

ABSTRACT

This research sought to explore the academic impact of peer victimization and minority stress on gender non-binary students through the lens of the Minority Stress Framework and Social Learning Theory. I compared gender non-binary student's experiences at coed institutions with those who attend Historically Women's Colleges to see if there was a difference in level of discrimination, and whether peer-related minority stress negatively impacted academic performance through the mediator of stress. One hundred and six participants from the five-college consortium, who identified as gender non-binary completed an online survey. The findings indicate that students who identify as non-binary in coed institutions report greater peer-related minority stress than their non-binary counterparts in Historically Women's Colleges; peer-related minority stress is associated with increased stress, which is negatively associated to students' academic confidence.

Keywords: gender identity, gender expression, gender non-binary, gender non-conforming, peer victimization, minority stress.

An Exploration of the Impact of Minority Stress on Gender Non-Binary College Students and
Their Academic Confidence

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AN EXPLORATION OF THE IMPACT OF MINORITY STRESS ON GENDER NON-BINARY COLLEGE STUDENTS AND THEIR ACADEMIC CONFIDENCE

Introduction

It is the beginning of the semester at an “all-women’s” college in a small New England town where class often starts with seemingly standard introductions: name, major, graduating year, and pronouns. During this introduction, a student identifies their pronouns as they/them/theirs, possibly having been one of few opportunities to openly do so in a structured, social, learning environment. The gesture of asking for pronouns seems to glean a moment of acknowledgement and respect for gender non-binary identities, but this small moment does not negate the discrimination and violence non-binary individuals often experience. Gender non-binary is a term used to describe any individual whose identity is not exclusively male/masculine or female/feminine (Webb, Matsuno, Budge, Krishnan & Balsam, 2015). To some, a non-binary gender identity may be unfamiliar or seemingly new, however, non-binary identities have been present throughout time all over the world (Richards, Bouman, Seal, Barker, Nieder & T’Sjoen, 2016).

Gender roles in the United States are largely rooted in socially constructed expectations of gender binary and heteronormative ideals. Individuals, particularly youth who identify as non-binary, face an overwhelming amount of discrimination and peer victimization as a result of the marginalization of their gender identity (Wyss, 2004; Colier, van Beusekom, Bos, & Sandfort, 2013), which can be considered forms of minority stress. Minority Stress Theory was originally proposed to examine and explain how the experiences of higher levels of discrimination and stress experienced by sexual minorities leads to various negative mental health outcomes (Myer, 2003). Non-binary individuals face discrimination due to the

marginalization of what is considered a “non-conforming” gender identity, which may also be linked to worse mental health outcomes.

A study conducted by Wyss (2004), found that there are many negative mental health outcomes relating to violence, bullying, and peer victimization associated with gender non-binary and gender non-conforming (GNC) identities. Some of the negative mental health outcomes experienced by non-binary students are, but not limited to, internalized negativity, feelings of fear, anxiety, depression, suicidal ideation and self-harm, low-self-esteem, and traumatic stress (Colier et al. 2013, Wyss 2004). Non-binary youth have had to resort to adaptive coping strategies, such as avoidance, conformity, self-defense, and alcohol and drug use (Wyss 2004). The bullying, violence and peer victimization experienced by non-binary youth has a serious negative impact on academics. This includes individuals reporting higher levels of peer victimization, decreased sense of school belonging, a lack of perceived safety, higher incidents of discipline related issues (such as truancy or expulsion), overall lower academic performance and disruptions in school trajectories (including high dropout rates), and an ultimate increase in overall negative mental health outcomes (Colier et al. 2013, Wyss 2004).

There is limited research focusing on non-binary experiences of minority stress and how that affects various aspects of living, particularly the effects of peer victimization and discrimination on academic performance in higher education. In this study, I am interested in exploring the effects of minority stress in the form of peer victimization on non-binary students’ perceived academic performance across different higher education institution types by asking the following questions: 1) Do students who identify as gender non-binary experience greater discrimination, peer victimization, and minority stress, at coed institutions in contrast with

Historically Women's Colleges?¹ and 2) Does the discrimination and resulting minority stress negatively impact the student's self-evaluation of academic success? Exploring these topics in greater depth will help to shed light on the gravity and academic impact of discrimination experienced by non-binary students. With this information, academic institutions may be better equipped to address these issues to make higher education environments more supportive to non-binary students.

Gender Non-Binary and Gender Non-Conforming Identities

Non-binary gender identities vary along a continuum outside of the typical European and American societies' polarized female/feminine and male/masculine identities. Examples of some non-binary spectrum identities are: agender, androgynous, bigender, transgender, gender non-conforming, genderqueer, gender variant, boi, genderfluid, third gender, two-spirit (Indigenous cultures), between gender, beyond gender, pangender, trigender, mixed gender, calalai (Indonesia), hijra (India), or other identities that do not align with Eurocentric gender roles (Austin & Goodman, 2016; Richards et al., 2016; Fontella et al., 2014; Gordon & Meyer, 2007; Tebbe & Moradi, 2016). Non-binary is a term that is considered a specific identity as well as an umbrella term used to describe the various identities on the continuum similar to the term genderqueer. People often recognize their non-binary gender at a young age or prior to their teenage years (Rankin & Beemyn, 2012). It is unclear just how many people identify as gender non-binary, but based on the limited research, individuals who identify as non-binary make up 25-35% or more of the transgender population. This does not take into account those individuals who are non-binary that do not identify as trans (James, Herman, Rankin, Keisling, Mottet, &

¹ For the purpose of this study, I will be using the term "Historically Women's Colleges" to describe institutions that are women's colleges in ethos and name, but that are currently admitting and retaining students who do not identify as women. This includes students that may identify as non-binary, among other gender minority identities

Anafi, 2016; Barr, Budge, & Adleson, 2016; Mikalson, Pardo, & Green, 2014). For the purpose of this research I will be using the terms gender non-binary and gender non-conforming (GNC).

Some studies suggest that when discussing gender identity, it should be considered separately from 'sex' and 'sexuality' as the terms are not synonymous; while gender may have some biological underpinnings, it is considered socially constructed, performative, fluid, and can be challenged or reinforced through 'dominant social norms' (Bauman 2013; Deutsch, 2007; Fontella et al. 2013; West & Zimmerman, 1987). That said, it is important to note that some sources have found that gay and lesbian adults tend to be more GNC or are more likely to identify as non-binary than their heterosexual peers, and that lesbian, gay and bisexual (LGB) youth are more likely to identify as GNC or non-binary. However not all LGB people are non-binary and vice versa; some GNC and non-binary individuals identify as heterosexual (Rieger, 2010; Skidmore et al. 2005). Exploring Social Learning Theory in relation to gender identity can help us understand how people who identify as non-binary or GNC navigate their gender expression and often experience a greater amount of discrimination compared to their cisgender peers.

Social Learning Theory

Social learning theory suggests that social environments shape the way people process information and act. These thoughts and behaviors are learned and solidified through observation, modeling, and social reinforcement (Bandura & Walters, 1963; Mischel, 1966; Spelke, 2005). Mischel (1966) suggests that children observe and begin to develop their understanding of gender roles through proximal modeled behavior. Children are more likely to replicate the behavior of a model that is: of the same gender, holds a position of power, acts in a

manner that is ‘socially normative’ for their gender, and has a positive relationship with the observer/child (Helgeson, 2012). West and Zimmerman (1987) describe gender identity as actors who assume roles that are socially constructed and seen as performative; children begin to develop and engage in these roles at a young age through model observation. Social learning theory largely pertains to cisgender individuals as they have been the majority of participants thus far. For the purpose of this research, I will extrapolate Social learning theory to the experiences of non-binary people.

Aggression is a good example of a behavior that is “typically” seen as masculine and has been modeled and reinforced through TV, movies, video games, and other social settings. With young boys being the target audience of aggression modeling, they learn at a young age that aggressive responses to certain social situations is not only acceptable, but also depicted as a desirable masculine trait (Helgeson, 2012). Similarly explained through Identity Theory, Carter (2014) discusses how gender ideals and stereotypes are influenced by social norms and are perpetuated through outdated institutional structures of kinship. Families begin reinforcing gender norms at birth through actions such as gendered color categories (pink for girls, blue for boys), and enforce themes in traits such as strength and agility in boys, and grace and delicacy in girls. Rewards and consequences are used in family and social structures to reinforce gender roles.

Parental and social reinforcement of modeled behavior is different for boys and girls in that boys are more severely punished or threatened for deviating from gender role norms even if the consequences are only perceived, while girls are often reinforced through rewards (Helgeson, 2012). Parents may nurture girls more and encourage domestic activities such as playing with

dolls, cooking and having good manners, whereas boys are encouraged through rough play to be tough, play with trucks, and refrain from crying. Boys are more likely to receive consequences for cross-gender behavior such as parental scolding or rejection for playing with girls' toys, playing dress up, or being feminine in any way, with the level of ridicule being amplified for boys that are gay or people that are assigned male at birth and are non-binary (Helgeson, 2012). Girls are less likely to be punished for crossing boundaries like playing sports or wearing boys clothing. These adolescent subcultures become internalized and influence individuals' social interactions, particularly in school settings as it may manifest into peer victimization for non-adherence to binary gender norms. This reinforces the idea that adherence to stereotypical gender expectations is due to social and familial influence and is carried on into adulthood (Carter, 2014). Given that boys are more likely to be punished for deviation from gender norms and reinforce gender norms potentially leading to peer victimization; non-binary students at coed institutions may be more likely to experience victimization due to the greater presence of males on campus.

