



Investigating to what extent Need for Closure, Need for Cognition, and Gender Role Attitudes can predict Genderism and Transphobia.

Sophie Whyman

## Investigating to what extent Need for Closure, Need for Cognition, and Gender Role Attitudes can predict Genderism and Transphobia

### ABSTRACT

Lesbian, Gay, Bisexual, Transgender and other (LGBT+) individuals are still marginalised and stigmatised despite recent progress in social, academic, and political areas. Transgender, or 'gender variant', individuals are often targets of transphobia, prejudicial behaviour such as assault and discrimination. Transphobia is underpinned by genderism, a set of beliefs which reinforces negative evaluations of gender nonconformity. Genderism and transphobia have serious implications on quality of life and mental health of gender variant individuals, necessitating exploration of ways to reduce such prejudice. One way to explore this is to examine and address constructs which may predict genderism and transphobia. Considering such constructs in education and intervention could improve individuals' reception to positive messages around gender variance. In turn, this can reduce genderist views and transphobic behaviours, improving experiences and quality of life for gender variant individuals. This study used a multiple regression analysis on 71 students at the Manchester Metropolitan University. It investigated to what extent three constructs – need for closure, need for cognition, and gender role attitudes – can predict genderism and transphobia. Gender role attitudes were found to be a significant predictor; need for closure was marginally significant; need for cognition was non-significant. Findings, implications, benefits, and limitations of this study are discussed.

<b>KEY WORDS:</b>	<b>TRANSPHOBIA</b>	<b>GENDERISM</b>	<b>NEED FOR CLOSURE</b>	<b>NEED FOR COGNITION</b>	<b>GENDER ROLE ATTITUDES</b>
-------------------	--------------------	------------------	-------------------------	---------------------------	------------------------------

## Introduction

Societal change in recent decades has seen individuals challenge social norms to take on new ideas, identities, and roles. One aspect of society changing in such ways is that of sexuality and gender. The LGBT+ (lesbian, gay, bisexual, transgender and other) community is made up of people whose sexuality, gender identity, or both, differs from those widely recognised and accepted in society. While evidence from LGBT+ individuals themselves has indicated increased acceptance of these identities (Payne, 2013), this group is still a marginalised minority in many countries (Herek and McLemore, 2013; Fenton, 2016). Within the LGBT+ community, partial progress was made regarding homosexual relationships in the Sexual Offences Act 1967, however, legislation recognising non-traditional gender identity and expression came much later (e.g. Gender Recognition Act 2004; Equality Act 2006; Equality Act 2010). This somewhat reflects the social and academic underrepresentation of individuals whose gender identities vary from typical expectations (Mayer et al., 2008; Flores et al., 2018). Individuals whose gender identities and expression differ from widely accepted norms are often referred to as 'transgender', a term used to describe someone whose gender is incongruent with the sex they were assigned at birth (male or female; Nataf, 1996; Hill and Willoughby, 2005; Bauer, 2009). This term was developed in the 1980s by a group of individuals who were assigned male at birth then later came to identify as female, and were unsatisfied with terminology available at the time to describe their shared identity (Prosser, 1997). For instance, the term 'transvestite', commonly used at the time, had connotations of men simply dressing as women part-time, trivialising these women's authentic identities as female. Additionally, the term 'transsexual', holding surgical connotations, implied gender variant identities were invalid without associated medical interventions, which is not the case (Carroll et al., 2011). Additionally, whilst 'transgender' was introduced as an umbrella term in response to this gap in terminology, its use to originally describe 'male-to-female' individuals could give the impression that the term only refers to this specific 'type' of gender identity. Indeed, well-known male-to-female public figures such as Jazz Jennings and Laverne Cox are often referred to by themselves and others as transgender (Hughes, 2014; Rothaus, 2015; Strohm, 2019), which could create the misconception that this term should be used to refer only to people who express their gender in a similar manner as these individuals. Therefore, while originally introduced to improve terminology and promote inclusivity at the time, common use of 'transgender' to refer to only male-to-female or female-to-male individuals could inadvertently lead to erasure of the diverse gender identities within the LGBT+ community. In reality, those identifying with the *T* in *LGBT* may identify as feminine men, masculine women, non-binary, gender fluid, intersex, and many other identities (e.g. Nadal, 2013). In recognition of this issue, various terms have emerged to refer to individuals whose birth sex and current gender differ. For instance, 'trans' (Bilodeau, 2005; Hill and Willoughby, 2005), 'transgendered' (Carroll et al., 2011) or 'queer' (Stryker, 2008) appear in literature, with 'trans\*', or 'trans asterisk', being used as an alternative modern umbrella term for such identities (Killermann, 2012). However, due to such terms being similar to 'transgender', as well as 'queer' having history as a slur (e.g. Glass, 2018), this report will use the term 'gender variant' (e.g. Carroll et al., 2011) to refer to individuals whose gender differs to their sex assigned at birth. Regarding additional terminology, the LGBT+ community is sometimes referred to as *LGBTQI+* to include those 'questioning' their identity, as well as intersex individuals (previously referred to as 'hermaphrodite');

