

Attraction to Both Genders and The Link to Depression Mediated by The Big Five and
Permissiveness in Relationships

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Abstract

The outcome of depression has been well established for sexual minorities. This can be seen in particular within the research regarding those who are attracted to both genders (ABG). The lifestyle choice of nonmonogamous or open relationships is commonly found in ABG relationships. These behaviors demonstrate the concept of permissiveness in relationships. The negative effect of the nonmonogamous lifestyle yields mixed results of either no developed psychopathologies and more personal satisfaction or in developed psychopathologies such as depression. Conscientiousness is often negatively correlated to ABG, permissive behavior in relationships, and depression. The current hypothesis is that conscientiousness and permissiveness in relationships mediate the relationship between ABG and depressive symptoms. A mass survey was given to 895 participants; 177 of whom were attracted to both men and women. It was found through a linear regression analysis that conscientiousness and permissiveness significantly mediated ABG and depressive symptoms. Permissiveness and ABG were positively correlated to depression while conscientiousness was negatively correlated to depression, permissiveness, and ABG. Future research should evaluate the importance of both sexual identity and self-concept clarity and uses interview-style data collection to build the gap between pressured stereotypes and self-concept clarity.

Key words: depression, bisexual, attraction, Big Five, nonmonogamy, attraction

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Chapter 1. Introduction

Currently, sexual orientation research has been gaining more prevalence as previous gaps in the literature have been targeted with the increase of awareness in media regarding this topic. Even though most sexual minorities are under strenuous and consistent stereotypes, both positive and negative, people who are attracted to both genders (ABG) tend to experience more misunderstandings about their attraction and receive social negativity. People who identify as straight and those within the lesbian, gay, bisexual, plus (LGBT+) community are both aware of the stereotypes and tend to apply them to bisexual and ABG individuals (Dyar, Lytle, London, & Levy, 2017; Zivony & Saguy, 2018; (Beach et al., 2019). While some ABG people address that there are stereotypes, i.e., permissive attitudes, confusion, and disorganized (Beach et al., 2019), they do not tend to see themselves in this way (Burke & LaFrance, 2016). The dilemma, however, is that unlike other sexual minorities, such as gay men or lesbians, bisexuals and ABG people do not have an identity or culture to engage with (Maliepaard, 2018; Flanders, Dobinson, & Logie, 2017) which can make the stereotypes even stronger and may lead to those stereotypes becoming their pseudo-identity instead. This can be problematic, since, many of the stereotypes are negative.

Nonetheless, there are groups of people who identify with bisexuality or both gender attraction that come together to formulate their sub-group. Often, these groups are found on social media platforms such as Tumblr or YouTube where people can freely express their thoughts and opinions (Lucero, 2017; Mccracken, 2017). Unfortunately, for

the bisexual and ABG population, there are tremendous amounts of bi-negativity, that, even the definition of what ABG means is disputed. There is considerable controversy over the differences between bisexual, pansexual, omnisexual, etc. that due to lack of an agreed-upon definition of the culture this tends to give an explanation as to why there is no “bi-culture” or, further, why ABG people do not often disclose their sexuality. Many ABG people feel the need to constantly prove they are not straight, while, also showing they are not struggling with internalized homophobia with their attraction to the opposite gender (Molina et al., 2015).

Although research has been showing that while there are pushed stereotypes for ABG people such as being confused, disorganized or chaotic, and permissive in relationships (Dyar, Lytle, London, & Levy, 2017; Beach et al., 2019), there has also been substantial evidence displaying that these behaviors are typically seen more in ABG individuals than other sexual orientations (Schauer, Berg, & Bryant, 2013; Tuthill, Denney, & Gorman, 2018; Berona, Horwitz, Czyz, & King, 2019; Moschella, Potter, & Moynihan, 2020; Mereish, Katz-Wise, & Woulfe, 2017; Pachankis et al., 2020; Maimon, Sanchez, Albuja, & Howansky, 2019). Within the Big Five factors, those who are ABG tend to present differently from other sexual orientations, in that, they have higher openness, higher neuroticism, and lower conscientiousness (Kowalczyk et al., 2019; Bogaert, Ashton, & Lee, 2018). Lower conscientiousness tends to increase disorganization, risk-taking behaviors, and having higher permissiveness in relationships (Moors, Selterman, & Conley, 2017; Lippa, 2020). Lower conscientiousness, also, follows alongside many of the projected stereotypes of bisexuality and ABG.

This thesis will address the relationship between ABG and depressive symptoms via lower conscientiousness and permissiveness in relationships. By utilizing both personality via the Big Five and self-concept clarity this may help individuals, especially adolescents, to better develop their sense of self without increased social stereotypes which can then lower psychopathologies.

Chapter 2. Literature Review

Stereotypes

Sexual orientation is often perceived with many stereotypes about character, identity, and sexual proneness. ABG is one of the sexual orientations that is not as well understood and tends to garner a lot of negative stereotypes from both heterosexuals and homosexuals alike. ABG people were seen as to be more prone to nonmonogamous relationships and were more likely to change their sexual orientation identity in the future compared to heterosexual and homosexual individuals (Dyar, Lytle, London, & Levy, 2017). This can be especially apparent when the stereotypes were more endorsed which predicted the expressed action of the stereotypes. Thus, previous stereotypes predicted how the participant would view those who are ABG but in the reverse, where previous knowledge of stereotypes does not affect their view of ABG people and those who had less knowledge of stereotypes embraced more of said stereotypes. Heterosexuals stereotyped ABG women as being more confused and promiscuous compared to non-ABG women which were inversely related to their knowledge of these stereotypes (Zivony & Saguy, 2018). Even ABG individuals were aware of these stereotypes and perceived others perceiving themselves as such. ABG individuals assessed the stereotypes that others have towards them as being confused, STD risky, incapable of