Davidson (2009) found that men who challenge the norm by taking on typical feminine characteristics are devalued based on the negative connotations generally associated with femininity, and automatically relinquish their positions of power in society. Halberstam (1999) stated: "since masculinity is a sign of privilege... it is much more heavily guarded than femininity... boys who exhibit feminine behavior are punished [as they] constitute a powerful assault on male privilege" (p. 164). Some men will create carefully constructed blended identities of feminine characteristics masked by typically masculine ones in order to subtly challenge gender norms (Davidson, 2009). The balance of these blended identities demonstrates Goffman's (1959) theories around 'doing gender' reflecting how people convey their identities in

specific ways to avoid experiencing humiliation and hostility from others, essentially conforming to social norms as a self-protective measure.

Conversely, some research has found that women who express masculine qualities that are positively valued (i.e. competitive, strong, independent) may receive an elevation of status as these socially acceptable traits are still valued even when adopted by women; whereas men that adopt feminine traits that are negatively valued such as being overly sensitive and timid will see negative effects (Bailey, Bechtold, & Berenbaum, 2002; Martin, 1995). One study examined the social significance of labels surrounding adoptions of positive and negative traits of a different gender such as “tomboy” to describe a girl with positive male attributes or “brat” conveying negative associations and using terms such as “sissy” for boys with negative female characteristics or “mama’s boy” describing boys with positive female characteristics (Coyle, Fulcher, & Trubutschek, 2013). The adult participants struggled with using the term “mama’s boy” as they held less than positive overall views of boys who exhibited traits that were anything other than masculine (Coyle, Fulcher, & Trubutschek, 2013). For girls who had the label of “tomboy” it was viewed as a positive label by women but not by men even though the label was associated with positive masculine traits (Coyle, Fulcher, & Trubutschek, 2013). This study exemplifies how labels can be used as a form of social reinforcement and how some men tend to be more critical of, and criticized for, gender role deviation which further demonstrates why coed institutions may be less safe for non-binary students.

Non-binary individuals may experience difficulties in developing and reinforcing gender expression due to the perpetuation of socially constructed gender beliefs. The external societal expectations become internalized while they are inundated with heteronormative standards of

beauty, society only showing support for behavior that is consistent with gender norms, and adverse feedback for any act outside of the norm (Carter, 2014; Wyss, 2004). However, Davidson (2009) describes people who identify as gender non-binary by saying “They do not see their gender as confused, but rather quite clear as borderland dwellers moving freely between fixed gender binaries regulated and enforced by established norms of heterosexism” (p. 616). Coyle, Fulcher, and Trubutschek (2013) found that when adults were asked to describe non-binary or GNC children, they associated the non-binary identity negatively with queer identities, used terms such as “fag” to describe them, and saw them as less competent than their conforming peers, compounding the issues of prejudice.

When considering Social Learning Theory, non-binary and gender non-conformity of any kind appears to be more negatively viewed by men than women due to society’s commonly held beliefs around masculinity and heterosexuality. This may have implications, as Gordon and Meyer (2007) explain that interactions with prejudice shapes behavior particularly when prejudice and associated violence come from sources that are perceived as safe, such as family, school, work and other public settings. Non-binary/GNC children often face challenges of fitting in amongst gender binary peers and are frequently pressured by adults to conform to typical social expressions of gender. These circumstances may create long term negative health outcomes as a result of internalized negativity (Coyle, Fulcher, & Trubutschek, 2013). The research around Social Learning Theory in conjunction with societies’ expectations of gender roles helped to shape my first hypothesis that non-binary students at coed institutions will experience greater discrimination than students at Historically Women’s Colleges.

Given that social norms shift and evolve over time, Social Learning Theory would suggest that gender roles would evolve as well. Until then, non-binary individuals will experience an inordinate amount of discrimination and marginalization due to their gender minority identity and the perpetuation of socially constructed, binary gender rules. The Minority Stress Model helps us to understand how this particular type of prejudice leads to negative mental health outcomes.

Minority Stress

Meyer's (2003) Minority Stress Model expands on the concepts of external and internal factors in social stress theory as applied to sexual minorities, specifically LGB individuals. Social Stress theory describes how your social environment can influence your experienced stress (Meyer, 2003). Meyer discusses the effects of exposure to discrimination, prejudice, and violence experienced by sexual minorities as external contributing factors to negative mental and physical health outcomes (Meyer, 2003). He also theorizes that such exposure leads to internalized stress factors, such as expectations of rejection, isolation, internalized homophobia, and pressure to conceal sexual identity. Though Meyer did not specifically apply this theory to non-binary individuals, other researchers have. The Minority Stress framework is a versatile tool that can be applicable to multiple minority groups and can be particularly helpful when discussing intersectionality. Through the Minority Stress lens, I will explore how non-binary specific stressors and stressors related to other marginalized identities affect academics and mental health outcomes.

Non-binary minority stressors. Testa, Michaels, Bliss, Rogers, Balsam, and Joiner (2016) describe a gender minority stress and resilience model, which suggests that there are

“four external stressors: gender-based victimization, gender-based rejection, gender-based discrimination, and identity non-affirmation” (p. 2). Trans and gender non-binary individuals experience victimization in the forms of verbal and physical violence such as being verbally harassed, being called “it”, experienced property damage, and or engaged in sexual activity against their will, to name a few examples. Rejection can be experienced via people, places, and establishments, such as being made to feel unwelcome in religious groups, cultural or ethnic communities, or distanced from friends because of their gender identity. Trans and gender non-binary individuals often experience discrimination through denial of housing, employment rejection, inability to obtain legal documentation accurately reflecting their gender identity as opposed to what is assigned at birth, and lack of access to quality healthcare. All of these experiences lead to feelings of “thwarted belongingness” (Van Orden, Witte, Crukrowicz, Braithwaite, Selby, & Joiner, 2010; Testa et al., 2016). The fourth external stressor, identity non-affirmation, is caused by others not recognizing, as well as rejecting, trans and non-binary identities (Testa et al., 2016). Based on a series of interviews, Austin (2016) discusses the difficulties and feelings of confusion, isolation, and uncertainty that are experienced when constructing a GNC non-binary identity in a society where gender binary identities are embedded in so many social and cultural institutions. Participants found it particularly frustrating to not have many, if any, visible representations of other individuals with non-binary identities. This sense of exclusion is not limited to heterosexual people who identify as gender non-binary.

Individuals who identify with lesbian, gay, bisexual, and queer sexual identities are more likely to identify as non-binary than their heterosexual counterparts (Reiger, 2012; Skidmore, Linsenmeier, & Bailey 2006). Non-binary individuals experience a perceived lack of support and in group discrimination from the LGBTQ community for reasons such as not using binary

pronouns, and not being “trans enough” due to their lack of conformity to strictly feminine or masculine identity characteristics (Austin, 2016; Rankin & Beemyn, 2012). The lack of association that non-binary individuals experience can lead to feelings of confusion from the absence of validation and affirmation, making it more challenging to adopt non-binary identity labels (Rankin & Beemyn, 2012). These issues are particularly challenging for non-binary youth.

Gender non-binary adolescents experience peer victimization, peer and parental rejection, ridicule, are seen as in an identity crisis that needs to be “treated”, are often victims of physical and sexual violence, and endure a general lack of acceptance. This lack of acceptance often is perpetuated by peers who are the same sex that non-binary people were assigned at birth, especially boys. These forms of minority stress may contribute to experiencing long term negative effects on adult relationships (Harrison, J., Grant, J., & Herman, J. L. 2012; Rieger and Savin-Williams 2010; Wyss 2004). Given that boys are more likely to not accept gender non-binary peers, non-binary student experience of gender-based discrimination may be greater at coed institutions as the presence of cisgender male peers may increase the likelihood for discrimination based on social conditioning.

Non-binary youth of color experience greater peer victimization, violence, discrimination, and a greater amount of minority stress relative to their white peers as they are facing marginalization in relation to their intersectional identities. This has a negative impact on various aspects of their lives including difficulties in academic environments and potential incarceration (Robinson, 2017). Robinson (2017) describes the disproportionate amount of discrimination and marginalization experienced by non-binary youth of color. This discussion

identifies three major sources that often-become catalysts to incarceration for Black GNC/LGBTQ youth: family rejection, homelessness, and hostile school environments. Family rejection is frequently experienced by non-binary youth. However, for youth of color, it appears to come from religious and cultural traditions that can lead to abuse, neglect, and even rejection from caregivers and community/ religious resources intensifying the sense of “thwarted belongingness and perceived burdensomeness” (Testa et al. 2016, p3) that non-binary and GNC youth experience (Robinson, 2017; Testa et al., 2016). Often times, non-binary individuals experience institutionalization to “cure their identity crisis” in conjunction with family punishment and rejection (Rankin & Beemyn, 2012). This type of denunciation and discrimination frequently leads to homelessness and potential difficulties with the law. GNC/non-binary/LGBTQ youth sometimes feel the need to resort to illegal behavior for the sake of survival, such as theft, loitering, and “survival sex.” Due to discriminatory practices such as institutionalized transphobia and racism, non-binary youth of color engaged in these survival behaviors experience greater rates of detention and incarceration compared to their white counterparts, who engage in the same behavior (Robinson, 2017). Despite the severity of the first two catalysts, the current study will focus on the last: hostile school environment.

Minority stress and academic impact. Non-binary students reported a decreased sense of belonging at school, a negative perception of the school atmosphere, regarded the school as an unsafe environment, and experienced a negative impact on academics (Collier et al., 2013). Though some colleges and universities have included language around “gender identity and/or expression” (typically trans specific) to their anti-discrimination policies and have created gender inclusive spaces, a large majority has not; those ‘inclusive’ environments still operate on binary systems which provide greater opportunities for conforming students, such as participation in

sports, fraternities and sororities, and other gendered academic activities (Rankin & Beemyn, 2012).