Barber, 2017). In this report, *LGBT+* will be used to refer collectively to any individuals whose gender and sexuality differ from traditional societal norms.

Despite increasing acceptance of *LGBT+* individuals, this group is a certain minority, making up less than 1% of adults in the United Kingdom and other countries (Reed et al., 2009; Meier and Labuski, 2013; Rudin et al., 2016). Society is largely heteronormative and cisnormative, favouring heterosexual and cisgender (non-gender variant) individuals (Fish, 2008; Logie et al., 2018). *LGBT+* individuals are known to face discrimination in many aspects of daily life including education (Ng et al., 2017), healthcare settings (Sharek et al., 2014), and work environments (Moss-Racusin et al., 2010; McFadden and Crowley-Henry, 2017). Such acts can be precursors to more serious incidents including threats, assault, and hate crimes (Duncan and Hatzenbuehler, 2014). Discrimination such as this affects younger and older *LGBT+* individuals alike (Ahuja, 2016; Yarns et al., 2016), and intersectionality asserts that effects can be more severe for individuals with multiple minority or oppressed identities, such as somebody who is both homosexual and black (Paisley and Tayar, 2016; Nourafshan, 2017). More specifically, gender variant individuals may even face overt discrimination by gender specialists or counsellors (e.g. McCullough et al., 2017), a disconcerting testament to the prevalence of negative attitudes surrounding such identities. Prejudice directed toward gender variant individuals specifically is called 'transphobia'. Transphobia refers to negative feelings and actions relating to gender variant individuals, such as feeling uncomfortable around them or avoiding them. As with homophobia, transphobia does not mean to suggest legitimate fear of gender variant individuals, but rather refers to the irrational revulsion and hatred which causes people to discriminate against them (Weinberg, 1972; Nagoshi et al., 2010). Transphobia is underpinned by genderism, a set of negative beliefs around gender variance, such as that one's sex and gender being incongruent is wrong, beliefs which cause genderist individuals to view gender variance as a pathological condition (Hill and Willoughby, 2005). These views can then manifest into transphobic actions including bullying, harassment, and exclusion of gender variant individuals, leading to shame and isolation of those targeted (Reisner et al., 2015; Chodzen et al., 2019). This victimisation can also contribute to and exacerbate mental health problems; for instance, gender variant individuals are at higher than average risk of mental health disorders (Budge et al., 2013; North, 2014; Salmon, 2017; Klemmer et al., 2018). Additionally, gender variant individuals are at greater risk than the general population to attempt suicide (Williams, 2017), particularly during adolescence (Yuksel et al., 2017). Gender variant individuals' negative experiences, as well as the consequences of such, demonstrate a need for improved knowledge and increased acceptance of gender variance, in order to reduce transphobic prejudice and improve quality of life for those it affects.

### **The Current Study**

Prevalence of genderism, transphobia and associated risks call for exploration of possible explanations of this behaviour in order to reduce it (Cramwinckel et al., 2018). One way of contributing to knowledge of when and how genderism and transphobia may occur is to investigate variables which could predict these constructs. One benefit to such research is that behaviours which predict genderism and transphobia may occur earlier and more clearly than prejudice specifically directed toward gender variance. Therefore, identifying predictors of genderism and transphobia could

contribute to knowledge on informing and educating individuals to improve their acceptance of gender variance (Flores et al., 2018). It is established that education into gender variance can reduce genderist views in the short-term (Brockman and Kalla, 2016), and by investigating variables that can predict genderism and transphobia, interventions could be tailored to be compatible with these variables, facilitating long-term reduction and prevention of such views and behaviour. In turn, increasing acceptance and support of gender variant individuals can aid improvement of mental health problems associated with transphobia, such as anxiety and depression (Budge et al., 2013; The Guardian, 2013). With such implications in mind, the current study investigated to what extent three variables – need for closure, need for cognition, and gender role attitudes – can predict genderism and transphobia in students at one English University. Previous research of these variables validates the current investigation, and real-world implications exist for each variable should any or all be found to be significant predictors of genderism and transphobia.

