Adverse childhood experiences, gender non-affirmation, social support, and psychological distress in transgender and non-binary adults in the United States

by

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Abstract

Given the higher rates of adverse childhood experiences (ACEs), discrimination, and mental health challenges experienced by gender minority populations compared to cisgender peers, the aim of this thesis is to delineate to what extent social support buffers the negative effect of ACEs and gender discrimination on the mental health of transgender and gender non-binary (TGNB) adults. The current literature lacks separation of gender minority subgroups which can result in transnormative research that does not take into account the potential differences in experience between transgender and gender non-binary populations. The present study used secondary data from the TransPop study (n = 274), the first national probability sample of transgender and gender non-binary adults in the U.S. First, ANOVAs were conducted in SPSS to assess mean differences on key variables between transgender and gender non-binary subgroups. Second, four multiple group path models based on gender minority stress theory were run in M*plus* to assess if different types of social support buffer the negative impact of ACEs and discrimination (assessed by gender non-affirming interactions) on psychological distress differently for trans women, trans men, and gender non-binary groups. I found that gender non-binary folks reported significantly greater ACEs, gender non-affirmation, and psychological distress compared to both trans men and trans women, and that trans men and women reported significantly different levels of social support. Additionally, I found that gender identity moderates the association of family and significant other social support with psychological distress. This first of its kind study is an important step in validating the necessity for TGNB research to view gender minority subgroups as having unique experiences and needs. Future research should not assess trans men, trans women, and gender non-conforming folks as

homogeneous groups, and helping professionals should consider the unique needs and experiences across gender minority subgroups.

Table of Contents

List of Figures

List of Tables

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Chapter 1 - Introduction

Compared to heterosexual and cisgender populations, people within the LGBTQ+ community experience Adverse Childhood Experiences (ACEs) and psychological distress at a significantly higher rate (Hughes et al., 2022), and within the LGBTQ+ community, trans and gender non-binary (TGNB) populations have significantly higher rates of ACEs, psychological distress, and suicidal ideation than any other LGBTQ+ subgroup (Price-Feeney et al., 2020; Schnarrs et al., 2019; Tobin & Delaney, 2019). Similar to adult populations, TGNB youth also report significantly higher rates of ACEs and psychological distress than their cisgender LGB peers (Craig et al., 2020). More LGBTQ+ youth are identifying as TGNB, with transgender youth increasing from 15.2% to 28.2%, and non-binary youth from 3.6% to 15.1% from 2015 to 2019 (National School Climate Survey 2015; 2019). With this increase in youth identifying as transgender and non-binary, it is important to look at what can buffer the negative outcomes of ACEs and psychological distress, such as social support, in the TGNB population.

In this study, the term transgender is being split into two categories: trans woman and trans man. Trans woman is being defined as a person who was assigned male at birth and currently identifies as female. Trans man is being defined as a person who was assigned female at birth and currently identifies as male. Gender non-binary is being defined as a person whose gender identity is outside of, or an expansion on, male or female; this also includes those who identify as agender, genderqueer, genderfluid, two spirit, etc. Physical, social, or any other type of transition is not necessary for a person to hold transgender or gender non-binary identities.

The gender minority stress model (GMSM; Testa et al., 2015), which is a validated adaptation of the minority stress model (Meyer, 2013), explains the impact of distal (e.g., ACEs;

gender discrimination and non-affirmation) and proximal stress factors (e.g., internalized transphobia) on outcomes (e.g., mental health), and potential buffering resilience factors (e.g., social support) that are experienced by people with marginalized gender identity status. The GMSM provides an explanation for the higher rates of distress in gender minority populations, but because people identifying as gender non-binary fall outside the gender binary (whereas many people who identify as transgender may conceptualize their gender within the binary), there is evidence their experiences may be qualitatively different from those who identify as transgender (Reisner & Hughto, 2019). Unfortunately, samples taken from gender minority groups thus far have predominantly focused on the transgender minority stress experience (e.g., ACEs, social support, mental health outcomes) without taking into account the potential differences between transgender and gender-nonconforming subgroups (Testa et. al, 2017; Tubbe & Moradi, 2016). However, when it comes to gender affirmation (the participant's gender identity is understood and respected by others) and non-affirmation, more studies split transgender and gender non-binary subgroups (Reisner & Hughto, 2019). When looking at the current body of research, it seems as though gender minority subgroups get grouped differently based on what variables are being examined. The reason for this inconsistency is unknown, but consistency in how research is conducted to result in a more homogeneous approach to gender minority studies is foundational to the present study.

Specifically, the distal stress factors being considered in the present study are ACEs and gender non-affirmation, the outcome is psychological distress, and the resilience factor is social support. The gender minority stress model highlights social support as a protective factor in gender minority stress experiences (Testa et al., 2017), and social support has been shown to be significantly related to a decrease in depression and suicide risk in adult trans women and trans

men (Tebbe & Moradi, 2016). However, previous research has not looked at potential differences in mental health outcomes between youth who identify as transgender and those who identify as non-binary (Price-Feeney et al., 2020). Thus, Price-Feeney et al. (2020) recommended that future gender minority research explore the unique needs and life experiences of LGBTQ+ youth who identify as transgender versus youth who identify as non-binary. Accordingly, I further examined whether the model is moderated by gender identity to examine whether the buffering strength of social support on the pathways between ACEs and gender non-affirmation to psychological distress changes based on gender identity (trans woman, trans man, and gender non-binary). These LGBTQ+ subgroups are growing in numbers, and identifying the unique experiences, and subsequent needs, of people in gender minority subgroups is necessary to mitigate or prevent adverse mental health outcomes for these marginalized populations.

Chapter 2 - Literature Review

The minority stress model (Meyer, 2013) and GMSM (Testa et al., 2015) posit that the higher rates of psychological distress and suicidal ideation amongst TGNB populations compared to LGB, cis-gender, and heterosexual populations (Price-Feeney et al., 2020; Schnarrs et al., 2019; Tobin & Delaney, 2019) can be explained in part due to greater stress experienced due to social discrimination against their marginalized identities which can be buffered by supportive relationships. With the current dearth of research on differences in this process for transgender and GNC populations, the present study seeks to better understand how types of social support differentially buffer the negative impacts of ACEs and gender non-affirming interactions on the psychological distress for transgender and GNC adults.

