

Transgender Health Disparities: Experiences of Societal Pressure, Gender Dysphoria,
and Body Dissatisfaction

by

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ABSTRACT

Transgender populations display disproportionately poorer health outcomes compared to the general population. On average, these populations tend to experience decreased well-being in part through increased mental health concerns (e.g., anxiety, depression) and poorer physical and behavioral health status. Understanding the process by which these deleterious outcomes occur for this population is integral to developing interventions. This thesis aimed to examine whether experiences of gender dysphoria and body dissatisfaction influenced the association of felt pressure to conform to gender norms with mental health and quality of life outcomes. Specifically, I hypothesized that greater pressure to conform to gender norms would be directly related to worse mental health and quality of life outcomes, and that gender dysphoria and body dissatisfaction would indirectly mediate this relationship. Furthermore, I hypothesized that participants' gender identity would moderate this relationship, such that transgender individuals would show stronger associations on all pathways as compared to cisgender individuals. The sample consisted of 211 individuals – 109 being transgender and 102 being cisgender. Participants completed a 15-minute online survey including a consent form. Results indicated partial support of hypotheses – pressure to conform to gender norms directly predicted outcomes of compromised mental health (i.e., depression, anxiety, and stress), but did not predict well-being or quality of life. Furthermore, gender dysphoria (but not body dissatisfaction) mediated the relationship between felt pressure for gender conformity and compromised mental health outcomes for cisgender participants, but unexpectedly not for transgender participants. Post hoc analyses suggest that perceived

discrimination mediated the relation between felt pressure and all mental health measures and quality of life measures for both transgender and cisgender participants.

DEDICATION

I dedicate this thesis to any gender non-conforming individuals and their allies. I hope this thesis helps expand the representation of transgender individuals' experiences both in society and internally.

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CHAPTER 1

INTRODUCTION

Across time, transgender and gender non-conforming individuals have endured higher rates of mental and physical health concerns relative to their cisgender counterparts (Fredriksen-Goldsen et al., 2014; Hendricks & Testa, 2012; Romanelli & Lindsey, 2020; Wesp et al., 2019). With these populations being projected to rise both nationally and globally (Ghorayshi, 2022; Herman et al., 2022; Reisner et al., 2016; Zucker, 2017), it is relative and important to further investigate contributors of health inequities among diverse gender groups. Social context has been shown to be an informative factor in health behaviors and outcomes (Burke et al., 2009), and likely plays a substantial role in trans peoples' generally poor mental and/or physical health status (see White Hughto et al., 2015 for a review). The social context of most trans and gender non-conforming individuals includes experiences of discrimination, societal exclusion, and other negative consequences based merely on their gender identity (Grant et al., 2011; Smith et al., 2018; White Hughto et al., 2015; Winter et al., 2016). Western societies characterized by binary gender views often fail to offer social space for transgender identities at both macro and micro levels (Gagné & Tewksbury, 1998; West & Zimmerman, 1987). This ongoing discrimination can serve as a social stressor that has potential psychological and physiological effects (e.g., irregular heartbeat, anxiety, heartburn) on individuals, which can be compounded over time and lead to long-term negative health outcomes (Pascoe & Smart Richman, 2009).

Failing to abide by binary gender norms, may serve as a risk factor to health and quality of life (Gordon et al., 2017; Sánchez-López et al., 2012). Binary gender norms

refer to the idea that natal sex directly determines gender -either male or female - with characteristics like appearance, interests, and values expected of them (Morgenroth & Ryan, 2020; Morgenroth et al., 2021). In order to gain acceptance by others and society at large, people are expected to follow gender norms (Elliot et al., 2022). However, it has been well-established that binary gender identities and expectations are not applicable to everyone. Binary gender norms present issues for those who do not feel a personal sense of identity in their designated gender. As a result, these people can be faced with distress by incongruence of their natal sex and their felt gender identity (Davy, 2015; Davy & Toze, 2018; Miller & Grollman, 2015; Zucker et al., 2016), and dissatisfaction with their physical body (Jones et al., 2019; McGuire et al., 2016; Mofradidoost & Abolghasemi, 2020; Morris & Galupo, 2019; Vocks et al., 2009; Wilchek-Aviad et al., 2020). In fact, gender norms are recognized as a major social determinant of health (Fleming & Agnew-Brune, 2015).

Gender dysphoria refers to experiences of incongruence between one's expressed gender and assigned gender for a duration of six months or more, accompanied with clinically significant feelings of distress or impairment in social, occupational, or other areas of functioning (DSM-5, 2013, p. 453). Gender dysphoria is strongly correlated with body dissatisfaction - in fact, some view the two as going "hand in hand" (van de Grift et al., 2016). Body dissatisfaction is defined as a dislike with one's general physical appearance and/or specific body parts and has been shown to be negatively related to quality of life, health, and well-being (Gordon et al., 2017; Morris & Galupo, 2019; Röder et al., 2018).

Collectively, experiences with gender dysphoria and body dissatisfaction are commonplace for trans and gender non-conforming individuals (Peterson et al., 2016; Röder et al., 2018; Tabaac et al., 2017).

It is well-documented that transgender and gender non-conforming people generally experience worse mental and physical health outcomes, with many of those being attributed to and associated with experiences of gender dysphoria and/or body dissatisfaction. Alongside, the establishment that gender norms serve as social determinants of health (Fleming & Agnew-Brune, 2015), places trans individuals in a unique position. Specifically, being faced with external pressures to conform to societal expectations and internal distress as a result of experienced incongruency with their body. However, research is lacking regarding how gender norm expectations influence health outcomes of transgender and gender non-conforming individuals. The thesis aims to examine whether societal pressures to conform may be predictive of decreased mental and physical health outcomes among trans individuals. It is also interested in exploring the associations of gender dysphoria and body dissatisfaction on this relationship.

Gender Identity

Until the 1960s, the term ‘gender’ was often used to identify masculine and feminine French words. In 1968, psychologist Robert Stoller began using the term ‘sex’ to differentiate biological traits of a person (e.g., chromosomes, anatomy, hormones), while the term ‘gender’ was used to describe the amount of femininity and masculinity a person exhibited (Mikkola, 2022). Presently ‘gender’ refers to associated roles (i.e., what it means to be a man or woman in a specific culture) or self-identification and categorization (American Psychological Association, 2018; Wood & Eagly, 2015).

Relevant to the proceedings of this thesis, Stroller originally denoted the distinction between sex and gender to further the understanding of transsexuality – a differentiation in an individual’s sex from their gender (Mikkola, 2022). Even so, sex and gender have been regarded as being coextensive, being that men are male humans and women are female humans.

Feminists argue otherwise, they refer to gender to distinguish social and psychological differences among people rather than biological ones (Mikkola, 2022). A person’s sex is determined by fixed biological differences, while gender refers to a social construct that informs behavior, interests, expectations and other personal characteristics that are ‘appropriate’ for men and women. In 1975, activist Gayle Rubin described gender as the “socially imposed division of the sexes” (Mikkola, 2022). Feminists believe that behavioral and psychological differences among men and women are a product of socialization, rather than biological determinism as historically theorized (and presently outdated) by Geddes and Thompson in 1889 (Mikkola, 2022). Gaining popularity among both academics and laypeople is the ‘doing gender’ theory originally coined by West and Zimmerman (1987), which refers to the idea that gender, rather than being an innate quality of individuals, is a psychologically ingrained social construct that surfaces in everyday human interaction. This theory suggests that gender is performed on a repeated basis in accordance with societal norms.

Gender is one of the earliest learned and most influential social identities throughout the lifespan (Bem, 1993), and often thought of as a major contributor to an individual’s self-concept. Researchers have developed and adopted various perspectives from several fields of psychology (e.g., social, cognitive, biological) to better understand

the role gender plays across the lifespan (Miller, 2016). In fact, for more than 60 years, child development experts have studied how young children learn and think about gender (Bem, 1981; Bussey & Bandura, 1999; Hines, 2020; Kohlberg, 1966; Martin & Halverson, 1981; Miller, et al., 2006; Ruble & Martin, 1998; Ruble et al., 2006; Trautner, et al., 2003; Zosuls et al., 2009). Some suggest that children observe gendered messages in infancy, and by 18 months of age children begin to acquire and demonstrate concepts of gender through activities, interests, and toys that are associated with each gender (Early Childhood National Centers, 2022; Martin & Ruble, 2010). Collectively, research has identified several stages of gender development in children which signifies healthy, unique conceptualization of gender (Early Childhood National Centers, 2022). Given the ubiquitous influence of gender, various assessment tools have been developed (i.e., *Gender Self-Socialization Model*, *Childhood Play Activities Questionnaire*, *Recalled Childhood Gender Questionnaire-Revised*) in an attempt to further investigate gender development (Meyer-Bahlburg et al., 2006; Perry et al., 2017). Virtually all human functioning across the lifespan has a gendered cast - appearance, mannerisms, communication, temperament, aspirations, and values (Ruble & Martin, 2006), hence the consistent prominence of gender research.

Traditionally in the Western world, gender was thought of as being dichotomous and oppositional, with people belonging to one of two categories: male or female (akin to biological sex). This belief system is referred to as the gender/sex binary – sex is binary and directly determines gender (Hyde et al., 2019). Belief in binary views not only *describes* what sexes and genders exist and how these two concepts are related, but *prescribes* and *proscribes* (i.e., dictating which genders and sexes *should* or *should not*

exist and how they *should* or *should not* be related) *typical* gender expectations (Morgenroth et al., 2021). Belief in a binary system suggest that all individuals born with a male karyotype of 46, XY are expected to develop male bodies, identify as men, and align with masculine stereotypes, while all individuals born with a female karyotype of 46, XX are expected to develop female bodies, identify as women, and align with female stereotypes (Morgenroth & Ryan, 2020; Morgenroth et al., 2021). Yet, these are immensely limiting and unattainable expectations, as it has been well established that humans are vastly diverse beings, with many identifying outside of the binary.

The discourse of gender identities outside the binary brings up important considerations for researchers. Social science researchers suggest that many quantitative research findings are limited in terms of gender because participant gender is often represented by a dichotomous/ binary variable (Lindqvist et al., 2020). Researchers report that the problem with the binary gender system is twofold. First, the use of a dichotomous, categorical gender variable, without opalization, may elicit measurement errors (Frohard-Dourlent et al., 2017). When collecting data, gender identities that do not fall into gender binary response options may not be accurately reported and captured, therefore producing potentially flawed research findings. This is problematic because research measures may fail to recognize findings that are related to non-binary identities and ultimately result in inaccurate research (Lindqvist et al., 2020). Secondly, capturing gender identity with a dichotomous variable discriminates against individuals who do not define themselves as one of the two options (Nowakowski et al., 2016). For these reasons, the use of a binary gender variable may raise ethical problems in research (Frohard-Dourlent et al., 2017). To more accurately capture one's gender Lindqvist and

colleagues (2020) recommend that gender-related data consist of the following facets: physiological/bodily aspects, self-defined gender identity, legal sex, and gender expression. These are important future considerations for social science researchers, and an opportunity for attributing specific components of participants' gender to their findings.

Emergence of Trans Identity

Across time views of gender have begun to shift away from a traditional binary lens. In recent years views of gender have gradually become more inclusive towards individuals who do not align with a binary gendered system, such as transgender and nonbinary individuals (Morgenroth & Ryan, 2020). Broadly, the term ‘transgender’ (trans) refers to individuals whose gender presentation differs from their sex assigned at birth (Liamputtong et al., 2020), while the term ‘nonbinary’ describes gender identities outside of the binary, or a gender identity that is neither male nor female (Thorne et al., 2019). While some transgender individuals may identify as a trans woman or a trans man, other transgender individuals may identify as neither (e.g., nonbinary). Nonbinary identities are sometimes discussed as trans identities and those who exhibit gender expressions of such may also consider themselves as trans (Richards et al., 2017). In other words, a nonbinary individual *may* or *may not* consider themselves as transgender, and vice versa. The term ‘transgender’ can be applicable to a range of diverse gender identities (e.g., third gender, agender, and having no gender) that ultimately differs from sex assigned at birth (Liamputtong et al., 2020). The term ‘transgender’ has undergone multiple definitions and descriptors across time, each nuanced towards the inclusivity of recognizing all gender identities, experiences, and expressions (Matsuno & Budge, 2017).

Importantly, gender identity is not a fixed characteristic, and many transgender people move fluidly between identities over time, sometimes without specific labels (Whittle et al., 2007). For clarification purposes, the terms ‘transgender’ or ‘trans’ in this study will refer specifically to people who have transitioned their experienced (binary or nonbinary) gender socially, legally, or physically, or a combination thereof.

Notably, it was not until the late 1980s and early 1990s that the term ‘transgender’ was used to describe a wide range of gender-variant identities and communities within the U.S. (Marlowe, 2018). Prior throughout the 1960s and 1970s the terms ‘transgender’, ‘transsexual’, and ‘transvestite’ were all used interchangeably to describe people transitioning and undergoing sex changes. The transformation of transgender’s etymology was largely due to social activists such as Virginia Prince, Christine Jorgenson, Ari Kane, and Marsha P. Johnson (Marlowe, 2018). In suit with social and political reformation, transgender studies became of interest to researchers. Academic exploration of gender identity and expression, and particularly nonbinary identities, only stretches back to the first decade of this millennium (Factor & Rothblum, 2008; Haritaworn, 2008), and more than half the total number of publications ever printed on transgender issues have been published since 2010 (Matsuno & Budge, 2017). Not to mention, only a small number of these publications discuss gender identities that are not binary. However, interestingly, the concept of ‘third gender’ (e.g., an identity that does not fall into a gender binary category) extends far beyond the last millennium. Deep literature analyses suggest that various historic figures (i.e., ancient Greek Gods, early philosophers and Christian leaders, and tribes settled in pre-Columbus America) promoted androgynous and/or third gender ideology (Thorne et al., 2019). Though the

discussions of nonbinary identities have become increasingly popular in recent years, these ideals are not new.

As a result of trans activists' discourses in the 1990s, the term '*cisgender*' emerged to describe an individual whose gender identity and gender expression align with sex assigned at birth (Aultman, 2014), otherwise sometimes defined as 'non-transgender' (Ansara, 2016). However, the use of 'non-transgender' as a definition has been rather controversial (see Enke, 2013, for a critique) as it can allude to negative implications of transgender gender identity. Similarly, considering cisgenderism as 'transgender vs. cisgender' alludes to ideas of two distinct classes of individuals with distinct natures, with normativity typically being placed of the side of "cis-ness" (Ansara & Hegarty, 2014; Enke 2013). Cisgenderism can refer to the idea that it is possible to visually see one's gender and assume bodily characteristics based on physical appearance, which has the potential to delegitimize one's self-designated gender (Ansara & Hegarty, 2014). Other researchers suggest that when 'cisgender' is used appropriately it helps distinguish diverse gender identities without reproducing unstated norms associated with cisness (Autman, 2014). Likewise, it can be used as a way of including transgender as a categorical equal of identifying gendered individuals (Autman, 2014; Stryker, 2008).

Until recently, there was a lack of transgender-inclusive gender-identity data in general population research (Meerwijk & Sevelius, 2017). Official records such as the U.S. Census kept by agencies like the National Archives and State Departments of Motor Vehicles report data based on sex assigned at birth or legal sex, without report of current gender identity. Such agencies and departments fail to record whether legal sex differs

from sex assigned at birth, resulting in misrepresentation of the transgender population (Meerwijk & Sevelius, 2017). Representation of the transgender community is further complicated by diversity in the trans community with regard to language and subcultures (Haas et al., 2011; APA, 2015), alongside conflation of the transgender identity and homosexuality (Drescher, 2010; Drescher 2015). Collectively, the U.S. population size of transgender individuals is not well-established, but rather a broad estimation (Meerwijk & Sevelius, 2017).

As views of gender continue to shift and reflect societal change by the growing visibility of transgender and nonbinary identities, so has the development of data on gender. Contemporary secular trends in culture and media have created a more favorable environment for collecting transgender-inclusive gender identity data (Meerwijk & Sevelius, 2017). For instance, recent data from the CDC's Behavioral Risk Factor Surveillance System and the Youth Behavioral Risk Factor Surveillance System estimates that at least 1.6 million people ages 13+ identify as transgender in the United States. Specifically, around 1.3 million adults identifying as transgender and 300,000 youth ages 13-17 identifying as transgender (Herman et al., 2022). The CDC's most current report suggests that the number of adults who identify as transgender have remained mostly steady from the 2016-2017 report. As for the youth, the 2016-2017 report estimated about 10% of youth identified as transgender, and today the current report estimates about 18% of youth identified as transgender (Herman et al., 2022). With the transgender population rising nationally, and globally (Ghorayshi, 2022; Herman et al., 2022; Reisner et al., 2016; Zucker, 2017) it is important that these individuals are not only statistically represented, but also represented within psychological research.

Pressure to Conform

Gender is considered a central construct to many facets of psychological development, especially with development being reliant on conformity to established societal and cultural norms (Carver, 2003; Eiseman, 2018). Norms dictate what is considered “normal” and oftentimes people experience pressure to conform to norms in order to feel accepted by their peers and society at large (Elliot et al., 2022). Though norms are relative and socially constructed, they heavily influence human behavior, preferences, attitude, and other identifying characteristics (Elliot et al., 2022; Lagaert et al., 2017). In particular, gender norms deem what is socially acceptable for one’s gender - typically in Western societies binary gender views are the norms (Weber et al., 2019). In other words, people assigned female at birth are expected to conform to feminine norms and identify as female, and people assigned male at birth are expected to conform to masculine norms and identify as male. However, it has been well-established that binary gender identities and expectations do not apply to every single person. Binary gender views tend to come in one size, yet it is known that humans are unique, diverse, and different - one size does *not* fit all (or even most). Some people assigned female at birth feel masculine and identify as male, and vice versa. Some people do not feel either male or female, or some may feel like both. But relative to society’s norms, these people might be considered to be abnormal by not conforming to the gender binary. Irrespective, some people are comfortable with non-conforming by identifying with a gender identity that is different from the one assigned to them. However, more often than not, this is not the case. When people do not feel an internal sense of identity or belonging to their assigned gender, they are often met with feelings of distress, felt pressure to conform, and even

emotional turmoil (Fleming & Agnew-Brune, 2015; Weber et al., 2019; Zucker et al., 2016). Furthermore, when people openly do not ascribe to their designated gender identity, they can feel or become outcast and encounter discrimination, stigma, and harassment (White Hughto et al., 2015; Winter et al., 2016).