### **Need for Closure**

The first variable the current study is investigating as a predictor of genderism and transphobia is need for closure. This construct refers to a dislike of ambiguity and a need for quick, straightforward answers to maintain certainty and order (Webster and Kruglanski, 1994; Roets and Van Hiel, 2011; Perreault, 2017). Generally, need for closure has been found to correlate with strong anti-immigration attitudes and reduced support for multiculturalism (Perreault, 2017), perhaps stemming from the tendency for high need for closure individuals to possess aversion to diversity and unfamiliarity. Additionally, Tebbe and Moradi (2012) found a positive correlation between need for closure and LGB (lesbian, gay and bisexual) prejudice. Furthermore, Makwana et al. (2018) and Costa and Davies (2012) have found need for closure to be positively correlated with transphobia. As the basis of transphobia, it is pertinent to suggest that genderism would also correlate with need for closure, and findings suggest that high need for closure could predict genderist views and transphobic behaviour, as well as correlating with them. Furthermore, the correlation between need for closure and transphobia could be related to the dislike of ambiguity often found in high need for closure individuals. This would make someone high in need for closure likely to feel uncomfortable around someone who is ambiguous in their gender expression, such as by possessing some characteristics seen as stereotypically male and some stereotypically female. Indeed, the ambiguity of both gender variance and bisexuality, as recognised by Garelick et al. (2017), suggests that need for closure could be a shared factor in prejudice toward both of these identities. With this in mind, Burke et al.'s (2017) finding that need for closure predicts biphobia further suggests that it could predict prejudice toward gender variant individuals. This supports this study's investigation of need for closure as a predictor of genderism and transphobia, and there are positive implications should significance be found. For instance, Perreault (2017) asserts that, while need for closure is a stable construct, the extent to which individuals display its characteristics can vary between situations, stating that fatigue or time pressure increase an individual's need for closure. Therefore, individuals discussing or learning about gender variance and related issues should ideally be well-rested and in a relaxed environment without time pressures, to decrease chance of any situational factors making them feel rushed to obtain answers or explanations. Of course, in many real-world situations, some factors such as environment or time available can't be manipulated, so someone high in need for closure meeting a gender

variant person in public and being curious of their biological sex, for instance, may feel rushed and ask such a question bluntly, potentially causing offence or distress. Conversely, if feeling relaxed and open to taking time to understand the person's identity, somebody high in need for closure would be less likely to act in a way which may insult a gender variant individual, according to Perreault (2017). Therefore, should need for closure be found to predict genderism and transphobia in this study, there is promising evidence for its use in education and intervention.

### **Need for Cognition**

The second variable this study is investigating for its predictive power over genderism and transphobia is need for cognition. This construct refers to one's intrinsic motivation to engage in effortful cognition and deliberation (Cacioppo and Petty, 1982; Cacioppo et al., 1996; Bruinsma and Crutzen, 2018) in structuring and making sense of their world and experiences (Cohen et al., 1955). Need for cognition is also associated with openness toward new ideas (Furnham and Thorne, 2013). This suggests that those higher in need for cognition will be more inclined to think about and explore the nature and implications of diverse gender identities (Perry et al., 2016). For instance, someone high in need for cognition may be more interested in understanding how it feels to experience dysphoria (negative feelings associated with incongruence between one's biological sex and gender identity; American Psychiatric Association, 2013). By gaining understanding such aspects of gender variance, individuals high in need for cognition will likely feel more empathy and compassion for gender variant individuals, and will therefore be less likely to develop negative, genderist beliefs and exhibit transphobic behaviour (Cramwinckel et al., 2018). In general, need for cognition has been found to be associated with less prejudicial behaviour toward outgroups (Carter et al., 2006; Tam et al., 2008), suggesting that those with a high need for cognition will be more accepting of those who differ from expected norms, such as gender norms. In addition, need for cognition has been found to correlate with a higher need for information quality (Petty et al., 2009). This means high need for cognition individuals tend to form attitudes from pertinent information and are less likely to base judgement on rumours or stereotypes, such as that LGBT+ individuals are perverts or paedophiles (e.g. Whiteman, 2010; McKinnon, 2014; Burke and Ferguson, 2019). Need for cognition is also associated with more moral behaviour (Strobel et al., 2017); it is possible that this increased morality reduces likelihood of basing judgement off of rumour, an arguably immoral act. Additionally, higher morals have been found to negatively correlate with prejudice in general (Passini, 2012), and to even directly reduce prejudice toward gay men (Calvin et al., 2014). This suggests that need for cognition, a characteristic of which is morality, could predict reduced genderism and transphobia. Therefore, this study's investigation of need for cognition is justified. Should need for cognition be found to be a significant predictor, this could be applied to education of gender variance to reduce genderism and transphobia, ultimately improving gender variant individuals' experiences. For instance, Bruinsma and Crutzen (2018) found need for cognition to be highest in adolescence and that it begins to decline after the age of thirty years old, suggesting that people are more open to new ideas and find greater enjoyment in complex thought earlier in life. This means individuals could be more inclined to think about and try to understand gender variance at a younger age, justifying educating people on this and wider LGBT+ issues earlier in life. Otherwise, individuals may find less enjoyment and interest in considering these concepts later in life, reducing positive effects of such education. UK schools have in