As mentioned previously, non-binary individuals often experience in-group discrimination from the LGBTQ community, college students experience the same difficulty when seeking non-binary specific support on campus (Rankin and Beemyn, 2012). Students like 'Bryce' in Davidson's (2009) interviews with teen-age males around "gender-bending", who are feminine and straight, feel the constant negative effects of challenging gender norms particularly in school settings: "The problem is that you can flunk the gender test at school just like you pass or fail algebra exams. But with gender, it takes a while to realize that you are constantly being tested" (p.622). Non-binary youth of color experience a heightened level of hostility in school environments; as black youth are already viewed by school administrators and their peers as "hyper-aggressive and sexually deviant", are often "blamed for their own victimization" and are commonly punished for "public displays of affection and violating gender norms" (Robinson, 2017, p14). The potential consequences for such hostile school settings for non-binary youth can lead to lower grades, an increase in absenteeism and truancy, higher dropout rates, and discipline related to aforementioned reactions to hostile school environments. For non-binary youth of color, consequences include a greater likelihood to be pushed into the school to prison pipeline with less opportunities for reformation (Robinson, 2017). The little research available focused on the effects of minority stress generally on high school students. However, these factors are likely still important to consider among college students, in that peer victimization may be associated with the increased stress, which may be negatively associated to students' self-evaluation of academic success. Many non-binary individuals have resorted to adaptive coping strategies as a result of the discrimination they have experienced.

Adaptive Coping Strategies

Wyss (2004), discusses how participants had shared in the interviews that they frequently adjusted their identities and actions for the sake of safety, adopted ‘tough’ identities for protective purposes, and avoided certain situations that they knew would result in aggressive physical peer victimization. While some participants avoided situations, others threatened to attack back with violence and profanity; conformity was often used for protective and in some cases survival purposes (Wyss, 2004). For non-binary youth of color, their self-protective measures were typically viewed as aggression, and were disciplined more frequently than their perpetrators (Robinson, 2017). Individuals often resorted to drugs and alcohol as a means of coping with the stress (Rankin & Beemyn, 2012), while others resorted to petty theft and sex-work in order to afford things such as clothing and hormones in attempt to “survive and live authentically” (Robinson, 2017, p.14). These adaptive coping strategies may interact with the effects of Minority Stress and the resulting negative mental health outcomes.

Negative Mental Health Outcomes

Adults and adolescents who identify as non-binary experience a greater amount of negative mental health outcomes such as anxiety, depression, suicidal ideation and self-harm related to the stress, discrimination, and stigma that they experience throughout their lifetime (Gordon & Meyer, 2007, Colier et al., 2013). The research of Collier et al. (2013) also found increased peer victimization associated with non-binary identities in youth to be associated with an increase in negative outcomes in adulthood, such as symptoms of depression, interpersonal difficulties such as “attachment anxiety” and submissive tendencies, and lower life satisfaction.

As noted earlier, GNC and non-binary individuals who sexually identify as LGBTQ are at a greater risk for being targets of victimization due to societal expectations associated with sexual orientation such as masculine lesbians and effeminate gay men. Some studies found a greater relationship between gay people who were assigned male at birth and identified as GNC/non-binary in relation to psychological distress, body dissatisfaction, suicidal thoughts and overall negative wellbeing as a result of stigmatization than GNC or non-binary people who were assigned female at birth (Reiger, 2010; Skidmore et al. 2005, Rankin and Beemyn, 2012). LGBTQ individuals may have a tendency to hide any sense of GNC or non-binary identities due to added increased exposure and criticism for violating social gender norms. This may cause gender conformity, LGBTQ group discrimination towards non-binary individuals, increased internalized homophobia and or transphobia due to childhood stigmatization, low self-esteem, anxiety, and suicidality (Skidmore et al. 2005; Reiger and Savin-Williams, 2010). Skidmore et al. (2005) examines anxiety and depression in gay men and lesbians finding that they are at an increased risk of mood and substance abuse disorders, suicidal thoughts, subjected to prejudice and harassment, and lesbians in particular experience more lifetime victimization leading to psychological distress. These studies found a greater relationship with negative wellbeing, discrimination, and violence to non-binary and non-conforming gender identities than with LGBTQ sexual identities alone (Harrison, J., Grant, J., & Herman, J. L. 2012; Reiger, 2010; Skidmore et al. 2005). In this light, it becomes apparent that intersecting identities, particularly sexual and gender identities that do not conform to heteronormative binary identities, increase risk of negative mental health outcomes particularly in adolescence.

The relationships between discrimination, mental health, and academic performance among non-binary people are important for educational institutions to consider in order to be

more proactive about gender-based discrimination. Having a better understanding of how each institution type relates to these relationships may help schools to provide better supports for non-binary students across a range of settings. The five-college consortium includes institutions that vary in student body population, affording me the opportunity to compare differences in institution types, coed versus Historically Women's Colleges.

Institution Profiles

The five-college consortium is made up of two, private women's colleges, two coed private liberal arts colleges and one public university. The following information was taken from each of the institutions "About" section of their websites. Mount Holyoke College which was originally Mount Holyoke Female Seminary, is a private women's liberal arts college which was founded in 1837 by Mary Lyon, chemist and educator, and considered "the female equivalent of the once all-male Ivy League". Smith College is also a private women's liberal arts college founded in 1871 by Sophia Smith as a way to provide education to women that was equal to her male peers. Amherst College, once a private all-male liberal arts college, founded in 1821 by Zephaniah Swift Moore and is third oldest institution of higher education in Massachusetts, became a coed institution in 1975. Hampshire College always a coed institution founded in 1965 admitting their first students in 1970, was imagined by the other four colleges offering an alternative education to the typical liberal arts college with socially liberal student structured education with a narrative evaluation system as opposed to a traditional grades and GPAs. University of Massachusetts, formerly Mass State or "Mass Aggie" founded in 1867 was originally an all-male public agricultural school, admitted their first female student in 1892 and has been a public coed institution since. The five-college consortium offers students the

opportunity to take classes at any of the other institutions. Each of the five colleges has a Nondiscrimination policy which addresses gender identity and expression.

Mount Holyoke College's admissions policy is to admit qualified students who identify as a female or woman upon admission, transgender men, as well as various transgender and non-binary identities, regardless of sex assigned at birth, with the understanding that identities change over time. Mount Holyoke does not admit cisgender males. Smith College's admission policy is slightly different in that they admit qualified students who identify as female either by birth certificate or self-identification at the time of admission and do not admit anyone who identifies as male, cisgender or transgender, at the time of admission. I have chosen to compare Historically Women's Colleges to coed institutions based on the history of women's colleges being a place that has focused on the education and support for people who experience gender marginalization with the supposition that Historically Women's Colleges would be more supportive of students who identify as gender non-binary.

Current Project

The discrimination, peer victimization, and minority stress experienced by gender non-binary individuals results in disproportionate increase of negative health outcomes. These experiences span across the lifetime and have lasting impact, including a negative impact on non-binary students' academic success. Although non-binary identities are gaining more attention, there is still a huge gap in research regarding their experiences as a whole. Exploring the impact of minority stressors in the form of peer victimization on students who identify as gender non-binary may help to propel college and university policy and practice into a more

comprehensively inclusive environment for non-binary students to thrive. Based on the limited research available I hypothesize the following:

HI: Students who identify as non-binary in coed institutions will experience greater peer victimization than their non-binary counterparts in Historically Women's Colleges.

HII: Peer victimization will be associated with the increased stress, which will be negatively associated to student's self-evaluation of academic success.

Methods

Participants

One hundred and six participants were recruited from Historically Women's College 1 (17%), Historically Women's College 2 (33%), Coed College 1 (29.2%), Coed College 2 (1.9%), and Coed College 3 (18.9%) with equal numbers of participants from the Historically Women's Colleges (50%) and Coed Institutions (50%) to participate in this study. To be eligible, participants had to identify as gender non-binary and be a current student at one of the five included colleges in order to meet the survey requirements. Gender non-binary is being used as an umbrella term for any individual that does not identify as strictly cisgender or transgender masculine/male or feminine/female. The ages of the participants ranged from 18-37 years (M age=20.79) and the study was inclusive of non-traditional aged students. There was representation of first year through senior students. The majority of participants were undergraduate sophomore (28.3%), undergraduate junior (25.5%), and undergraduate senior (24.5%) students. A minority were graduate students (4.7%) attending these institutions.

Participants were able to select more than one option in the categories of sexual identity and gender identity. Participants' self-identified sexuality largely consisted of queer (60.4%), gay (26.4%), bisexual (26.4%), asexual (23.6%), and lesbian (19.8%). The majority of the self-identified gender identities were non-binary (78.3%), with genderqueer (41.5%), agender (29.2%) and gender fluid (27.4%) making up a notable portion of the sample. When asked about gender expression, 45.3% chose somewhat masculine, 39.6% chose somewhat feminine, and 37.7% equally feminine and masculine, or androgynous. Of the 106 participants, 79.3% identified as white with 20.7% identifying as a person of color. See Table 1 for additional demographics information

Participant recruitment. Recruitment was conducted using physical posters and fliers posted at each of the five colleges and local communities, as well as electronic notice boards, department emails, and social media focusing on queer organizations on each campus. The flier invited current students from the five-college consortium who identified under the umbrella term as non-binary to participate in a study about their experiences with discrimination, peer victimization, and violence related to their non-binary gender identity, and potential impact on perceived academic performance. They were provided with a link to the survey on SurveyMonkey. Students were able to choose between receiving one SONA credit if eligible or being entered in a raffle to win one of four Amazon gift certificates valued at twenty-five dollars as incentive for participation. A random number generator was used to select the winners of the gift cards, which were awarded along with eligible SONA credits at the end of data collection.

Materials

Participants engaged in an online survey consisting of five sections: Demographics, Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983), Gender Minority Stress and Resilience Measure (modified to target participants' experiences with their school peers; Testa, Habarth, Peta, Balsam, & Bockting 2015), Academic Confidence Scale (Sander, Sanders, & Lalage, 2003), and a section for clarifying questions regarding discrimination and perceived academic performance.

The demographics portion of this survey included basic information regarding age, institution name/type, race, ethnicity, gender identity, gender expression, sexual orientation, household income, and religious affiliation. Given that there are various terms under the umbrella term gender non-binary, this portion gave participants an opportunity to choose from several gender identity terms listed as well as write in their own if it was not on the list.