monogamy, unstable (being viewed as their identity is “just a phase”), and promiscuous (Beach et al., 2019). However, when ABG individuals were asked to evaluate stereotypes of their sexual orientation they did not rate themselves to be indecisive, prone to nonmonogamy, focused on sex, or likely to cheat as did heterosexuals and homosexuals believed the stereotypes towards them (Burke & LaFrance, 2016). So, even though those who are ABG tend to have a more acute awareness of the stereotypes, many do not believe them to be true about themselves. These stereotypes still are seen, are projected, and actively pressured towards individuals who identify as bisexuals and ABG, thus, creating a cycle of expressed stereotypes which then further the bi-negativity. Bisexuals and ABG people experience bi-negativity from multiple areas be it their orientation, mixed-orientation relationships, or consensual non-monogamy much of which follows the stereotypes associated with ABG (Davids & Lundquist, 2018).

In open interviews, ABG women shared their experiences with pressure to conform to the expectations others have of them for being ABG and their isolation from the queer community which they saw as leading to their decreased mental and sexual health (Flanders, Dobinson, & Logie, 2017). Some of the pressures were to be in nonmonogamous relationships due to their status of being ABG but still being shamed if they do engage in open relationships. Many of the personal testimonies the ABG women gave emphasized the pressure they felt to fulfill the stereotypes about their orientation. Their identity felt lost to them as they were being defined by others and pushed into a role that they may or may not be comfortable to deliver. The women then attributed their decreased mental health and sexual health to bi-negativity.

There is a severe lack of culture or safe space around the bisexual and ABG orientation. A safe space is an area where minorities can be open about their identity and feel safe to express themselves. Creating spaces for bisexuals and ABG individuals showed itself to be difficult due to the lack of disclosure and expression seen in the ABG community (Maliepaard, 2018). ABG people experience a major restriction in coming out to people even those they are in a close relationship with and prefer keeping silent about their orientation. Often those who are ABG will express willingness to answer questions about their identity but prefer not to bring it up themselves. Typically, this was seen with the person not wanting to face the common misconceptions and bi-negativity that comes with outing themselves. Some of the participants were bold in talking about other LGBT+ related identities, such as coming out as transsexual, yet still did not want to be open about their sexual orientation of bisexuality.

Openness in Relationships

There have been mixed outcomes of nonmonogamy or permissiveness in a relationship for various sexual orientations. Some results indicate there were positive outcomes that come with permissive and nonmonogamous relationships or no difference between nonmonogamy and monogamy. Young gay and ABG men reported that with their nonmonogamous relationships, the relationship with their primary partner has high satisfaction and improvements in communication, sex life, and overall relationship (Stults, 2019). This study was done by asking both partners independently how they felt about the different areas of their relationship and in what ways they were satisfied or not satisfied with the open relationship and its influence on their primary relationship. Results showed that a high majority were satisfied and had improvements in their

relationship while only a couple of individuals were not satisfied with the arrangement. While men in previously agreed upon nonmonogamous relationships perceived the quality of their relationships to be higher when it came to personal psychological well-being there was no difference between nonmonogamous and monogamous relationships (Whitton, Weitbrecht, & Kuryluk, 2015). Depression rates were similar amongst groups as well as internalized heterosexism. Internalized heterosexism is the personal bias that heterosexuality is perceived as being superior. Those in a nonmonogamous agreement did report a significant increase in perceived quality for the alternative person over their main relationship and a lower dedication to commitment. Nonmonogamous gay men reported similar results to monogamous gay men in their sexual satisfaction, sexual jealousy, and sexual communication; although sexual jealousy was slightly higher in monogamous men (Parsons, Starks, Gamarel, & Grov, 2012).

On the other hand, some studies show there are negative consequences in mental well-being and lifestyle when it comes to open relationships. Gay and ABG men in monogamous relationships reported higher rates of psychological well-being and sexual health than those who were single or in an open relationship (Parsons, Starks, Dubois, Grov, & Golub, 2013). Men in monogamish (only open to three-ways/group sex) relationships had lower depression and higher life satisfaction than those who were single. Those in monogamous relationships showed the least amount of substance abuse use during sex. Monogamous and monogamish relationships resembled each other and displayed better psychological and physical health than open relationships and single men.

Yet, for some, due to bi-negativity in the relationship, those who are ABG experience a decrease in mental health outcomes especially when being seen as “straight” or being nonmonogamous. ABG women display both negative experiences and a decrease in mental health outcomes from either engaging in a single straight relationship or from having multiple partners (Molina et al., 2015). With multiple partners, depression and alcohol-related consequences significantly increased as well as experienced bi-negativity. The negative experiences mediated depression symptoms.

Psychopathology

Sexual minorities have often been seen to have an increased risk with substance abuse, especially women, and typical socio-cultural and demographic factors do not seem to have the same protective factors as they do for heterosexual individuals (Green & Feinstein, 2012). Those who are ABG, especially women, were more likely to report higher substance usage and psychiatric disorders (Kerridge et al., 2017). ABG participants reported higher rates of substance abuse and internalized heterosexism than homosexual participants as well as lower levels of guilt-proneness (Hequembourg & Dearing, 2013). ABG individuals tended to have higher rates of substance abuse and use. ABG females reported higher tobacco, binge drinking, and marijuana use than female homosexuals and heterosexuals while men reported no difference between sexual orientation (Schauer, Berg, & Bryant, 2013). ABG individuals were more likely to engage in smoking, have poorer health, and have higher odds of obesity comparatively based on gender and race (Tuthill, Denney, & Gorman, 2018). While many factors influence substance use and abuse, it was evident that ABG individuals tended to have a high correlation to the behavior.