fact begun to implement such programs, introducing sex and relationship education (SRE), which also informs on LGBT+ identities, to primary school children, in the hopes it will increase their knowledge, acceptance and familiarity of these issues (Brewis, 2019; Jones, 2019). However, this has been met with resistance by parents and religious groups, for instance (e.g. Braidwood, 2019; Halle-Richards, 2019; Kotecha, 2019; Parveen, 2019), showing that LGBT+ individuals are still facing discrimination and prejudice. Therefore, making the most of higher need for cognition in early life could reduce the need for later and arguably more challenging re-education around gender variance in older ages.

### **Gender Role Attitudes**

The third factor being investigated as a predictor of genderism and transphobia in this study is gender role attitudes. Gender roles refer to emotions, behaviours and responsibilities expected of individuals in society depending on their gender (e.g. male or female; Levesque, 2014). Traditional gender role attitudes include such beliefs as women should be feminine and concerned with housework and childcare, while men should be masculine and occupy well-paid jobs to provide for their families (Frieze and Ciccocioppo, 2009). Those who hold traditional gender role attitudes tend to be more prejudiced to perceived violators of such roles (Hill and Willoughby, 2005), such as men who wear make-up or women with short hair. As such 'violators' could fall under the umbrella term of 'transgender' or gender variant, this suggests that individuals with traditional gender role attitudes possess genderist views and could display transphobic behaviour toward gender variant individuals. Investigating gender role attitudes could have an impact on the real world to reduce occurrence of genderism and transphobia. For instance, Bartini (2006) found that the flexibility of school children's gender role attitudes increases as they get older, suggesting that people become more open to new ideas about gender roles as they age. This finding suggests that encouraging people to take on modern gender roles from a young age, such as that men can be stay-at-home dads and women can be doctors, will increase their openness to such ideas and could consequently improve their attitudes toward gender variance. However, as flexibility of attitudes increases, people could also of course become more receptive to negative gender role attitudes, which would predict development of genderist beliefs and transphobic behaviour. Therefore, consistent education and encouragement around positive gender role attitudes is crucial in preventing internalisation of any negative views encountered. Regarding education, a key consideration is that boys and girls are shown to differ in how they develop attitudes toward gender roles, and in how likely they are to challenge them. As such, it would be pertinent to consider gender differences when designing interventions relating to gender role attitudes. For instance, while parents and caregivers are evidenced to be key in both boys' and girls' attitudes toward gender roles, Kågesten et al. (2016) notes that girls' attitudes in particular are also influenced by teachers. On the other hand, boys are strongly influenced by friends, specifically by friends' reactions to non-typical gender role attitudes or behaviours. Additionally, lacking a male role model who displays such roles, for instance emotional sensitivity, further reinforces within boys the stereotypically male behavioural and emotional gender roles they learn. Therefore, should gender role attitudes be found to significantly predict genderism and transphobia, gender role education should be consistent and begin at a young age. Furthermore, approaches implemented should consider differences between boys and girls in their sources of and reactions to gender role attitudes to better tailor

approaches to improve these attitudes and consequently reduce genderism and transphobia.

To summarise, this study investigates need for closure, need for cognition, and gender role attitudes as predictors of genderism and transphobia. Findings will contribute to knowledge on prejudice toward gender variance and how it can be reduced.

## **Hypotheses**

Alternative Hypothesis 1: Need for closure will be a significant predictor of genderism and transphobia scores.

Null Hypothesis 1: Need for closure will not be a significant predictor of genderism and transphobia scores.