The Perceived Stress Scale was created by Sheldon Cohen in 1983 as a way to measure to what degree a person's everyday experiences are perceived as stressful using questions such as, "In the last month, how often have you felt nervous and 'stressed?'" The measure also examines how much a person may see their life as being unpredictable, overwhelming, and overloaded as well as current levels of experienced stress. Upon looking at the inner item scale correlation, it appeared that it was measuring two different factors. Two subscales were created by separating questions for reliability. Subscale 1 consisted of questions 3, 4, 5, 6, 8, 9, and Subscale 2 consisted of questions 1, 2, 7, 10, 11, 13, 14. Subscale 1 demonstrated acceptable reliability, with a Cronbach's Alpha score of .779, and Subscale 2 strong internal reliability, with a Cronbach's Alpha score of .813.

The Gender Minority Stress and Resilience Measure was created by Testa, Habarth, Peta, Balsam, & Bockting (2014) to assess minority stress and resilience in transgender and gender non-conforming individuals. It is based on the concept of Meyer's (2003) minority stress model and adapted to address the specific stress experienced by the GNC/non-binary community. This measure covers both stress factors related to mental health and general life stress as well as examining social support and other resilience dynamics. For the purpose of this study I only used three of the sub-scales, which were modified to ask participants specifically about minority stressors at their college and related to their school peers. The first sub-scale is the gender related victimization subscale, which consists of six yes or no questions such as, "I have been threatened with physical harm by my school peers because of my gender identity or expression." The second subscale is related to gender non-affirmation and uses a five-point Likert Type scale with twelve questions such as, "I have difficulty being perceived as my gender by my school peers." The third subscale pertains to gender non-disclosure and also uses a five-point Likert Type scale with five questions such as, "Because I don't want people at my college to know my gender identity, I pay special attention to the way I dress or groom myself." The scales demonstrated unacceptable reliability for gender related victimization with a Cronbach's Alpha score of .573, a strong internal reliability for gender non-affirmation with a Cronbach's Alpha score of .899, and strong internal reliability for gender non-disclosure with a Cronbach's Alpha score of .886 respectively.

The Academic Confidence Scale was created by Sander and Sanders (2003) to evaluate self-efficacy specifically in the form of academic confidence in relation to academic performance. The scale includes twenty-two questions (using a 5-point response scale) such as, "How confident are you that you are able to manage your work load to meet coursework

deadlines?” Academic confidence is seen as a mediator between learning style and academic and institutional experience. This scale demonstrated strong internal reliability, with a Cronbach’s Alpha score of .938.

The additional questions were crafted to fill in the gaps of these standardized measures. There is little research regarding the experiences of gender non-binary individuals, and very few measures that specifically assess their experiences. The additional questions included: 1) How would you rate your overall academic ability?, 2) How would you rate your overall academic performance at your current school?, 3) If you experienced gender related discrimination, how would you rate the impact it has had on your academic performance?, and 4) If you experienced gender peer victimization, how would you rate the impact it had had on our academic performance? There was also an opportunity for participants to add any additional comments they had regarding their experiences as a person who identifies as gender non-binary.

Procedure

IRB approval was obtained from all five educational institutions prior to conducting the survey. This survey was distributed and conducted online through Survey Monkey. Participants were asked two screening questions prior to the start of the survey which required them to identify as gender non-binary and be a current student at one of the five colleges listed in order to continue. Participants completed an informed consent form with an electronic signature. Participants were also given information regarding supports as the topic is sensitive in nature. Participants accessed the survey online via Survey Monkey where they were instructed to complete as many survey items that they felt comfortable with having the ability to skip or end

the survey at any time without penalty. The survey took 10-15 minutes to complete. The SONA credits and Amazon gift cards were awarded within a week of the closure of the survey.

Analysis

Data analysis was conducted using SPSS. To first assess whether any of the demographic variables were significant covariates, I conducted a series of t-tests comparing demographic variables on the outcome variables of the Perceived Stress Scale, Academic Confidence Scale, and Gender Minority Stress subscales. I also ran descriptive analyses calculating central tendency and correlation for outcome variables of the aforementioned scales. To test hypothesis one, whether level of peer victimization differs depending upon institution type, I conducted an ANOVA comparing responses to the Gender Minority Stress subscales across institution type, comparing Historically Women's Colleges to the Coed Institutions. To test hypothesis two, whether peer victimization is associated with decreased academic performance, and whether stress mediates this relationship, I used a simple linear regression and mediation analysis using PROCESS (Hayes, 2013) for SPSS.

Results

Descriptive Statistics

The mean and standard deviations of the outcome variables were as follows: Gender Minority Stress Subscales of Victimization, $M = 0.314$, $SD = 0.751$; Non-Affirmation, $M = 12.124$, $SD = 5.958$; Non-Disclosure, $M = 5.830$, $SD = 4.933$. The mean and standard deviation for the Perceived Stress Scale Subscale 1 were $M = 11.698$, $SD = 4.04$, and for Subscale 2 were $M = 12.73$, $SD = 4.12$. The mean and standard deviation for the Academic Confidence Scale were $M = 3.485$, $SD = 0.770$

I conducted Pearson Correlations between outcome variables and found that there was a significant positive correlation between the Perceived Stress Scale and two of the Gender Minority Stress subscales: gender related non-affirmation and non-disclosure. The correlation between perceived stress and gender related non-affirmation was $r = .212$ ($p = .03$, $n = 105$) and for non-disclosure it was $r = .260$ ($p = .007$, $n = 105$). As experiences of gender related non-affirmation increase, so does perceived stress, and likewise with the positive correlation of non-disclosure to perceived stress. There was also a significant negative correlation between non-disclosure and academic confidence, $r = -.306$ ($p = .001$, $n = 106$), as well as a negative correlation between perceived stress and academic confidence, $r = -.373$ ($p = .001$, $n = 106$). These results show that when there is an increase in experiences of gender minority stress from non-disclosure there is a decrease in academic confidence, and when perceived stress increases, academic confidence decreases.

Institution Type and Gender Minority Stress

Data preparation. As mentioned above, I first conducted a series of t-tests to assess whether there was a difference on the outcome variables Gender Minority Stress and Resilience subscales, Perceived Stress Scale, and Academic Confidence Scale based on demographic categories. This included comparing sexual identities, including those who identified as asexual/not, bisexual/not, gay or lesbian/not and whether people identified as a person of color or not. The only variable that was significant was gay/lesbian identity, $t(104) = 1.998$, $p = .048$, $d = 0.392$. This demographic group experienced greater levels of stress ($M = 25.952$, $SD = 3.519$) on the Perceived Stress Scale measure in comparison with those who did not identify as gay/lesbian ($M = 24.562$, $SD = 3.491$). The test was also significant with people who identified as gay/lesbian regarding academic confidence, $t(104) = 2.023$, $p = .046$, $d = 0.397$. People who

identified as gay/lesbian had lower academic confidence ($M = 3.300$, $SD = 0.820$) than those who did not identify in that way ($M = 3.605$, $SD = .716$). The gay/lesbian identity was added as a covariate to models that used the Perceived Stress Scale and Academic Confidence Scale outcomes.

To test Hypothesis 1, students who identify as non-binary in coed institutions will experience greater peer victimization than their non-binary counterparts in Historically Women's Colleges, I conducted a one-way ANOVA. There was a significant effect for institution type, $F(1, 103) = 6.093$, $p = 0.015$, for the Gender Related Non-Affirmation Subscale. Hypothesis 1 was supported as students in Coed Institutions experience a higher level of gender minority stress due to gender related non-affirmation from their peers ($M = 13.539$, $SD = 5.543$) in comparison to students who attended Historically Women's Colleges ($M = 10.736$, $SD = 6.074$). There was not a significant difference in the other two Gender Minority Stress sub-scales.

As a follow-up test, I compared the outcome variables of the Gender Minority Stress subscales, Perceived Stress Scale, and Academic Confidence Scale across all five institutions. I conducted a one-way ANOVA with a Bonferroni Post Hoc test. There was a significant difference ($F(4, 101) = 2.928$, $p = 0.025$) based on institution for the Perceived Stress Scale between students who attend Coed Institution 1 ($M = 26.677$, $SD = 3.166$) and students at Historically Women's College 2 ($M = 24.114$, $SD = 3.660$). Coed Institution 1 students appear to experience greater perceived stress levels than the students at Historically Women's College 2. There is also a significant difference on the Gender Non-Affirmation Subscale ($F(4, 100) = 5.233$, $p = 0.001$). Students at Coed Institution 3 reported higher experiences of gender minority stress related to non-affirmation ($M = 16.421$, $SD = 3.305$) compared to students at Historically Women's College 1 ($M = 8.167$, $SD = 7.679$).

Gender Minority Stress and Academic Confidence

Hypothesis 2, peer victimization will be associated with the increased stress, which will be negatively associated to student's self-evaluation of academic success, was tested using a Model Four PROCESS Procedure for mediation. I conducted a series of mediation analyses to see if overall stress levels mediated the effect of the predictor variables (gender related victimization, gender minority non-affirmation, and gender non-disclosure) on the outcome variable of academic confidence. There were no significant results for perceived stress mediating the relationship between gender related victimization and academic confidence however, there were significant findings for non-affirmation and non-disclosure in relation to academic confidence as mediated by perceived stress.