Additionally, bisexuals and other sexual minorities have been found to experience a higher risk both in physical and sexual health and wellbeing. LGBT participants experienced more psychiatric emergency department visits and hospitalization, higher suicidal ideation, and more severe non-suicidal self-injuries both in recent events and historical events (Berona, Horwitz, Czyz, & King, 2019). ABG college students experienced higher rates of sexual victimization and the survivors reported lower well-being outcomes such as life satisfaction and mental health than heterosexual survivors (Moschella, Potter, & Moynihan, 2020). ABG people were also more likely to disclose the sexual victimization event to an unofficial person (family, friend, partner) than to an official person (law enforcement, counselor, college staff) than were homosexual survivors.

Furthermore, the consequences of bi-negativity and lack of cultural identity that follows ABG, stress, and depression were increased. ABG people often felt the stress of anti-bisexual experiences from both those in the LGBT+ community as well as those outside of it (Mereish, Katz-Wise, & Woulfe, 2017). This bi-negativity leads to their insecurities of internalized heterosexism and sexual orientation concealment. Loneliness was seen to mediate this effect which then led to other psychological distress and suicidality. Mental health problems and stress can be linked to the view of self and sociopsychological strains for ABG and gay men (Pachankis et al., 2020). There is an unspoken pressure within the gay community that ABG and gay men have to maintain high status and a more extinguished portrayal of self in order to be accepted. This was both due to common stereotypes and the culture encompassing the sexual orientation. ABG people with more frequent identity denials had greater uncertainty with

belongingness, more meta-stereotypes, and more depressive symptoms while belongingness mediated identity denial and depressive symptoms (Maimon, Sanchez, Albuja, & Howansky, 2019). Sexual minority women who experienced trauma had an increase in PTSD symptoms which was predicted by internalized heterosexism (Straub, McConnell, & Messman-Moore, 2018). This was especially noted with an increase in shame-related withdrawal tendencies. Sexual minorities with more implicit anti-gay attitudes tended to ruminate more, have increased suppression, and have higher psychological distress (Hatzenbuehler, Dovidio, Nolen-Hoeksema, & Phills, 2009). Rumination and suppression were both significant mediators in the development of psychological distress for those with an implicit bias towards homosexuality. Social predictors resulted in an indirect effect in that for sexual minorities religious conservatism of a college predicted higher depression levels which was mediated by lower college acceptance and internalized homophobia (Heiden-Rootes, Wiegand, Thomas, Moore, & Ross, 2020). Family rejection during adolescents was a prediction for future psychological distress in young adult sexual minorities (Ryan, Huebner, Diaz, & Sanchez, 2009). Those who reported rejection were eight times more likely to attempt suicide, six times more likely to report high levels of depression, and three times more likely to engage in unprotected sex. ABG women who experienced internalized homophobia tended to have binge eating disorders which were mediated by shame (Bayer, Robert-McComb, Clopton, & Reich, 2017). ABG women reported higher levels of depression and shame compared to lesbian participants. Thus, bi-negativity have a strong influence on the development of psychopathology for ABG individuals.

Within mental health, depression, anxiety, and suicide ABG individuals tend to report higher results. Wave 2 of the National Epidemiologic Survey on Alcohol and Related Conditions reported that bisexuals had the highest rates of anxiety and mood disorders than did lesbians or gay men (Bostwick, Boyd, Hughes, & McCabe, 2010). ABG women experienced higher rates of frequent mental distress and poor general health than did lesbians according to the Washington State Behavioral Risk Factor Surveillance System (Fredriksen-Goldsen, Kim, Barkan, Balsam, & Mincer, 2010). The mental distress and poor health were associated both with each other as well as poverty, obesity, and lack of exercise. ABG women had a six-fold increase in suicide attempts than other sexual minorities and women were more likely to start at a younger age. Sexual minorities were also more likely to disclose suicide attempts to medical professionals than heterosexuals (Blosnich, Nasuti, Mays, & Cochran, 2016). ABG college students reported higher mental health diagnoses, suicidal ideation, self-harm, and suicide attempts than heterosexuals and homosexuals (Liu, Stevens, Wong, Yasui, & Chen, 2019). A telephone interview with men who have sex with men reported that 21% have made a suicide plan, 12% have attempted suicide, and half of those that attempted suicide made multiple attempts. Most who attempted suicide made that attempt before age 25 (Paul et al., 2002). For ABG mothers, their level of identity salience predicted their psychological response as a parent. Those with higher levels of identity salience and higher efficacy had lower levels of guilt, shame, and psychological distress (Roberts, 2018). Therefore, there is a major health crisis for sexual minorities, especially ABG individuals when it comes to mental and physical wellbeing.

Big Five Differences

Sexual Orientation

Big five differences were observed in gay, lesbian, bisexual, asexual, and straight people (Bogaert, Ashton, & Lee, 2018). Non-heterosexual groups (especially ABG) reported higher rates of openness than heterosexuals. While heterosexual men and women differed in agreeableness, lesbians and gay men differed very slightly. Asexuals had lower extraversion and were lower in agreeableness compared to their gender counterparts. Bogaert, et al. (2018) theoretically implies that the Big Five could then explain the origin of sexual orientation.

The Big Five was also seen as predicting sexual activity and had significant correlations to orientation. In general, extraversion was linked to increased sexual activity and risk and decreased sexual dysfunction (Allen & Walter, 2018). Openness was linked to homosexual orientation and liberal attitudes specifically towards sex. Low conscientiousness and agreeableness related to sexually aggressive behavior and infidelity. Homosexual and ABG men had higher openness and lower conscientiousness than did heterosexual men while ABG men had higher neuroticism than homosexual men (Kowalczyk et al., 2019). The common correlation was that ABG people have lower conscientiousness across the board and lower conscientiousness predicted conventionally negative sexual activity.