Alternative Hypothesis 2: Need for cognition will be a significant predictor of genderism and transphobia scores.

Null Hypothesis 2: Need for cognition will not be a significant predictor of genderism and transphobia scores.

Alternative Hypothesis 3: Gender role attitudes will be a significant predictor of genderism and transphobia scores.

Null Hypothesis 3: Gender role attitudes will not be a significant predictor of genderism and transphobia scores.

## **Method**

A multiple regression analysis was used to investigate the extent to which need for closure, need for cognition and gender role attitudes predict genderism and transphobia. Initially, 80 participants were obtained through volunteer sampling either through a Manchester Metropolitan University Psychology participation website, or via other means of advertisement through the university. After removing 3 participants from analysis for outliers, and a further 6 for incomplete responses, analysis was conducted on the remaining 71 participants (57 females; 13 males; one identified as 'non-binary'). All participants were current Psychology students at the Manchester Metropolitan University. Of the 71 participants, 56 reported their ages (18 to 29 years; mean 20.34; standard deviation 1.85).

## **Measures**

Need for Closure data was collected using a brief, 15-item version of the Need for Closure Scale (Roets and Van Hiel, 2011), derived from the full version (Webster and Kruglanski, 1994). Participants rated statements such as 'I don't like situations that are uncertain' from 1 (strongly disagree) to 6 (strongly agree).

Need for Cognition data was collected from the Need for Cognition Scale (Cacioppo and Petty, 1982). Participants rated statements such as 'I prefer complex to simple problems' from 1 (extremely uncharacteristic of me) to 5 (extremely characteristic of me). Items 3-5, 7-9, 12, 16 and 17 were reverse scored.



Gender Role Attitude data was collected from the Gender Role Attitudes Scale (García-Cueto et al., 2015). Participants rated statements such as 'People should be treated equally, regardless of their sex' from 1 (totally agree) to 5 (totally disagree). Items 1-6 were reverse scored.

Data on transphobia and genderism was collected using the Genderism and Transphobia Scale-Revised-Short Form (GTS-R-SF; Tebbe et al., 2014) from the original version (Hill and Willoughby, 2005). Item 2 was reverse scored.

## **Procedure**

Participants were able to access the survey on Qualtrics.com (2005) either through the Manchester Metropolitan University online participation pool or directly through the Qualtrics site. Participants read the Participant Information, which informed them of the aim of the study, their right to withdraw, their anonymity, and the confidentiality of their data. Participants were also informed that they could remove their data up to one week after completing the study and were provided with relevant contact details. Participants then gave their informed consent to take part in this study. Participants were given the option to report their age and gender and then completed the survey which consisted of 61 items from 4 questionnaires. After completing the survey, participants read the Debrief Information.

## **Results**

### **Reliability analysis**

Each questionnaire was subjected to internal consistency analysis. Results indicated that reliability for the 'need for closure' scale was high,  $\alpha = .83$ . Reliability for the 'need for cognition' scale was also high,  $\alpha = .83$ . Internal consistency for 'gender role attitudes' and 'genderism and transphobia' scales was also greater than satisfactory,  $\alpha = .88$  and  $\alpha = .90$  respectively.

### **Descriptive Statistics**

Pearson correlations were computed for each variable (see Table 1). As can be seen from Table 1, there was a strong positive correlation between gender role attitudes and genderism and transphobia score,  $r(69) = .83$ ,  $p < .001$ . However, need for closure was not significantly correlated with genderism and transphobia score ( $r(69) = .02$ ,  $p = .452$ ). Additionally, need for cognition did not significantly correlate with genderism and transphobia score ( $r(69) = .02$ ,  $p = .424$ ).

**Table 1. Correlations among all study variables**

Variable	Gender role attitudes	Need for closure	Need for cognition	Genderism and Transphobia
Gender role attitudes		-.15	.15	.83**
Need for closure			-.33*	.02
Need for cognition				.02
Genderism and Transphobia				

Note. \* indicates  $p < .05$ ; \*\* indicates  $p < .001$

### Regression Analysis

Prior to conducting a regression analysis, assumptions were tested to ensure a multiple regression was a valid means of analysing the data. Assumptions of absence of outliers, multicollinearity, independent errors, homoscedasticity and linearity of data were examined. The analysis of standard residuals showed that the data contained no outliers (Std. Residual Min = -2.49, Std. Residual Max = 2.12). Collinearity tests indicated that the data met the assumption of no multicollinearity (need for closure, Tolerance = .88, VIF = 1.13; need for cognition, Tolerance = .88, VIF = 1.14; gender role attitudes, Tolerance = .97, VIF = 1.04). The data met the assumption of independent errors (Durbin-Watson = 2.07). Finally, the scatterplot of standardised residuals indicated that the data met the assumptions of linearity and homoscedasticity.