Psychological Distress

There are limited studies researching risks and sources of psychological distress in the TGNB community. The current literature is largely based in the minority stress model and the GMSM, so the risks and sources of distress are frequently viewed, and subsequently researched, as having a social locus. In a qualitative study of 30 TGNB adults, Rood et al. (2016) found that expecting social rejection was associated with psychological distress. In another study, they found identity concealment as a form of social protection was a common experience among the TGNB participants in their study, but that concealment in and of itself was not related to psychological distress (Rood et al., 2017). Lloyd et al. (2019) further validated these findings by analyzing an online sample of TGNB adults and found that identity nondisclosure was not significantly related to depression, anxiety, or stress.

Lefevor et al. (2019) conducted a study on psychological distress buffers within a student sample of both cisgender and TGNB participants. They found that TGNB individuals perceived

significantly less family support than their cisgender counterparts and that in the combined sample of both cisgender and TGNB participants, psychological distress was most strongly predicted by the level of general social support and family support. Although these findings make an important contribution to the research on psychological distress in the TGNB population, there is no delineation in the current literature between the trans and gender non-binary subgroups regarding severity of psychological distress. The current literature predominantly focuses on the transgender population.

ACEs

Adverse Childhood Experiences (ACEs) are defined as stressful or traumatic experiences in a person's childhood that include neglect, abuse, and severe household instability; if a person has four or more ACEs, that individual is significantly more likely to develop poor physical and mental health outcomes (Schnarrs et al., 2019). Since its conception, ACEs have been useful in measuring traumatic childhood experiences across populations by giving researchers a homogenous measurement of childhood trauma (Edwards et al., 2019). This cross-disciplinary trauma assessment is useful for informing interventions that intend to mitigate the severity of the negative outcomes associated with childhood adversity.

As previously stated, LGBTQ+ populations experience higher rates of ACEs than their cisgender and heterosexual peers and ACEs scores increase even more in TGNB subgroups (Hughes et al., 2022). Hughes et al. (2022) looked at a sample of over 50,000 people (n = 56,262) and found that across generations, "exposure to ACEs has been increasing over time and more so for LGBTQ+ individuals" (p. 666). Tobin and Delaney (2019) also found that gender non-conformity was linked to higher rates of ACEs. In a sample of trans masculine individuals (n = 131), almost every participant (n = 121) experienced ACEs and those who had four or more

ACEs were over five times more likely to experience depression, suicidality, and PTSD symptoms (Suarez et al., 2021).

TGNB youth samples were also significantly more likely to report ACEs than their cisgender peers (Austin et al., 2022; Craig et al., 2020;). In fact, Craig et al. (2020) found the transgender youth in their study reported an average of five ACEs while gender non-binary youth reported an average of six ACEs. As a result, researchers have called for further research to explore the links between ACEs, minority stress, and mental health outcomes, as well as possible preventative factors to support mental health (Austin et al., 2022; Craig et al., 2020).

Research examining the protective factors that buffer the negative effects of ACEs for TGNB samples has yielded mixed results, possibly because the studies did not differentiate transgender and non-binary sub-samples. Schnarrs et al. (2020) sought to explore resilience as a protective factor against poor mental health outcomes in the LGBTQ+ community and found that resilience did not have a significant impact on poor mental health outcomes. Similarly, in a study examining the moderating effect of transgender youth's perceptions of peer/family support on suicidality and attempts, Austin et al. (2022) found that neither peer nor family support significantly reduced suicidality or attempts. This study has a different outcome than previous research on the buffering effect of social support on psychological distress in TGNB populations (Lefover et al., 2019), so further research on protective factors for negative outcomes of ACEs, including the differences between the trans and gender non-binary populations, is necessary to better understand the protective factors and outcomes of ACEs (Craig et al., 2020; Schnarrs et al., 2019; Schnarrs et al., 2020; Suarez et al., 2021; Tobin & Delaney, 2019).

Gender Non-Affirmation

Another salient predictor of psychological distress in the TGNB population is the experience of gender non-affirmation (Rood et al., 2016). Gender non-affirmation is when transgender or gender non-binary folks do not receive support, acceptance, or positive reception regarding their gender presentation. Gender non-affirmation can occur in public, like having to choose bathrooms, and in private, like if the person experiences familial rejection for gender non-conformity. The fear of expected rejection also falls under gender non-affirmation and is linked to increased psychological distress and maladaptive coping mechanisms such as substance use, social avoidance, and rumination (Rood et al, 2016).

Comparing the transgender and gender non-binary experiences of gender non-affirmation is more common because of the binary versus non-binary experiences the two groups may have with their gender expression (Reisner & Hughto, 2019), particularly in public or medical settings where social spaces get divided by male and female (Rood et al., 2016). Gender non-binary folks have reported higher levels of familial or social rejection due to their gender identity compared to trans individuals and report higher levels of gender identity concealment (Reisner & Hughto, 2019). Considering the association familial support has with gender non-affirmation, assessing significance in that relationship across gender minority subgroups could provide clearer insight on the differences and needs of the TGNB population.

Social Support

Parallel to the sources of distress, protective factors for mental health outcomes of the TGNB population also have been researched as having a social locus. Social support as a factor of resilience has been studied in multiple domains, such as family, peers, significant others, and general community support (Tebbe & Moradi, 2016). Like the research on psychological distress

and ACEs, research on social support in the TGNB community does not delineate the experiences of transgender and gender non-binary samples. However, research has validated the significance of social support in mitigating mental health outcomes for the general TGNB population (Tebbe & Moradi, 2016).

To illustrate, in their online survey of 1,093 trans women and trans men, Brockting et al. (2013) found that family and peer support were negatively associated with psychological distress, with family having a stronger association than peer support. Budge et al. (2013) further validated the inverse relationship that social support has with depression and anxiety in trans men and women. They found that higher levels of support significantly decreased depression and anxiety. Tebbe and Moradi (2016) expanded on this by separating their analysis into three social support groups: family, friends, and significant other. They found that in their adult TGNB sample, all three domains of social support were significantly negatively related to suicide risk and depression, except for the negative relationship between significant other support and depression, which was not significant.