Nonmonogamy

Sexual minorities who had higher openness and lower conscientiousness were predicted to view open relationships more positively and with a greater desire (Moors, Selterman, & Conley, 2017). These Big Five traits displayed a better prediction of the consensual agreement than attachment did. Personality factors were able to distinguish

between sexual orientation for men and women (Lippa, 2020). ABG men were able to be distinguished based on the higher rates of sex drive, socio-sexuality (uncommitted sex-positivity), and neuroticism and lower rates of conscientiousness. Non-heterosexual women were also distinguished based on their higher socio-sexuality and sex drive. This distinction also pertained to masculine/feminine identification and occupation. For ABG men, they were both intermediates in occupational role and self-identification while heterosexual men were gender-typical and gay men were gender atypical. Only lesbians were seen with significant gender-atypical identification. Therefore, there was a strong correlational link between conscientiousness, specifically lower conscientiousness, ABG, and permissiveness in relationships

Psychopathology

Big Five factors such as extraversion and conscientiousness tend to predict future psychopathology. Sexual minorities were shown to have a negative relationship with extraversion, emotional openness, and social support (Tse, Kwon, & Faust, 2018). Extraversion did not moderate depression, social support, nor emotional openness for women. In men, however, extraversion was shown to moderate emotional openness and depression. Emotional openness was correlated with less depression and lower extraversion levels. Sexual minorities and binge-drinking habits correlated positively with extraversion and negatively with conscientiousness (Livingston, Oost, Heck, & Cochran, 2015). Moreover, sexual minorities displayed a significant correlation with extraversion-mental health symptoms and conscientiousness-mental health symptoms (Cramer et al., 2016). Active and passive coping mediated both mental health symptoms. Depression was found to correlate negatively with extraversion, conscientiousness,

agreeableness, and openness. Personality was presented with being a predictor of psychological disorders thus, it may be indicative of future depression, anxiety, and substance use for those who have a proneness for specific Big Five traits.

Chapter 3. Hypothesis

The stereotypes attributed to ABG people often appear. However, there does seem to be research suggesting that ABG participants are more permissive in relationships and have lower conscientiousness which may present the stereotype to be partially evidence-based. Correspondingly, ABG, lower conscientiousness, and permissiveness in relationships seem to be correlated to depressive symptoms. Therefore, the hypotheses are broken down as follows. Hypothesis 1(H1) is that there will be a positive correlation between ABG and depressive symptoms. Hypothesis 2 (H2) is that permissiveness will correlate positively to both ABG and depressive symptoms. Hypothesis 3 (H3) is that conscientiousness will be negatively correlated to ABG, permissiveness, and depressive symptoms. Hypothesis 4 (H4) is that conscientiousness will mediate ABG and permissiveness. Hypothesis 5 (H5) is that conscientiousness and permissiveness will mediate ABG and depressive symptoms based on Hayes (2013) model 6 as seen in Figure 1. Hypothesis 6 (H6) is that there will be a difference between those who are ABG and those attracted to the opposite gender (AOG) in conscientiousness, permissiveness, and depression scores. The whole model would display the relationship that ABG has with depression and that its development is linked to lower conscientiousness and permissiveness in relationships.

Chapter 4. Significance

Currently, research has been addressing the significant correlation between minority sexual orientations and decreased mental health outcomes. This is an important area to research due to the misconceptions and biases that many people have, especially, in understanding bisexuality and ABG. Research not only opens up the discussion and reveals problems that may be unaddressed in society; it can also bring about future treatments and therapy that are more understanding and holistic in approach. Treatment and coping factors can be better implemented through researching the lifestyle and personality dimensions correlated with bisexuality and ABG. This can develop positive mental health and safer, better well-being for a commonly disregarded and oppressed sexual minority group. Most of the research that correlates ABG to depression focuses on oppression through bi-negativity as the main source. While being a major influence, this does not seem to explain the whole situation since many minorities are oppressed and bisexuals still seem to have increased psychopathology comparatively. Therefore, it is proposed that perhaps lifestyle choices that are correlated with ABG can explain the development of negative mental health outcomes. Furthering this regard, personality may also be a factor that both are correlated to ABG and lifestyle choices. However, the lifestyle that is correlated with ABG, (i.e., permissiveness in relationships) could be common stereotypes being pushed upon those who identify as ABG. ABG is viewed negatively in society, even within the LGBT+ community which further presents the lack of safe spaces and cultural identity. Thus, even when considering the lifestyle of permissive relationships and lower conscientiousness, bi-negativity and other stereotypes may be influencing these factors as well. Society often projects a double standard in

behaviors and specific “rules” that hinders the development of identity and self-concept clarity for minorities such as bisexuals and ABG people. For example, bisexuality is often viewed as a phase and there is a discrepancy between genders in its acceptability with women being allowed to express their attraction more freely to both genders. This effect can be seen in the internalized struggle that ABG people have with heterosexism, homophobia, and heterophobia. By understanding the origin of the situation, better treatment and awareness can be put into place to present a more holistic approach, such as creating specialized and personalized safe spaces for ABG people as suggested by Maliepaard (2018). Therefore, this study addresses lifestyle and personality in their links to depression in order to add further understanding in the development of psychopathologies for people who are attracted to both genders.