Gender related non-affirmation. For the non-affirmation models, the initial part of the test revealed that non-affirmation was positively related to stress levels in both stress subscales. Subscale 1 ($\beta = -.1278$, $SE = .0652$, $p = 0.0225$) and Subscale 2 ($\beta = .2742$, $SE = .0768$, $p < 0.001$) meaning that as non-affirmation increases, stress levels increase. However, non-affirmation did not show any direct relationship with academic confidence. The second portion of the test did find that stress levels had a negative relationship with academic confidence for Subscale 1 ($\beta = .0936$, $SE = .0167$, $p = 0.0001$) and Subscale 2 ($\beta = -.0874$, $SE = .0137$, $p < 0.001$), meaning that as stress levels increase, academic confidence decreases. The final portion of the test revealed that stress levels did in fact mediate the relationship between gender related non-affirmation and academic confidence with a relatively small, negative indirect effect of $-.0120$ for Subscale 1 ($SE = .0061$, 95% bootstrap CI, $-.0247$ $-.0006$) and a negative indirect effect of $-.0240$ for Subscale 2 ($SE = .0075$, 95% bootstrap CI, $-.0411$, $-.0110$). These findings indicate

that gender non-affirmation does negatively and indirectly impact academic confidence through increased stress. See Figure 1 for a visual depiction of this information.

Gender non-disclosure. The initial part of the test revealed that non-disclosure was positively related to stress levels for Stress Subscale 1 ($\beta = .1936, SE = .0771, p = 0.0066$) and for Stress Subscale 2 ($\beta = .3345, SE = .0929, p < 0.001$) meaning that as non-disclosure increases, stress levels increase. Non-disclosure was also negatively related to academic confidence ($\beta = -.0292, SE = .0133, p = 0.0136$). The second portion of the test indicated that stress levels had a negative relationship with academic confidence for Stress Subscale 1 ($\beta = -.0851, SE = .0165, p < 0.001$) and Stress Subscale 2 ($\beta = -.0765, SE = .0134, p < 0.001$). The final portion of the test revealed that stress levels did in fact mediate the relationship between gender related non-disclosure and academic confidence with a relatively small, negative indirect effect of $-.0165$ with Stress Subscale 1 ($SE = .0063, 95\% \text{ bootstrap CI}, -.0308, -.0059$) and $-.0256$ with Stress Subscale 2 ($SE = .0074, 95\% \text{ bootstrap CI}, -.0423, -.0132$). These findings indicate that gender non-disclosure does negatively and indirectly impact academic confidence through increased stress. Overall these results suggest that peer-related gender non-affirmation and non-disclosure potentially relate to a decrease in academic confidence through the mechanism of increased stress, which supports the second hypothesis. See Figure 2 for a visual description of this information.

Discussion

This study sought to increase the understanding of gender non-binary students experience of minority stress in an academic environment. Given that there may be different experiences of discrimination both at Historically Women's Colleges and coed institutions among non-binary

students, I decided to compare their experiences of gender related stressors across institution type. I was specifically interested in discrimination and peer victimization in relation to negative mental health outcomes such as stress, and the potential impact on academic performance. I explored these topics through surveying the students who identified as non-binary at each of the five colleges using the Gender Minority Stress subscales of victimization, non-affirmation, and non-disclosure, as well as the Perceived Stress Scale and Academic Confidence Scale.

Institution Type and Gender Minority Stress

In testing the first hypothesis, students who identify as non-binary in coed institutions will experience greater peer victimization than their non-binary counterparts in Historically Women's Colleges, there were significant differences in experience of gender minority stress based on institution type. Specifically, students at Historically Women's Colleges reported lower rates of peer-related non-affirmation compared to students at coed institutions. Rates of peer victimization and peer-related non-disclosure were not significantly different across institution types. A follow-up test across the five institutions also found that at Coed Institution 1, non-binary students reported higher levels of perceived stress compared to students at Historically Women's College 2. Previous research around Social Learning Theory (Helgeson, 2012), the differences in social gender expectations, social influence on gender as performative (West & Zimmerman, 1987), and how Carter (2014) suggests that these experiences can be perpetuated in adulthood, may in part reflect the differences in experiences of non-affirmation and stress across institution type.

Halberstam (1999) suggests that there are greater expectations for men to more strictly adhere to socially constructed gender roles, which are often aggressively perpetuated and

reinforced. The presence of cis male peers as well as potentially more diverse experience of sex assigned at birth among non-binary students at the coed institutions may be important considerations in the findings. Davidson (2009) suggests that men who adopt feminine qualities are automatically devalued due to the loss of power and status inherent with the negative views of femininity. The study examining the significance around social labels suggests that men were criticized and labeled negatively for having feminine characteristics and also negatively associated these characteristics with derogatory labels for sexual minorities (Coyle, Flucher, & Trubutschek, 2013). This study also noted that men were more critical of women who were described as “tomboy” due to exhibiting masculine characteristics, where women did not see this label as negative (Coyle, Flucher, & Trubutschek, 2013). The presence of cis male peers could contribute to a hostile environment for non-binary students through the perpetuation of socially constructed heteronormative binary ideals and their experiences of expectation to disseminate and uphold these learned constructs. Halberstam (1999) suggests that men on average are taught to adhere to and reinforce gender roles more strictly than women, which may explain the greater experience of non-affirmation in the coed institutions.

The difference in experience of non-affirmation and stress may also come from how society does not hold women to the same standard. Girls are often shaped culturally towards femininity through the process of praise versus punishment (Helgeson, 2012). Women who adopt masculine qualities receive an almost automatic elevation of status and are not subjected to the same ridicule and rather often praised for showing traditionally masculine qualities such as strength and assertiveness (Bailey, Bechtold, & Berenbaum, 2002; Martin, 1995). In settings such as Historically Women’s Colleges, women are often encouraged to challenge societal

expectations, which may explain why these spaces appeared to have lower scores in non-affirmation creating a more inclusive environment.

As students exist in these academic subcultures and social learning environments, it stands to reason that societal norms and standards will continue to have influence. Non-binary students in coed institutions may experience this added layer of discrimination as a result of the perpetuation of a culture that is riddled with toxic masculinity and binary heterosexual social expectations. While the presence of cis peers may have an effect, it is certainly not the only influence in the difference of experience across institution type.

The 2018 National College Health Association Survey of one of the Historically Women's Colleges indicate that 9.5% students identify as trans or non-binary, and only 46.7% identify as straight indicating over half on the college's population identifies as a sexual minority. Previous research does show that while often non-binary individuals identify also as LGBTQIA+, it is not always the case (Rieger, 2010; Skidmore et al., 2005). It was difficult to find specific information provided for the coed institutions regarding gender and sexual minority identity demographics, however it may be safe to speculate that a large university may be more reflective of the general population than their private school counterparts. There is no available population data as of yet for non-binary people however, in relation to transgender individuals, who make up .6% of the population, 25-35% of transgender individuals identify as non-binary. As discussed, not all non-binary individuals are transgender (James, Herman, Rankin, Keisling, Mottet, & Anafi, 2016; Barr, Budge, Adleson, 2016; Mikalson, Pardo, & Green, 2014). When looking for student description data for one of the coed institutions, the reports are only descriptive of male and female gender identities with no acknowledgement of gender minorities

which may be in line with an assumption that coed implies only two genders. On campuses where there are more queer and transgender identified people as with the Historically Women's College, it might make sense that there is less peer-related gender minority stress enacted. However, it is also important to note that non-binary individuals that identify as LGBTQ+ still face in-group discrimination (Reiger, 2012; Skidmore, Linsenmeier, & Bailey, 2006). Though there are greater concentrated numbers of people who identify as LGBTQIA+ and non-binary at these Historically Women's Colleges; progress still needs to be made around supporting non-binary students.

While the results reflect lower non-affirmation rates at Historically Women's Colleges in comparison to coed institutions, non-affirmation is still an issue. Given the deeply ingrained history, tradition, and habits, Historically Women's Colleges struggle with issues around micro aggressions relating to invalidation and non-affirmation of gender non-binary identities. These underlying issues surface every time a group of students is addressed as "ladies" or "women", official campus documents continue to use largely she/her pronouns, customs, clubs, and activities are female focused, any exhibited femininity automatically assumes a cisgender female identity. Pronouns continue to be not asked for, not used, or students are misgendered, which can be very invalidating. There is an assumption that there may be a heightened awareness of the marginalization of minority identities being a Historically Women's College however, gender non-binary identities often continue to go unrecognized and un-affirmed through the perpetuation of feminized traditions. While the gender binary may be reinforced at coed institutions through the assumption that there are only two genders and the perpetuation of binary gender norms by male peers, Historically Women's Colleges similarly uphold these ideals through practices that reflect the assumption that there is only one gender.

It is important to note that the Gender Minority Stress Subscales of peer victimization and non-disclosure did not come out as different across institutions types. One explanation of this could be due to a reliability issue with the peer victimization scale as it scored particularly lower than the others. There may also not be a significant difference across institution type for non-disclosure due to the traditional nature of Historically Women's Colleges and the effects of social influence on non-binary students' behavior. Regardless of the lack of significant difference across institution type in these last two areas, gender non-binary individuals continue to face discrimination and peer victimization which could lead to negative mental health outcomes such as stress (Meyer, 2003; Testa et al, 2016)

Gender Minority Stress and Academic Confidence

There were significant findings in support of the second hypothesis, peer-related gender minority stress results in an increase in overall stress, which in turn will have a negative impact on perceived academic performance. There were no significant findings with the relationship of victimization to academic confidence as mediated by stress, which again may be related to test reliability as this particular measure did not score well. Identity non-disclosure and non-affirmation were found to have a negative indirect relationship to academic confidence when mediated by stress.

The findings that non-disclosure and non-affirmation lead to a heightened level of stress is in line with the literature around Minority Stress Theory. While Social Learning Theory may explain why society continues to perpetuate binary gender standards, Minority Stress Theory explains the negative mental health outcomes and impact that this type of discrimination has on people who identify as gender non-binary. Testa et al. (2016) describe the four gender-based

external stressors of victimization, rejection, non-affirmation, and discrimination that people who identify as non-binary experience, which lead to negative mental health outcomes such as stress, anxiety, depression and suicidality. The findings in this study support that students are experiencing over half of these external stressors particularly through non-affirmation and non-disclosure. Non-affirmation can be explained in part by the implications of Social Learning Theory with a lack of visible role models, lack of representation in curriculum, and a lack of inclusiveness due to the binary nature of these institutions. These factors may contribute to influencing and perpetuating binary student opinion and treatment of their non-binary counterparts. As Gordon and Meyer (2007) suggest, interactions with a non-affirming environment may lead to non-disclosure as prejudice shapes our behavior. Students may not feel like they are in a safe enough environment to be able to live authentically and openly, thus possibly denying them the opportunity for the personal growth and development that may typically accompany a college experience.