Gender norms in Western societies that are characterized by binary gender views often fail to offer social space for gender non-conforming individuals (Gagné & Tewksbury, 1998; West & Zimmerman, 1987). People who arrive at a personal sense of gender identity that is different from the one they were assigned, sometimes undergo gender transitioning (Mason-Schrock, 1996). The term ‘gender transitioning’ is used to signify a social process wherein modifications are made to one's appearance, style of dress, hair, body, hormones, physical anatomy, and pronoun/name usage. Rather than a singular event, transitioning is generally a process that unfolds over time, taking anywhere from several months to several years (Miller & Grollman, 2015). Gender transitioning is typically done to affirm one’s felt gender identity (Mason-Schrock, 1996). Some common terms for people who undergo gender transition include transgender, transsexual, gender non-conforming, nonbinary, agender, third gender (Liamputtong et al., 2020). Gender identity formation among transgender individuals typically has to be negotiated more than once. For instance, Devor (2004) suggested a fourteen-stage model of trans identity development that ranged from anxiety and confusion to discovery, acceptance, and pride in one’s gender identity. Previously Gagne and colleagues (1997) reported qualitative accounts on individuals’ gender identification processes of those who transitioned from male-to-female. They were described through narrative accounts in which four main themes were asserted: early transgendered experiences, coming out to

oneself, coming out to others, and resolution of identity. Though Devor's model depicts stages, and Gagne and colleagues centralize on themes, they both demonstrate trans peoples' early experiences of discomfort with the variance between felt gender and natal sex as it deviates from what society deems as "normal". According to authors from both studies, trans individuals report feelings of not fitting in with others, as well as feeling fearful of coming out due to the rejection they expect from loved ones, peers, and society (Budge et al., 2013).

Gender theorists Egan and Perry (2001) developed a multidimensional approach to defining gender identity that rightfully asserts that gender identity cannot be deduced to a singular component. They proposed that gender is composed of five major components: (1) membership knowledge; (2) gender typicality; (3) gender contentedness; (4) felt pressure for gender conformity; and, (5) intergroup bias. Many researchers have adopted this multidimensional approach to explore various components of gender identity formation in children and adolescence. For example, one finding illustrated that felt gender typicality among young cisgender girls are affected by surrounding peer group composition (i.e., mixed-sex groups vs. single sex groups) (Drury et al., 2012). Similarly, Kornienko and colleagues (2016) suggest that, in adolescence, peers influence intergroup bias and felt pressure for gender conformity, but peers did not influence felt gender typicality and contentedness. One study found that cisgender females that demonstrated higher felt gender-typicality and higher pressure to conform to gender stereotypes were associated with higher interests in arts-related activities, as compared with lower highbrow interests in cisgender males (Lagaert et al., 2017). These studies and the remaining literature on gender norm conformity, focuses on cisgender youth and adults

(Priess et al., 2009), with little to no attention to multidimensional gender identity development of those who are gender non-conforming or trans - potentially revealing a gap in the literature.

In childhood and sometimes adolescence, adhering less or not conforming at all to societal gender expectations can have negative social implications, and may serve as a risk factor to health and quality of life (Gordon et al., 2017; Sánchez-López et al., 2012), including bullying or ostracism by peers, and scolding or punishment by caretakers and teachers (Weber et al., 2019). Across the literature, findings suggest that gender nonconformity in childhood positively predicts negative health-related outcomes (Gordon et al., 2017; Heard et al., 2018; Roberts et al., 2013; Röder et al., 2018), such as elevated levels of depression and/or anxiety, bullying victimization, pain or discomfort. However, there is limited data on the pressures to conform to gender norms in adult populations. Speculatively, this may be due to greater identity exploration and desire to belong in childhood and adolescence (Elliot et al., 2022; Steensma et al., 2013). While both trans youth and adults experience negative health outcomes, it is unclear in the literature if adults feel the pressure to conform to gender norms similarly to adolescents - thus, exposing a gap this thesis aims to bridge (*Aim 1*).

Mental and Physical Health: Transgender versus Cisgender

On average, transgender people suffer from higher rates of a variety of negative mental and physical health issues relative to their cisgender counterparts (Fredriksen-Goldsen et al., 2014; Hendricks & Testa, 2012; Romanelli & Lindsey, 2020; Wesp et al., 2019). Research on the trans population has tended to come from medical, psychiatric, or deviance perspectives (Cole et al., 2000; Ekins & King, 1996; Garfinkel, 1967; Feldman

& Goldberg, 2006; Tewksbury, 1998), with little attention paid to social context and their experiences. A holistic approach is required to appropriately address the mental and physical health disparities that exist between transgender and cisgender people. This approach demands recognizing barriers within social context such as social stigma, discrimination, and harassment that further restrict trans people from the promotion of health and well-being (White Hughto et al., 2015; Winter et al., 2016). The minority stress theory developed by Meyer (2003) accounts for social context in minority health-related research. Originally, it was applied to sexual minority research (e.g., LGB populations) and is becoming increasingly popular in application to trans' health studies (Griffin et al., 2019; Hendricks & Testa, 2012; Rood et al., 2016). This theory proposes that unique stressors specific to minorities, such as identity-based discrimination and internalization of this discrimination, collectively contribute to negative mental and physical health outcomes (Meyer, 2003). This approach is unique because it uses a social context factor (i.e., discrimination) to (partially) explain health status of sexual minority groups. Aside from identifying health disparities, this theory could give professionals a more thorough explanation as to why these disparities may exist and what sort of interventions might be most appropriate in improving health.

In 2015, the National Center for Transgender Equality conducted the U.S. Transgender Survey consisting of 27,715 participants that highlighted the injustices experienced by transgender and gender non-conforming populations across the U.S., including all 50 states, the District of Columbia, American Samoa, Puerto Rico, Guam, and U.S. military bases overseas (James et al., 2016). The U.S. Trans Survey is the largest transgender survey to date, that examined all domains of trans people's lives and

how they are negatively hindered on the basis of their gender identity and/or expression. The U.S. Trans Survey collected data on disparities compared to the general population in education, employment, family life, housing, and the criminal justice system, which could partially contribute towards poor mental and physical health outcomes. The survey found that 39% of participants experienced severe psychological distress within the last month that they took the survey, compared with only 5% of the U.S. population. About 40% of participants reported attempting suicide in their lifetime, which is nine times the attempted suicide rate in the U.S. (4.6%) (James et al., 2016). Trans people exhibit disproportionately high rates of depression and anxiety compared to cisgender counterparts (Bariola et al., 2015; Budge et al., 2013; Nuttbrock et al., 2014; Owen-Smith et al., 2017). A systematic literature review released in 2020 suggested that there was high and excess prevalence of substance use among transgender compared with cisgender people, but insufficient evidence to estimate prevalence or quantify the risk for substance use (Connolly & Gilchrist, 2020).

The National Institutes of Health (NIH) identified transgender people as a health disparity population and the World Health Organization (WHO) called for a global health agenda inclusive of transgender people (Wesp et al., 2019). These calls for action illuminate the drastically poor mental and physical health outcomes of transgender populations, both nationally and globally. Trans people are commonly faced with systemic barriers that limit opportunity and restrict the promotion of health and well-being. One dominant barrier being access to healthcare, which is a fundamental human right, that has been historically denied to transgender and gender non-conforming individuals (James et al., 2016). Specifically, one third of participants from the U.S.

Trans Survey reported mistreatment by a healthcare provider (i.e., verbal harassment, refusal of treatment). Fear of discrimination, specified by the minority stress model (Meyer, 2003), influenced one quarter of participants to avoid healthcare services, and about 33% of participants could not financially afford to go to a provider (James et al., 2016). Relatedly, about one in four (25%) had problems with insurance, such as being denied, and a little more than half (55%) of those who sought out coverage for transition-related surgery were denied. Research has shown that withholding or delaying transition-related treatments may not be optimal given the benefits of reduced levels of distress, and observed depression and/or anxiety after undergoing desired interventions (Owen-Smith et al., 2018). One finding suggested that sleep was frequently impaired among transgender and gender non-conforming population, which may serve as a risk factor for mental health concerns, such as depression and anxiety (Harry-Hernandez et al., 2020).

Also, commonly discussed in the literature are high rates of disordered eating among gender-dysphoric (or trans) people that experience body image concerns (Ålgars et al., 2010; Strandjord et al., 2015; Turan et al., 2018; Vocks et al., 2009). Disordered eating behaviors include restraint, bingeing, and purging, which have the potential to affect health status. Some studies reported on overall decreased health-related quality of life among trans adults and youth (Röder et al., 2018; Gordon et al., 2017). To conclude, it is clear from the existing literature that transgender and gender non-conforming individuals experience prominent mental and physical health inequities relative to their cisgender peers. What is less clear is why – what are the mechanisms explaining this connection?

Gender Dysphoria

The literature suggests that experiences of gender dysphoria are commonplace for trans people and have been suggested to be related to impaired health outcomes (Peterson et al., 2016; Tabaac et al., 2017). With the first two publications of the *Diagnostic and Statistical Manual of Mental Disorders (DSM)* making no mention of gender identity, the *DSM-III* in 1980 contained the diagnosis of ‘transsexualism’. By 1990 the *World Health Organization (WHO)* followed suit by including it as a diagnosis in the *International Statistical Classification of Diseases and Related Health Problems (ICD-10)* (Davy, 2015). In an effort to reduce stigma, the *DSM-IV* in 1994 replaced ‘transsexualism’ with ‘gender identity disorder (GID)’; however, this was controversial because it pathologized gender identity. Eventually, by 2013, the fifth edition of the *DSM* eliminated GID as a diagnosis and replaced it with ‘gender dysphoria (GD)’ to better indicate distressing feelings of an incongruent gender identity. Again, the *ICD-11* followed suit by replacement of GID with ‘gender incongruence’ and switched condition classification from mental health to sexual health, with the intention to increase care for health interventions and destigmatize the condition (Khoury et al., 2021). Though the diagnosis name changed to ‘gender dysphoria’ for trans people of all ages, the descriptive diagnostic criteria remained relatively similar (Davy, 2015). Specifically, GD diagnostic criterion includes experiences of incongruence between one’s expressed gender and assigned gender for a duration of six months or more, accompanied with clinically significant feelings of distress or impairment in social, occupational, or other areas of functioning (APA, 2013). A GD diagnosis for adolescents and adults requires

manifestation of these criteria in two ways or more, whereas children require six ways or more to be eligible for diagnosis.

In the *DSM-5*, gender dysphoria is defined as “*an individual’s affective/cognitive discontent with the assigned gender (usually at birth and referred to as natal gender)*” (APA, 2013, p. 451). Under the guidance of a clinical professional, a GD diagnosis can be applicable to a wide range of gender identities outside of the male and female binary, such as nonbinary, transsexual, transgender, gender variant, gender non-conforming, gender queer, gender fluid, bigender, gender neutral, agender, and intersex, or otherwise known as difference/disorder in sex development (DSD) (Zucker et al., 2016). The reported time of initial gender dysphoric feelings and experiences determines the time of onset, rather than the time of seeking diagnosis. Researchers have indicated that most people fall into one of two categories of onset - early-onset GD and late-onset GD (Zucker et al., 2016). The literature on early-onset GD is quite variable with some considering early-onset to be any time prior to puberty and others consider it to be during toddler and preschool years. Late-onset GD refers to the emergence of GD at the time of or after puberty (Zucker et al., 2016).

Controversy exists around the diagnosis of gender dysphoria among scholars, clinicians, and laypeople alike, with some claiming it to be “*two steps forward, and one step back,*” (Lev, 2013). By adopting GD as a diagnosis, the *DSM-5*’s goals were to reduce pathologizing and stigma and instead better indicate experience(s) of distress (Davy, 2015; Davy & Toze, 2018; Zucker et al., 2016). However, not all individuals will experience distress as a result of gender incongruence, as stated in the manual. Specifically, the *DSM-5* working group stated that the key distinction between *DSM-IV*

and *DSM-5* was the recognition that gender nonconformity and distress were not the same things, and that gender nonconformity is not pathological in its own right (Zucker et al., 2016). Contrarily, the *World Professional Association for Transgender Health (WPATH)* board of directors suggest that even though gender nonconformity is not inherently pathological or negative, diagnosing trans people as disordered can continually reinforce stigma (Bockting et al., 2010). Other scholars suggest that non-correspondence of gender identity and assigned sex is a matter of human diversity rather than as pathology (Coleman et al., 2012, p. 168; Suess et al., 2014). The writers of the *DSM-5*, *WPATH*, and most other professionals all ultimately aim for similar outcomes: mitigating pathologizing, discrimination, and stigma of trans and gender non-conforming people in all settings and providing accessible medical and therapeutic care. Yet, the method to best achieve those outcomes is where opinions tend to differ (Lev, 2013).

Another area of contention relates to the specific term ‘gender dysphoria’ as it was used in academic discourses prior to being adopted by the *DSM-5* as diagnostic terminology (Davy & Toze, 2018). The *DSM* workgroup intentionally adopted this existing term in efforts to reduce pathologizing; however, this may have been counterproductive and led to inconsistencies in the literature. The first use of ‘gender dysphoria’ is normally attributed to Norman Fisk (1974) who wrote an editorial in *The Western Journal of Medicine* as gender dysphoria syndrome being a more progressive alternative to the diagnosis of transsexualism. Due to prior use of GD in the literature, researchers Davy and Toze (2018) did a literature review of GD and found that nearly 45% of articles referred to GD as a *diagnosis* for trans and intersex individuals, while the other 55% made no mention of the *DSM* and diagnostic criteria. Observably, GD is

conflated across the literature which results in inconsistent definitions and implementations, in such, not all research findings related to GD are also associated with *DSM* qualifiers for a GD diagnosis (i.e., clinically significant distress). Given, a now specific diagnosable psychiatric term may be at risk of being applied to individuals or populations that do not meet diagnostic criterion (Davy & Toze, 2018).

It is rather common for individuals that experience GD to have other mental health concerns co-occur (Dhejne et al., 2016). Given that a GD diagnosis is characterized by significant distress related to incongruence between one's sexed body and felt gender identity, experiences of body image concerns and body dissatisfaction are relatively common. According to van de Grift and colleagues (2016) much of the experienced distress described by GD results from body dissatisfaction. Distress coupled with feelings of body dissatisfaction, may be explained by the desire to have the primary or secondary sex characteristics of another gender (Feusner et al. 2016; Turan et al., 2018). This dissatisfaction with body and appearance has led some professionals to describe these experiences as body image concerns rather than GD (Pulice-Farrow et al., 2020). Experiences of body dissatisfaction in trans individuals have been linked to negative mental health outcomes such as suicidal ideation and self-harm (Peterson et al., 2016). More specifically, Peterson and colleagues (2016) conducted a study with 96 gender-dysphoric adolescents and emerging adults and found that almost one-third had attempted suicide and a little less than half of the sample reported history of self-injurious behaviors. A longitudinal study that went on for 45 years indicated that the suicide risk for gender-dysphoric people is higher than the general population and seems to occur at every stage of gender transitioning (Wiepjes et al., 2020). Research indicates that people

with GD are more vulnerable to psychiatric comorbidity with some conditions such as depression and anxiety, yet not others, like bipolar disorder and schizophrenia (Dhejne et al., 2016). Given, the significant distress described by GD seems to contribute towards certain mental health concerns. Aside from one's own feelings of interpersonal conflict as described by GD, contextually these individuals are subjected to various forms of discrimination and abuse, that may partially mediate high prevalence of health concerns. Furthermore, GD related distress might be more pronounced among those who experience greater pressure to abide by gender norms, and ultimately resulting in poorer health (*Aim 2*).

Body Image

In general, body image is salient among pubescent individuals as they adjust to their new sexually maturing body (McGuire et al., 2016). During this time, stereotypical gender expectations can be exacerbated and contribute towards concerns in appearance and body dissatisfaction (Gillen and Lefkowitz, 2006; Murray et al., 2013). These pressures to conform to dominant gender norms and perceived body image ideals are heightened and have been found to result in profound negative effects on mental health. Not to mention, adolescence is generally associated with a decline in health-related quality of life (Röder et al., 2018). Collectively, adolescents are adapting to a new, matured body, facing both external and internal pressures and expectations, and experiencing compromised mental and physical health. Now consider all of these variables for adolescents with gender-dysphoric feelings and experiences. Puberty and adolescence can be a trialing time for transgender and gender non-conforming youth, as it can accentuate the incongruence between one's expressed gender and natal somatic sex

(Ålgars et al., 2010; de Vries et al., 2014; Feusner et al. 2016; Pfeffer, 2008). Although signs of body image and dissatisfaction, including anatomic dysphoria, can be observed in some prepubertal children with gender dysphoria, research indicates it becomes more salient with the onset of puberty (Zucker et al., 2016).

Body image concerns and body dissatisfaction are not exclusive to the pubescent experience. Transgender young adults and adults demonstrate body image concerns and bodily or anatomic dissatisfaction. Body image concerns for trans people may include the degree of satisfaction or dissatisfaction with specific body parts, comfort with body size, and/or satisfaction with the gendered nature of one's appearance (McGuire et al., 2016). According to the *DSM-5*'s gender dysphoria (GD) diagnosis that is most commonly applied to trans individuals, specifies incongruence being between one's felt gender and secondary sex characteristics (i.e., characteristics that appear during puberty) (APA, 2014). However, a recent qualitative study suggested that GD was not limited to only secondary sex characteristics (Pulice-Farrow et al., 2020). What seems to be not well understood is the extent to which body image is viewed through a lens of concern with thin (or muscular) ideals, concerns with gender incongruence, or personal expectations of meeting stereotypical gender norms. The literature regarding body image of trans adults show mixed findings (McGuire et al., 2016).

One study indicated that body image concerns were significantly higher in transgender participants compared to cisgender participants, and these scores were especially higher in trans women (male-to-female) compared to other groups (Mofradidoost & Abolghasemi, 2020). Another study found similar findings regarding trans women and indicated that trans women reported high degrees of disturbed eating

patterns including restraint, bingeing, and purging; and a greater drive for thinness, body dissatisfaction, and body surveillance (Vocks et al., 2009). The same study found that trans men (female-to-male) showed more restrained eating, body mass and shape concerns, body dissatisfaction, and body surveillance compared to cisgender males (Vocks et al., 2009). A study in Israel concluded that trans women felt their gender role and body image were more compatible with cisgender women, and different from that of cisgender men (Wilchek-Aviad et al., 2020). Jones and colleagues (2019) discovered differences in gender congruence and body satisfaction between binary (i.e., trans men and trans women) and nonbinary (i.e., agender, genderqueer, gender fluid) transgender people. Nonbinary trans people reported higher levels of satisfaction than binary trans people on sex-specific parts of the body (i.e., chest, genitalia, and secondary sex characteristics), but there were no differences in congruence and satisfaction with social gender role between the two transgender groups (Jones et al., 2019). Likewise, another study identified that binary transgender people engaged in significantly more non-suicidal self-harming behaviors and reported higher in body image concerns compared to nonbinary transgender people (Morris & Galupo, 2019). Findings across the literature are heterogeneous, much like the diversity of the gender identities and experiences they are investigating. A conclusion consistently arrived at across the literature is that trans individuals experience a high degree of body dissatisfaction that can negatively impact quality of life and have serious implications on health and well-being (Gordon et al., 2017; Morris & Galupo, 2019; Röder et al., 2018). This thesis is interested in exploring the influence of body dissatisfaction in association with poor health and felt pressure to conform to gender norms (*Aim 2*).