Chapter 5. Literature Gap

Currently, the research in sexual orientation has been expanding, especially within the lifestyle of those who are attracted to both genders.. The area of depression, internalized heterosexism and homophobia, and bi-negativity have been heavily researched showing mediation between the variables (Mereish, Katz-Wise, & Woulfe, 2017; Bayer, Robert-McComb, Clopton, & Reich, 2017; Hatzenbuehler, Dovidio, Nolen-Hoeksema, & Phills, 2009). Personality factors have also been considered (Allen & Walter, 2018) in line with negative health outcomes (Tse, Kwon, & Faust, 2018) and lifestyle in terms of nonmonogamy and open relationships (Moors, Selterman, & Conley, 2017). However, there is a mix in the mental health outcomes for those who are ABG and in open relationships with some being positive in terms of improved communication (Stults, 2019) while others resulted in increased bi-negative experiences and depression

(Whitton, Weitbrecht, & Kuryluk, 2015). Therefore the model that represents the link between ABG and depression is expanded by including the Big Five trait conscientiousness and the lifestyle choice of permissiveness in relationships. This study branches together with the side of personality and lifestyle preferences in their development of depression for people who are attracted to both genders.

Chapter 6. Method

Participants

An expansive survey went out to 895 participants from across the United States via Mechanical Turk. Of the participants 177 were attracted to both genders (ABG); 43 were men and 134 were women. 718 participants identified as being attracted to the opposite gender of themselves (AOG)). Men made up 41% of participants while 59% identified as women (Table 1). The ages of the participants ranged from 19-77 years old with those in their late twenties and early thirties making up the majority of the population for both AOG and ABG(Figure 2). 79% of participants were Caucasian/white, .08% were African American, .06% were Hispanic/Latino, .05% were Asian, .001% were American Indian/Alaska Native, and .02% identified as other (Figure 3). Participants received \$1 for completing the survey.

Materials

Attraction: Attraction was defined by correlating results for gender identity with results for what gender(s) they are attracted to. Those that marked both genders were placed in the attracted to both genders group (ABG). Those who were female and were attracted to men and those that were male and were attracted to women were combined in the attracted to the opposite gender (AOG) group. Neither identified as a specific

orientation, thus these are broad terms to signify their attraction. Previous studies have also used other measures to categorize sexual orientation instead of using only personal identifiers (Burke, et al., 2017).

Depression: The Depression Anxiety Stress Scale (DASS21; Lovibond & Lovibond, 1995) is a validated, self-report, Likert scale (0-3, 0 being no application and 3 being very much applicable) and made up of 21 items used to measure negative emotional states of depression, stress, and anxiety. 7 items make up the depression scale measuring affect such as self-disparaging, dispirited, gloomy, blue, and convinced that life has no meaning or value using questions such as “I found it difficult to work up the initiative to do things”. The Depression scale has a high internal consistency ($\alpha = .90$; Lovibond & Lovibond, 1995) and an 8-week retest reliability ($r = .60$; Lovibond, 1997, cited in Lovibond, 1998).

Conscientiousness: International Personality Item Pool (IPIP-NEO, Goldberg, et al., 2006) has a validated, 10-item scale measuring conscientiousness (Alpha = .81). This is a 5-point Likert scale with 1 being “very inaccurate” and 5 being “very accurate”. The scale is keyed by either low conscientiousness with questions such as “find it difficult to get work done”, or keyed at high conscientiousness with questions such as “pay attention to details”.

Positive view of open relationships: Brief Sexual Attitudes Scale (BSAS; Hendrick, 2006) is a 23 item, 5-point Likert scale that ranges from strongly agree to strongly disagree. One of the subscales measures permissiveness in relationships which has 10 items asking questions such as “I would like to have sex with many partners”.

This can relate to polyamorous relationships, open relationships, and casual one-night stands.

Procedure

Data was first evaluated and screened for any participants who missed answers, answered bogus questions (questions that were set-up in order to notice nonsense respondents), and those that were answering the same way throughout each scale were removed. This was done to avoid mindless responses and ceiling effects and floor effects within the results. A one-way ANOVA analyzed the difference between AOG and ABG in results for conscientiousness, permissiveness in relationships, and depressive symptoms. Process by Hayes (2013) was run using model number 6 at 10,000 bootstraps and 95.00 level of confidence with ABG and depression being mediated by first conscientiousness followed by permissiveness in relationships. This is in line with previous research between sexual minorities and depression with having internalized homophobia and college acceptance as mediators (Heiden-Rootes, Wiegand, Thomas, Moore, & Ross, 2020) which has the same mediation model as does this current study.

Chapter 7. Results

There was a significant difference between AOG and ABG participants in conscientiousness ($F(1,893) = 26.669, p < .001$), permissiveness in relationships ($F(1, 893) = 60.325, p < .001$), and depressive symptoms ($F(1,893) = 31.448, p < .001$) as seen in Table 2. The ABG group tended to have lower conscientiousness higher permissiveness, and higher depressive symptoms (Figure 4). Mean difference presented the ABG group as having higher depression, higher permissiveness, and lower

conscientiousness both in comparison to the AOG group and the mean average as seen in Table 3.

ABG had a direct effect on conscientiousness $R^2 = .029$, $F(1, 893) = 26.229$, $p < .001$. ABG and permissiveness were mediated by conscientiousness $R^2 = .281$, $F(2, 892) = 38.224$, $p < .000$, while also having a positive direct effect ($t = 7.051$). The overall mediated relationship between ABG and depression mediated by conscientiousness and permissiveness in relationships showed significant results $R^2 = .199$, $F(3, 895) = 73.958$, $p < .001$. Individually, ABG and permissiveness were positively correlated to depression ($t = 4.075$, $t = 2.712$ respectively) while conscientiousness was negatively correlated ($t = -12.829$). The total indirect effect of ABG on depression ($p < .001$) was higher than the direct effect ($p < .05$) though both were significant (Table 4).