The finding of minority stressors leading to increased stress connects to previous literature that discussed how the experiences of discrimination for non-binary individuals lead to a sense of “thwarted belongingness” (Van Orden et al., 2010). This continuous sense of stigma, rejection, and isolation contributes to increased stress and related negative mental health outcomes such as anxiety, depression, suicidal ideation and self-harm (Gordon & Meyer, 2007; Colier et al., 2013). Higher education comes with its fair share of stressful situations which for non-binary students is exacerbated by their marginalized identity as shown overall by identity non-disclosure and non-affirmation having a positive correlation to perceived stress. Some students may feel that they often find some higher level of acceptance having found peers at college versus home or studying abroad, while others have yet to “come out” due to still feeling

that they are still in a largely unsupportive environment. Previous literature suggests that non-binary students generally feel like they do not belong, nor are safe in at school, which leads to a decrease in academic performance over all (Collier et al., 2013). Students may frequently experience discrimination from professors, administration, and in extracurricular activities by being misgendered, not using pronouns after being asked, or not being asked at all. These experiences often lead to students feeling like they need to hide their gender identity because it's easier than having to correct others or have to explain their gender identity as if they are not "performing a non-binary identity enough". Not feeling able to disclose one's gender identity has shown to have a negative impact on academic confidence and was similarly reflected in the literature about minority stress and the negative impact on academics (Colier et al., 2013, Robinson, 2017).

This same sentiment is reflected in the literature discussing the difficulties in developing a non-binary identity due to socially constructed gender beliefs. Part of a non-binary gender identity is the ability to identify freely and or fluidly through the spectrum of masculinity, androgyny, and femininity without feeling pressure to conform to cisgender heteronormative ideals. Due to the continued binary nature of academic settings, non-binary students experience discrimination and peer victimization in the form of non-affirmation as well as feeling the need to not disclose their identity, which increases stress, and negatively impacts academics as this research supports. Even though peer victimization was not significant in this case, this study demonstrates how more subtle forms of gender minority stressors are still having a negative impact on people's mental health.

While these institutions each have nondiscrimination policies specifically addressing gender identity and expression, they appear to not have as much of an impact as they may have intended. This could be explained in part through Social Learning Theory as students may carry previously developed behaviors, reflexive of a binary privileged society, with them that have yet to catch up with current well-intentioned policies. If these policies are not diligently reinforced, students may continue a cycle of discriminatory behavior, which negatively impacts the educational experiences of non-binary students. This study's findings support this in showing a significant negative relationship between non-disclosure and non-affirmation to academic confidence mediated by stress. While there may be at first glance inclusive social groups in colleges such as LGBTQIA+ clubs and social events, as mentioned in the literature, people who identify as non-binary experience in group discrimination (Austin, 2016; Rankin & Beemyn, 2012). The lack of non-binary specific support and exposure in college settings contributes to feelings of non-affirmation and in turn negatively impact academic confidence and perceived performance.

Implications

There hasn't been much research to date regarding the experiences of people who identify as gender non-binary. Research regarding people who have non-binary identities often combines them with other research regarding transgender and sexual minority identities. We are finding out that people who identify as non-binary experience greater discrimination than other gender identities and often experience in-group discrimination if they also identify as LGBTQ (Austin, 2016; Rankin & Beemyn, 2012). Often this discrimination manifests in peer victimization, especially during adolescence. Some, but not all, higher educational institutions

have developed specific language around the protections of people with non-binary identities, which as this research shows, has not always translated into non-binary students feeling affirmed or able to disclose their identity. This research contributes to the current small body of research to lay the groundwork for the exploration of the experiences of non-binary gender minority discrimination and how it negatively impacts a student's academic experience. Current research discusses short and long-term impact such as low-grades, missing class, and even dropping out which are difficulties that may have a negative effect for future educational and life trajectories (Robinson, 2017). Previous literature suggests that these experiences of peer victimization in youth are linked to difficulties experienced later in life such as relational complications related to "attachment anxiety" and overall lower life satisfaction (Collier et al., 2013). College is a time for personal growth and development. Students who identify as non-binary may not be afforded the same opportunity to do this successfully if they are faced with having to cope with additional stress associated with discrimination and gender minority stress.

This information can be used to create better supports and sense of community for non-binary students across all educational institution types. It may be beneficial for institutions to explore supports beyond policy that help non-binary students, such as creating more educational events, mandatory trainings, and other learning opportunities to bring awareness to various gender identities for students, health services, faculty, and staff. This may be a way to help gain a greater understanding and awareness to the experiences of the non-binary students.

Incorporating non-binary identities in curriculum may help to provide more visible role models and affirm identities. Institutions could also revisit and reconstruct binary-based activities and spaces to be more inclusive of all identities such as allowing students to participate equally in sports or clubs and provide gender-neutral facilities/ bathrooms. Education, exposure, and

support will help reinforce the policies that have been put in place and may make them more effective.

It may also be beneficial for institutions to adopt an approach for creating and implementing systematic change, similarly to how Singh (2016) suggests psychologists shift towards liberation psychology; therapists are encouraged to examine their own assumptions of gender roles/norms. The therapists are also expected to pay close attention to how intersectionality plays a role in discrimination of transgender and non-binary individuals and have an opportunity to act as advocates in allies taking into account cis gender privilege. Using these principles, administrators could follow suit to help create a more inclusive environment for gender non-binary students. Singh (2016) suggest that psychologists try to understand “how their lives have been influenced by social gender bias” in order to have a better understanding of the overarching impact of sexism and gender related oppression on everyone due to societal gender expectations (p. 756). This type of reflexive association may be helpful in gaining a better understanding of the discriminatory experiences that gender non-binary individuals face in an academic setting. Singh (2016) also proposes the use of Edwards Ally Identity model suggesting that psychologist classify themselves as “aspiring ally” suggesting that there is no end point or one way in supporting TGNC individuals as well as approaching it as a social justice issue rather than an individual issue. Institutions have a unique opportunity to help to change the social narrative regarding gender expression and identity through raising consciousness by challenging socially constructed gender norms (Singh 2016). Singh’s (2016) ideas around the shift in psychologist support models could also be used on college campuses to shift cultural norms as well as combat minority stress by sparking organizational shift and changes.

Limitations

There were several limitations to this research that are important to note. The lack of prior research on the experiences of people who identify as gender non-binary made it a bit difficult when trying to construct a comprehensive and thoughtful survey. This sample also lacked diversity as it was predominantly white students who attended largely private institutions with the exception of one of the coed institutions. This lack of diversity does not allow us to examine an intersectional approach and exploration of the experiences of people of color who identify as gender non-binary. Focusing on college students, and in particular many who are at private, high-cost institutions, may mean that the participants come from a more privileged background with access to education. This may skew the findings as they might differ from non-binary people in the general population. The location of these institutions being in a rural, liberal area of the United States may have an effect of the findings. These institutions, though their non-discrimination policies around gender identity and expression are in their infancy, may still be ahead of other institutions in different geographic areas.

The Perceived Academic Performance measure may have been misunderstood. I was hoping to capture the essence of their experiences around how the additional stress may have affected their path to success. Some students still equate success with grades disregarding the effort and experience it took to get there. One might compare two students that receive an A for class. While of course there are many factors that play a role in achieving the A, I was interested in seeing if in fact the minority stress made it unnecessarily more difficult. School can be stressful in and of itself for many reasons. I was curious to see if the additional experience of gender minority stress made it more difficult to get to that A or even if it had a more significant

negative impact on grades themselves. This is also difficult to quantify, as one of the coed institutions does not use a traditional grading system, which may have skewed survey responses.

Future Research

Some areas to consider for future research would be to focus on the experiences of non-binary people of color to explore the impact of intersectional identities on experiences of Minority Stress. The research discusses the issues around the complexities of discrimination for people with multiple marginalized identities. Another area of focus might be specifically related to student experience of discrimination and victimization in relation to administration with a focus on the impact of micro aggressions. This research could also act as a springboard to examine in greater depth, how intersectionality impacts a student's experience of discrimination and stress. Given the increase and impact of the negative mental health outcomes resulting from minority stress, it is imperative that we explore this topic further in hopes to create better supports and policy around the protection of rights for gender minority students. It may be informative to examine the experiences of gender minority stress and peer victimization with non-binary people in the general community, particularly around common, public, everyday experiences such as in the workplace, at medical providers, in dealing with police or other public safety administrations, or even in retail situations. As this area of study and body of research is so limited, there are so many opportunities to add meaningful contributions.

Conclusion

Overall, this study offered preliminary findings that peer victimization and minority stress with gender non-binary students has a negative academic impact mediated by stress; while also finding that non-binary students are experiencing greater non-affirmation at coed institutions

than students at Historically Women's Colleges. This study contributed to a small body of research, which is important in bringing visibility and validation to the experiences of non-binary students. This is important information to encourage educational institutions to consider challenging traditional gender roles in typically gendered spaces in order to create more supportive environments for non-binary students. College life should be a time of personal growth and development, not riddled with additional stress created and perpetuated by non-affirming and non-supportive environments.