Similar results have been found in TGNB youth samples. Specifically, in their study of 2,168 gender diverse students, Gower et al. (2018) found that feeling more connected to parents significantly lowered all indicators of psychological distress and that caring adults in their general community lowered their odds of emotional distress. The National School Climate Surveys (NSCS) of 2015 and 2019 mirrored these findings in that they reported TGNB students with fewer supportive staff in their school were more likely to feel unsafe and avoid school entirely. The 2019 NSCS also found that transgender students were more likely to feel unsafe and avoid school than nonbinary students. Despite these findings, little is known about the differential impacts social support has on transgender versus non-binary populations.

Present Study

There has been a rise in LGBTQ+ youth who identify as transgender and gender non-binary (NSCS, 2015; 2019) and they are experiencing ACEs at higher levels than their cisgender peers (Hughes et al., 2022; Schnarrs et al., 2019). Moreover, we know family and peer support have been negatively associated with psychological stress in transgender samples (Brockting et al., 2013; Budge et al., 2013) and that social support is important to their mental health (Levitt & Ippolito, 2014; Moody et al., 2015). However, there is a large gap in the literature on the differences between transgender and non-binary subgroups with specific calls to understand their unique needs (Moody et al, 2015; Price-Feeney et al., 2020). Identity milestones are likely different for binary trans and non-binary trans populations and the assumption that the trans sub-groups experience similar life trajectories may potentially be limiting gender minority research and contributing to transnormativity (Tatum et al., 2020). Turban et al. (2021) found that the timing of social transition impacted mental health outcomes for TGNB adults and that K-12 peer harassment for those who came out during their school age years was a mediating factor in adverse mental health outcomes. Tatum et al. (2020) found that their non-binary sample socially transitioned at significantly later time in their development than their transgender peers. Suarez et al. (2021) and Craig et al. (2020) call for the need to delineate ACEs and their association with mental health outcomes in trans and gender non-binary populations.

With this need for delineation in mind, this thesis seeks to explore the potential differences in psychological distress, ACEs, gender non-affirmation, and social support in the transgender and gender non-binary subgroups using data from the TransPop surveys (Meyer et al., 2020). Reisner and Hughto (2019) surveyed TGNB adults and found that non-binary respondents experienced significantly less familial support than the transgender sample.

However, this study did not use a validated scale to measure familial support, such as the Multidimensional Scale of Perceived Social Support (MPSS), the scale that the TransPop study utilizes. Furthermore, as previously highlighted, there is a dearth of research on the differences between transgender and non-binary samples with regard to ACEs and psychological distress. This thesis seeks to address that gap as a means to deconstruct transnormativity within gender minority research and to highlight the potential limitations this places on such research that seeks to mitigate adverse mental health outcomes for marginalized populations.

Research Questions

1. How do transgender and gender non-binary subgroups differ in the levels of ACEs, gender non-affirmation, social support, and psychological distress they experience?
2. How does social support moderate the association of ACEs and gender non-affirmation with adult psychological distress within gender minority subgroups?
3. How does gender identity moderate the moderation of social support on psychological distress outcomes in relation to ACEs and gender non-affirmation?

Chapter 3 - Data collection and Analysis

Data and Participants

The present study uses secondary data from the TransPop surveys (Meyer et al, 2020), the first national probability sample of transgender individuals in the United States. The survey was administered twice, first from April 2016 to August 2016 and second from June 2017 to December 2018. The first administration ("TransPop1") utilized a 222-item questionnaire and the second questionnaire had 228 items ("TransPop2"). The item discrepancy is due to a change in gender and sex identity questions for TransPop2 that asked participants their sex assigned on their birth certificate and how they defined their gender identity. Furthermore, the items in TransPop2 were consolidated into datapoints to match the items in the TransPop1 sample. Those whose sex and gender identity differed were placed in the trans sample, as well as those who self-identified as transgender, whereas cisgender participants were invited to take the cisgender survey. The present study does not include the cisgender sample due to the discrepancy in gender non-affirmation items between the TGNB and the cisgender questionnaires.

The participants were recruited by Gallup, Inc. using random digit dialing and address-based sampling. Participants were screened and excluded if they did not identify as a gender or sexual minority, were not 18+, did not have an education above the 6th grade level, and did not complete the response in English. Participants received a $25 Amazon gift card with their survey if they received it via email and $25 in cash if they elected to have the questionnaire mailed to them. Data from both periods were grouped into one data set. For the TGNB sample, 581,844 were screened, 1,114 were classified as transgender or GNC and eligible to participate, 804 agreed to participate, and 274 participants completed the survey. The final, total sample size was

274. Overall, the majority of the sample was white with diverse sexual orientations and have attended at least some college (see descriptions of sample by gender identity in Table 1).

Table 1. Demographics (*n* = 274)

	Gender non-binary (*n* = 76)	Trans Woman (*n* = 120)	Trans Men (*n* = 78)
	M (*SD*) or *n* (weighted %)	*M* (*SD*) or *n* (weighted %)	*M* (*SD*) or *n* (weighted %)
Age	33.4 (14.2)	46.2 (16.7)	34.7 (15.9)
Race			
Asian/Asian American	1 (1.3)	4 (3.3)	3 (3.8)
Black/African American	5 (6.6)	8 (6.7)	8 (10.3)
Hispanic/Latino/Spanish	4 (5.3)	3 (2.5)	1 (1.3)
Middle Eastern/North African	1 (1.3)	0 (0.0)	0 (0.0)
Native Hawaiian/Pacific Islander	1 (1.3)	1 (0.8)	2 (2.6)
White	52 (68.4)	85 (70.8)	50 (64.1)
American Indian/Alaskan Native	1 (1.3)	1 (0.8)	0 (0.0)
Multirace	11 (14.5)	17 (14.2)	14 (17.9)
Other	0 (0.0)	1 (0.8)	0 (0.0)
Assigned Sex at Birth			
Female	51 (67.1)	2 (1.7)	77 (98.7)
Male	25 (32.9)	118 (98.3)	1 (1.3)
Sexual Identity			
Straight/heterosexual	2 (2.6)	29 (24.2)	27 (34.6)
Lesbian	8 (10.5)	16 (13.3)	0 (0.0)
Gay	3 (3.9)	9 (7.5)	11 (14.1)
Bisexual	11 (14.5)	28 (23.3)	11 (14.1)
Queer	32 (42.1)	7 (5.8)	10 (12.8)
Same-gender loving	3 (3.9)	7 (5.8)	2 (2.6)
Other	3 (3.9)	12 (10.0)	6 (7.7)
Asexual spectrum	6 (7.9)	3 (2.5)	3 (3.8)
Pansexual	8 (10.5)	6 (5.0)	8 (10.3)
Education			
Less than high school diploma	14 (18.4)	23 (19.2)	21 (26.9)
High school degree or diploma	0 (0.0)	0 (0.0)	0 (0.0)
Technical/vocational school	0 (0.0)	0 (0.0)	0 (0.0)
Some college	21 (27.6)	48 (40.0)	31 (39.7)
College graduate	19 (25.0)	27 (22.5)	14 (17.9)
Post graduate work or degree	20 (26.3)	21 (17.5)	11 (14.1)