A multiple regression analysis was performed to test the extent to which the variables 'need for closure', 'need for cognition', and 'gender role attitudes' were predictive of genderism and transphobia in students at Manchester Metropolitan University. Using the 'enter' method, a significant model emerged ( $F(3,67) = 56.91$ ,  $p < .001$ ). The relationship between the variables was strong ( $R = .85$ ) and the model could explain approximately 71.8% ( $R^2_{adj} = 70.6\%$ ) of the variance in genderism and transphobia scores. Out of the variables, gender role attitudes was the strongest predictor of genderism and transphobia,  $\beta = .86$ ,  $t(67) = 13.06$ ,  $p < .001$ . Need for cognition, however, did not significantly predict genderism and transphobia,  $\beta = -.07$ ,  $t(67) = 1.01$ ,  $p = .315$ . Additionally, need for closure did not significantly predict genderism and transphobia scores  $\beta = .12$ ,  $t(67) = 1.73$ ,  $p = .088$ .

The contribution of each predictor variable in accounting for the variance in genderism and transphobia scores is shown in Table 2.

**Table 2. Summary of regression analysis for predicting student genderism and transphobia scores**

		<i>SE B</i> (std. Error)	$\beta$ (beta score)
Variable	<i>B</i>		
Constant	-5.62	6.55	
Gender role attitudes	.62	.05	.86**
Need for closure	.10	.06	.12†
Need for cognition	-.06	.06	-0.07

Note:  $R^2 = .72$

Note. † indicates  $p < .09$ ; \* indicates  $p < .05$ ; \*\* indicates  $p < .001$

The results of this study show that the variable of gender role attitudes is a significant predictor of genderism and transphobia score in this study's sample, meaning alternative hypothesis 3 is accepted and null hypothesis 3 is rejected. This result suggests that the degree to which an individual holds traditional gender role attitudes can predict the likelihood of them having genderist beliefs and exhibiting transphobic behaviours. Secondly, need for cognition was not shown to be a significant predictor of genderism and transphobia, suggesting that the extent to which people enjoy thinking and deliberation of complex ideas does not predict their genderism and transphobia score. As a result, alternative hypothesis 2 is rejected and null hypothesis 2 is accepted. Finally, need for closure being shown to be a marginally significant predictor of genderism and transphobia suggests that someone's need for clarity, order and non-ambiguity could possibly predict their possession of genderist beliefs and transphobic actions. However, further research with a larger and more diverse sample could clarify this finding and its implications.

On the other hand, the  $p$  value of need for closure was close to the standard significance level of  $p < .05$ , suggesting need for closure is a marginally significant predictor of genderism and transphobia in this study. It is possible that conducting this study on a larger sample could yield a significant result for need for closure as a predictor. Additionally, the concept of a strict significance threshold has been debated (e.g. Wagenmakers, 2007; Chawla, 2017), meaning this significance being near the cut-off is good enough to suggest need for closure could somewhat predict genderism and transphobia. However, in terms of the standard significance threshold ( $p < .05$ ), alternative hypothesis 1 is rejected and null hypothesis 1 is accepted.