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Appendix A

Demographics**Screening questions:****1. Do you identify with a non-binary gender identity?**

- Yes
- No
- Sometimes
- Unsure

2. Which educational institution are you from?

- Amherst College
- Hampshire College
- Mount Holyoke College
- Smith College
- University of Massachusetts

(Participants will need to have identified as either yes or sometimes to question one and will have to come from one of the 5 colleges in order to participate in this survey)

3. What is your sexual identity? (Check all that apply)

- Asexual
- Bisexual
- Demisexual
- Fluid
- Multisexual
- Omnisexual
- Pansexual
- Plurisexual
- Queer

- Two-spirit
 - Lesbian
 - Gay
 - Heterosexual
 - You don't have an option that applies to me. I identify as (*Please specify*)
-

4. Which of the following describes your **gender identity**? (*Check all that apply*)

- Two-spirit
 - Agender
 - Bigender
 - Genderqueer
 - Genderfluid
 - Nonbinary
 - Cisgender man
 - Trans man
 - Trans woman
 - Cisgender woman
 - Man
 - Woman
 - You don't have an option that applies to me. I identify as (*Please specify*)
-

5. A person's appearance, style, or dress, and mannerisms (such as the way they walk or talk) can be part of gender expression. On average, how would you describe your mannerisms? (Mark all that apply. Use space provided for further clarification as needed)

- Very feminine
- Mostly feminine
- Somewhat feminine

- Not feminine at all
- Equally Feminine and masculine (androgynous)
- Not masculine at all
- Somewhat masculine
- Mostly masculine
- Very masculine

Additional Clarifying remarks: _____

6. What is your age? _____

7. How do you define your racial, ethnic or cultural identity/identities? (*Check all that apply*)

- Mexican, Mexican American, Chicano
- Puerto Rican
- Cuban
- Latino
- White
- Black, African American
- American Indian, Alaska Native
- Asian Indian
- Chinese
- Filipino
- Japanese
- Korean
- Vietnamese
- Other Asian
- Native Hawaiian
- Guamanian or Chamorro
- Samoan

Other Pacific Islander

You don't have an option that applies to me. I identify as _____

8. Do you identify as a person of color and/or as a racialized person?

Yes

No

Sometimes

I don't know

9. Do you belong to a religious affiliation or community of worship?

Yes

No

If yes, what is your religious affiliation or community of worship?

10. What is your highest level of education so far?

Some high school

Completed high school or GED program

Some trade school or apprenticeship

Completed trade school or apprenticeship

Some college or university

Completed college or university undergraduate degree (example: BA, BSc, BFA)

Some graduate or professional education

Completed graduate or professional degree (example: MA, PhD)

Other (*please specify*) _____

11. What was your individual income last year, before taxes? Please estimate.

Less than \$10,000

- \$10,000 - \$19,999
- \$20,000 - \$29,999
- \$30,000 - \$39,999
- \$40,000 - \$59,999
- \$60,000 - \$79,999
- \$80,000 - \$100,000
- Greater than \$100,000

12. What was your combined household income before taxes last year? Include all sources such as student loans, social assistance, etc. Please estimate.

- Less than \$10,000
- \$10,000 - \$19,999
- \$20,000 - \$29,999
- \$30,000 - \$39,999
- \$40,000 - \$59,999
- \$60,000 - \$79,999
- \$80,000 - \$100,000
- Greater than \$100,000
- I don't know

13. How many people are supported by your household income? Please **include yourself** as well as people who are supported by this income but do not live with you, such as grown children you are supporting, or relatives in or outside of Canada to whom you send money, even if you are not their sole source of support.

The household income supports _____ person/people.

Perceived Stress Scale

INSTRUCTIONS:

The questions in this scale ask you about your feelings and thoughts during THE LAST MONTH. In each case, you will be asked to indicate your response checking a point on a scale ranging from never to very often representing HOW OFTEN you felt or thought a certain way.

Although some of the questions are similar, there are differences between them and you should treat each one as a separate question. The best approach is to answer fairly quickly. That is, don't try to count up the number of times you felt a particular way, but rather indicate the alternative that seems like a reasonable estimate.

Using a scale 5-point scale ranging from never to very often, answer the following:

1. In the last month, how often have you been upset because of something that happened unexpectedly?
2. In the last month, how often have you felt that you were unable to control the important things in your life?
3. In the last month, how often have you felt nervous and "stressed"?
4. In the last month, how often have you dealt successfully with day to day problems and annoyances?
5. In the last month, how often have you felt that you were effectively coping with important changes that were occurring in your life?
6. In the last month, how often have you felt confident about your ability to handle your personal problems?
7. In the last month, how often have you felt that things were going your way?
8. In the last month, how often have you found that you could not cope with all the things that you had to do?
9. In the last month, how often have you been able to control irritations in your life?
10. In the last month, how often have you felt that you were on top of things?
11. In the last month, how often have you been angered because of things that happened that were outside of your control?
12. In the last month, how often have you found yourself thinking about things that you have to accomplish?
13. In the last month, how often have you been able to control the way you spend your time?

In the last month, how often have you felt difficulties were piling up so high that you could not overcome

Gender Minority Stress and Resilience Measure (modified for this study)

Instructions:

Please answer the following in relation to your experience with your school peers at your current educational institution

Gender-related victimization

Response options: yes, no,

1. I have been verbally harassed or teased because of my gender identity or expression. (For example, being called “it”)
2. I have been threatened with being outed or blackmailed because of my gender identity or expression.
3. I have had my personal property damaged because of my gender identity or expression.
4. I have been threatened with physical harm because of my gender identity or expression.
5. I have been pushed, shoved, hit, or had something thrown at me because of my gender identity or expression.
6. I have had sexual contact with someone against my will because of my gender identity or expression.

Non-affirmation of gender identity

Response options: 5-point scale from strongly disagree to strongly agree

1. I have to repeatedly explain my gender identity to my school peers or correct the pronouns my school peers use.
2. I have difficulty being perceived as my gender.
3. I have to work hard for my school peers to see my gender accurately.
4. I have to be “hypermasculine” or “hyperfeminine” in order for my school peers to accept my gender.
5. My school peers don’t respect my gender identity because of my appearance or body.
6. My school peers don’t understand me because they don’t see my gender as I do.

Nondisclosure

Response options: 5-point scale from strongly disagree to strongly agree

1. Because I don’t want people at my college to know my gender IDENTITY/HISTORY, I don’t talk about certain experiences from my past or change parts of what I will tell my school peers.
2. Because I don’t want people at my college to know my gender IDENTITY/HISTORY, I modify my way of speaking.

3. Because I don't want people at my college to know my gender IDENTITY/HISTORY, I pay special attention to the way I dress or groom myself.
4. Because I don't want people at my college to know my gender IDENTITY/HISTORY, I avoid exposing my body, such as wearing a bathing suit or nudity in locker rooms.
5. Because I don't want people at my college to know my gender IDENTITY/HISTORY, I change the way I walk, gesture, sit, or stand.

Academic Confidence Scale

Instructions: The following will be rated on a 5-point scale ranging from Not Very Confident at All to Very Confident

How confident are you that you will be able to:

1. Study effectively on your own in independent / private study
2. Produce your best work under examination conditions
3. Respond to questions asked by a lecturer in front of a full lecture hall
4. Manage your work load to meet coursework deadlines
5. Give a presentation to a small group of fellow students
6. Attend most taught sessions
7. Attain good grades in your work
8. Engage in profitable academic debate with your peers
9. Ask lecturers questions about the material they are teaching, in a one-to-one setting
10. Ask lecturers questions about the material they are teaching, during a lecture
11. Understand the material outlined and discussed with you by lecturers.
12. Follow the themes and debates in lectures.
13. Prepare thoroughly for tutorials.
14. Read the recommended background material.
15. Produce coursework at the required standard.
16. Write in an appropriate academic style.
17. Ask for help if you don't understand.

18. Be on time for lectures.
19. Make the most of the opportunity of studying for a degree at university
20. Pass assessments at the first attempt.
21. Plan appropriate revision schedules.
22. Remain adequately motivated throughout.
23. Produce your best work in coursework assignments
24. Attend tutorials

Additional questions:

Rate on a scale from 1-5

How would you rate your overall academic ability?

How would you rate your overall academic performance at your current school?

If you experienced gender related discrimination or peer victimization, how would you rate the impact it has had on your academic performance?

Additional comments?

Table 1

Demographics

Variable	N (%)
Sexuality	
Asexual	25 (23.6%)
Bisexual	28 (26.4%)
Demisexual	16 (15.1)
Fluid	10 (9.4%)
Multisexual	3 (2.8%)
Omnisexual	1 (.9%)
Pansexual	18 (17%)
Queer	64 (60.4%)
Lesbian	21 (19.8%)
Gay	28 (26.4%)
Heterosexual	2 (1.9%)
Gender Identity	
Agender	31 (29.2%)
Bigender	1 (.9%)
Gender Queer	44 (41.5%)
Gender Fluid	29 (27.4%)
Non-binary	83 (78.3%)
Transman	10 (9.4%)
Transwoman	1 (.9%)
Cisgender Woman	5 (4.7%)
Man	4 (3.8%)
Woman	14 (13.2%)
Gender Expression	
Very Feminine	5 (4.7%)
Mostly Feminine	14 (13.2%)
Somewhat Feminine	42 (39.6%)
Not Feminine at all	8 (7.5%)
Equally Feminine and Masculine/ Androgynous	40 (37.7%)
Not Masculine at all	3 (2.8%)
Somewhat Masculine	48 (45.3%)
Mostly Masculine	26 (24.5%)
Very Masculine	3 (2.8%)
Racial, Ethnic, Cultural Identity	
Mexican American Chicano	2 (1.9%)
Latino	3 (2.8%)
White	88 (83%)
Black, African American	4 (3.8%)
American Indian, Alaska Native	1 (.9%)
Asian Indian	3 (2.8%)
Chinese	7 (6.6%)