Chapter 8. Discussion

Review

There was a significant difference between AOG and ABG participants when it came to personality and lifestyle viewpoints showing H6 to be significant. The ABG group tended to have lower levels of conscientiousness than did the AOG group. They were also more likely to have a permissive attitude when it comes to relationships meaning open relationships, nonmonogamy, casual hook-ups, and the like. As commonly seen in past research, ABG participants also had higher levels of depression (Mereish, Katz-Wise, & Woulfe, 2017; Maimon, Sanchez, Albuja, & Howansky, 2019) which covers H1. Past research using the DASS_21 on a bisexual population found the mean depression score to be 11.94 which was reportedly higher than that of the past (Bayer, Robert-McComb, Clopton, & Reich, 2017). The mean score with this population of

participants that are attracted to both men and women is 14.67 which is way higher suggesting that this population may be clinical and not representative of the average. H2 and H3 were also shown significant with permissiveness being positively correlated to both ABG and depression, as well as conscientiousness being negatively correlated to all three variables. While being disorganized and permissive in relationships is a common stereotype (Dyar, Lytle, London, & Levy, 2017; Zivony & Saguy, 2018; Beach et al., 2019) there is past research suggesting validity to these stereotypes (Stults, 2019; Molina et al., 2015; Bogaert, Ashton, & Lee, 2018; Kowalczyk et al., 2019) and is reported within these results, as well. Not only is there a significant correlation, but the relationship between ABG and permissiveness in relationships is mediated by conscientiousness suggesting a linear relationship. Both H4 and H5 displayed significance with conscientiousness mediating ABG and permissiveness and further, conscientiousness and permissiveness mediating ABG and depression. These relationships show a progressive process by which those who are ABG experience depression.

Implications

While this data set specifically looks at only attraction the results are in line with past research with participants that identify as bisexual. With bisexuals tending to have lower conscientiousness in past research as also seen in the ABG group (Kowalczyk et al., 2019), it is evident why depression and other negative psychopathologies are so prevalent (Mereish, Katz-Wise, & Woulfe, 2017; Maimon, Sanchez, Albuja, & Howansky, 2019). Furthermore, this correlation is an explanation for the willingness to engage in open relationships, especially, since there is evidence that there is some benefit

in open communication and sexual satisfaction (Stults, 2019; Whitton, Weitbrecht, & Kuryluk, 2015; Parsons, Starks, Gamarel, & Grov, 2012) and that through lower conscientiousness (Kowalczyk et al., 2019; Moors, Selterman, & Conley, 2017) there can be an increase in thrill-seeking and more disorganized behavior.

Ayala (2017) gave an analysis of the choice of sexual orientation that there are many philosophical arguments as to what the origin of sexual preference is and how people choose to interpret the testimonies and research done in this area. While sexual identity is not discovered typically until later into adolescence, there may be a predisposition that develops early on in life similar to the Big Five. Bogaert, et al. (2018) argues that the Big Five influences sexual orientation. However, this relationship could be theoretically reversed in that sexual orientation influences the Big Five, or that they are developmentally predisposed at a similar time. This current study presents the case that sexual orientation may have a linear effect on the Big Five trait conscientiousness. This could be that those who are likely to identify as ABG may also have lower conscientiousness or may perceive themselves as having lower conscientiousness due to the aforementioned stereotypes such as being disorganized, confused, etc.

Furthermore, this study then gives a different perspective on the development of depressive symptoms commonly seen with those who are ABG. While many attest that it is the bi-negativity and stereotypes that lead to depression (Flanders, Dobinson, & Logie, 2017), this may be the case with the push of being permissive in relationships and seen in the increased expression of this behavior, as well as, perceiving themselves as being lower in conscientiousness. This supports both the expressed action within this study and previous research and the influence of bi-negativity. Thus, while evident that those who

are ABG tend to have a lifestyle that is comparable to the pressured stereotypes, it is difficult to address where the origin of these stereotypes presents. Perhaps, the stereotypes are pressured onto ABG individuals and they then act according to the perceived bisexual identity and culture. People who are ABG may perceive themselves as the stereotypes since there is a lack of community and identity for them. By connecting and embracing the stereotypes this can create a culture and sense of identity, but one that is mainly viewed negatively from outside groups. To reiterate, a person who is ABG may be pressured into thinking they lack conscientiousness and are permissive in relationships due to the stereotypes that are pushed on them by society and through bi-negativity encounters. Since the Big Five is a self-report measure, it relies solely on self-analysis and self-perception. So, if a person has lower self-concept clarity and views themselves as the image that is projected onto them by society through stereotypes, this pseudo-self-perception could explain the Big Five correlation of lower conscientiousness. There may be a projection of identity that is attached to ABG that one may perceive themselves to align with societies' preconceived stereotypes or to be connected to the few stereotypes that give the impression of cultural expression. So then, changes in behavior can be seen where those who are ABG may evaluate themselves to have lower conscientiousness and are more apt to participate in nonmonogamous relationships. Which, then based on cognitive dissonance, social pressure, isolation, and general lower conscientiousness an ABG person could experience psychopathologies, such as, depression and anxiety. Conversely, these stereotypes may have been constructed by the public based on general observations of those who are ABG even using other people who identify as bisexual as role models and follow their influence. In this case, lower conscientiousness still will be

evident. However, if the argument aforementioned is valid, then having an overwhelming amount of pushed negative stereotypes can be damaging to an ABG person when self-actualizing. So, while some truly have lower conscientiousness and are more inclined towards permissive relationships, others may only perceive themselves to be this way when in actuality they would not uphold that view. Perhaps this explains why bi-negativity and social pressure can lead to a decrease in mental health outcomes.