Measures

Gender Identity

Gender identity was measured using a 5-item scale plus a fill-in option, where participants could indicate their gender identity as man, woman, trans man (FTM), trans woman (MTF), gender non-binary (GNB), or other. For the present study, participants were selected that identified as trans woman, trans man, and gender non-binary.

Gender Non-Affirmation

The scale for experiences of gender non-affirmation is a 6-item measure that assesses how frequently the participant's gender identity is understood and respected by others (Testa et al., 2015). It uses statements such as "I have to repeatedly explain my gender identity to people or correct the pronouns people use" and "I have difficulty being perceived as my gender." Answers are given on a 5-point agreement scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Lower scores mean more frequent experiences of gender affirmation and high scores mean less frequent gender affirmation. Cronbach's alpha (α) was .92 for trans women, .95 for trans men, and .88 for gender non-binary samples (Meyer et al., 2020).

Adverse Childhood Experiences

The Adverse Childhood Experiences Questionnaire (CDC-BRFSS, 2010) was used to measure adult experiences of ACEs. The measure is an 8-item scale listing eight different ACEs with dichotomized response options: 1 (*yes/more than once*) or 2 (*no, never*). Participant scores were calculated as a sum of the number of ACEs the participant experienced, ranging from 0 to 8. Any unsure or unmarked answers were removed from the final score. Cronbach's alpha (α) was .76 for trans women, .74 for trans men, and .75 for gender non-binary samples (Meyer et al., 2020).

Social Support

The Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988) is a 12-item scale used to measure family, peer, and significant other support using a 7-point agreement scale from 1 (very strongly disagree) to 7 (*strongly agree*). Participant scores were calculated as the mean of scale items, with lower scores indicative of lower perceived total social support. Cronbach's alpha (α) for the total support scale was .94 for trans women, .86 for trans men, and .91 for gender non-binary samples (Meyer et al., 2020).

Psychological Distress

The Kessler-6 (Kessler et al., 2003) is a 6-item scale from the National Comorbidity Survey assessing psychological distress. Each item asked participants how often during the past 30 days they felt: "nervous," "hopeless," "restless or fidgety," "so depressed that nothing could cheer you up," "that everything was an effort," and "worthless." Each item consisted of a 5-point scale ranging from 1 (*none of the time*) to 5 (*all of the time*). Participants' scores were the sum of their answers with scores ranging from 0-12 indicating probability of no serious mental distress and scores from 13-24 indicating probability of serious mental distress (Kessler et al., 2010). Cronbach's alpha (α) was .91 for trans women, .91 for trans men, and .89 for gender non-binary samples (Meyer et al., 2020).

Analysis Plan

Missing data ranged from 0.4% - 3.6% across all variables except the ACEs scale, where missing data was at 26.3%; all variables were within the acceptable ranges of skewnesss and kurtosis (Chou & Bentler, 1995). First, SPSS software was used to run four one-way ANOVAs on the statistical variance between gender identity and ACEs, gender non-affirmation, social support (familial, peer, and significant other), and psychological distress. Because of different

group sizes (trans woman, trans man, and non-binary), Welch's *F*-statistic was run to account for violations of homogeneity of variances assumption by adjusting *F* and residual degrees of freedom to be robust (Field, 2005).

To predict the level of psychological distress from experience of ACEs and gender non-affirmation moderated by social support, variables were centered to compute the interaction term between ACEs and social support and gender non-affirmation and social support. These interaction terms were entered into four path models, each with a different type of social support (total social support, friend social support, family social support, and significant other social support) as the moderator. All path models were run in M*plus* (Muthén & Muthén, 1998-2020) with full information maximum likelihood (FIML) to manage missing data. In addition to a non-significant model χ^2, comparative fit index (CFI) values greater than .95, and root mean square error approximation (RMSEA) smaller than .06 indicated the model was a good fit to the data (Kline, 2010). Second, to assess whether social support had the same buffering effect between ACEs and gender non-affirmation and psychological distress for trans women, trans men, and gender non-binary folks, I conducted a multiple group analysis of this model which simultaneously estimated the model for all groups allowing for the testing of cross-group equality constraints on model parameters (Kline, 2010). With the unconstrained model fitting well (no cross-group equality constraints), additional models were run in which parameters were progressively constrained to be equal across gender identities. Chi-square difference tests were conducted to determine if constraining each parameter to be equal between trans women, trans men, and gender non-binary subgroups significantly reduced the fit of the model (Kline, 2010). If it did, I concluded that the associations between ACEs, gender non-affirmation, social support, and psychological distress were moderated by gender identity.

Chapter 4 - Results

The first analysis conducted was a test of variance of means in SPSS between gender categories to identify the differences in experiences of ACEs, gender non-affirmation, social support, and psychological distress between transgender and gender non-binary subgroups. The ANOVAs revealed significant differences between gender categories in gender non-affirmation, overall social support, significant other support, and psychological distress. Mean differences in levels of ACEs and friend social support were approaching significance. Mean differences in ACEs, gender non-affirmation, and psychological distress were found between gender non-binary respondents and both trans populations, whereas mean differences in social support variables were found between trans women and trans men.