Filipino	2 (1.9%)
Japanese	3 (2.8%)
Native Hawaiian	1 (.9%)
<hr/>	
Person of Color, Racialized Person	
Yes	22 (20.8%)
No	84 (79.2%)
<hr/>	
Religious Affiliation/Community of Worship	N103
Yes	30 (28.3%)
No	73 (68.9%)
<hr/>	
Current Educational Standing	
Undergraduate non-degree seeking	2 (1.9%)
Undergraduate, First year/ Freshman	15 (14.2%)
Undergraduate, Sophomore	30 (28.3%)
Undergraduate, Junior	27 (25.5%)
Undergraduate, Senior	26 (24.5%)
Graduate, non-degree seeking	1 (.9%)
Graduate, Master level	2 (1.9%)
Graduate, Doctoral level	2 (1.9%)
<hr/>	
Combined Household Income Before Tax	
Less than \$10,000	21 (19.8%)
\$10,000 - \$19,999	7 (6.6%)
\$20,000 - \$29,999	2 (1.9%)
\$30,000 - \$39,999	3 (2.8%)
\$40,000 - \$59,999	7 (6.6%)
\$60,000 - \$79,999	10 (9.4%)
\$80,000 - \$100,000	11 (10.4%)
Greater than \$100,000	21 (19.8%)
Don't Know	24 (22.6%)

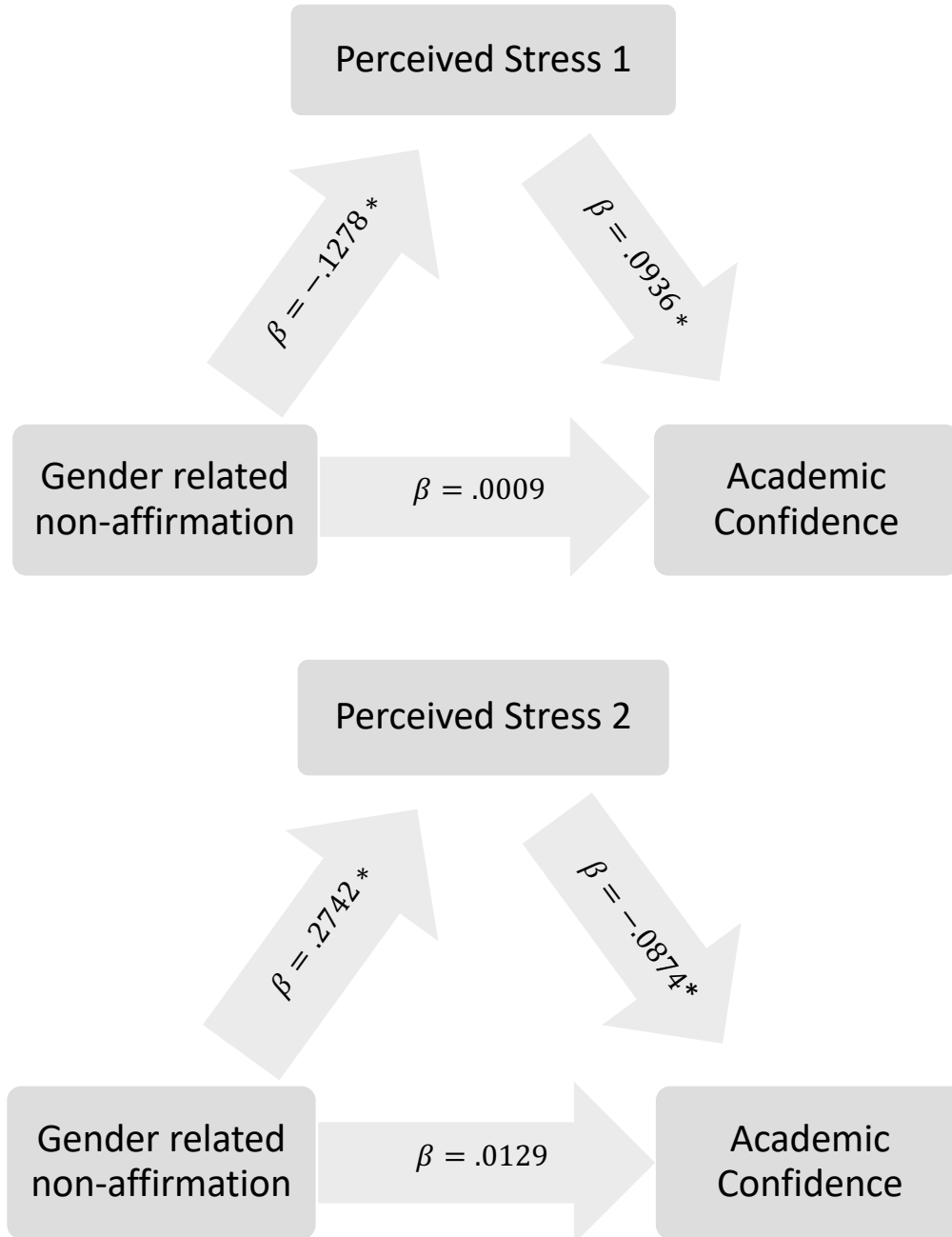
Table 2

Level of Gender Minority Stressors Across Institution Type

Measures	F	P value
<hr/>		
Gender Minority Stress subscales		
Victimization	1.447	.224
Gender Non-Affirmation	5.233	.001*
Gender Non-disclosure	1.468	.218
Perceived Stress scale	2.928	.025
Academic Confidence scale	.839	.503

Figure 1

Model Four PROCESS Procedure for Mediation: Gender Related Non-affirmation



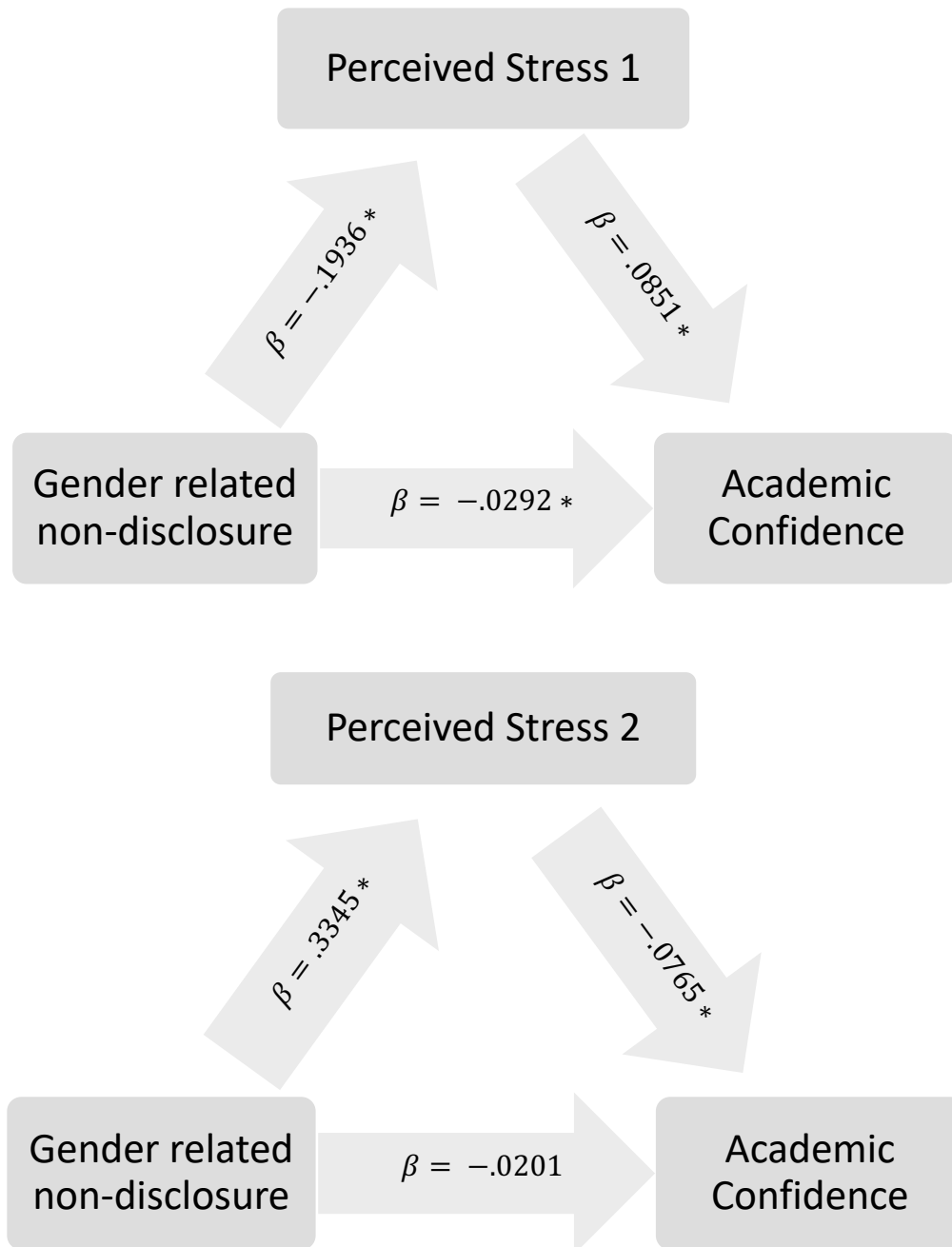
Perceived Stress Subscale 1 Indirect effect: $-.0120$ ($SE = .0061$, 95% bootstrap CI, $-.0247$ $-.0006$)

Perceived Stress Subscale 2 Indirect effect: $-.0240$ ($SE = .0075$, 95% bootstrap CI, $-.0411$, $-.0110$)

* indicates statistical significance at $p \leq .05$

Figure 2

Model Four PROCESS Procedure for Mediation: Gender Related Non-disclosure



Perceived Stress Subscale 1: Indirect effect: -.0165 (*SE* = .0063, 95% bootstrap CI, -.0308, -.0059)

Perceived Stress Subscale 2: Indirect effect: -.0256 (*SE* = .0074, 95% bootstrap CI, -.0423, -.0132)

* indicates statistical significance at $p \leq .05$.