Limitations

By using Hayes's (2013) model of mediation there is theoretical importance of time-ordered development with each variable. One of the main limitations is that currently there are still theoretical discussions as to when sexual orientation is developed, so the theory that attraction comes before conscientiousness may not be fully founded. However, even if this was not the case the correlation was so strong that the overall theoretical model was quite solid. There may be differences in the mediation model when evaluating race and ethnicity that may not be displayed by this population with the majority being Caucasian/white. Further, the sample population of ABG would preferably be larger than seen in this study. However, based on a survey from Gallup Daily Tracking in 2016, bisexuals make up 4.1% of the population based on phone calls to about 1.6 million U.S. adults (Gates, 2017). Based on that data, the population influx of about 20% ABG participants within this data there may be some disparity for generalizations and that there is a larger average within this study than seen in the general U.S. population. This may also be due to the fact that the participants did not respond with what they identify as, thus not considering themselves bisexual, pansexual, or omnisexual and are only answering what genders they are attracted to. While being

attracted to both genders assumes that one is under the bisexual term, they may not identify this way and are therefore representing a larger population than what is currently noted. Additionally, the mean score for depression was seen higher within this population than previously suggesting that the population may not be generalizable to non-clinical populations. Lastly, with the use of a self-report mass survey, there may be false or misguided responses that may influence the final results.

Future Studies

Future studies should evaluate this model with other sexual minorities and compare the effects amongst the different groups within the LGBT+ community. The relationship between bisexuality and depression should be evaluated with more definitive mediators and moderators to display and give answers to why this relationship is so prevalent which can then turn into treatments that are more precise and holistic. There should also be a study done using the interview style to evaluate specifically the stereotypes and their effect on the perception of self. Through this, a conversation on the personal impact of stereotypes can be addressed as well as evaluating a stronger role of self-concept clarity. Additionally, there should also be further research on how to better create a culture and social bonding that does not rely on the negative stereotypes that are currently seen for bisexuals. Using self-concept clarity as a treatment method in future studies may change the result of negative mental health outcomes by targeting identity and self-perception. This may combat the effect of bi-negativity and increase self-esteem as well as cultural bonding. By helping bisexuals gain further self-concept clarity they may be able to lower depression rates and combat bi-negativity by having higher self-esteem and confidence in themselves (Makhubela, 2019; Stinson, Wood, & Doxey,

2008). Lastly, it would be theoretically interesting and useful to have sexual orientation be a common demographic question since there is often displayed a difference between heterosexuals and sexual minorities in research and should, therefore, be treated the same as gender typically is in demographic questions.

Chapter 9. Conclusion

The common stereotypes that are expressed towards people who are ABG and bisexual have been evidenced in the relationship with depression that is mediated by lower conscientiousness and permissiveness in relationships. Additionally, more evidence is shown that those who are ABG are more likely to display depressive symptoms and that multiple factors are influencing this relationship, such as, personality and attitudes about life that can mediate this relationship. This could be explained by the stereotypes that are held in regard by others to those who are ABG or bisexual and the lack of culture and identity for the sexual orientation that is typically seen in homosexual and even heterosexual orientations. Treatments should now address this relationship's mediators to help lower depressive symptoms and to target the problem more holistically for example the role of self-concept clarity in the development of psychopathologies

Figures and Tables

Figure 1.

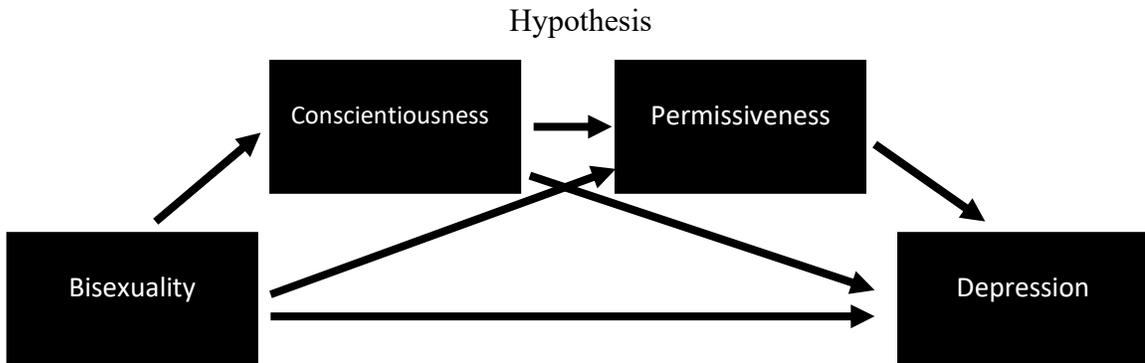


Figure 1. A theoretical model of the hypothesis using Hayes model 6 (2013) representing the mediation of conscientiousness and permissiveness in relationships between bisexuality and depressive symptoms.

Figure 2

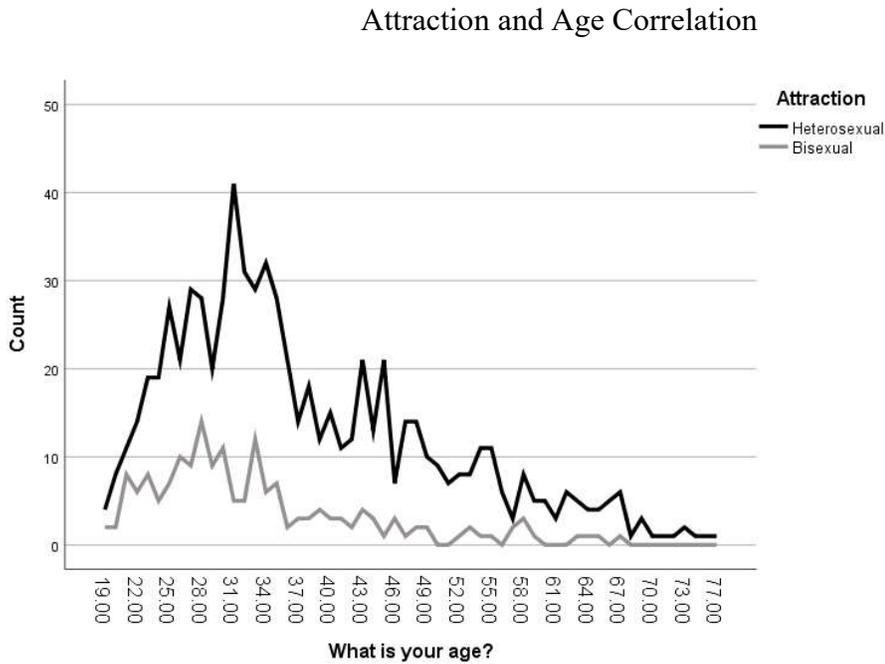


Figure 2. Age of participants within the data via their sexual orientation.