CHAPTER 2

CURRENT STUDY

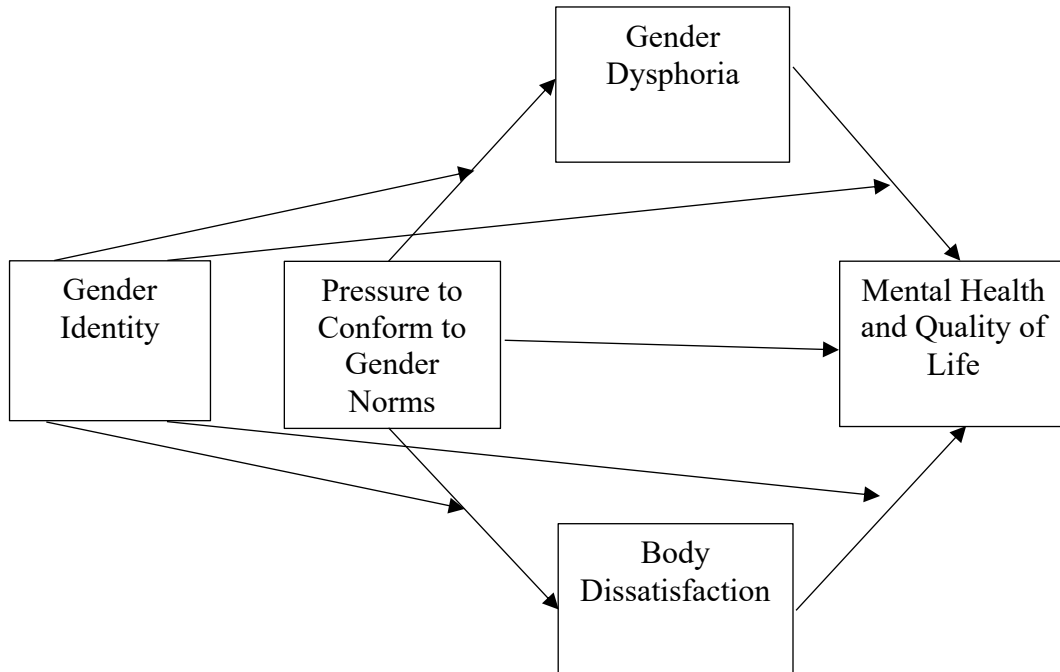
Given the growing transgender and gender non-conforming population and the high prevalence of health inequities within these populations, it is important to extend the knowledge of trans peoples' experiences, relative to their cisgender counterparts. Prior research clearly exhibits that trans people often experience poor health, gender dysphoria, and body dissatisfaction; however, less clear is whether felt pressure to conform to gender norms is predictive of these outcomes. This thesis has three specific aims: 1) explore if trans adults experience pressure to conform to gender norms; 2) examine the influence of gender dysphoria and body dissatisfaction in association with compromised health and quality of life with felt pressure to conform to gender norms, and, 3) identify if these outcomes differ between transgender and cisgender individuals. Based on prior literature, (as shown in Figure 1) I hypothesize the following:

H1: Greater pressure to conform to gender norms will be related to worse mental health and quality of life.

H2: Gender dysphoria and body dissatisfaction will mediate the association between greater pressure to conform to gender norms and worse mental health and quality of life.

H3: Gender identity will moderate this mediation, such that transgender individuals will show stronger associations on all pathways as compared to cisgender individuals.

Figure 1. Conceptual Preliminary Model



CHAPTER 3

METHODS

Participants

Participants initially included a total of 280 individuals recruited from online platforms of Reddit and Prolific to complete an online survey. Specifically, 179 participants were recruited from Reddit and 101 participants were recruited from Prolific. Eligibility requirements for study participation included that participants be at least 18 years of age, reside within the U.S., and speak fluent English. Additionally, inclusion criteria from Reddit specified that participants should be transgender or have undergone gender transition. Of the 280 participants who started the survey, 66 participant responses from Reddit were excluded due to poor data quality (e.g., failing two or more attention checks). Of the remaining 214 cases, preliminary analyses identified that there were 3 outliers, which were deleted. The final sample consisted of 211 participants with 109 being transgender and 102 being cisgender.

Procedures

Participants completed a 15 to 20-minute online Qualtrics survey which included a consent form and questions pertaining to gender identity, views of oneself, experiences of societal pressures, and mental health and well-being. Participants were recruited through either Reddit or Prolific and compensation methods varied depending on the platform – participants from Reddit were entered into a drawing to receive a \$150 Amazon Marketplace gift card and participants from Prolific were compensated \$3.60 for their participation.

Measures

Sociodemographics

Demographic characteristics were assessed that were believed to be associated with one or more study variables, such as age, race/ethnicity, sexual orientation, educational attainment, employment status, personal income, living arrangements, and region of the country in which the participant resides. Natal sex and gender identity were assessed using an adapted two-step process as recommended by Reisner and colleagues (2015) when collecting data from gender nonconforming populations. Specifically, participants were asked “*What biological sex is listed on your original birth certificate?*” and “*Which best describes your current gender identity?*”

Table 1 - Sample Characteristics

Participants	Total (<i>N</i> = 211)	Transgender (<i>N</i> = 109)	Cisgender (<i>N</i> = 102)
Age	<i>M</i> (<i>SD</i>) 30.8 (6.8)	<i>M</i> (<i>SD</i>) 27.9 (5.8)	<i>M</i> (<i>SD</i>) 33.8 (6.6)
Sexual Orientation (%)			
Asexual	5.2	7.3	2.9
Bisexual	24.2	36.7	10.8
Gay/Lesbian	18.5	30.3	5.9
Heterosexual	46.9	18.3	77.5
Other	3.8	6.4	1.0
Prefer Not to Say	1.4	0.9	2.0
Race/Ethnicity (%)			
African American	7.6	10.1	4.9
Asian	7.1	6.4	7.8
Hispanic/Latinx	6.2	2.8	9.8
Native American	3.8	6.4	1.0
Pacific Islander	0.5	0.0	1.0
White	72.5	70.6	74.5
Other	1.9	2.8	1.0
Education (%)			
High School	16.6	15.6	17.6
College Degree	74.4	75.2	73.5
Post Graduate Degree	9.0	9.2	8.8
Employment Status (%)			
Full-Time	56.4	67.0	45.1
Part-Time	15.6	11.0	20.6
Student	7.1	10.1	3.9
Unemployed	15.6	9.2	22.5
Retired/Disabled	5.2	2.8	7.8
Personal Income (%)			
\$9,999 or less	16.1	11.0	21.6
\$10,000 to \$24,999	13.3	14.7	11.8
\$25,000 to \$49,999	19.9	24.8	14.7
\$50,000 to \$74,999	26.5	23.9	29.4
\$75,000 to \$99,999	10.4	11.0	9.8
\$100,000 to \$149,999	9.0	8.3	9.8
\$150,000 and greater	4.7	6.4	2.9
Region (%)			
East	16.1	17.4	14.7
Midwest	30.3	33.0	27.5
North	10.9	18.3	2.9
South	20.9	12.8	29.4
West	21.3	17.4	25.5
Neighborhood (%)			
City	40.3	51.4	28.4
Suburb	43.1	37.6	49.0
Rural Town	16.6	11.0	22.5

On average, the transgender participants ($M = 27.8$, $SD = 5.8$) were younger than cisgender participants ($M = 33.7$, $SD = 6.6$). Age was measured from 18 to 40 years and older and was statistically represented as a scale/continuous variable. Per suggestion of Reisner et al., (2015), BioSex was assessed across five selections of Female, Male, Intersex, and Prefer Not to Say. However, several adaptations were made to Gender resulting with selection options of Female, Male, Nonbinary, Agender, and Other. Biosex and Gender were cross-checked to determine which participants are transgender and which are cisgender. Additionally, transgender gender identity was further confirmed by participants' responses to gender transition-related items, if applicable – resulting in Trans_sum. Race/ethnicity was a self-report of African American, Asian, Hispanic/Latinx, Native American, Pacific Islander, White, and Other. Education had response options of Some High School – No Diploma, High School Graduate – Diploma or Equivalent (GED), Some College Credit – No Diploma, Trade/Technical/Vocational Training, Associate's Degree, Bachelor's Degree, Master's Degree, and Doctorate or Other Professional Degree. Employment was assessed through options Full-Time, Part-Time, Student, Unemployed, Retired/Disabled and Income ranged across seven response options from \$9,999 to \$150,000 and greater. Lastly, participants' Region of residence (e.g., East, Midwest, North, South, and West) was assessed for and the Living circumstance (e.g., City/Metropolitan Area, Suburb, Rural Town/Community).

Pressure to Conform to Gender Norms

Multifactor Adult Gender Identity Scale. The Multifactor Adult Gender Identity Scale (MAGIS) by Jackson and Perry (2001) is an extension of Egan and Perry's (2001) multidimensional gender identity scale for children. This self-report scale is composed of

five different factors: Same Gender Typicality, Other Gender Typicality, Gender Contentedness, Gender Boundary Intolerance, and Felt Pressure for Gender Conformity. The Felt Pressure for Gender Conformity Subscale most closely measured the construct of felt pressure to conform to gender norms, therefore this subscale was prioritized in analyses. A mean score was created for the (*felt_pressure*) subscale with a higher score indicating greater a greater presence of felt pressure to conform to gender norms (Cronbach's $\alpha = .78$ for transgender sample; Cronbach's $\alpha = .82$ for cisgender sample). However, a MAGIS total mean score was not calculated due to all the subscales measuring differing dimensions of gender identity. The MAGIS has sex specific versions, therefore adaptations were made to some items such as "*Other men I know would be upset if I wanted to participate in masculine hobbies.*" to "*People I know would be upset if I wanted to participate in masculine hobbies.*" Items that directly referred to natal sex or assumed that participants were either male or female were adapted to be more inclusive to various gender identities (e.g., trans or nonbinary individuals). However, other items were not adapted, such as, "*It would bother me if my friends say I was acting boyish.*" Items referring to traditional beliefs about gender were not adapted to measure experienced pressure to conform with cultural gender norms.

Mental Health

Mental health was operationalized with two scales – one being a measure of compromised mental health (i.e., DASS-21), and the other being a measure of positive mental health (i.e., MCH-SF). This thesis is utilizing both to obtain a complete, holistic view of mental health. For analytic purposes the DASS-21 and the MHC-SF will be

observed as two separate measures/variables, as they measure different constructs of mental health.

Depression Anxiety Stress Scale. The Depression Anxiety Stress Scale (DASS-21) short form is a set of three self-report scales designed to measure the negative emotional states of depression, anxiety, and stress. The DASS-21 developed by Lovibond and Lovibond (1996) contains three scales with 7 items in each. The Depression subscale assesses dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest/involvement, anhedonia, and inertia. The Anxiety subscale assesses autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect. The Stress subscale is sensitive to levels of chronic non-specific arousal; it assesses difficulty relaxing, nervous arousal, and being easily upset/agitated, irritable/over-reactive and impatient. Participants were asked to use 5-point frequency scales to rate the extent to which they have experienced each state over the past week. Scores for *DASS Depression*, *DASS Anxiety*, and *DASS Stress* were calculated by obtaining an average of the scores for the relevant items. For the primary analyses in this thesis, a total average score collectively measuring depression, anxiety, and stress was computed of *DASS total* (Cronbach's $\alpha = .94$ for transgender sample; Cronbach's $\alpha = .96$ for cisgender sample). The DASS-21 has been shown to have high internal consistency and to yield meaningful discriminations in a variety of settings, the scale should meet the needs of both researchers and clinicians who wish to measure current state or change in state over time on the three dimensions of depression, anxiety, and stress.

Mental Health Continuum Scale. The Mental Health Continuum Short-Form (MHC-SF) developed by Keyes (2005) was used to measure the presence of well-being

and flourishing mental health. This measure assessed the frequency of participants' experiences during the past week on an adapted 5-point scale from 1 = *Never* to 5 = *Everyday*. The MHC-SF is made up of three subscales that altogether consist of 14 items. The subscales include (a) Emotional Well-Being (3 items), (b) Psychological Well-Being (6 items), and (c) Social Well-Being (5 items). The MCH-SF has shown good internal consistency ($> .80$) and discriminant validity (Keyes, 2005). The three factors of the MCH-SF - emotional, psychological, and social well-being - have been confirmed in nationally representative samples of U.S. adults (Gallagher et al., 2009), college students (Robitschek & Keyes, 2009), and adolescents (Keyes, 2009). A total mean score, *MHC_total*, was computed to measure the presence of flourishing mental health and well-being (Cronbach's $\alpha = .90$ for transgender sample; Cronbach's $\alpha = .94$ for cisgender sample).

Quality of Life

Quality of life was operationalized with two scales – as one measures the quality of different life domains (i.e., QOLS), and the other measures overall satisfaction with life (i.e., SWLS). For analytic purposes, these were recognized as two separate outcome variables, as they measure different constructs of quality of life.

Quality of Life Scale. The Quality of Life Scale (QOLS) by Burckhardt and Andersen (2003) is a valid instrument used to measure quality of life across groups and cultures. This scale measures quality of life on six conceptual domains: (1) material and physical well-being, (2) relationships with other people, (3) personal, community, and civic activities, (4) personal development and fulfillment, (5) recreation, and (6) independence. Participants indicated how satisfied they are on an adapted 5-point scale

that ranges from 1 = *Very dissatisfied* to 5 = *Very satisfied* on a total of 16 items. Though this scale was adapted to measure quality of life in chronically ill patients, the QOLS shows low to moderate correlations with physical health status and disease measures. Therefore, the QOLS demonstrates well-being conceptually different from health status or other causal indicators of quality of life. To assess participants' self-reported quality of life, a total mean score (*QOLS_total*) was computed and utilized in analyses (Cronbach's $\alpha = .89$ for transgender sample; Cronbach's $\alpha = .88$ for cisgender sample).

Satisfaction With Life Scale. The Satisfaction with Life Scale (SWLS) by Diener and colleagues (2009) was developed to measure subjective well-being, specifically the judgmental/cognitive component (rather than the emotional/affective component) of subjective well-being. The SWLS is a 5-item scale designed to measure global cognitive judgments of one's life satisfaction (not a measure of either positive or negative affect). Much like the MHC-SF, the SWLS is being used in analyses to assess for the presence of satisfaction within different domains of life. For this scale, participants indicated how much they disagree or agree with each of the 5 items using an adapted 5-point Likert scale that ranges from 1 = *Strongly disagree* to 5 = *Strongly agree* (Cronbach's $\alpha = .89$ for transgender sample; Cronbach's $\alpha = .91$ for cisgender sample). Some sample items include "*I am satisfied with my life*" and "*In most ways my life is close to my ideal*". A total mean score of *SWLS_total* was computed to measure the presence of life satisfaction.

Gender Dysphoria

Utrecht Gender Dysphoria Scale - Gender Spectrum. The Utrecht Gender Dysphoria Scale - Gender Spectrum (UGDS-GS) by McGuire and colleagues (2020) is a

revised version of the Utrecht Gender Dysphoria Scale (UGDS) (Schneider et al., 2015). This scale measures both dissatisfaction with gender identity and expression over time, as well as comfort with affirmed gender identity. The UGDS-GS is an adapted 18-item self-report, 5-point Likert-type scale measure that is a) inclusive of all gender identities and expressions (e.g., transgender, nonbinary, cisgender); b) appropriate for use longitudinally from adolescence to adulthood; and c) administered at any point in the social or medical transition process, if applicable, or in community-based research focused on gender dysphoria that examines cisgender and transgender persons. Some sample items include “*Physical sexual development was stressful*” and “*I wish I had been born as my affirmed gender*”. For primary analyses a total average score, *UGDS_total*, was computed (Cronbach’s $\alpha = .93$ for transgender sample; Cronbach’s $\alpha = .84$ for cisgender sample), and for any secondary analyses subscales of Dysphoria and Gender Affirmation were developed.

Body Satisfaction

Body satisfaction was operationalized with two scales – one (i.e., BAS) focuses more broadly on the degree of overall appreciation one feels toward their body, and the other (i.e., BIS) focuses on perceptions of specific body parts. For analytical purposes, this thesis recognized these as separate mediators, as they measure different constructs of body satisfaction.

Body Appreciation Scale. The Body Appreciation Scale-2 (BAS-2) by Tylka and Wood-Barcalow (2015) assessed positive body image perceptions. The BAS-2 is a revised version of the BAS (2004) to eliminate use of sex-specific versions. The BAS-2 consists of 10 items in which participants indicated on an adapted 5-point scale from 1 =

Never to 5 = *Always* to the degree that they believe an item is true about their own body perceptions. A mean score of *BAS_total* was computed to measure positive body image perceptions (Cronbach's $\alpha = .93$ for transgender sample; Cronbach's $\alpha = .95$ for cisgender sample). Specifically, higher scores represent higher degrees of body appreciation. The BAS-2 is a psychometrically sound body image measure applicable for research and clinical settings.

Body Image Scale for Transsexuals. The Body Image Scale (BIS) for Transsexuals (Lindgreen & Pauly, 1975) consists of 30 body characteristics in which respondents rated satisfaction of these body characteristics on a 5-point scale, ranging from 1 = *Very dissatisfied* to 5 = *Very satisfied*. The BIS has two sex-specific versions – one for natal males and one for natal females – containing equivalent genital body parts. However, to be more inclusive the scale was adapted to contain both sex equivalent characteristics side-by-side for participants to rate as they apply, as all participants responded to this scale. Furthermore, the scale includes primary sex characteristics, secondary sex characteristics, and non-sex-related body parts. Per adaptations of this thesis, higher scores represent higher degrees of body satisfaction, and lower scores indicate lower perceptions of body image. This scale was used with both transgender and cisgender individuals. A total average score, *BIS_total*, was developed to assess participants' body image perceptions (Cronbach's $\alpha = .94$ for transgender sample; Cronbach's $\alpha = .95$ for cisgender sample).

Exploratory Variables

A measure of perceived discrimination was included in the survey to obtain a comprehensive view of participants' social context – as previous literature has

demonstrated that discrimination is a major contributor of health disparity outcomes, particularly for individuals with marginalized identities (e.g., trans individuals) (Mays & Cochran, 2001; Almeida et al., 2009; Rosario et al., 2002; Wyss, 2004; Lombardi et al., 2002).

Perceived Discrimination Scale. The Perceived Discrimination Scale was developed by Williams and colleagues (1997), which is a 20-item scale that measures how often people feel that others treat them badly or unfairly on the basis of race, ethnicity, gender, age, religion, physical appearance, sexual orientation, or other characteristics. The scale covers discrimination in different areas of life, including at school, at work, and in one's neighborhood. The 20-item scale has two subscales: the Lifetime Discrimination Scale (11 items) and the Daily Discrimination Scale (9 items). Participants indicated on an adapted 5-point type scale from 1 = *Never* to 5 = *Always* to the degree that the item has applied to them and their experiences – higher scores represent higher degrees of perceived discrimination. A total average score, PDS_total, was developed to assess participants' experiences of perceived discrimination (Cronbach's $\alpha = .95$ for transgender sample; Cronbach's $\alpha = .95$ for cisgender sample).

Overview of Analyses

Prior to the main analyses, I examined the data for the assumptions related to linear regression, as well as evaluating for the inclusion of potential covariates. Additionally, I conducted analyses to test for potential covariates by putting all potential covaries in one block simultaneously. Next, I analyzed *Hypothesis 1* via PROCESS Model 4 by assessing the initial direct effect of pressure to conform to gender norms on mental health outcomes. I also used PROCESS, Model 4, to address *Hypothesis 2* and

determine the mediating effects of gender dysphoria and body dissatisfaction on the relationship between pressure to conform to gender norms and health outcomes. To investigate *Hypothesis 3*, I again used PROCESS, Model 59, analyzing for moderated mediation. Using this model, I addressed the final hypothesis — determining if gender identity moderates the mediation, such that if transgender individuals will show stronger associations on all pathways as compared to cisgender individuals.

