPE	33.78	18.37	130
Heterosexual	31.57	17.16	79
LGB	37.22	19.79	51
FNE	22.78	7.0	130
Heterosexual	21.91	6.73	79
LGB	24.12	7.26	51

Note. Social Anxiety = Social Anxiety Interaction Scale (SIAS), FNE = Brief Fear of Negative Evaluation Scale-II (BFNE-II), Brief Fear of Negative Evaluation Scale – Straightforward (BFNE-S), FPE = Fear of Positive Evaluation Scale (FPES),

Table 3: Hierarchical Regression Analysis for Variables Predicting Social Anxiety in Heterosexual Individuals (N = 79)

Variable	*B*	*SE B*	*β*	*T*	*p*
Step 1					
Age	4.17	1.33	.338	3.13	.002
Sex	-1.41	3.02	-.051	-.46	.641
Step 2					
Age	.85	.75	.069	1.1	.261
Sex	-1.004	1.63	-.036	-.61	.540
FPE	.18	.077	.22	2.3	.021
FNE	1.3	.199	.65	6.7	<.001

Note. R^2 = .12 for Step 1 (*p* = .008); ΔR^2 = .632 for Step 2 (*p* < .001).

Table 4: Hierarchical Regression Analysis for Variables Predicting Social Anxiety in LGB Individuals (N = 51)

Variable	B	SE B	β	T	p
Step 1					
Age	2.52	1.19	.29	2.12	.039
Sex	1.94	3.52	.07	.552	.584
Step 2					
Age	1.88	.61	.22	3.05	.004
Sex	-.74	1.85	-.029	-.39	.692
HHRDS	9.321	.80	.84	11.56	<.001
ARSQ	-.871	.54	-.11	-1.6	.118
Step 3					
Age	1.05	.59	.12	1.76	.085
Sex	.234	1.7	.009	.138	.891
HHRDS	5.75	1.57	.524	3.65	<.001
ARSQ	-1.16	.49	-.156	-2.35	.023
FPE	.28	.08	.44	1.45	.001
FNE	-.04	.28	-.02	-.14	.883

Note. $R^2 = .08$ for Step 1 ($p = .110$); $\Delta R^2 = .679$ for Step 2 ($p < .001$), $\Delta R^2 = .058$ for Step 3 ($p = .002$)

Appendix I

Demographic Questionnaire

1. What is your age?   [Free Text]

2. How would you best describe your ethnicity?

   - Hispanic
   - American Indian or Alaska Native
   - Asian
   - Black or African American
   - Native Hawaiian or Other Pacific Islander
   - White

3. What is the highest level of education you have completed?

   - No formal education
   - Highschool or GED
   - College Graduate (BA/BS)
   - Master's Degree
   - Doctorate
   - Prefer not to answer

4. What is your current relationship status?

   - Single
   - In a committed relationship
   - Married
   - Separated
   - Divorced
   - Other [Free Text]
   - Prefer not to answer

5. How would you best describe your sex?

   - Male
   - Female
   - Other [Free Text]

6. Which of the following best represents how you think of yourself? [Select ONE]:

- Lesbian or gay
- Straight
- Bisexual
- I use a different term [free-text]
- Prefer not to answer

Social Interaction Anxiety Scale (SIAS)

Instructions: For each item, please indicate the number to indicate the degree to which you feel the statement is characteristic or true for you. The rating scale is as follows:

0 = **Not at all** characteristic or true of me.

1 = **Slightly** characteristic or true of me.

2 = **Moderately** characteristic or true of me.

3 = **Very** characteristic or true of me.

4 = **Extremely** characteristic or true of me

1. I get nervous if I have to speak with someone in authority (teacher, boss, etc.)
2. I have difficulty making eye contact with others.
3. I become tense if I have to talk about myself or my feelings.
4. I find it difficult to mix comfortably with the people I work with.
5. I find it easy to make friends my own age.
6. I tense up if I meet an acquaintance in the street.
7. When mixing socially, I am uncomfortable.
8. I feel tense if I am alone with just one other person
9. I am at ease meeting people at parties, etc
10. I have difficulty talking with other people
11. I find it easy to think of things to talk about.
12. I worry about expressing myself in case I appear awkward.
13. I find it difficult to disagree with another's point of view

14. I have difficulty talking to attractive persons of the opposite sex.

15. I find myself worrying that I won't know what to say in social situations.

16. I am nervous mixing with people I don't know well

17. I feel I'll say something embarrassing when talking.

18. When mixing in a group, I find myself worrying I will be ignored.

19. I am tense mixing in a group.

20. I am unsure whether to greet someone I know only slightly.

Brief Fear of Negative Evaluation Scale II (BFNE-II)

Instructions: For each item, please indicate the number to indicate the degree to which you feel the statement is characteristic or true for you. The rating scale is as follows:

1 = **Not at all** characteristic or true of me.

2 = **Slightly** characteristic or true of me.

3 = **Moderately** characteristic or true of me.

4 = **Very** characteristic or true of me.