Table 2. ANOVAs

Variables	Gender non-binary (n = 76) M (SD)	Trans Woman (n = 120) M (SD)	Trans Man (n = 78) M (SD)	Welch's F
ACEs	3.27 (2.08)[a]	2.54 (2.07)[a]	3.16 (2.21)	2.63^
Gender Non-affirmation	3.76 (0.88)[a,b]	2.77 (1.19)[a]	2.60 (1.35)[b]	30.80***
Total Social Support	4.95 (1.33)	4.76 (1.49)[a]	5.34 (1.01)[a]	5.49**
Family Social Support	4.03 (1.66)	4.23 (1.86)	4.52 (1.74)	1.54
Friend Social Support	5.35 (1.49)	5.12 (1.65)[a]	5.63 (1.30)[a]	2.86^
Significant Other Social Support	5.46 (1.75)	4.99 (1.93)[a]	5.84 (1.23)[a]	6.98***
Psychological Distress	10.93 (5.34)[a,b]	8.70 (6.18)[a]	8.59 (5.54)[b]	4.67**

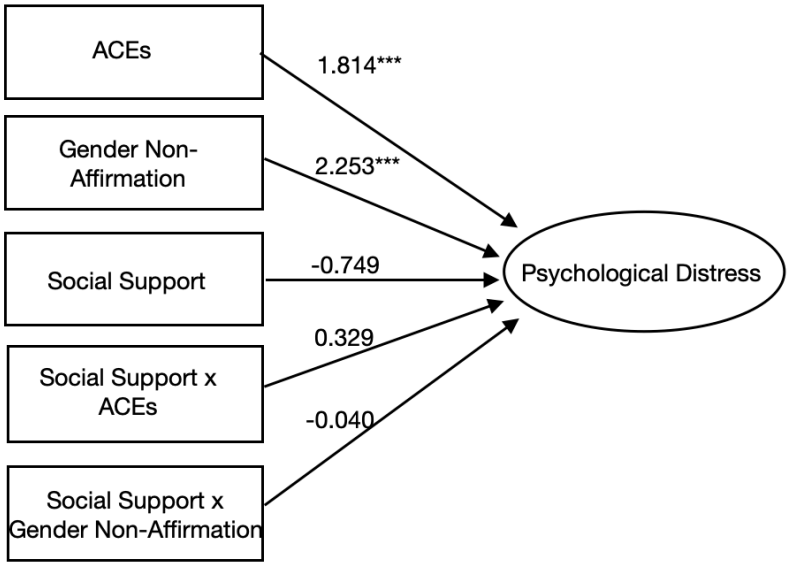
Note: ^ = p<.10, *= p<.05, **= p<.01, ***= p<.001. Matching superscript letters indicate significant mean differences.

Next, the four multiple group path models with interaction terms to examine whether each type of social support moderated the association of ACEs and gender non-affirmation on

psychological distress were run. All paths in the model were tested for moderation by gender and non-moderated paths were constrained to have equivalent unstandardized betas across groups whereas paths that were moderated were freely estimated. All final models were a good fit to the data (see the Figures below for model results and fit indices).

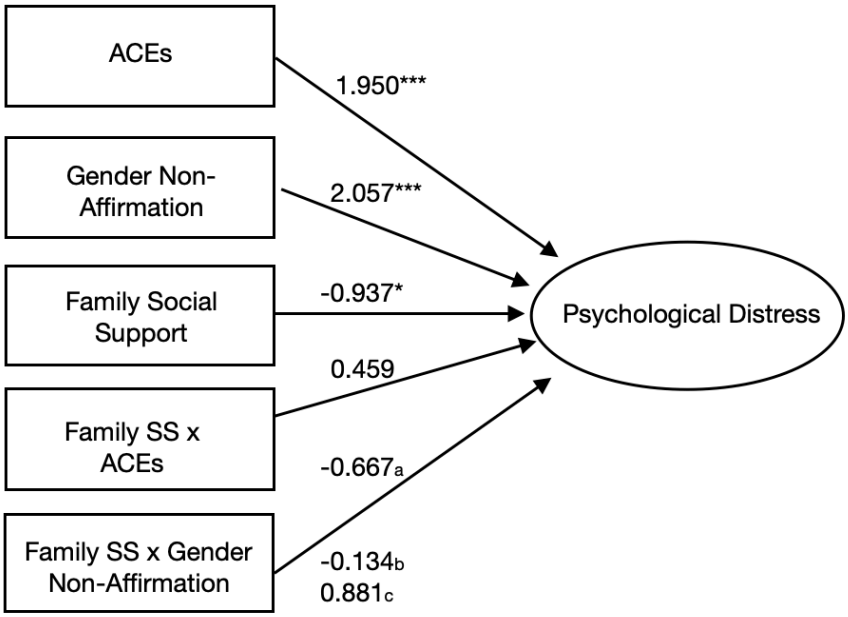
Overall, ACEs and gender non-affirmation were positively associated with psychological distress similarly for all groups across all models. Although total social support was not associated with psychological distress, family social support (Figure 2) and friend social support (Figure 3) were negatively associated with psychological distress. The association of significant other social support (Figure 4) with psychological distress was more complex and moderated by gender. Specifically, significant other social support had a positive association with psychological distress for trans men and was not significantly associated for trans women or gender non-binary folks. No type of social support significantly buffered (moderated) the negative associations between ACEs and gender non-affirmation with psychological distress, but gender did moderate the association between the interaction term of family social support by gender non-affirmation with psychological distress (see Appendix A).