CHAPTER 4

RESULTS

Preliminary Analyses

Of the key variables in this study (e.g., main variables, covariates), little data is missing – being acceptable for listwise deletion (5-10%). Additionally, any missing data pertaining to main study variables was treated by utilizing mean scores. MANCOVAs were performed on each of the main study variables (see Table 2) to identify how variable means differ between sample groups (e.g., transgender and cisgender). Covariates were controlled for in the MANCOVAs (refer to the following section for more details on covariates). Preliminary analyses tested for assumptions related to the general linear model, such as sample size, outliers, linearity, homoscedasticity, normality, homogeneity of error variance, and independence of errors. Preliminary examination of the data revealed that many assumptions of linear regression were/were not met in the current dataset. Pearson’s bivariate correlation matrix revealed minimal to no indications of multicollinearity (see Table 3), and tolerance and VIF scores suggested no signs of multicollinearity. Though scatterplots identified linearity and homoscedasticity assumptions were met, however they indicated signs of a few outliers on standardized residual variables. Therefore, three cases were deleted to treat violation of outliers on a standardized residual score that was either above 3 or below -3 standard deviations from the mean. Examination of Q-Q plots and Shapiro-Wilk statistics demonstrate the assumption of normality is violated with some measures (e.g., DASS-21, SWLS) of the criterion variable, but not others (e.g., MHC-SF, QOLS). Due to the sufficient sample size ($N = 211$), even after deleting outliers, the violation of normality assumption should

not cause major problems (Pallant, 2020) and can be ignored (Altman & Bland, 1995; Ghasemi & Zahedias, 2012).

Table 2 – Main Study Variables

	<i>Range</i>	Total Sample (N = 211)		Transgender (N = 109)		Cisgender (N = 102)	
		<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>
Felt Pressure to Conform	1.00-5.00	2.48	0.66	2.76 ^{a*}	0.59	2.18*	0.61
Depression, Anxiety, and Stress	1.00-5.00	3.60	1.58	4.65 ^{a*}	0.79	2.48*	1.09
Flourishing Mental Health	1.00-5.00	3.30	0.75	3.24	0.72	3.27 ^a	0.79
Quality of Life	1.00-5.00	3.47	0.63	3.49 ^a	0.63	3.44	0.64
Satisfaction With Life	1.00-5.00	3.13	1.02	3.19 ^a	0.99	3.07	1.07
Gender Dysphoria	1.00-5.00	3.09	0.99	3.77 ^{a*}	0.70	2.38*	0.52
Body Appreciation	1.00-5.00	3.53	0.84	3.50	0.82	3.57 ^a	0.85
Body Image	1.00-5.00	3.28	0.66	3.20	0.65	3.37 ^a	0.66

Note: *a* = higher comparative mean; **p* < .001

Table 3 – Correlations of Main Study Variables

	1.	2.	3.	4.	5.	6.	7.	8.
1. Felt Pressure to Conform		.23*	-.06	-.07	-.11	.51**	.11	-.01
2. Depression, Anxiety, Stress	.22*		-.55**	-.42**	-.40**	.51**	-.35**	-.39**
3. Flourishing Mental Health	.19	-.47**		.72**	.61**	-.15**	.70**	.58**
4. Quality of Life	-.03	-.50**	.74**		.78**	-.03	.63**	.66**
5. Satisfaction with Life	.18	-.52**	.73**	-.74**		-.01	.58**	.64**
6. Gender Dysphoria	-.26**	.15	-.37**	-.31**	-.40**		.21	-.16
7. Body Appreciation	.16	-.47**	.70**	.58**	.72**	-.27**		.73**
8. Body Image	.13	-.40**	.58**	.52**	.70**	-.38**	.63**	

Note: * $p < .05$, ** $p < .01$; Transgender correlations are on the bottom half of the matrix and cisgender correlations are on the top half of the matrix.

Hierarchical Regression for Covariate Analyses

Covariate analyses were conducted using hierarchical regressions with each of the outcome measures (e.g., DASS-21, MHC-SF, QOLS, and SWLS) and each mediation measure (e.g., UGDS-GS, BAS, and BIS). All potential covariates were entered into one block and the predictor variable (e.g., MAGIS Felt Pressure) in the second, and were all tested simultaneously. Upon doing so, analyses revealed that the following variables were significant ($p < .05$) in at least one or more of the outcome measures tested: *Income*, *Heterosexual* (dummy variable – LGBQA = 0, Heterosexual = 1), and lastly, *Region_S* (dummy variable – All other regions = 0, South = 1). Therefore, these variables were included as covariates in main study analyses.

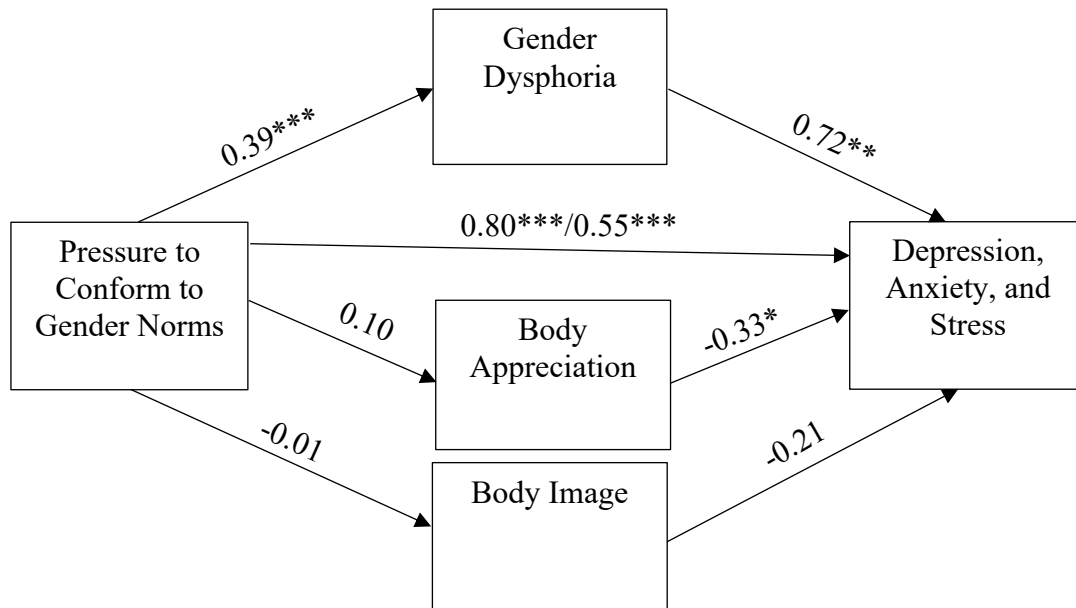
PROCESS Model 4 for Parallel Mediation Analyses

To investigate if the relation of felt pressure of gender conformity and mental health and quality of life outcomes is mediated by experiences of gender dysphoria and body image concern, a series of PROCESS macro v4.1 Model 4 analyses (Hayes, 2022) were performed. Pressure to conform to gender norms (*felt_pressure*) was entered as a predictor of mental health (*DASS_total*, *MHC_total*) and quality of life outcomes (*QOLS_total*, *SWLS_total*), gender dysphoria (*UGDS_total*) and body satisfaction (*BAS_total*, *BIS_total*) were entered as mediators, and the covariates were also included in all models. To analyze *Hypothesis 1* – greater felt pressure to conform to gender norms predicting poorer mental health and quality of life outcomes – the initial direct effect (e.g., path *c*) was examined in each of the mediation analyses. As hypothesized, felt pressure of gender conformity was a significant predictor of compromised mental health, $b = 0.80$, $SE = 0.13$, $t(201) = 6.38$, $p < .001$, with greater felt pressure predicting higher levels of depression, anxiety, and stress. However, greater felt pressure of gender conformity was not a significant direct predictor of flourishing mental health, quality of life, or satisfaction with life.

To investigate *Hypothesis 2* – if gender dysphoria and body dissatisfaction mediate the relationship between pressure to conform to gender norms and health outcomes – the indirect effects (paths *a* and *b*) and the direct (path *c'*) effects were examined. As shown in Figure 2, felt pressure of gender conformity was a significant positive predictor gender dysphoria, Furthermore, higher reported experiences of gender dysphoria significantly predicted greater levels of depression, anxiety, and stress. The test of mediation through gender dysphoria was significant ($ab = .28$, $BootSE = .07$, $CI (.15,$

.43). Although pressure to conform to gender norms was not a significant predictor of body appreciation, higher levels of body appreciation was related to lower reported levels of depression, anxiety, and stress. The other measure of body image did not mediate the relationship between felt pressure of gender conformity and depression, anxiety, and stress. Furthermore, none of the other mediation analyses with the other outcomes were significant.

Figure 2 – Mediation Model of Depression, Anxiety, and Stress Outcomes



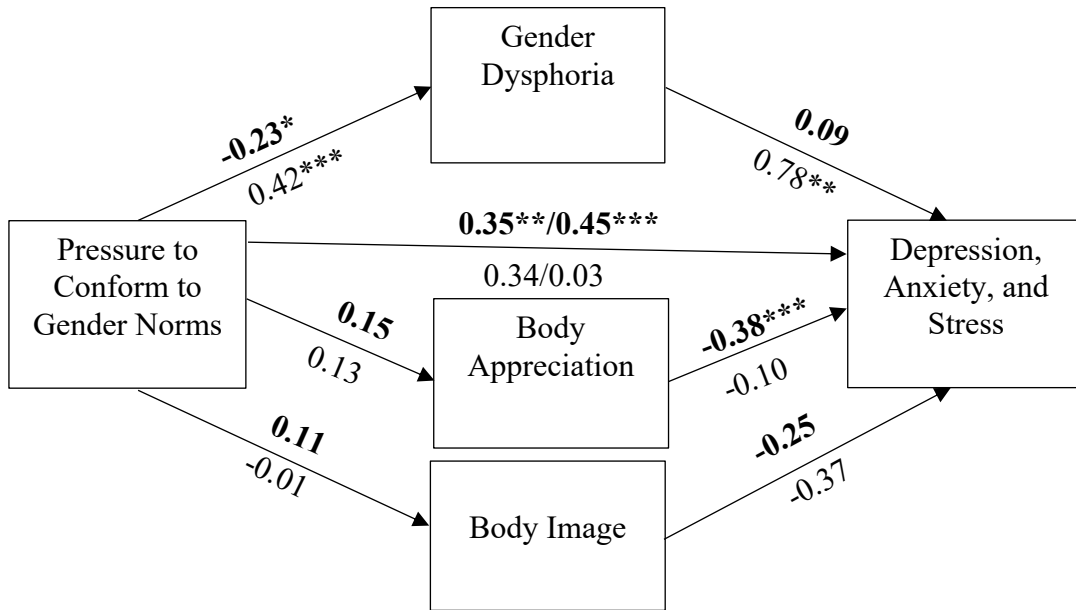
Note: * $p < .05$; ** $p < .01$; *** $p < .001$

PROCESS Model 59 for Moderated Mediation Analyses

To investigate *Hypothesis 3* – determining if transgender individuals will show stronger associations on all pathways as compared to cisgender individuals – a series of PROCESS macro v4.1 Model 59 analyses (Hayes, 2012) were performed with transgender versus cisgender identity entered as a dichotomous moderator. There was only evidence of moderated mediation for the outcome of depression, anxiety, and stress.

These moderated mediation analyses revealed a significant interaction of felt pressure and gender identity, $b = -0.71$, $SE = 0.14$, $t(199) = -5.17$, $p < .001$, on gender dysphoria. Specifically, higher felt pressure predicts higher degrees of gender dysphoria for cisgender participants, $b = 0.45$, $SE = 0.14$, $t(199) = 4.71$, $p < .001$, but lower degrees of gender dysphoria for transgender participants, $b = -0.26$, $SE = 0.10$, $t(199) = -2.68$, $p = .008$. Furthermore, analyses detected a significant interaction of gender dysphoria and gender identity, $b = -0.72$, $SE = 0.22$, $t(193) = -3.23$, $p = .002$, such that cisgender individuals who experience higher degrees of gender dysphoria, demonstrate higher reports of depression, anxiety, and stress, $b = 0.80$, $SE = 0.19$, $t(193) = 4.33$, $p < .001$. However, gender dysphoria did not predict depression, anxiety, and stress for transgender participants. As shown in Figure 3, with respect to the mediation analyses, there was a significant indirect effect of felt pressure on depression, anxiety, and stress through gender dysphoria, $ab = 0.36$, $BootSE = 0.14$, $CI (.10, .66)$ for cisgender (but not transgender) participants.

Figure 3 – Mediation Model of Depression, Anxiety, and Stress Outcomes Split by Gender



Note: Transgender participants’ path estimates are **bolded** above the respective paths and cisgender participants’ path estimates are below the respective paths and not bolded; * $p < .05$; ** $p < .01$; *** $p < .001$

Finally, there was a significant interaction of felt pressure and gender identity on depression, anxiety, and stress, $b = 0.41$, $SE = 0.20$, $t(193) = 2.03$, $p = .04$. However, in this interaction, it was transgender participants who showed a significant association between felt pressure and depression, anxiety, and stress ($b = 0.46$, $SE = 0.13$, $t(106) = 3.44$, $p < .001$), but not cisgender participants. In other words, pressure to conform to gender norms did indeed predict depression, anxiety, and stress for transgender individuals, but not through the mechanisms of gender dysphoria, body appreciation, or body image

Post Hoc Analyses: Perceived Discrimination

As mentioned in the Method section, I included a measure of perceived discrimination as a potential exploratory variable. The literature suggests a strong link between discrimination and compromised mental health for transgender individuals (Almeida et al., 2009; Lombardi et al., 2002; Mays & Cochran, 2001; Rosario et al., 2002; White Hughto et al., 2015; Winter et al., 2016; Wyss, 2004), as well as with lack of conformity to gender norms (Gordon et al., 2017; Heard et al., 2018; Roberts et al., 2013; Röder et al., 2018). As a result, it is plausible that perceived discrimination may mediate the association between felt pressure to conform and mental health outcomes, especially for transgender individuals. Moderated mediation analyses with perceived discrimination as the mediator (PROCESS macro v4.1 Model 59; Hayes, 2012) were performed. There was a significant interaction of felt pressure and gender identity on perceived discrimination, $b = 0.43$, $SE = 0.14$, $t(199) = 2.99$, $p = .003$, such that higher felt pressure predicted higher perceived discrimination for *both* cisgender, $b = 0.33$, $SE = 0.10$, $t(199) = 3.38$, $p < .001$, and transgender participants, $b = 0.76$, $SE = 0.10$, $t(199) = 7.49$, $p < .001$. Furthermore, perceived discrimination significantly predicted each outcome variable: higher depression, anxiety, and stress, $b = 0.87$, $SE = 0.14$, $t(197) = 6.29$, $p < .001$; lower flourishing mental health, $b = -0.40$, $SE = 0.13$, $t(197) = -3.19$, $p = .002$; lower quality of life, $b = -0.26$, $SE = 0.11$, $t(197) = -2.41$, $p = .017$; and lower satisfaction with life, $b = -0.47$, $SE = 0.17$, $t(197) = -2.83$, $p = .005$. In other words, perceived discrimination mediated the pathway between felt pressure to conform to gender norms and each of the outcome measures.

Finally, in terms of the moderated mediation analyses, there was no evidence that the mediations differed by gender identity for depression, anxiety, and stress, quality of life, or life satisfaction. In other words, perceived discrimination was a significant mediator between felt pressure and each of these outcomes for *both* transgender and cisgender participants. Only for flourishing mental health was there evidence of the moderated mediation, such that perceived discrimination was a significant mediator for cisgender participants ($ab = -.13$, $BootSE = .06$, $CI's (-.26, -.03)$), but not for transgender participants ($ab = -.15$, $BootSE = .09$, $CI's (-.33, .03)$).

DISCUSSION

With the limited literature coverage, yet real-world prevalence, it is important to extend representation of trans peoples' experiences. The aim of this thesis was to broaden the social context scope by investigating how and to what extent societal gender norms influence different life domains, such as mental health and reported quality of life. In doing so, this thesis had three objectives: 1) to explore if felt pressure for gender conformity was related to mental health and quality of life; 2) examine the mediating influence of gender dysphoria and body dissatisfaction in the association between felt pressure to conform and health.; and, 3) identify if these outcomes differ between transgender and cisgender individuals.

Gender Dysphoria and Body Dissatisfaction: Findings or Foundering

For my first hypothesis, I predicted that higher pressure for gender conformity would be related to worse mental health and quality of life outcomes; specifically, felt pressure would predict higher rates of depression, anxiety, and stress, lower flourishing mental health, lower quality of life, and lower satisfaction with life. This initial direct relationship was assessed across each of these outcomes, with only one illustrating a significant direct relationship – felt pressure predicted higher rates of depression, anxiety, and stress. However, it seems plausible that well-being (i.e., flourishing mental health, quality of life, satisfaction with life) would decline in the presence of heightened depression, anxiety, and stress. Indeed, a post hoc serial mediation analysis for the total sample suggested that pressure to conform predicts gender dysphoria, which then predicts depression, anxiety, and stress and, ultimately, quality of life, $ab = -.07$, $BootSE = .02$; $CI (-.12, -.03)$, (see Figure 4 in the Appendix H).

For my second hypothesis, I predicted that gender dysphoria and body dissatisfaction would mediate the relationship between pressure for gender conformity and mental health and quality of life outcomes. However, only gender dysphoria mediated the relation between pressure to conform and depression, anxiety, and stress; gender dysphoria did not mediate any of the other outcomes. Furthermore, the results indicated that the two body satisfaction measures – body appreciation and body image – did not mediate the relationship between felt pressure and *any* of the four outcome measures.

There could be a few potential explanations for these findings, or rather the lack thereof. Across the literature and clinical explanations, the experience of gender dysphoria is described by severe distress from experienced incongruence between natal sex and felt gender – sensibly, those who score higher on gender dysphoria would also score higher on depression, anxiety, and stress. Prior research suggests the co-morbidity of depression, anxiety, and stress and that is likely to happen as a result of experiencing gender dysphoria (Dhejne et al., 2016). We can rule out a shared variance explanation (i.e., the study contained a methodological error and assessed the same constructs, specifically attributed distress from gender dysphoria and feelings of stress and/or anxiety described by the DASS-21), as the bivariate correlations of study variables between gender dysphoria and depression, anxiety, and stress correlated at .15 for transgender participants, and .51 for cisgender participants (see Table 3). This might suggest that attributed distress per gender dysphoria and stress and anxiety may overlap more for cisgender individuals but are uniquely different constructs for transgender individuals. As support of this idea, the trans/cis identity moderated the association between gender

dysphoria and depression, anxiety, and stress, with this path only being significant for cisgender (but not transgender) participants. Additional bivariate correlations were performed to further analyze to what extent UGDS-GS subscales and DASS-21 subscales correlate for transgender and cisgender participants (refer to Appendix G).