5 = **Extremely** characteristic or true of me

1. I worry about what other people will think of me even when I know it doesn't make any difference.

2. It bothers me when people form an unfavorable impression of me.

3. I am frequently afraid of other people noticing my shortcomings.

4. I worry about what kind of impression I make on people.

5. I am afraid that others will not approve of me.

6. I am afraid that other people will find fault with me.

7. I am concerned about other people's opinions of me.

8. When I am talking to someone, I worry about what they may be thinking about me.

9. I am usually worried about what kind of impression I make.

10. If I know someone is judging me, it tends to bother me.

11. Sometimes I think I am too concerned with what other people think of me.

12. I often worry that I will say or do wrong things.

Fear of Positive Evaluation Scale (FPES)

Instructions: Read each of the following statements carefully and answer the degree to which you feel the statement is characteristic of you, using the following scale. Rate each situation from 0 (Not at all true) to 9 (Very true).

1. I am uncomfortable exhibiting my talents to others, even if I think my talents will impress them.
2. It would make me anxious to receive a compliment from someone that I am attracted to.
3. I try to choose clothes that will give people little impression of what I am like.
4. I feel uneasy when I receive praise from authority figures.
5. If I have something to say that I think a group will find interesting, I typically say it.
6. I would rather receive a compliment from someone when that person and I were alone than when in the presence of others.
7. If I was doing something well in front of others, I would wonder whether I was doing "too well".
8. I generally feel uncomfortable when people give me compliments.
9. I don't like to be noticed when I am in public places, even if I feel as though I am being admired.
10. I often feel underappreciated and wish people would comment more on my positive qualities.

Heterosexist Harassment, Rejection, and Discrimination Scale (HHRDS)

Instructions: Please think carefully about your life as you answer the questions below. Read each question and then indicate the number that best describes events in the PAST YEAR, using the following scale:

1 = The event has NEVER happened to you

2 = The event happened ONCE IN A WHILE (less than 10% of the time

3 = The event happened SOMETIMES (10–25% of the time)

4 = The event happened A LOT (26–49% of the time

5 = The event happened MOST OF THE TIME (50–70% of the time

6 = The event happened ALMOST ALL OF THE TIME (more than 70% of the time).

I.   *Harassment and rejection*

1. How many times have you been rejected by friends because you are an LGB individual?
2. How many times have you been verbally insulted because you are an LGB individual?
3. How many times have you been made fun of, picked on, pushed, shoved, hit, or threatened with harm because you are an LGB individual?
4. How many times have you heard anti-lesbian/anti-gay remarks from family members?
5. How many times have you been rejected by family members because you are an LGB individual?
6. How many times have you been called a heterosexist name like dyke, faggot, lezzie, or other names?
7. How many times have you been treated unfairly by your family because you are an LGB individual?

II.   *Workplace and school discrimination*

8. How many times have you been treated unfairly by your employer, boss, or supervisors because you are an LGB individual?
9. How many times were you denied a raise, a promotion, tenure, a good assignment, a job, or other such thing at work that you deserved because you are an LGB individual?
10. How many times have you been treated unfairly by teachers or professors because you are an LGB individual?
11. How many times have you been treated unfairly by your co-workers, fellow students, or colleagues because you are an LGB individual?

III.   *Other discrimination*

12. How many times have you been treated unfairly by people in service jobs (by store clerks, waiters, bartenders, waitresses, bank tellers, mechanics, and others) because you are an LGB individual?
13. How many times have you been treated unfairly by strangers because you are an LGB individual?
14. How many times have you been treated unfairly by people in helping jobs (by doctors, nurses, psychiatrists, caseworkers, dentists, school counselors, therapists, pediatricians, school principals, gynecologists, and others) because you are an LGB individual?

Rejection Sensitivity Questionnaire, Adult version (A-RSQ)

Instructions: The items below describe situations in which people sometimes ask things of others. For each item, **imagine that you are in the situation, and then answer the questions that follow it**. Rate each situation from 1 (Very Unconcerned) to 6 (Very Concerned) and from 1 (Very Unlikely) to 6 (Very Likely).

1. You ask your parents or another family member for a loan to help you through a difficult financial time.

How concerned or anxious would you be over whether or not your family would want to help you?

I would expect that they would agree to help as much as they can.

2. You approach a close friend to talk after doing or saying something that seriously upset him/her.

How concerned or anxious would you be over whether or not your friend would want to talk with you?

I would expect that he/she would want to talk with me to try to things out.

3. You bring up the issue of sexual protection with your significant other and tell him/her how important you think it is.

How concerned or anxious would you be over his/her reaction?

I would expect that he/she would be willing to discuss our possible options without getting defensive.

4. You ask your supervisor for help with a problem you have been having at work.

How concerned or anxious would you be over whether or not the person would want to help you?

I would expect that he/she would want to try to help me out.

5. After a bitter argument, you call or approach your significant other because you want to make up.

How concerned or anxious would you be over whether or not your significant other would want to make up with you?

I would expect that he/she would be at least as eager to make up as I would be.

6. You ask your parents or other family members to come to an occasion important to you.

How concerned or anxious would you be over whether or not they would want to come?

I would expect that they would want to come.

7. At a party, you notice someone on the other side of the room that you'd like to get to know, and you approach him or her to try to start a conversation.

How concerned or anxious would you be over whether or not the person would want to talk with you?

I would expect that he/she would want to talk with me.

8. Lately you've been noticing some distance between yourself and your significant other, and you ask him/her if there is something wrong.

How concerned or anxious would you be over whether or not he/she still loves you and wants to be with you?

I would expect that he/she will show sincere love and commitment to our relationship no matter what else may be going on.

9. You call a friend when there is something on your mind that you feel you really need to talk about.

How concerned or anxious would you be over whether or not your friend would want to listen?

I would expect that he/she would listen and support me.