## Discussion

This study investigated to what extent need for closure, need for cognition, and gender role attitudes could predict genderism and transphobia in current students at Manchester Metropolitan University. One predictor variable, gender role attitudes, was found to be a significant predictor of genderism and transphobia scores. Additionally, need for closure was marginally significant, suggesting that using a larger sample in this study could have shown need for closure to be a significant predictor. Thirdly, need for cognition was not found to be a significant predictor of genderism and transphobia. Overall, this model can account for 71.8% of the sample's variance in genderism and transphobia scores, and findings have positive implications for the real world. Firstly, gender role attitudes were shown to significantly predict genderism and transphobia scores in this study. This finding suggests that an individual having more traditional gender role attitudes, such as that men should be bread-winners and women should be housewives, predicts they will have more genderist beliefs and exhibit more transphobic behaviour than someone with more modern gender role attitudes. This finding builds on previous research which found correlations between traditional gender role attitudes and transphobia (e.g. Costa and Davies, 2012; Makwana et al., 2018). Real-world implications for this study's finding relate to education and intervention around gender variance. Firstly, Bartini (2006) asserts that flexibility of gender role attitudes increases over time, suggesting that consistently encouraging individuals from a young age to be open to positive ideas about roles, behaviours, and abilities of men and women could predict reduced genderist views and transphobic behaviour. Secondly, further research has found that boys and girls learn gender role attitudes from different sources and in different ways. For instance, girls tend to learn socially acceptable behaviour for their gender from parents and teachers, who may 'police' their appearance and actions to ensure they are in line with traditional gender roles (Kågesten et al., 2016: 25). In contrast, boys mostly copy their male peers to learn what behaviour is typically expected and accepted for their gender. Additionally, lacking a male figure in their lives who displays behaviour against male gender roles, such as being emotional, can further perpetuate boys' perception of traditional male gender roles as the correct way to behave (Kågesten et al., 2016). Differences between boys and girls in internalisation of gender role attitudes should therefore be considered in education and intervention, which would facilitate improvement of such attitudes and in turn predict reduction in genderism and transphobia. For example, parents and teachers could be informed of the negative implications of restricting or stereotyping girls with strict gender roles, while boys could be encouraged to be more accepting of male peers who may display behaviour outside of that typically expected for their gender. Additionally, encouraging male figures in boys' lives to show emotion or vulnerability when it arises could provide boys with a positive role model from which to develop more egalitarian gender roles. Therefore, gender role attitudes being found to significantly predict genderism and transphobia has positive implications for education and intervention to improve attitudes toward and treatment of gender variant individuals.

Secondly, the variable of need for closure was found to be a marginally significant predictor of genderism and transphobia in this study. For instance, the significance of this predictor ( $p = .088$ ) was very close to the standard threshold for significance of  $p < .05$ , which has itself been referred to as arbitrary (e.g. Chawla, 2017). In any case, need for closure's marginal significance suggests that utilising a larger sample could

have resulted in statistical significance. If this were the case, evidence could support the implication of this finding in the real world. For instance, while need for closure remains relatively stable in each individual, it can differ between situations (Perreault, 2017), meaning topics such as gender variance can be discussed at a time when need for closure is relatively low. For instance, individuals high in need for closure are more open to new or ambiguous ideas when they are well rested and in a relaxing environment. This suggests that individuals high in need for closure will be more receptive to information on gender variance in such situations where they will feel less rushed for quick answers around someone's gender. However, in the real world and away from arranged interventions, topics such as gender variance may arise in situations where an individual's need for closure will be heightened, such as when one is in a busy environment or when tired or irritated. This could result in an individual pestering or harassing someone who appears gender variant, in pursuit of a quick explanation of their appearance or identity. This could offend or upset any individual, no matter what their identity, meaning that at least initial education on gender variance should ideally take place in a more relaxed environment, allowing individuals to gather information while they are more equipped to deal with ambiguity than they would be in a busy, real-world environment. Therefore, should future research with a larger sample find need for closure to be a significant predictor of genderism and transphobia, Perreault's (2017) findings could show that even possessing high need for closure does not necessarily mean that education around gender variance will be inconsequential. As such, intervention tailored to need for closure could still aid reduction of genderism and transphobia in the real world.

Thirdly, need for cognition was not found to be a significant predictor of genderism and transphobia. This suggests that the extent to which individuals like to deliberate and explore ideas does not predict the extent to which they will possess genderist beliefs and display transphobic behaviours. Additionally, this finding suggests that components of need for cognition, including consideration of information quality, openness to new ideas, and morality, do not predict genderism and transphobia as suggested by research (e.g. Petty et al., 2009; Furnham and Thorne, 2013; Strobel et al., 2017). It is possible that improving this study's sample could increase the predictive power of need for cognition on genderism and transphobia, however, it is not certain that this would occur nor to what extent.

It is worth noting that this study had some limitations. Firstly, the sample size was relatively small, which could have affected results of significance of the predictors. Nine of the initial 80 participants were removed due to outliers and incomplete responses, leaving 71 participants for analysis. However, this amount was close to Green's (1991) rule-of-thumb for number of participants in a regression analysis ( $N \geq 50 + 8m$ ; where  $m$  is the number of predictors), which in this study would be 74 participants. Nevertheless, conducting this study on a larger sample could have improved results, such as by finding need for closure to be statistically significant rather than marginally significant. A second limitation of this study is that its sample consisted only of current students at Manchester Metropolitan University in the United Kingdom, questioning the generalisability of this study's findings to other populations, such as of students at other universities, people in full-time work, or retired individuals. On a related note, the majority of this study's participants were female, questioning the generalisability of these findings to males. Such limitations of this study's sample mean that its findings of gender role attitudes as a significant predictor of genderism and

transphobia, for instance, may not be replicated if this study were repeated on other samples.