Another consideration for these findings specifically for transgender participants, could be related to the point of transition. Specifically, individuals at a later (rather than earlier) point in their gender transition may experience less distress that could potentially be related to an incongruence between natal sex and experienced gender. Being that gender transitioning is typically done to affirm one's felt gender identity (Mason-Schrock, 1996), individuals that have undergone transition may feel more affirmed and therefore are less likely to experience poorer mental health or quality of life. Indeed, the very structure of this thesis made the assumption that transgender participants would not be comfortable with their current body at the time of taking the survey, which could then be explained by experiences of gender dysphoria and/or body dissatisfaction. However, if this was not the case, it may not be likely that felt pressure to conform to gender norms and mental health and quality of life outcomes could be explained by gender dysphoria and/or body dissatisfaction. The following section will expand further on this consideration.

Gender Differences Across Experienced Pressure, Mental Health, and Quality of Life

For my third hypothesis, I predicted that gender identity would moderate the mediation, with transgender participants showing a greater association on all pathways in the model. Specifically, this hypothesis predicted that transgender participants would demonstrate more compromised mental health and quality of life compared to cisgender

participants. Preliminary analyses suggested partial support with transgender and cisgender participants differing significantly on felt pressure for gender conformity, gender dysphoria, and outcomes of depression, anxiety, and stress (see Table 2).

Moderated mediation analyses were utilized to better assess if these proposed effects would surface. As mentioned prior, analyses revealed both an initial direct effect of felt pressure for gender conformity on depression, anxiety, and stress, and an indirect effect of the same relationship being mediated by gender dysphoria. A moderated mediational analysis was performed to better understand the role gender played. The analysis demonstrated rather unexpected findings. First, and most surprisingly, gender dysphoria mediated the relationship between felt pressure and depression, anxiety, and stress for cisgender participants, but not for transgender participants. Additionally, felt pressure directly predicted heightened depression, anxiety, and stress for transgender participants, but not for cisgender participants.

Why might gender dysphoria be explanatory of this relationship for cisgender individuals, but not for transgender individuals – opposite of what my third hypothesis predicted? Mentioned in the section above, gender dysphoria may not explain the relationship of transgender individuals who have undergone transition and no longer experience incongruence between physicality and felt gender identity. However, this line of thinking would not explain why the relationship between felt pressure and heightened depression, anxiety, and stress was explained by gender dysphoria for cisgender individuals. These findings may suggest that cisgender individuals who do not abide by traditional gender norms (e.g., females who do not dress in a feminine way or wear make-up) may be more impacted by the feelings of incongruence between who they feel they

are and what society expects of them. Future research is needed to further examine exactly how experiences of gender dysphoria present in cisgender populations, as a majority of the literature is related to gender minorities.

Additionally, these findings indicate that felt pressure for gender conformity is significantly related to elevated depression, anxiety, and stress for transgender individuals, but the exact mechanism behind this relationship is unknown. Therefore, post hoc analyses were performed to see if perceived discrimination might mediate this association.

Perceived Discrimination

It has been well-documented in the literature that social barriers such as discrimination can further restrict people from the promotion of health and well-being (White Hughto et al., 2015; Winter et al., 2016). Furthermore, exposure to discrimination has been suggested to be a leading factor in the disproportionate rates of poor health outcomes of trans people (Almeida et al., 2009; Lombardi et al., 2002; Mays & Cochran, 2001; Rosario et al., 2002; Wyss, 2004). Discrimination happens at structural and individual levels that both directly and indirectly impact health. Specifically, structural (or macro-level) discrimination refers to unequal conditions that limit opportunities, resources, and the well-being of marginalized groups, whereas individual (or micro-level) discrimination refers to negative interactions between people based on individual characteristics (Krieger, 2014; Lukachko et al., 2014). Contextually, trans people can be a vulnerable population for experiencing both structural and individual discrimination (Wesp et al., 2019). Based on this literature, it is theoretically plausible that perceived

discrimination is likely to mediate the association between felt pressure to conform and well-being.

Indeed, in the current sample, a test of mean differences between trans and cis participants revealed that transgender participants reported significantly higher perceived discrimination than cisgender participants (see Table 2 for mean differences by trans/cis on all study variables). Furthermore, unlike the hypothesized mediators (gender dysphoria and body dissatisfaction), perceived discrimination fully mediated the relationship between felt pressure for gender conformity and each of the four dependent measures. Perceived discrimination explained the relationship between pressure to conform to gender norms and elevated depression, anxiety, and stress for both cisgender and transgender individuals. Specifically, higher felt pressure predicted higher perceived discrimination, and higher perceived discrimination predicted higher depression, anxiety, and stress. Conditional direct effects were not significant, meaning the relationship was fully explained by the mediator of perceived discrimination. This was similar for quality of life – perceived discrimination predicted lower quality of life through a fully mediated relationship.

Interestingly, there were no significant differences between cisgender and transgender participants in these mediational models. There were some mixed results for both positive psychology measures, with conditional direct effects suggesting that felt pressure for gender conformity was directly related to higher positive mental health and satisfaction with life for transgender individuals. Similarly, indirect effects demonstrate that felt pressure negatively predicts flourishing mental health for cisgender individuals and negatively predicts satisfaction with life for both cisgender and transgender

individuals. Thus, although trans participants report more perceived discrimination than cis participants, seemingly both cisgender and transgender individuals who feel pressure to conform to gender norms experience compromised mental health and quality of life through experiences of discrimination.

Limitations and Future Directions

Overall, there were several limitations to the study. To begin, one possible limitation was the measure of gender dysphoria; although the only significant mediator, it did produce some confusing findings. I used both subscales of Dysphoria and Gender Affirmation to comprise the total average score of gender dysphoria (*UGDS_total*) – as each subscale measures a different component of gender dysphoria. The Dysphoria subscale assesses distress related to experienced incongruence that emerges from one’s assigned sex, whereas the Gender Affirmation subscale assesses the degree to which individuals feel like their affirmed gender. Thus, it is possible that the Gender Affirmation subscale may be a more powerful mediator for transgender and the Dysphoria subscale would be a more powerful mediator for cisgender individuals. To test this idea, I conducted a post hoc moderated mediation analysis separating the two subscales to be parallel mediators. As I suspected, there was evidence for a dual-pathway model, such that gender affirmation mediated for transgender individuals, $ab = 0.47$, $BootSE = 0.15$, $CI (0.19, 0.77)$, while dysphoria mediated for cisgender, $ab = 0.25$, $BootSE = 0.10$, $CI (0.06, 0.45)$, (see Figure 5 in Appendix I). Thus, a future study should test replicability of these findings and further examine the presentation of gender dysphoria between cisgender and transgender groups.

Additionally, the body dissatisfaction mediator did not significantly mediate any of the proposed relationships, which may be in suit with the literature suggesting that findings have remained mixed on body image concern of trans individuals (McGuire et al., 2016). In this thesis, transgender and cisgender participants did not significantly differ on body appreciation and body image average ratings (see Table 2). In fact, both groups rated body appreciation and image moderately high, suggesting body dissatisfaction was not likely to be predictive of decreased mental health and quality of life reports in this sample. Though body appreciation and body image did not fully mediate any of the relationships between felt pressure for gender conformity and the four outcome measures (*DASS_total*, *MHC_total*, *QOLS_total*, and *SWLS_total*), mediational analyses did reveal some findings. Higher body appreciation and body image were significantly related to higher flourishing mental health, quality of life, and satisfaction with life, and there were no gender identity differences in these findings. Although these findings do not support hypotheses, they are equally important for discerning the causes of mental health and quality of life disparities across gender identity groups.

A future direction from this research could include further investigating the relationship between gender dysphoria and mental health outcomes for cisgender individuals. Currently there is little to no research on this topic – potentially due to the common conflation of gender dysphoria being used both in the literature and as a diagnosis for primarily transgender individuals (Davy & Toze, 2018). Indeed, a critique by the American Philosophical Association (Engelhardt, 2021) was made regarding the diagnostic criteria associated with gender dysphoria, suggesting that it was less about gender discomfort and rather more about conforming to a binary gender. This critique is

similar to the previously stated potential implications of moderated mediational findings – cisgender individuals who do not abide by traditional gender norms may be impacted by the feelings of incongruence between who they feel they are and what society expects of them and therefore experience gender dysphoria. However, this is just one consideration of these findings as more research should be conducted to further expand on this theory.

Other future directions for this line of research could include addressing other structural and contextual factors that contribute towards the internal process and experiences of minoritized gender and sexual communities. The current thesis examined how social context, specifically cultural gender norms, informed internal processes (i.e., self-reports of mental health and quality of life) of gender diverse individuals in comparison to cisgender individuals. Furthermore, this thesis sought to understand if and to what extent other internal processes, such as gender dysphoria and body image concern explained outcomes of mental health and quality of life. Instead, it was discovered that internalization of external events like discrimination, better explained outcomes of reported mental health and quality – in suit with previous research (Almeida et al., 2009; Lombardi et al., 2002; Mays & Cochran, 2001; Meyer, 2003; Rosario et al., 2002; Wyss, 2004). Interestingly, perceived discrimination explained these outcomes for both transgender and cisgender individuals, likely suggesting that a single demographic factor (i.e., gender) was not the only contributor of these outcomes. Rather, other (and potentially multiple) sociodemographic characteristics (e.g., race/ethnicity, social class) that make up one’s social identity may collectively predict the likelihood of experiencing

and internalizing discrimination. Future directions may consider a more nuanced and complete account of one's social identity incorporated into health disparities research.

CHAPTER 6

CONCLUSION

In this thesis I aimed to examine how mental health and quality of life outcomes differed between transgender and cisgender individuals, and whether experiences of gender dysphoria and/or body dissatisfaction played a role in these relationships. In suit with the literature, I hypothesized that felt pressure for gender conformity would be related to decreased mental health and quality of life outcome. Specifically, I predicted transgender individuals would demonstrate decreased mental health and quality of life outcomes in comparison to cisgender individuals. and these outcomes would be attributed to the mediational effects of gender dysphoria and/or body dissatisfaction. However, my hypotheses were partially supported, as that was not entirely what analyses illustrated. Overall, the main findings suggested that pressure to conform to gender norms directly predicted outcomes of depression, anxiety, and stress, but did not predict well-being or quality of life. Furthermore, gender dysphoria (but not body dissatisfaction) mediated the relationship between felt pressure for gender conformity and depression, anxiety, and stress for cisgender participants, but unexpectedly not transgender participants. Post hoc analyses suggested that perceived discrimination mediated the relation between felt pressure and all mental health measures and quality of life measures for both transgender and cisgender participants. Future research may consider incorporating other aspects of one's social context and identity to further explain disparities experienced by gender minorities.

REFERENCES

- Ålgars, M., Santtila, P., & Sandnabba, N. K. (2010). Conflicted gender identity, body dissatisfaction, and disordered eating in adult men and women. *Sex Roles*, *63*(1), 118-125. <https://doi.org/10.1007/s11199-010-9758-6>
- Almeida, J., Johnson, R. M., Corliss, H. L., Molnar, B. E., & Azrael, D. (2009). Emotional distress among LGBT youth: The influence of perceived discrimination based on sexual orientation. *Journal of Youth and Adolescence*, *38*(7), 1001–1014. <https://doi.org/10.1007/s10964-009-9397-9>
- Altman, D. G., & Bland, J. M. (1995). Statistics notes: the normal distribution. *Bmj*, *310*(6975), 298. <https://doi.org/10.1136/bmj.310.6975.298>
- American Psychological Association*. (2018). APA guidelines for psychological practice with boys and men. <http://www.apa.org/about/policy/psychological-practice-boys-men-guidelines.pdf>
- American Psychiatric Association*. (2013). Diagnostic and statistical manual of mental disorders (5th ed.). Arlington, VA.
- American Psychological Association*. (2015). Guidelines for psychological practice with transgender and gender nonconforming people. *American Psychologist*, *70*(9), 832–864. <https://doi.org/10.1037/a0039906>
- American Psychological Association, Girls and Women Guidelines Group*. (2018). APA guidelines for psychological practice with girls and women. <http://www.apa.org/about/policy/psychological-practice-girls-women.pdf>
- Ansara, Y. G., & Berger, I. (2016). Cisgenderism. *The Wiley Blackwell Encyclopedia of Gender and Sexuality Studies*, 1–3. <https://doi.org/10.1002/9781118663219.wbegss426>
- Ansara, Y. G., & Hegarty, P. (2014). Methodologies of misgendering: Recommendations for reducing cisgenderism in psychological research. *Feminism & Psychology*, *24*(2), 259–270. <https://doi.org/10.1177/0959353514526217>
- Aultman, B. (2014). Cisgender. *Transgender Studies Quarterly*, *1*(1-2), 61–62. <https://doi.org/10.1215/23289252-2399614>
- Bariola, E., Lyons, A., Leonard, W., Pitts, M., Badcock, P., & Couch, M. (2015). Demographic and psychosocial factors associated with psychological distress and resilience among transgender individuals. *American Journal of Public Health*, *105*(10), 2108-2116. <https://doi.org/10.2105/AJPH.2015.302763>

- Bem, S.L. (1981). Gender schema theory: A cognitive account of sex typing. *Psychological Review*, 88(4), 354–364. <https://doi.org/10.1037/0033-295X.88.4.354>
- Bem, S. L. (1993). *The lenses of gender: Transforming the debate on sexual inequality*. Yale University Press.
- Bockting, W., Fraser, L., Knudson, G., Whittle, S., Botzer, M., Brown, G., . . . Wylie, K. (2010, May 26). WPATH de-pathologisation statement. https://amo_hub_content.s3.amazonaws.com/Association140/files/de-psychopathologisat
- Budge, S. L., Katz-Wise, S. L., Tebbe, E. N., Howard, K. A. S., Schneider, C. L., & Rodriguez, A. (2013). Transgender emotional and coping processes: Facilitative and avoidant coping throughout gender transitioning. *The Counseling Psychologist*, 41(4), 601–647. <https://doi.org/10.1177/0011000011432753>
- Burke, N. J., Joseph, G., Pasick, R. J., & Barker, J. C. (2009). Theorizing social context: rethinking behavioral theory. *Society for Public Health Education*, 36(5), 55S–70S. <https://doi.org/10.1177/1090198109335338b>
- Bussey, K. & Bandura, A. (1999). Social cognitive theory of gender development and differentiation. *Psychological Review*, 106(4), 676–713. <https://doi.org/10.1037/0033-295X.106.4.676>
- Carpiano, R. M., Link, B. G., & Phelan, J. C. (2008). Social inequality and health: Future directions for the fundamental cause explanation. In A. Lareau & D. Conley (Eds.), *Social class: How does it work*, (pp. 232-263). Russell Sage.
- Carver, P. R., Yunger, J. L., & Perry, D. G. (2003). Gender identity and adjustment in middle childhood. *Sex Roles*, 49(3-4), 95–109. <https://doi.org/10.1023/A:1024423012063>
- Clements, K., Wilkinson, W., Kitano, K., & Marx, R. (2001). HIV prevention and health service needs of the transgender community in San Francisco. In W. Bockting & S. Kirk (Eds.), *Transgender and HIV: Risks, prevention, and care* (pp. 69-89). Haworth Press.
- Cole, S. S., Denny, D., Eyler, A. E., & Samons, S. L. (2000). Issues of transgender. In L. T. Szuchman & F. Muscarella (Eds.), *Psychological perspectives on human sexuality* (pp. 149–195). John Wiley & Sons, Inc.
- Coleman, E., Bockting, W., Botzer, M., Cohen-Kettenis, P., DeCuypere, G., Feldman, J.,

- . . .Zucker, K. (2012). Standards of care for the health of transsexual, transgender, and gender-nonconforming people, version 7. *International Journal of Transgenderism*, 13(4), 165–232. [doi:10.1080/15532739.2011.700873](https://doi.org/10.1080/15532739.2011.700873)
- Connolly, D., & Gilchrist, G. (2020). Prevalence and correlates of substance use among transgender adults: A systematic review. *Addictive behaviors*, 111, 106544. <https://doi.org/10.1016/j.addbeh.2020.106544>
- Davy, Z., & Toze, M. (2018). What is gender dysphoria? A critical systematic narrative review. *Transgender Health*, 3(1), 159–169. <https://doi.org/10.1089/trgh.2018.0014>
- Davy, Z. (2015). The DSM-5 and the politics of diagnosing transpeople. *Archives of Sexual Behavior*, 44(5), 1165–1176. <https://doi.org/10.1007/s10508-015-0573-6>
- de Blok, C. J., Wiepjes, C. M., van Velzen, D. M., Staphorsius, A. S., Nota, N. M., Gooren, L. J.,... & den Heijer, M. (2021). Mortality trends over five decades in adult transgender people receiving hormone treatment: A report from the Amsterdam cohort of gender dysphoria. *The Lancet Diabetes & Endocrinology*, 9(10), 663-670. [https://doi.org/10.1016/S2213-8587\(21\)00185-6](https://doi.org/10.1016/S2213-8587(21)00185-6)
- de Vries, A. L., McGuire, J. K., Steensma, T. D., Wagenaar, E. C., Doreleijers, T. A., & Cohen-Kettenis, P. T. (2014). Young adult psychological outcome after puberty suppression and gender reassignment. *Pediatrics*, 134(4), 696-704. <https://doi.org/10.1542/peds.2013-2958>
- Deogracias, J. J., Johnson, L. L., Meyer-Bahlburg, H. F., Kessler, S. J., Schober, J. M., & Zucker, K. J. (2007). The gender identity/gender dysphoria questionnaire for adolescents and adults. *Journal of Sex Research*, 44(4), 370–379. <https://doi.org/10.1080/00224490701586730>
- Devor, A. H. (2004). Witnessing and mirroring: A fourteen-stage model of transgender identity formation. *Journal of Gay & Lesbian Psychotherapy*, 8(1-2), 41-67. [doi:10.1300/J236v08n01_05](https://doi.org/10.1300/J236v08n01_05)
- Dhejne, C., Van Vlerken, R., Heylens, G., & Arcelus, J. (2016). Mental health and gender dysphoria: A review of the literature. *International Review of Psychiatry*, 28(1), 44–57. <https://doi.org/10.3109/09540261.2015.1115753>
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49(1), 71-75. https://doi.org/10.1207/s15327752jpa4901_13
- Drescher J. (2010). Queer diagnoses: Parallels and contrasts in the history of