Figure 1. Overall Social Support Moderation Model



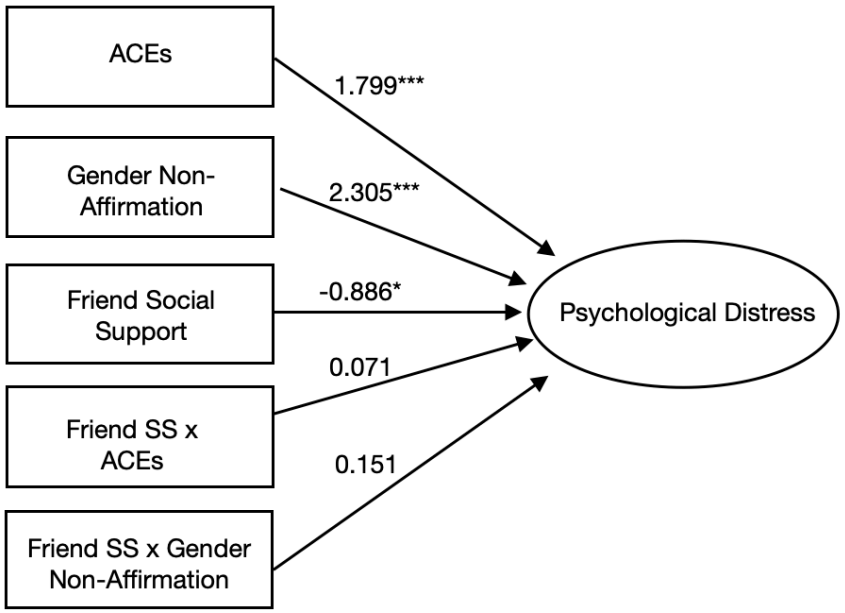
Note: Model fit: $\chi 2$ (10) = 6.63, $p > .05$; CFI = 1.0, RMSEA = .00, and SRMR =.07.

Figure 2. Family Social Support Moderation Model



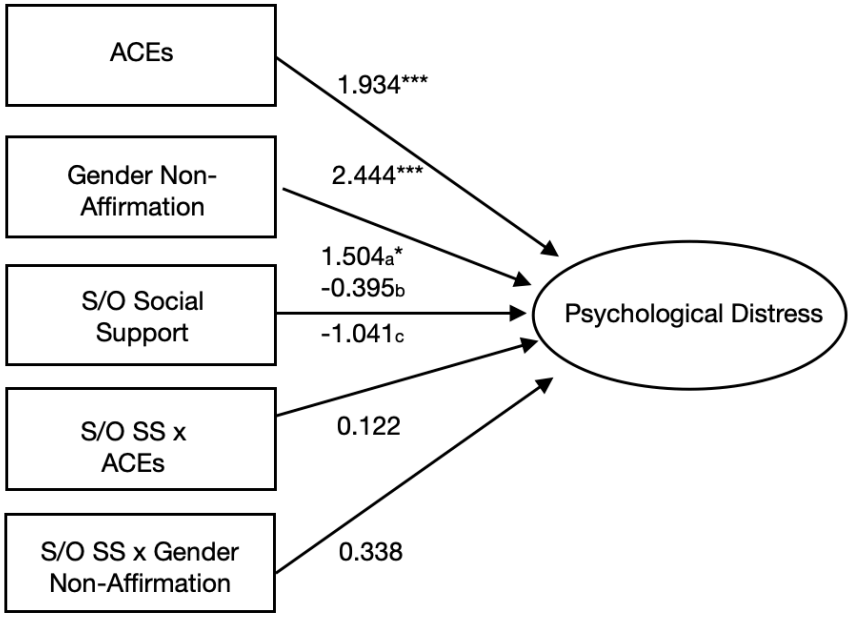
Note: a = Trans Men, b = Trans Women, c = Gender Non-Binary. Model fit: $\chi 2$ (8) = 6.60, $p > .05$; CFI = 1.0, RMSEA = .00, and SRMR =.05.

Figure 3. Friend Social Support Moderation Model



Note: Model fit: $\chi 2$ (10) = 4.92, $p > .05$; CFI = 1.0, RMSEA = .00, and SRMR =.06.

Figure 4. Significant Other Support Moderation Model



Note: a = Trans Men, b = Trans Women, c = Gender Non-Binary. Model fit: Model fit: $\chi 2$ (8) = 4.84, $p > .05$; CFI = 1.0, RMSEA = .00, and SRMR =.06.

Chapter 5 - Discussion

The presence of transnormativity in research has been made evident by the consistent grouping of TGNB samples together even though their gender developmental trajectories have been shown to be different. The results of the present study are an important first step towards highlighting the differences gender minority groups have in their experiences of gender non-affirmation, distress, and social support, as well as the contexts within which these differences exist.

First, this study confirmed that there were significant differences between gender minority subgroups in their experience of ACEs, gender non-affirmation, overall social support, significant other support, and psychological distress. Non-binary folks reported significantly higher gender non-affirmation and psychological distress than trans men and women and significantly higher ACEs than trans women. This difference may be in part due to ill-fitting gendered treatment of non-binary folks. Trans men and trans women experience gender non-affirmation and distress; however, there are more social scripts that fit with male and female gender expression. Non-binary folks likely have access to fewer social settings that are devoid of binary gender roles, such as in schools, family events, public spaces (ex. bathrooms), etc. This can lead to gender non-affirmation and the distress caused by such experiences. These findings validate past research on TGNB experiences of distress and gender non-affirmation (Reisner & Hughto, 2019) and extends it by finding significance in the difference of experience between gender minority subgroups.

Secondly, ACEs, gender non-affirmation, family support, and friend support were significantly related to distress outcomes across gender identity groups. Significant other social support was moderated by gender identity, but it did not moderate the pathways between ACEs

and distress or gender non-affirmation and distress. Compared to trans women and gender non-binary folks, trans men experienced the least amount of buffering of significant other social support on distress outcomes. Trans men also experienced the least amount of social support buffering on distress outcomes in regards to family support and gender non-affirmation. This trend raises questions as to why trans men had less beneficial social support even though trans men had comparatively high ratings of social support relative to the other gender groups. It could be that trans men receive social support but that there are other, more salient factors to their distress than gender non-affirmation or ACEs. These factors may be more proximal, such as internalized transphobia.

Finally, it was found that there were significant differences between gender identities on how familial social support moderated the effect that experiences of gender non-affirmation had on psychological distress outcomes. Trans men and trans women experienced less moderation of family social support on psychological distress outcomes compared to gender non-binary folks. Family social support had a slightly positive relationship to psychological distress outcomes for gender non-affirmation with trans men whereas family social support had an inverse relationship to distress outcomes in regard to gender non-affirmation for trans women. This suggests that family social support did not buffer the potential effects of gender non-affirmation for trans men while it did for trans women. Gender non-binary folks had an even more notable relationship with the buffering effects family social support had on distress outcomes in regard to gender non-affirmation, but it did not reach statistical significance. Regardless, there were significant differences between the ways different gender identities experienced family social support.