Figure 3.

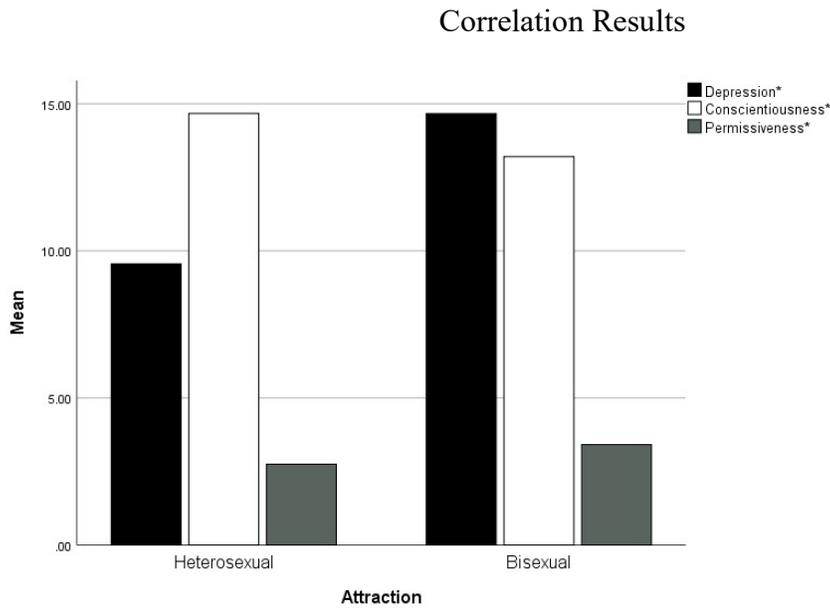


Figure 3. Representation of the difference between bisexual and heterosexual results.

*represents that the p-value was $>.001$

Figure 4.

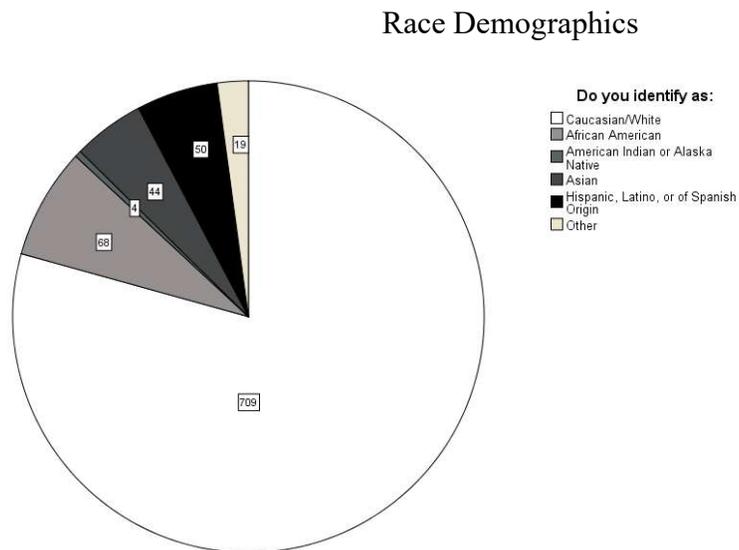


Figure 4. Percentage of the population based on what race they identified as.

Table 1.

Gender and Attraction

		Do you identify as:		
		Male	Female	Total
What sexes are you attracted to?	Men only	0	398	398
	Women Only	320	0	320
	Men and Women	43	134	177
Total		363	532	895

Note. A crosstab on the participant population based on the gender they identify as and what gender they are attracted to.

Table 2.

Results for Sexual Orientation

	Sum of Squares	df	Mean Square	F
Depression	3711.21	1	3711.21	31.448*
Conscientiousness	306.551	1	306.551	26.669*
Permissiveness	63.425	1	63.425	60.325*

Note. One-way ANOVA correlating the difference between heterosexuals and bisexuals in their scores between depressive symptoms, conscientiousness, and permissiveness. *p-value was <.00.

Table 3.

Table 3. Average Means Across Variables			
	Conscientiousness	Permissiveness	Depression
Bisexual	13.2034*	3.4141*	14.667*
Heterosexual	14.6727*	2.7457*	9.5543*
Conscientiousness	-	2.8779	10.5654
Permissiveness	-	-	10.5654

Note. The average of means across the variables. There is a difference between bisexual and heterosexual scores. * indicates the difference in means between bisexuals and heterosexuals is p-value < .05.

Table 4.

Model 6 Results for Mediation

Results						
Depression: R = .4465, R2 = .1994, MSE = 98.0290, F = (3, 891) 73.9580, P = .0000						
	b	se	t	p	LLCI	ULCI
Bisexual	2.664	0.8664	3.0748	>.05	0.9636	4.3643
Conscientiousness	-1.2643	0.0986	-12.829	>.001	-1.4577	-1.0709
Permissiveness	0.8839	0.3259	2.7124	>.05	0.2443	1.5234

Note. Results of the indirect and total effect of the mediation model with depressive symptoms (DASS_21) being the outcome measure for each variable.

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