- homosexuality, gender variance, and the diagnostic and statistical manual. *Archives of Sexual Behavior*, 39(2), 427–460. <https://doi.org/10.1007/s10508-009-9531-5>
- Drescher J. (2015). Queer diagnoses revisited: The past and future of homosexuality and gender diagnoses in DSM and ICD. *International Review of Psychiatry*, 27(5), 386–395. <https://doi.org/10.3109/09540261.2015.1053847>
- Drury, K., Bukowski, W. M., Velásquez, A. M., & Stella-Lopez, L. (2012, February 1). *Victimization and gender identity in single-sex and mixed-sex schools: Examining contextual variations in pressure to conform to gender norms - sex roles*. SpringerLink. <https://link.springer.com/article/10.1007/s11199-012-0118-6>
- Early Childhood National Centers*. (2022). Healthy gender development and young children: A guide for early childhood programs and professionals. University of Washington. (n.d.). National Center on Parent, Family, and Community Engagement. <https://depts.washington.edu/dbpeds/healthy-gender-development.pdf>
- Egan, S. K., & Perry, D. G. (2001). Gender identity: A multidimensional analysis with implications for psychosocial adjustment. *Developmental Psychology*, 37(4), 451–463. <https://doi.org/10.1037/0012-1649.37.4.451>
- Eiseman, P. (2018, September 10). *Validation of the multilayered gender identity questionnaires*. Dissertations. <https://irl.umsl.edu/dissertation/760>
- Ekins R, King D, eds. (1996). *Blending genders: Social aspects of cross-dressing and sex-changing*. Routledge
- Elliot, A. J., Leary, M. R., & Gabriel, S. (2022). The relentless pursuit of acceptance and belonging. In *Advances in Motivation Science* (Vol. 9, pp. 135–172). Elsevier Science & Technology.
- Engelhardt, J. (2021, December 24). *Misandrogyny and cisgender discomfort*. Blog of the American Philosophical Association (APA). <https://blog.apaonline.org/2021/12/27/misandrogyny-and-cisgender-discomfort/>
- Enke, A. F. (2013). “The education of little cis”: Cisgender and the discipline of opposing bodies. In S. Stryker & A. Z. Aizura (Eds.), *The Transgender Studies Reader 2* (pp. 234–47). Routledge.
- Factor R. J., & Rothblum E. (2008). Exploring gender identity and community among

- three groups of transgender individuals in the United States: MTFs, FTMs, and genderqueers. *Health Sociology Review*, 17(3), 235–253.
[doi:10.5172/hesr.451.17.3.235](https://doi.org/10.5172/hesr.451.17.3.235)
- Feldman, J. L., & Goldberg, J. M. (2006). Transgender Primary Medical Care. *International Journal of Transgenderism*, 9(3-4), 3–34.
https://doi.org/10.1300/j485v09n03_02
- Feusner, J. D., Dervisic, J., Kosidou, K., Dhejne, C., Bookheimer, S., & Savic, I. (2016). Female-to-male transsexual individuals demonstrate different own body identification. *Archives of Sexual Behavior*, 45(3), 525–536.
<https://doi.org/10.1007/s10508-015-0596-z>
- Fisk, N. M. (1974). Gender dysphoria syndrome: The conceptualization that liberalizes indications for total gender reorientation and implies a broadly based multi-dimensional rehabilitative regimen. *The Western Journal of Medicine*, 120, 386–391.
- Fleming, P. J., & Agnew-Brune, C. (2015). Current trends in the study of gender norms and health behaviors. *Current Opinion in Psychology*, 5, 72–77.
<https://doi.org/10.1016/j.copsyc.2015.05.001>
- Fredriksen-Goldsen, K. I., Cook-Daniels, L., Kim, H. J., Erosheva, E. A., Emlert, C. A., Hoy-Ellis, C. P., Goldsen, J., & Muraco, A. (2014). Physical and mental health of transgender older adults: an at-risk and underserved population. *The Gerontologist*, 54(3), 488–500. <https://doi.org/10.1093/geront/gnt021>
- Frohard-Dourlent, H., Dobson, S., Clark, B. A., Doull, M., & Saewyc, E. M. (2017). “I would have preferred more options”: Accounting for non-binary youth in health research. *Nursing Inquiry*, 24(1), e12150. <https://doi.org/10.1111/nin.12150>
- Gagné, P., & Tewksbury, R. (1998). Conformity pressures and gender resistance among transgendered individuals. *Social Problems*, 45(1), 81-101.
<https://doi.org/10.1525/sp.1998.45.1.03x0158b>
- Gagne, P., Tewksbury, R., McGaughey, D. (1997). Coming out and crossing over: Identity formation and proclamation in a transgender community. *Gender and Society*, 11(4), 478-508. [doi:10.1177/089124397011004006](https://doi.org/10.1177/089124397011004006)
- Gallagher, M. W., Lopez, S. J., & Preacher, K. J. (2009). The hierarchical structure of well-being. *Journal of personality*, 77(4), 1025–1050.
<https://doi.org/10.1111/j.1467-6494.2009.00573.x>
- Garfinkel H. (1967). *Studies in Ethnomethodology*. Prentice-Hall

- Ghasemi, A., & Zahediasl, S. (2012). Normality tests for statistical analysis: a guide for non-statisticians. *International journal of endocrinology and metabolism*, 10(2), 486–489. <https://doi.org/10.5812/ijem.3505>
- Ghorayshi, A. (2022, June 10). *Report reveals sharp rise in transgender young people in the U.S.* The New York Times. <https://www.nytimes.com/2022/06/10/science/transgender-teenagers-national-survey.html>
- Gillen, M. M., & Lefkowitz, E. S. (2006). Gender role development and body image among male and female first year college students. *Sex Roles*, 55(1), 25-37. <https://doi.org/10.1007/s11199-006-9057-4>
- Gordon, A. R., Krieger, N., Okechukwu, C. A., Haneuse, S., Samnaliev, M., Charlton, B. M., & Austin, S. B. (2017). Decrements in health-related quality of life associated with gender nonconformity among U.S. adolescents and young adults. *Quality of Life Research*, 26(8), 2129–2138. <https://doi.org/10.1007/s11136-017-1545-1>
- Grant, J. M., Mottet, L. A., Tanis, J. J., & Min, D. (2011). Transgender discrimination survey. *National Center for Transgender Equality and National Gay and Lesbian Task Force: Washington, DC, USA.*
- Griffin, J. A., Casanova, T. N., Eldridge-Smith, E. D., & Stepleman, L. M. (2019). Gender minority stress and health perceptions among transgender individuals in a small metropolitan southeastern region of the United States. *Transgender Health*, 4(1), 247-253. <https://doi.org/10.1089/trgh.2019.0028>
- Haas, A. P., Eliason, M., Mays, V. M., Mathy, R. M., Cochran, S. D., D'Augelli, A. R., Silverman, M. M., Fisher, P. W., Hughes, T., Rosario, M., Russell, S. T., Malley, E., Reed, J., Litts, D. A., Haller, E., Sell, R. L., Remafedi, G., Bradford, J., Beautrais, A. L., Brown, G. K., ... Clayton, P. J. (2011). Suicide and suicide risk in lesbian, gay, bisexual, and transgender populations: review and recommendations. *Journal of Homosexuality*, 58(1), 10–51. <https://doi.org/10.1080/00918369.2011.534038>
- Haritaworn J. (2008). Shifting positionalities: Empirical reflections on a queer/trans of colour methodology. *Sociological Research Online*, 13(1), 1–12. [doi:10.5153/sro.1631](https://doi.org/10.5153/sro.1631)
- Harry-Hernandez, S., Reisner, S. L., Schrimshaw, E. W., Radix, A., Mallick, R., Callander, D., ... & Duncan, D. T. (2020). Gender dysphoria, mental health, and poor sleep health among transgender and gender nonbinary individuals: A qualitative study in New York city. *Transgender Health*, 5(1), 59-68. <https://doi.org/10.1089/trgh.2019.0007>

- Hayes, A. F. (2012). PROCESS: A versatile computational tool for observed variable mediation, moderation, and conditional process modeling. <http://www.afhayes.com/public/process2012.pdf>
- Heard, J., Morris, A., Kirouac, N., Ducharme, J., Trepel, S., & Wicklow, B. (2018). Gender dysphoria assessment and action for youth: Review of health care services and experiences of trans youth in Manitoba. *Pediatrics & Child Health, 23*(3), 179-184. <https://doi.org/10.1093/pch/pxx156>
- Hendricks, M. L., & Testa, R. J. (2012). A conceptual framework for clinical work with transgender and gender nonconforming clients: An adaptation of the Minority Stress Model. *Professional Psychology: Research and Practice, 43*(5), 460–467. <https://doi.org/10.1037/a0029597>
- Hines, M. (2020). Human gender development. *Neuroscience & Biobehavioral Reviews, 118*, 89–96. <https://doi.org/10.1016/j.neubiorev.2020.07.018>
- Hyde, J. S., Bigler, R. S., Joel, D., Tate, C. C., van Anders, S. M. (2019). The future of sex and gender in psychology: Five challenges to the gender binary. *American Psychologist, 74*(2), 171–193. <https://psycnet.apa.org/record/2018-32185-001>
- James, S., Herman, J., Rankin, S., Keisling, M., Mottet, L., & Anafi, M. A. (2016). *The report of the 2015 US Transgender Survey*. Justice Research and Statistics Association.
- Jones, B. A., Pierre Bouman, W., Haycraft, E., & Arcelus, J. (2019). Gender congruence and body satisfaction in nonbinary transgender people: A case control study. *International Journal of Transgenderism, 20*(2-3), 263-274. <https://doi.org/10.1080/15532739.2018.1538840>
- Keyes, C. L. M. (2005). Mental illness and/or mental health? Investigating axioms of the complete state model of health. *Journal of Consulting and Clinical Psychology, 73*(3), 539–548. <https://doi.org/10.1037/0022-006X.73.3.539>
- Keyes, C. L. M. (2009). The nature and importance of mental health in youth. In R. Gilman, M. Furlong, & E. S. Heubner (Eds.), *Promoting Wellness in Children and Youth: A Handbook of Positive Psychology in the Schools* (pp. 9-23), Routledge.
- Khoury, B., El Khoury, J., Fresán Orellana, A., Daouk, S., Khauli, N., Ramadan, Z., Reed, G. M., & Robles, R. (2021). The ICD-11 classification of gender incongruence of adolescence and adulthood: Adequacy among transgender people in Lebanon. *Culture, Health & Sexuality, 23*(1), 131–142. <https://doi.org/10.1080/13691058.2019.1692907>

- Kohlberg L. A. (1966). A cognitive-developmental analysis of children's sex role concepts and attitudes. In Maccoby E. (Eds.), *The Development of Sex Differences* (pp. 82–173). Stanford University Press.
- Kornienko, O., Santos, C. E., Martin, C. L., & Granger, K. L. (2016). Peer influence on gender identity development in adolescence. *Developmental Psychology, 52*(10), 1578–1592. <https://doi.org/10.1037/dev0000200>
- Krieger, N. (2014). Discrimination and health inequities. *International Journal of Health Services, 44*(4), 643–710. <https://doi.org/10.2190/HS.44.4.b>
- Lagaert, S., Van Houtte, M., & Roose, H. (2017). Engendering culture: The relationship of gender identity and pressure for gender conformity with adolescents' interests in the arts and literature. *Sex Roles, 77*(7), 482-495. <https://link.springer.com/article/10.1007/s11199-017-0738-y>
- Lev, A. I. (2013). Gender dysphoria: Two steps forward, one step back. *Clinical Social Work Journal, 41*(3), 288–296. <https://doi.org/10.1007/s10615-013-0447-0>
- Liamputtong, P., Noack-Lundberg, K., Dune, T., Marjadi, B., Schmied, V., Ussher, J., Perz, J., Hawkey, A., Sekar, J., & Brook, E. (2020). Embodying transgender: An analysis of trans women in online forums. *International Journal of Environmental Research and Public Health, 17*(18), 6571. <https://doi.org/10.3390/ijerph17186571>
- Lindgreen, T. W., & Pauly, I. B. (1975). A body image scale for evaluating transsexuals. *Archives of Sexual Behavior, 4*(6), 639-656. <https://doi.org/10.1007/BF01544272>
- Lindqvist, A., Sendén, M. G., & Renström, E. A. (2020). What is gender, anyway: A review of the options for operationalising gender. *Psychology & Sexuality, 12*(4), 332–344. <https://doi.org/10.1080/19419899.2020.1729844>
- Lombardi, E. L., Wilchins, R. A., Priesing, D., & Malouf, D. (2002). Gender violence: Transgender experiences with violence and discrimination. *Journal of Homosexuality, 42*, 89-101. https://doi.org/10.1300/J082v42n01_05
- Lovibond, S.H., & Lovibond, P.F. (1995). *Manual for the depression anxiety stress scales* (2nd. Ed.). Psychology Foundation of Australia.
- Lovibond, S. H., & Lovibond, P. F. (1996). *Manual for the depression anxiety stress scales*. Psychology Foundation of Australia.
- Lukachko, A., Hatzenbuehler, M. L., & Keyes, K. M. (2014). Structural racism and myocardial infarction in the United States. *Social Science & Medicine, 103*, 42–50. <https://doi.org/10.1016/j.socscimed.2013.07.021>

- Marlowe, G. (2018, November 14). *Identifying transgender: A brief history of the word "transgender."* The Experiences of Transgender Children. <https://wgssfall2018.voices.wooster.edu/2018/11/14/identifying-transgender-janet-mock-as-a-modern-transgender-woman/>
- Martin, C., & Halverson, C. (1981). A schematic processing model of sex typing and stereotyping in children. *Child Development*, 52(4), 1119-1134. <https://doi.org/10.2307/1129498>
- Martin, C. L., & Ruble, D. N. (2010). Patterns of gender development. *Annual Review of Psychology*, 61(1), 353–381. <https://doi.org/10.1146/annurev.psych.093008.100511>
- Matsuno E., & Budge S. L. (2017). Non-binary/Genderqueer identities: A critical review of the literature. *Current Sexual Health Reports*, 9(3), 116–120. [doi:10.1007/s11930-017-0111-8](https://doi.org/10.1007/s11930-017-0111-8)
- Mays, V. M., & Cochran, S. D. (2001). Mental health correlates of perceived discrimination among lesbian, gay, and bisexual adults in the United States. *American Journal of Public Health*, 91(11), 1869–1876. <https://doi.org/10.2105/ajph.91.11.1869>
- McGuire, J. K., Doty, J. L., Catalpa, J. M., & Ola, C. (2016). Body image in transgender young people: Findings from a qualitative, community based study. *Body Image*, 18, 96–107. <https://doi.org/10.1016/j.bodyim.2016.06.004>
- Meerwijk, E. L., & Sevelius, J. M. (2017). Transgender population size in the United States: A meta-regression of population-based probability samples. *American Journal of Public Health*, 107(2), 1–8. <https://doi.org/10.2105/AJPH.2016.303578>
- Meyer-Bahlburg, H. F., Dolezal, C., Baker, S. W., Ehrhardt, A. A., & New, M. I. (2006). Gender development in women with congenital adrenal hyperplasia as a function of disorder severity. *Archives of Sexual Behavior*, 35(6), 667–684. <https://doi.org/10.1007/s10508-006-9068-9>
- Meyer, I. H. (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychological Bulletin*, 129(5), 674. <https://doi.org/10.1037/0033-2909.129.5.674>
- Mikkola, M. (2022, January 18). *Feminist perspectives on sex and gender*. Stanford Encyclopedia of Philosophy. <https://plato.stanford.edu/entries/feminism-gender/>
- Miller, C. F. (2016). Theories of gender development. *The Wiley Blackwell Encyclopedia*

- of Gender and Sexuality Studies*, 1–6.
<https://doi.org/10.1002/9781118663219.wbegss590>
- Miller, C. F., Trautner, H. M., & Ruble, D. N. (2006). The role of gender stereotypes in children’s preferences and behavior. In C. Tamis-LeMonda and L. Balter (Eds.). *Child psychology: A handbook of contemporary issues*, (2nd ed.). Psychology Press.
- Miller, L. R., & Grollman, E. A. (2015). The social costs of gender nonconformity for transgender adults: Implications for discrimination and health. *Sociological Forum*, 30(3), 809–831. <https://doi.org/10.1111/socf.12193>
- Mofradidoost, R., & Abolghasemi, A. (2020). Body image concern and gender identities between transgender and cisgender persons from Iran. *Journal of Sex & Marital Therapy*, 46(3), 260-268. <https://doi.org/10.1080/0092623X.2019.1683665>
- Morgenroth, T., Ryan, M. K. (2020). The effects of gender trouble: An integrative theoretical framework of the perpetuation and disruption of the gender/sex binary. *Perspectives on Psychological Science*. Advance online publication.
<https://doi.org/10.1177/1745691620902442>
- Morgenroth, T., Sendén, M. G., Lindqvist, A., Renström, E. A., Ryan, M. K., & Morton, T. A. (2021). Defending the sex/gender binary: The role of gender identification and need for closure. *Social Psychological and Personality Science*, 12(5), 731–740. <https://doi.org/10.1177/1948550620937188>
- Morris, E. R., & Galupo, M. P. (2019). “Attempting to dull the dysphoria”: Nonsuicidal self-injury among transgender individuals. *Psychology of Sexual Orientation and Gender Diversity*, 6(3), 296–307. <https://doi.org/10.1037/sgd0000327>
- Murray, K., Rieger, E., & Byrne, D. (2013). A longitudinal investigation of the mediating role of self-esteem and body importance in the relationship between stress and body dissatisfaction in adolescent females and males. *Body Image*, 10(4), 544–551. <https://doi.org/10.1016/j.bodyim.2013.07.011>
- Nowakowski, A. C., Sumerau, J., & Mathers, L. A. (2016). None of the above: Strategies for inclusive teaching with “representative” data. *Teaching Sociology*, 44(2), 96–105. <https://doi.org/10.1177/1363460716666755>
- Nuttbrock, L., Bockting, W., Rosenblum, A., Hwahng, S., Mason, M., Macri, M., & Becker, J. (2014). Gender abuse and major depression among transgender women: A prospective study of vulnerability and resilience. *American Journal of Public Health*, 104(11), 2191-2198. <https://doi.org/10.2105/AJPH.2013.301545>
- Owen-Smith, A. A., Gerth, J., Sineath, R. C., Barzilay, J., Becerra-Culqui, T. A.,

- Getahun, D., ... & Goodman, M. (2018). Association between gender confirmation treatments and perceived gender congruence, body image satisfaction, and mental health in a cohort of transgender individuals. *The Journal of Sexual Medicine*, 15(4), 591-600. <https://doi.org/10.1016/j.jsxm.2018.01.017>
- Owen-Smith, A. A., Sineath, C., Sanchez, T., Dea, R., Giammattei, S., Gillespie, T., ... & Goodman, M. (2017). Perception of community tolerance and prevalence of depression among transgender persons. *Journal of Gay & Lesbian Mental Health*, 21(1), 64-76. <https://doi.org/10.1080/19359705.2016.1228553>
- Pallant, J. (2020). *SPSS survival manual: A step by step guide to data analysis using IBM SPSS*. McGraw-hill education (UK).
https://books.google.com/books?hl=en&lr=&id=CxUsEAAAQBAJ&oi=fnd&pg=PP1&ots=n37HwKHf8W&sig=dNuvFMMeDzmJ8u_Ng9RKehxrcP4#v=onepage&q&f=false
- Pascoe, E. A., & Smart Richman, L. (2009). Perceived discrimination and health: A meta-analytic review. *Psychological bulletin*, 135(4), 531–554. <https://doi.org/10.1037/a0016059>
- Perry, D., Pauletti, R., & Aults, C. (2017). Gender self-socialization model. In K. Nadal (Ed.), *The SAGE encyclopedia of psychology and gender* (pp. 737-738). SAGE Publications, Inc., <https://dx.doi.org/10.4135/9781483384269.n245>
- Peterson, C. M., Matthews, A., Coppins-Smith, E., & Conard, L. A. (2016). Suicidality, self-harm, and body dissatisfaction in transgender adolescents and emerging adults with gender dysphoria. *Suicide and Life-Threatening Behavior*, 47(4), 475–482. <https://doi.org/10.1111/sltb.12289>
- Pfeffer, C. A. (2008). Bodies in relation—Bodies in transition: Lesbian partners of trans men and body image. *Journal of Lesbian Studies*, 12(4), 325-345. <https://doi.org/10.1080/10894160802278184>
- Priess, H. A., Lindberg, S. M., & Hyde, J. S. (2009). Adolescent gender-role identity and mental health: Gender intensification revisited. *Child Development*, 80(5), 1531–1544. <https://doi.org/10.1111/j.1467-8624.2009.01349.x>
- Pulice-Farrow, L., Cusack, C. E., & Galupo, M. P. (2020). “Certain parts of my body don’t belong to me”: Trans individuals’ descriptions of body-specific gender dysphoria. *Sexuality Research and Social Policy*, 17(4), 654–667. <https://doi.org/10.1007/s13178-019-00423-y>
- Rathjen, R. (2011, September 16). *New analysis shows startling levels of discrimination*