The findings of this study support those of Reisner and Hughto (2019) that gender non-binary folks experience different levels of distress due to gender non-affirmation. Moreover, the

results from the present study add to previous research on ACEs in the TGNB community by examining how social support differentially moderates the association between ACEs and psychological distress for different TGNB groups. Social support seems to be a more salient protective factor for gender non-affirmation than experience of ACEs. This could be because social support and gender non-affirmation are present-day variables whereas ACEs are events that happened in childhood, so intrapersonal strengths may be a stronger protective factor for gender minority individuals while interpersonal connections serve a stronger protective factor for day-to-day stressors. High ACE scores were still a strong predictor of psychological distress, so future research should examine what other protective factors moderate the relationship between ACEs and distress, specifically intrapersonal factors such as resilience.

Strengths of this study include the sample being a national non-probability sample, the use of multiple validated scales for variable measurement, and good alphas for all measures. Another strength of this study is the analytical approach, which is the first of its kind to examine how social support may differently moderate the relationship between distal stress factors and psychological distress between TGNB subgroups. The analytic structure is also heavily influenced by the GMSM, a validated measure of gender minority stress.

The limitations for this study are the small sample size and low response rate. Although the findings of the study indicated there were differences between TGNB subgroups, these findings were not consistent across all subgroups and measures. The results show that the difference in the moderation of gender identity lies predominantly in the subgroups' experiences of familial and significant other social support. This difference is unexplained by the current literature and future research directions may include examining why trans men, trans women, and gender non-binary folks experience types of social support differently. One possible

explanation is that trans men and women may hold binary identities that cisgender family members have previously learned language to use in affirming them, such as using their correct pronouns, familiarity with male and female gender roles, and more general social awareness of transgender individuals. Gender non-binary folks may experience family support differently because cisgender family members likely have had less social interaction with non-binary gender roles, the overall concept of gender fluidity, and less practice using they/them pronouns.

In summation, the present study highlighted the limitations of transnormativity in research through finding significant areas of difference between TGNB subgroups in regard to familial social support and gender non-affirmation, and significant other social support, using a first-of-its-kind moderated moderation model under the GMSM framework. These findings highlight the importance of looking at TGNB groups separately when researching their life experiences. Deconstructing transnormativity is imperative in research and in helping professions. Having a TGNB identity is not a catch-all and helping professionals should consider the assumptions they may be making about the impact different types of social support may have on their transgender or gender non-binary clients.

Based on the findings from the current study, it is recommended that helping professionals attune not just to childhood experiences of trauma, but also how gender specific non-affirmation affects their clients' day-to-day lives. Specifically, family therapists should consider the different levels of impact significant other social support and family support have on their TGNB clients. For example, when treating an individual or a family with a gender non-binary member, the clinician should consider checking in with the client(s) about the level of knowledge the family has on gender affirming language. Family social support is likely to be more effective when gender non-affirmation is not being perpetuated while the family is

engaging with their TGNB family member. Helping professionals should also consider the impact that different experiences of gender identity development will have had on their clients' experiences of ACEs. Non-binary folks reported a higher level of ACEs than trans men and trans women, so clinicians that work with children should be aware that there may be more non-binary children seeking treatment than previously assumed. With that in mind, therapeutic spaces should be inclusive of children who may carry non-binary identities. This could look like having gender neutral dolls in play therapy spaces, gender neutral bathroom spaces, and deferring to gender neutral language unless the child specifies their gender preference.

Recommendations for future TGNB research include building on this non-transnormative approach. This could include further examination of intrapersonal protective factors against distress outcomes for ACEs or examining why TGNB subgroups experience multiple types of social support differently. Qualitative interviews have been utilized for confirming that social support does help TGNB folks, but more specificity regarding why family, friend, and significant other social supports help could be warranted. Finally, studies examining how proximal factors, such as internalized transphobia, are affected by social supports or how proximal factors impact psychological distress compared to distal ones, such as gender non-affirmation across TGNB subgroups, are warranted.