- against black transgender people*. National LGBTQ Task Force.
<https://www.thetaskforce.org/new-analysis-shows-startling-levels-of-discrimination-against-black-transgender-people/>
- Reisner, S. L., Conron, K. J., Baker, K., Herman, J. L., Lombardi, E., Greytak, E. A., ... & GenIUSS Group. (2015). "Counting" transgender and gender-nonconforming adults in health research: Recommendations from the gender identity in US surveillance group. *Transgender Studies Quarterly*, 2(1), 34-57.
[doi:10.1215/23289252-2848877](https://doi.org/10.1215/23289252-2848877)
- Reisner, S. L., Poteat, T., Keatley, J., Cabral, M., Mothopeng, T., Dunham, E., Holland, C. E., Max, R., & Baral, S. D. (2016). Global health burden and needs of transgender populations: A review. *Lancet*, 388(10042), 412-436.
[https://doi.org/10.1016/S0140-6736\(16\)00684-X](https://doi.org/10.1016/S0140-6736(16)00684-X)
- Richards C., Bouman W. P., & Barker M. J. (Eds.). (2017). *Genderqueer and non-binary genders*. Palgrave Macmillan.
- Roberts, A. L., Rosario, M., Slopen, N., Calzo, J. P., & Austin, S. B. (2013). Childhood gender nonconformity, bullying victimization, and depressive symptoms across adolescence and early adulthood: An 11-year Longitudinal Study. *Journal of the American Academy of Child & Adolescent Psychiatry*, 52(2), 143-152.
<https://doi.org/10.1016/j.jaac.2012.11.006>
- Robitschek, C., & Keyes, C. L. M. (2009). The structure of Keyes' model of mental health and the role of personal growth initiative as a parsimonious predictor. *Journal of Counseling Psychology*, 56, 321-329.
<http://dx.doi.org/10.1037/a0013954>
- Röder, M., Barkmann, C., Richter-Appelt, H., Schulte-Markwort, M., Ravens-Sieberer, U., & Becker, I. (2018). Health-related quality of life in transgender adolescents: Associations with body image and emotional and behavioral problems. *International Journal of Transgenderism*, 19(1), 78-91.
<https://doi.org/10.1080/15532739.2018.1425649>
- Rood, B. A., Reisner, S. L., Surace, F. I., Puckett, J. A., Maroney, M. R., & Pantalone, D. W. (2016). Expecting rejection: Understanding the minority stress experiences of transgender and gender-nonconforming individuals. *Transgender Health*, 1(1), 151-164. <https://doi.org/10.1089/trgh.2016.0012>
- Rosario, M., Schrimshaw, E. W., Hunter, J., & Gwadz, M. (2002). Gay-related stress and emotional distress among gay, lesbian, and bisexual youths: A longitudinal examination. *Journal of Consulting and Clinical Psychology*, 70(4), 967-975.
<https://doi.org/10.1037//0022-006x.70.4.967>

- Ruble, D. N., & Martin, C. L. (1998). Gender development. In W. Damon (Eds.), *Handbook of child psychology* (Vol. 3), pp. 933–1016. Wiley.
- Ruble, D. N., Martin, C. L., & Berenbaum, S. A. (2006). Gender development. In N. Eisenberg, W. Damon, & R. M. Lerner (Eds.), *Handbook of child psychology* (pp. 858–932). John Wiley & Sons, Inc..
- Sánchez-López, M. D. P., Cuellar-Flores, I., & Dresch, V. (2012). The impact of gender roles on health. *Women & Health, 52*(2), 182-196.
<https://doi.org/10.1080/03630242.2011.652352>
- Seng, J. S., Lopez, W. D., Sperlich, M., Hamama, L., & Reed Meldrum, C. D. (2012). Marginalized identities, discrimination burden, and mental health: Empirical exploration of an interpersonal-level approach to modeling intersectionality. *Social Science & Medicine, 75*(12), 2437–2445.
<https://doi.org/10.1016/j.socscimed.2012.09.023>
- Smith, A. J., Hallum-Montes, R., Nevin, K., Zenker, R., Sutherland, B., Reagor, S., Ortiz, M. E., Woods, C., Frost, M., Cochran, B., Oost, K., Gleason, H., & Brennan, J. M. (2018). Determinants of transgender individuals' well-being, mental health, and suicidality in a rural state. *Rural Mental Health, 42*(2), 116–132.
<https://doi.org/10.1037/rmh0000089>
- Steensma, T. D., Kreukels, B. P., de Vries, A. L., & Cohen-Kettenis, P. T. (2013). Gender identity development in adolescence. *Hormones and Behavior, 64*(2), 288-297.
- Strandjord, S. E., Ng, H., & Rome, E. S. (2015). Effects of treating gender dysphoria and anorexia nervosa in a transgender adolescent: Lessons learned. *International Journal of Eating Disorders, 48*(7), 942–945. <https://doi.org/10.1002/eat.22438>
- Stryker, S. (2008). *Transgender history*. Seal.
- Suess, A., Espineira, K., Walters, P. C. (2014). Depathologization. *Transgender Studies Quarterly, 1*, 73–77. [doi:10.1215/23289252-2399650](https://doi.org/10.1215/23289252-2399650)
- Tabaac, A., Perrin, P. B., & Benotsch, E. G. (2017). Discrimination, mental health, and body image among transgender and gender-non-binary individuals: Constructing a multiple mediational path model. *Journal of Gay & Lesbian Social Services, 30*(1), 1–16. <https://doi.org/10.1080/10538720.2017.1408514>
- Tewksbury, R. (1998). Conformity pressures and gender resistance among transgendered individuals. *Social Problems, 45*(1), 81–101. <https://doi.org/10.2307/3097144>
- Thorne, N., Yip, A. K., Bouman, W. P., Marshall, E., & Arcelus, J. (2019). The

- terminology of identities between, outside and beyond the gender binary: A systematic review. *The International Journal of Transgenderism*, 20(2-3), 138–154. <https://doi.org/10.1080/15532739.2019.1640654>
- Trautner, H. M, Gervai, J., & Németh, R. (2003). Appearance-reality distinction and development of gender constancy understanding in children. *International Journal of Behavioral Development*, 27(3), 275–283. <https://doi.org/10.1080/01650250244000362>
- Turan, Ş., Poyraz, C. A., Sağlam, N. G. U., Demirel, Ö. F., Haliloğlu, Ö., Kadioğlu, P., & Duran, A. (2018). Alterations in body uneasiness, eating attitudes, and psychopathology before and after cross-sex hormonal treatment in patients with female-to-male gender dysphoria. *Archives of Sexual Behavior*, 47(8), 1–13. <https://doi.org/10.1007/s10508-018-1189-4>
- van de Grift, T. C., Cohen-Kettenis, P. T., Elaut, E., De Cuypere, G., Richter-Appelt, H., Haraldsen, I. R., & Kreukels, B. P. C. (2016). A network analysis of body satisfaction of people with gender dysphoria. *Body Image*, 17, 184–190. <https://doi.org/10.1016/j.bodyim.2016.04.002>
- Vocks, S., Stahn, C., Loenser, K., & Legenbauer, T. (2009). Eating and body image disturbances in male-to-female and female-to-male transsexuals. *Archives of Sexual Behavior*, 38(3), 364–377. <https://doi.org/10.1007/s10508-008-9424-z>
- Weber, A. M., Cislighi, B., Meausoone, V., Abdalla, S., Mejía-Guevara, I., Loftus, P., Hallgren, E., Seff, I., Stark, L., Victora, C. G., Buffarini, R., Barros, A. J., Domingue, B. W., Bhushan, D., Gupta, R., Nagata, J. M., Shakya, H. B., Richter, L. M., Norris, S. A., ... Rao Gupta, G. (2019). Gender norms and health: Insights from global survey data. *The Lancet*, 393(10189), 2455–2468. [https://doi.org/10.1016/s0140-6736\(19\)30765-2](https://doi.org/10.1016/s0140-6736(19)30765-2)
- Wesp, L. M., Malcoe, L. H., Elliott, A., & Poteat, T. (2019). Intersectionality research for Transgender Health Justice: A theory-driven conceptual framework for structural analysis of transgender health inequities. *Transgender Health*, 4(1), 287–296. <https://doi.org/10.1089/trgh.2019.0039>
- West, C., & Zimmerman, D. H. (1987). Doing gender. *Gender & Society*, 1(2), 125–151. <https://doi.org/10.1177/0891243287001002002>
- White Hughto, J. M., Reisner, S. L., & Pachankis, J. E. (2015). Transgender stigma and health: A critical review of stigma determinants, mechanisms, and interventions. *Social Science & Medicine*, 147, 222–231. <https://doi.org/10.1016/j.socscimed.2015.11.010>
- Whittle, S., Turner, L., & Al-Alami, M. (2007). *Endangered penalties: Transgender and*

- transsexual people's experiences of inequality and discrimination*. The Equality Review <http://www.pfc.org.uk/files/EndangeredPenalties.pdf>
- Wiepjes, C. M., den Heijer, M., Bremmer, M. A., Nota, N. M., Blok, C. J., Coumou, B. J., & Steensma, T. D. (2020). Trends in suicide death risk in transgender people: Results from the Amsterdam Cohort of Gender Dysphoria Study (1972–2017). *Acta Psychiatrica Scandinavica*, *141*(6), 486–491. <https://doi.org/10.1111/acps.13164>
- Wilchek-Aviad, Y., Tuval, C., & Zohar, N. (2020). Gender stereotyping and body image of transgender women. *Current Psychology*, *41*(4), 1-10. [doi:10.1007/s12144-020-01096-2](https://doi.org/10.1007/s12144-020-01096-2)
- Wilkinson, R. G. (2005). *The Impact of Inequality: How to Make Sick Societies Healthier*. Routledge.
- Williams, D. R., Yu, Y., Jackson, J. S., & Anderson, N. B. (1997). Racial differences in physical and mental health: Socio-economic status, stress and discrimination. *Journal of Health Psychology*, *2*(3), 335–351. <http://sparqtools.org/mobility-measure/perceived-discrimination-scale/#all-survey-questions>
- Winter, S., Diamond, M., Green, J., Karasic, D., Reed, T., Whittle, S., & Wylie, K. (2016). Transgender people: Health at the margins of society. *Lancet (London, England)*, *388*(10042), 390–400. [https://doi.org/10.1016/S0140-6736\(16\)00683-8](https://doi.org/10.1016/S0140-6736(16)00683-8)
- Wood, W., Eagly, A. H. (2015). Two traditions of research on gender identity. *Sex Roles*, *73*(11–12), 461–473. <https://doi.org/10.1007/s11199-015-0480-2>
- Wyss S., E. (2004). ‘This was my hell’: The violence experienced by gender non-conforming youth in US high schools. *International Journal of Qualitative Studies in Education*, *17*(5), 709–30. <https://doi.org/10.1080/0951839042000253676>
- Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The Multidimensional Scale of Perceived Social Support. *Journal of Personality Assessment*, *52*(1), 30–41. https://doi.org/10.1207/s15327752jpa5201_2
- Zosuls, K. M., Ruble, D. N., Tamis-LeMonda, C. S., Shrout, P. E., Bornstein, M. H., & Greulich, F. K. (2009). The acquisition of gender labels in infancy: Implications for gender-typed play. *Developmental Psychology*, *45*(3), 688. <https://doi.org/10.1037/a0014053>
- Zucker, K. J. (2017). Epidemiology of gender dysphoria and transgender identity. *Sexual*

Health, 14(5), 404–411. <https://doi.org/10.1071/sh17067>

Zucker, K. J., Lawrence, A. A., & Kreukels, B. P. C. (2016). Gender dysphoria in adults. *Annual Review of Clinical Psychology*, 12(1), 217–247. <https://doi.org/10.1146/annurev-clinpsy-021815-093034>

APPENDIX A

TABLE 4 – TRANSGENDER SAMPLE CHARACTERISTICS

Table 4 – Sample Characteristics of Transgender Participants

Participants	Total (<i>N</i> = 109)	Trans Female (<i>N</i> = 52)	Trans Male (<i>N</i> = 37)	Other (<i>N</i> = 20)
Age	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)
	27.8 (5.8)	28.3 (6.1)	26.8 (5.0)	28.6 (6.3)
Sexual Orientation (%)				
Asexual	7.3	3.8	13.5	5.0
Bisexual	36.4	34.6	35.1	45.0
Gay/Lesbian	30.0	34.6	35.1	10.0
Heterosexual	18.2	23.1	10.8	20.0
Other	7.3	3.8	5.4	15.0
Prefer Not to Say	0.9	0.0	0.0	5.0
Race/Ethnicity (%)				
African American	10.0	7.7	16.2	5.0
Asian	6.4	7.7	5.4	5.0
Hispanic/Latinx	2.7	3.8	0.0	5.0
Native American	6.4	5.8	10.8	0.0
White	70.9	73.1	62.2	80.0
Other	2.7	1.9	5.4	0.0
Education (%)				
High School	15.6	19.2	13.5	10.0
College Degree	75.2	73.1	75.7	80.0
Post Graduate Degree	9.2	7.7	10.8	10.0
Employment Status (%)				
Full-Time	66.4	71.2	64.9	60.0
Part-Time	10.9	11.5	13.5	5.0
Student	10.0	5.8	16.2	10.0
Unemployed	10.0	9.6	2.7	20.0
Retired/Disabled	2.7	1.9	2.7	5.0
Personal Income (%)				
\$9,999 or less	11.8	7.7	10.8	20.0
\$10,000 to \$24,999	14.5	15.4	16.2	10.0
\$25,000 to \$49,999	24.5	28.8	21.6	20.0
\$50,000 to \$74,999	23.6	25.0	16.2	35.0
\$75,000 to \$99,999	10.9	9.6	16.2	5.0
\$100,000 to \$149,999	8.2	3.8	16.2	5.0
\$150,000 and greater	6.4	9.6	2.7	5.0
Region (%)				
East	17.3	17.3	11.3	10.0
Midwest	32.7	34.6	22.6	25.0
North	19.1	17.3	3.8	20.0
South	12.7	13.5	28.3	5.0
West	17.3	17.3	34.0	35.0
Neighborhood (%)				
City	50.9	48.1	45.9	70.0
Suburb	38.2	36.5	45.8	20.0
Rural Town	10.9	15.4	5.4	10.0

APPENDIX B

TABLE 5 – CISGENDER SAMPLE CHARACTERISTICS

Table 5 – Sample Characteristics of Cisgender Participants

Participants	Total (<i>N</i> = 102)	Female (<i>N</i> = 49)	Male (<i>N</i> = 53)
Age	<i>M</i> (<i>SD</i>) 33.8 (6.6)	<i>M</i> (<i>SD</i>) 34.1 (6.6)	<i>M</i> (<i>SD</i>) 33.3 (6.6)
Sexual Orientation (%)			
Asexual	2.9	7.8	1.9
Bisexual	10.8	11.8	9.4
Gay/Lesbian	5.9	11.8	0.0
Heterosexual	77.5	62.7	88.7
Other	1.0	2.0	0.0
Prefer Not to Say	2.0	3.9	0.0
Race/Ethnicity (%)			
African American	4.9	5.9	3.8
Asian	7.8	7.8	7.5
Hispanic/Latinx	9.8	9.8	9.4
Native American	1.0	0.0	1.9
Pacific Islander	1.0	0.0	1.9
White	74.5	74.5	75.5
Other	1.0	2.0	0.0
Education (%)			
High School	17.3	27.5	7.5
College Degree	72.1	56.9	86.8
Post Graduate Degree	10.6	15.7	5.7
Employment Status (%)			
Full-Time	45.1	33.3	56.6
Part-Time	20.6	27.5	15.1
Student	3.9	2.0	5.7
Unemployed	22.5	27.5	17.0
Retired/Disabled	7.8	9.8	5.7
Personal Income (%)			
\$9,999 or less	21.6	19.6	22.6
\$10,000 to \$24,999	11.8	17.6	5.7
\$25,000 to \$49,999	14.7	19.6	9.4
\$50,000 to \$74,999	29.4	21.6	37.7
\$75,000 to \$99,999	9.8	7.8	11.3
\$100,000 to \$149,999	9.8	7.8	11.3
\$150,000 and greater	2.9	5.9	1.9
Region (%)			
East	14.7	19.6	11.3
Midwest	27.5	33.3	22.6
North	2.9	2.0	3.8
South	29.4	29.4	28.3
West	25.5	15.7	34.0
Neighborhood (%)			
City	28.8	25.5	32.1
Suburb	49.0	49.0	47.2
Rural Town	22.5	25.5	20.8

APPENDIX C

TABLE 6 – TRANSGENDER MAIN STUDY VARIABLES

Table 6 – Main Study Variables of Transgender Participants

Total Sample (N = 109)

	Mean	SD	Range
Felt Pressure	2.7	0.6	2.9
Depression, Anxiety, and Stress	4.8	0.8	4.9
Flourishing Mental Health	3.2	0.7	3.4
Quality of Life	3.4	0.7	3.4
Satisfaction with Life	3.1	1.0	4.0
Gender Dysphoria	3.9	0.7	2.4
Body Appreciation	3.4	0.8	3.8
Body Image	3.2	0.6	3.4

APPENDIX D

TABLE 7 – CISGENDER MAIN STUDY VARIABLES

Table 7 – Main Study Variables of Cisgender Participants

Total Sample (N = 102)

	Mean	SD	Range
Felt Pressure to Conform	2.2	0.6	2.5
Depression, Anxiety, and Stress	2.4	1.2	6.3
Flourishing Mental Health	3.3	0.8	3.8
Quality of Life	3.5	0.7	3.1
Satisfaction with Life	3.1	1.1	4.0
Gender Dysphoria	2.3	0.5	2.5
Body Appreciation	3.6	0.9	3.1
Body Image	3.4	0.7	3.5

APPENDIX E

TABLE 8 – TRANSGENDER CORRELATIONS SPLIT

Table 8 – Correlations of Main Study Variables for Transgender Participants Split

	1.	2.	3.	4.	5.	6.	7.	8.
1. Felt Pressure		.29*	.09	-.12	.16	-.38**	.12	.04
2. Depression, Anxiety, and Stress	.47**		-.60**	-.58**	-.64**	.15	-.65**	-.44**
3. Flourishing Mental Health	.16	-.24		.70**	.69**	-.42**	.68**	.51**
4. Quality of Life	-.13	-.41*	.78**		.58**	-.20	.53**	.43**
5. Satisfaction with Life	.06	-.40*	.81**	-.88**		-.42**	.77**	.70**
6. Gender Dysphoria	.03	-.05	-.17	-.20	-.24		-.36**	-.42**
7. Body Appreciation	.12	-.28	.76**	.65**	.70**	.00		.50**
8. Body Image	.13	-.32	.59**	.63**	.71**	-.18**	.75**	

Note: * $p < .05$, ** $p < .01$; Transgender male correlations are on the bottom half of the matrix and transgender female correlations are on the top half of the matrix.

APPENDIX F

TABLE 9 – CISGENDER CORRELATIONS SPLIT

Table 9 – Correlations of Main Study Variables for Cisgender Participants Split

	1.	2.	3.	4.	5.	6.	7.	8.
1. Felt Pressure		.31*	-.02	-.13	-.16	.62*	.08	-.14
2. Depression, Anxiety, and Stress	.26		.30*	-.15	-.41**	.54**	-.13	-.26
3. Flourishing Mental Health	-.12	-.64**		.80**	.60**	-.15	.66**	.63**
4. Quality of Life	-.06	-.49**	.66**		.69**	-.07	.64**	.71**
5. Satisfaction with Life	-.09	-.44**	.60**	.80**		-.06	.64**	.56**
6. Gender Dysphoria	.48**	.43**	-.19	-.00	-.02		-.10	-.19
7. Body Appreciation	.04	-.31*	.69**	.56**	.65**	-.11		.77**
8. Body Image	-.06	-.33**	.46**	.53**	.66**	-.08	.66**	

Note: * $p < .05$, ** $p < .01$; Cisgender male correlations are on the bottom half of the matrix and cisgender female correlations are on the top half of the matrix.

APPENDIX G

TABLE 10 – CORRELATIONS OF SUBSCALES SPLIT

Table 10 – Correlations of DASS-21 Subscales and UGDS-GS Subscales Split

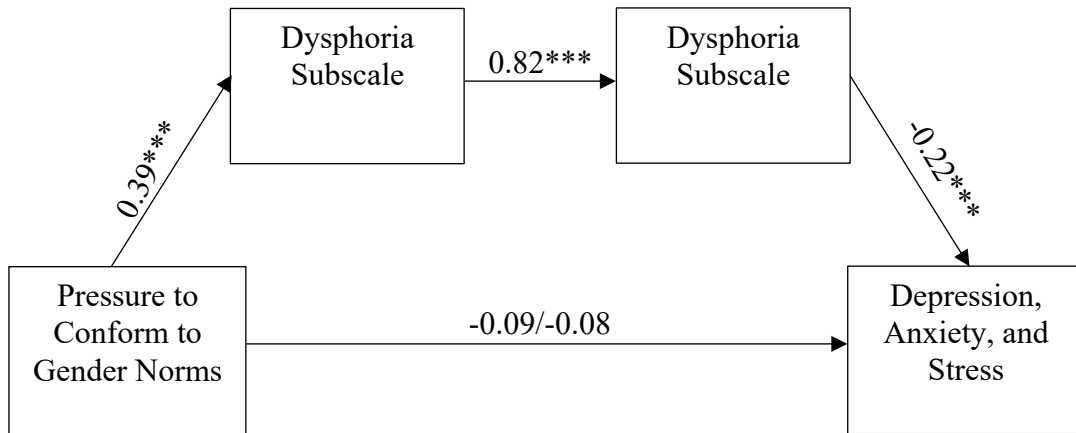
	1.	2.	3.	4.	5.	6.	7.
1. DASS Total		.93**	.94**	.95**	.51**	.51**	-.03
2. Depression	.88**		.82**	.84**	.40**	.40**	-.02
3. Anxiety	.92**	.71**		.83**	.54**	.52**	.04
4. Stress	.91**	.69**	.79**		.47**	.50**	-.09
5. UGDS Total	.15	.15	.07	.19*		.95**	.12
6. Dysphoria	.24*	.22*	.16	.27**	.98**		-.20*
7. Gender Affirmation	-.18	-.11	-.24*	-.12	.74**	.57**	

Note: * $p < .05$, ** $p < .01$; Transgender correlations are on the bottom half of the matrix and cisgender correlations are on the top half of the matrix.

APPENIDX H

FIGURE 4 – SERIAL MEDIATION MODEL

Figure 4 – Serial Mediation Model for Total Sample

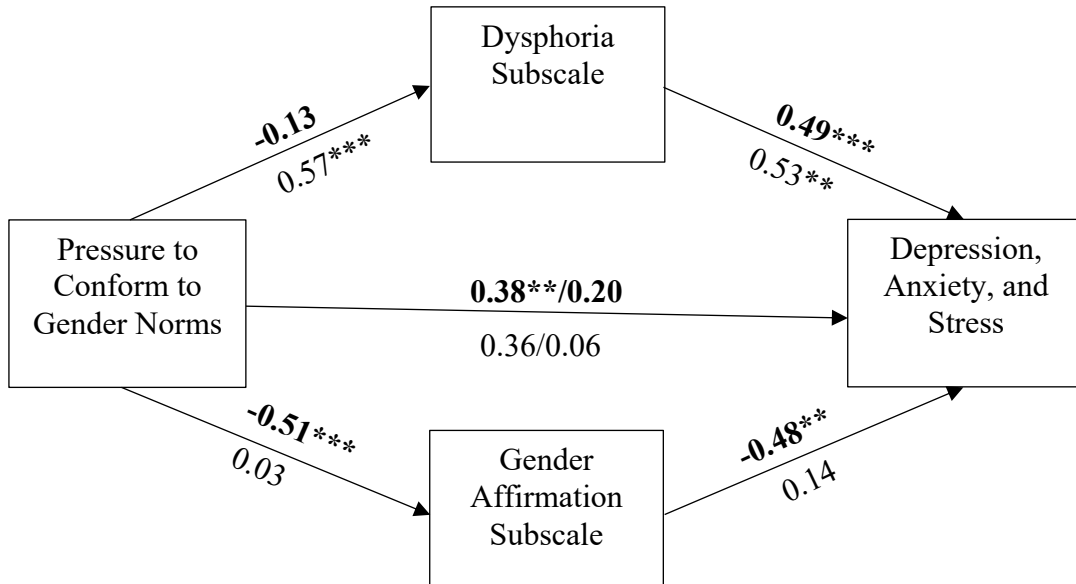


Note: * $p < .05$; ** $p < .01$; *** $p < .001$

APPENIDX I

FIGURE 5 –UGDS-GS SUBSCALES MEDIATOR MODEL

Figure 5 – Mediation Model with Dysphoria and Gender Affirmation Subscale



Note: Transgender participants' path estimates are **bolded** above the respective paths and cisgender participants' path estimates are below the respective paths and not bolded; * $p < .05$; ** $p < .01$; *** $p < .001$

APPENDIX J
SUREVEY MEASURES

Multifactor Adult Gender Identity Scale (MAGIS)

Below are statements you may or may not agree with. Please indicate your level of agreement to each statement.

1 = Strongly disagree

2 = Disagree

3 = Neither agree nor disagree

3 = Agree

4 = Strongly agree

Note: the bolded items were used in the Pressure for Gender Conformity Subscale.

1. I relate better with men.
2. I relate better with women.
3. It is unfair that others have certain expectations of me just because of my gender.
4. I feel cheated that there are some jobs that are considered inappropriate for people of my gender.
- 5. It would bother me if my friends say I was acting boyish.**
- 6. It would bother me if my friends say I was acting girly.**
- 7. People I know would be upset if I wanted to participate in masculine hobbies.**
- 8. People I know would be upset if I wanted to participate in feminine hobbies**
9. I like being my gender.
10. I feel I am similar to women.
11. I feel that I am similar to men.

12. I don't mind that there are some things I am not supposed to do just because of my gender.
13. I have the same interests that men usually have.
14. I have the same interests that women usually have.
- 15. I get upset when someone says that I am acting masculine.**
- 16. I get upset when someone says that I am acting feminine.**
- 17. My family would disapprove if I wanted to engage in a predominantly men's activity.**
- 18. My family would disapprove if I wanted to engage in a predominantly women's activity.**
19. I am similar to the ideal female.
20. I am similar to the ideal male.
21. I get upset that I am not allowed to do all the things that men are allowed to do.
22. I get upset that I am not allowed to do all the things that women are allowed to do.
23. I feel that the things I like to do in my spare time are similar to what most women like to do in their spare time.
24. I feel that the things I like to do in my spare time are similar to what most men like to do in their spare time.
25. It upsets me that men and women have different opportunities available to them.
26. I find it upsetting when I am expected to act certain ways just because of my gender.
27. I don't feel that I fit in with women.
28. I don't feel that I fit in with men.

29. My personality is similar to men's personalities.
30. My personality is similar to women's personalities.
- 31. I do not want people thinking I am too masculine.**
- 32. I do not want people thinking I am too feminine.**
- 33. My parents would disapprove if I wanted to engage in a predominantly masculine activity.**
- 34. My parents would disapprove if I wanted to engage in a predominantly feminine activity.**
- 35. Women I know wouldn't like it if I wanted to learn an activity that men usually do.**
- 36. Men I know wouldn't like it if I wanted to learn an activity that women usually do.**
37. I feel annoyed that there are some things I'm supposed to do just because of my gender.
38. I do not think that it's fair that some things are only for men.
39. I do not think that it's fair that some things are only for women.

Depression Anxiety Stress Scale (DASS-21)

Please read each statement and indicate how much the statement applied to you during *the past week*.

The rating scale is as follows:

1 = Never

2 = Rarely

3 = About 1 or 3 times a week

4 = Almost everyday

5 = Everyday

1. I found it hard to wind down.
2. I was aware of dryness of my mouth.
3. I couldn't seem to experience any positive feeling at all.
4. I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion).
5. I found it difficult to work up the initiative to do things.
6. I tended to over-react to situations.
7. I experienced trembling (e.g., in the hands).
8. I felt that I was using a lot of nervous energy.
9. I was worried about situations in which I might panic and make a fool of myself.
10. I felt that I had nothing to look forward to.
11. I found myself getting agitated.
12. I found it difficult to relax.
13. I felt down-hearted and blue.
14. I was intolerant of anything that kept me from getting on with what I was doing.
15. I felt I was close to panic.
16. I was unable to become enthusiastic about anything.
17. I felt I wasn't worth much as a person.
18. I felt that I was rather touchy.

19. I was aware of the action of my heart in the absence of physical exertion (eg., sense of heart rate increases, heart missing a beat).
20. I felt scared without any good reason.
21. I felt that life was meaningless.

Mental Health Continuum - Short Form (MHC-SF)

Please select the answer that best represents how often you have experienced or felt *during the past week*.

The rating scale is as follows:

1 = Never

2 = Rarely

3 = About 1 or 3 times a week

4 = Almost everyday

5 = Everyday

1. Happy
2. Interested in life
3. Satisfied with life
4. That had something important to contribute to society
5. That you belonged to a community (like a social group or your neighborhood)
6. That our society is a good place or becoming a better place for all people
7. That people are basically good
8. That the way our society works makes sense to you

9. That you liked most parts of your personality
10. Good at managing the responsibilities of your daily life
11. That you had warm and trusting relationships with others
12. That you had experiences that challenged you to grow and become a better person
13. Confident to think or express your own ideas and opinions
14. That your life had a sense of meaning or direction to it

Quality of Life Scale (QOLS)

Please read each item and select the response that best describes how satisfied you are at this time. Please answer each item even if you do not currently participate in an activity or have a relationship. You can be satisfied or dissatisfied with not doing the activity or having the relationship.

The rating scale is as follows:

1 = Very dissatisfied

2 = Dissatisfied

3 = Neutral

4 = Satisfied

5 = Very Satisfied

1. Material comforts – home, food, conveniences, financial security
2. Health – being physically fit and vigorous
3. Relationships with parents, siblings, and other relatives – communicating, visiting, helping

4. Having and rearing children
5. Close relationships with spouse or significant other
6. Close friends
7. Helping and encouraging other, volunteering, giving advice
8. Participating in organizations and public affairs
9. Learning – attending school, improving understanding, getting additional knowledge
10. Understanding yourself – knowing your assets and limitations – knowing what life is about
11. Work – job or in home
12. Expressing yourself creatively
13. Socializing – meeting other people, doing things, parties
14. Reading, listening to music, or observing entertainment
15. Participating in active recreation
16. Independence, doing for yourself

Satisfaction With Life Scale (SWLS)

Below are five statements that you may agree or disagree with. Please indicate your agreement with each item. Please be open and honest in your response.

The rating scale is as follows:

1 = Strongly disagree

2 = Disagree

3 = Neither agree nor disagree

4 = Agree

5 = Strongly agree

1. In most ways my life is close to my ideal.
2. The conditions of my life are excellent.
3. I am satisfied with my life.
4. So far I have gotten the important things I want in life.
5. If I could live my life over, I would change almost nothing.

Utrecht Gender Dysphoria Scale - Gender Spectrum (UGD-GS)

For each question, select the response that best describes how much you agree with each statement. Note: Assigned sex means the sex you were assigned at birth and affirmed gender is the gender you currently identify with.

The rating scale is as follows:

1 = Strongly disagree

2 = Disagree

3 = Neither agree nor disagree

4 = Agree

5 = Strongly agree

1. I prefer to behave like my affirmed gender
2. Every time someone treats me like my assigned sex I feel hurt.
3. It feels good to live as my affirmed gender.
4. I always want to be treated like my affirmed gender.

5. A life in my affirmed gender is more attractive for me than a life in my assigned sex.
6. I feel unhappy when I have to behave like my assigned sex.
7. It is uncomfortable to be sexual in my assigned sex.
8. Puberty felt like a betrayal.
9. Physical sexual development was stressful.
10. I wish I have been born as my affirmed gender.
11. The bodily functions of my assigned sex are distressing for me (e.g., erection, menstruation).
12. My life would be meaningless if I would have to live as my assigned sex.
13. I feel hopeless if I have to stay in my assigned sex.
14. I feel unhappy when someone misgenders me.
15. I feel unhappy because I have the physical characteristics of my assigned sex.
16. I hate my birth assigned sex.
17. I feel uncomfortable behaving like my assigned sex.
18. It would be better not to live, than to live as my assigned sex.

Body Appreciation Scale-2 (BAS-2)

Please indicate whether the statement is true about you *never, rarely, sometimes, often, or always*.

The rating scale is as follows:

1 = Never

2 = Rarely

3 = Sometimes

4 = Often

5 = Always

1. I respect my body.
2. I feel good about my body.
3. I feel that my body has at least some good qualities.
4. I take a positive attitude towards my body.
5. I am attentive to my body's needs.
6. I feel love for my body.
7. I appreciate the different and unique characteristics of my body.
8. My behavior reveals my positive attitude toward my body; for example, I hold my head high and smile.
9. I am comfortable in my body.
10. I feel like I am beautiful even if I am different from media images of attractive people (e.g., model, actresses/actors).

Body Image Scale (BIS) for Transsexuals

Select the answer that best expresses your feelings about the item mentioned as it applies to you.

The rating scale is as follows:

1 = Very dissatisfied

2 = Dissatisfied

3 = Neutral

4 = Satisfied

5 = Very satisfied

Nose

Shoulders

Hips

Chin

Calves

Breasts

Hands

Adam's apple

Scrotum/vagina

Height

Thighs

Arms

Eyebrows

Penis/clitoris

Waist

Muscles

Buttocks

Facial hair

Face

Weight

Biceps

Reproductive organs

Hair

Voice

Feet

Figure

Body hair

Chest

Appearance

Stature

Perceived Discrimination Scale

How many times in your life have you been discriminated against in each of the following ways because of such things as your race, ethnicity, gender identity, age, religion, physical appearance, sexual orientation, or other characteristics? Please read each statement and indicate how much the statement applied to you - *never, rarely, sometimes, often, or always*.

The rating scale is as follows:

1 = Never

2 = Rarely

3 = Sometimes

4 = Often

5 = Always

1. You were discouraged from a teacher or advisor from seeking higher education.
2. You were denied a scholarship.
3. You were not hired for a job.
4. You were not given a promotion.
5. You were fired.
6. You were prevented from renting or buying a home from the neighborhood you wanted.
7. You were prevented from remaining in a neighborhood because neighbors made life so uncomfortable.
8. You were hassled by the police.
9. You were denied a bank loan.
10. You were denied or provided inferior medical care.
11. You were denied or provided inferior service by a plumber, care mechanic, or other service provider.
12. You are treated with less courtesy than other people.
13. You are treated with less respect than other people.
14. You receive poorer service than other people at restaurants or stores.
15. People act as if they think you are not smart.
16. People act as if they are afraid of you.
17. People act as if they think you are dishonest.
18. People act as if they think you are not as good as they are.

19. You are called names or insulted.
20. You are threatened or harassed.

Multidimensional Scale of Perceived Social Support

For each question, select the response that best describes how much you agree with each statement.

The rating scale is as follows:

1 = Strongly disagree

2 = Disagree

3 = Neither agree nor disagree

4 = Agree

5 = Strongly agree

1. There is a special person around when I am in need.
2. There is a special person with whom I can share my joys and sorrows.
3. My family really tries to help me.
4. I get the emotional support and help I need from my family.
5. I have a special person who is a real source of comfort for me.
6. My friends really try to help me.
7. I can count on my friends when things go wrong.
8. I can talk about my problems with my family.
9. I have friends with whom I can share my joys and sorrows.
10. There is a special person in my life who cares about my feelings.

11. My family is willing to help me make decisions.

12. I can talk about my problems with my friends.

APPENDIX K
IRB APPROVAL



APPROVAL: EXPEDITED REVIEW

[Kristin Mickelson](#)
 NCIAS: Social and Behavioral Sciences, School of (SSBS)
 602/543-1632
 Kristin.Mickelson@asu.edu

Dear [Kristin Mickelson](#):

On 2/14/2023 the ASU IRB reviewed the following protocol:

Type of Review:	Initial Study
Title:	Transgender health disparities: Experiences of societal pressures, gender dysphoria, and body dissatisfaction
Investigator:	Kristin Mickelson
IRB ID:	STUDY00017273
Category of review:	
Funding:	None
Grant Title:	None
Grant ID:	None
Documents Reviewed:	<ul style="list-style-type: none"> • IRB Form, Category: IRB Protocol; • Prolific Consent, Category: Consent Form; • Reddit Consent, Category: Consent Form; • Survey PROLIFIC.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Survey REDDIT.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • VK_Recruitment Script.pdf, Category: Recruitment Materials;

The IRB approved the protocol from 2/14/2023 to 2/13/2024 inclusive. Three weeks before 2/13/2024 you are to submit a completed Continuing Review application and required attachments to request continuing approval or closure.

If continuing review approval is not granted before the expiration date of 2/13/2024 approval of this protocol expires on that date. When consent is appropriate, you must use final, watermarked versions available under the "Documents" tab in ERA-IRB.

In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

Sincerely,

IRB Administrator

cc: Victoria Klennert
Kristin Mickelson
Victoria Klennert