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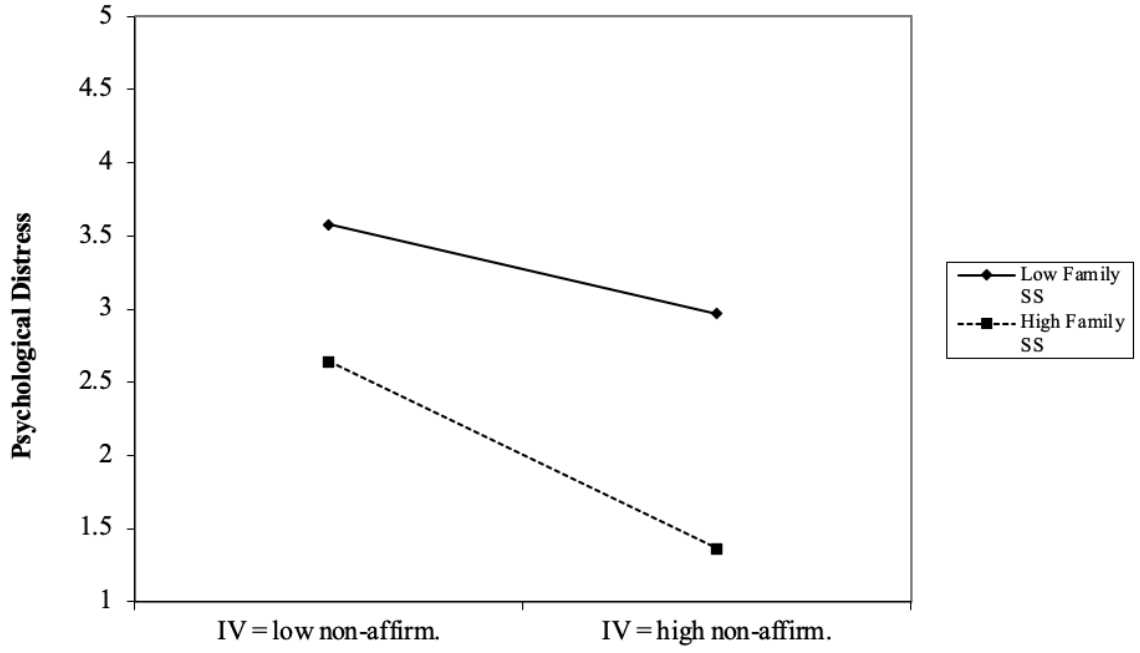
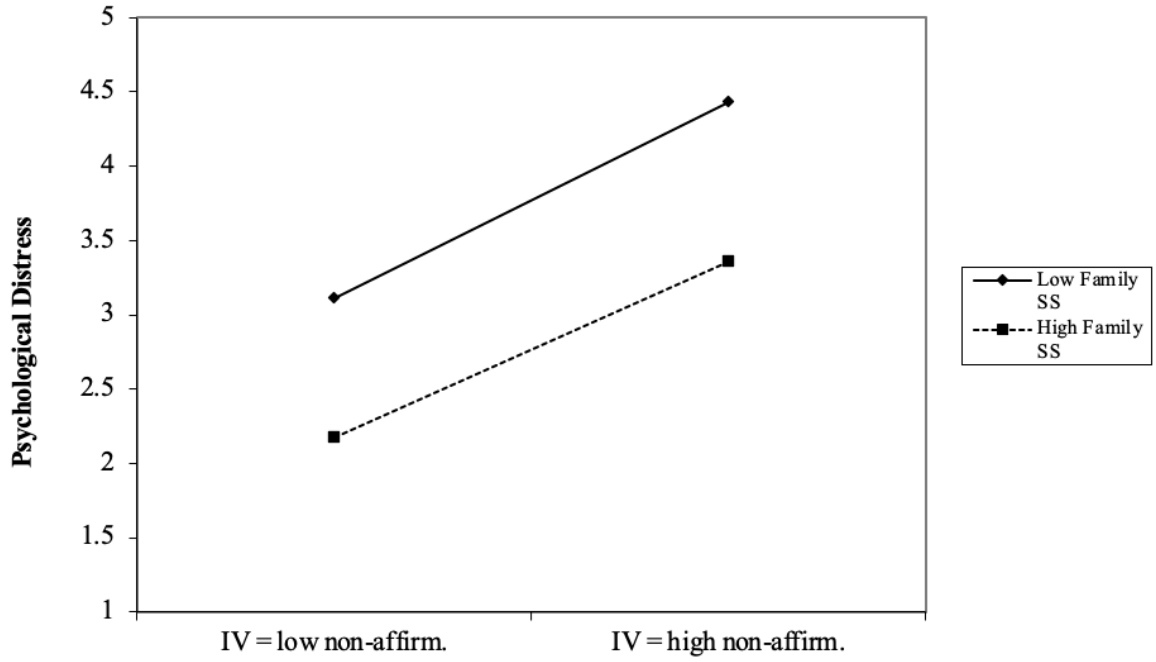
Appendix A - Moderated Moderation Graphs

Figure 5. FTM family social support, gender non-affirmation, and distress



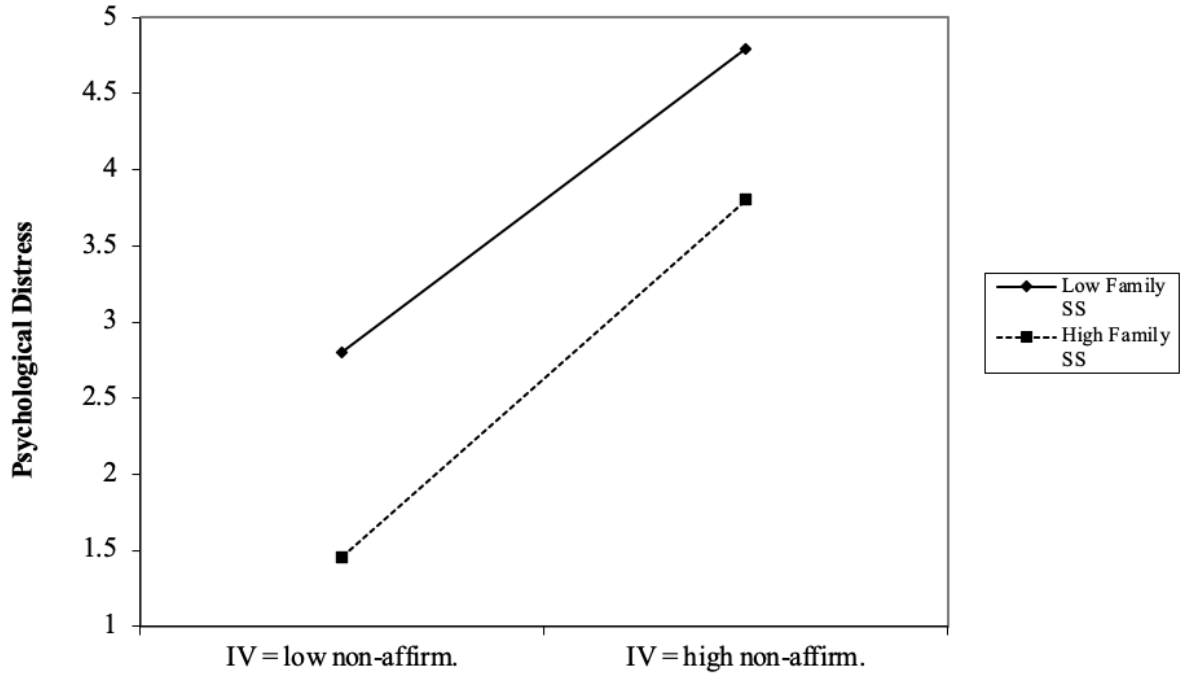
Note: FTM = trans men. Non-affirm = gender non-affirmation.

Figure 6. MTF family social support, gender non-affirmation, and distress



Note: MTF = trans women. Non-affirm = gender non-affirmation.

Figure 7. GNB family social support, gender non-affirmation, and distress



Note: GNB = gender non-binary. Non-affirm = gender non-affirmation.