An additional limitation of this study is that participants' survey responses could have been subject to social desirability bias, for instance, if participants did not want to be truthful in any negative views they held toward gender variance. This could have affected results by analysis including inaccurate responses. However, assuring participants of their anonymity likely reduced this risk. As well as social desirability bias, participants may have displayed demand characteristics, guessing the aims of the study and responding to the survey items accordingly, which would question the validity of this study's results. However, giving minimal details of the aims of the study before participation (more detail was given in the debrief after completion) reduced this risk.

A further limitation of this study is that some survey items could be viewed as problematic. For instance, one item in the Genderism and Transphobia Scale (Hill and Willoughby, 2005) reads 'Women who see themselves as men are abnormal'. This could be criticised for implying that someone who 'sees themselves' as a man is not a man and is in fact female as they were assigned at birth. In reality, somebody who views themselves as a certain gender is, in fact, that gender and should be seen as and referred to as such (Bhaskar et al., 2017; Summersell, 2018) regardless of their birth sex. Such problematic language in this study's survey could have been negatively received by participants who are knowledgeable about gender variance. However, contact information of this study's researchers was provided for participants should they have any such concerns. In fact, one reason for selecting this scale to measure genderism and transphobia was its explicit and clear use of language: for instance, one item refers to somebody as having 'a surgically created penis and testicles'. Alternatively, utilising a scale whose items include terms such as 'transgender' or 'gender variant', such as in Kanamori et al.'s (2017) scale, could have caused confusion in participants who were unfamiliar with such terminology. This confusion could have led to inaccurate responses, negatively affecting results. Therefore, despite possible issues in terminology used in this study's scales, reasoning behind their selection is justified.

A further consideration of this study is that using an online survey to gather responses on the predictor and criterion variables lacks ecological validity. For instance, people's responses to a survey may not reflect how they would react in real world situations involving the interaction of ambiguity, cognition, gender role attitudes and gender variance. This means that characteristics found to predict genderism and transphobia in this study may not predict these constructs in the real world, and vice versa.

Therefore, a critical perspective may view this study's findings simply as an indication of how genderism and transphobia are predicted by responses to a survey. Interviews or observational studies may be more ecologically valid and hence more accurate in predicting responses to gender variance. However, using a multiple regression to gain quantitative results also has merit by way of providing statistical contribution to this issue.

In summary, this study investigated to what extent need for closure, need for cognition, and gender role attitudes could predict genderism and transphobia in students at the Manchester Metropolitan University. This investigation was supported and justified by

previous research and its results hold promise for real world implications. Gender role attitudes were found to significantly predict genderism and transphobia. Need for closure was marginally significant, a result which could improve with a larger sample. However, need for cognition was not found to be a significant predictor of genderism and transphobia. Despite positive results, this study had limitations relating to sample size, ecological validity, and potential social desirability bias, among others. However, steps were taken to reduce effects of these limitations or to justify the methods with which they were associated. In any case, this study's finding of gender role attitudes as a significant predictor of genderism and transphobia has potential to inform education on and intervention of prejudicial beliefs and actions toward gender variant individuals. Building on previous research, the findings of this study can further contribute to knowledge of prejudice toward gender variance and wider LGBT+ issues. To conclude, the current study has shown that gender role attitudes, and potentially need for closure, can predict genderism and transphobia in university students and inform relevant intervention.

## References

- Ahuja, A. (2016) 'LGBT adolescents in America: Depression, discrimination and suicide.' *European Psychiatry*, 33(suppl.) pp. S70.
- American Psychiatric Association (2013) *Diagnostic and Statistical Manual of Mental Disorders: DSM-5*. 5<sup>th</sup> ed. Arlington, VA.: American Psychiatric Association.
- Barber, C. (2017) 'Rare health conditions 7: diabulimia, precocious puberty, intersex/hermaphrodite.' *Disease Control*, 11(12) pp. 582-585.
- Bartini, M. (2006) 'Gender Role Flexibility in Early Adolescence: Developmental Change in Attitudes, Self-perceptions, and Behaviours.' *Sex Roles*, 55(3-4) pp. 233-245.
- Bauer, G., Hammond, R., Travers, R., Kaay, M., Hohenadel, M., and Boyce, M. (2009) "I don't think this is theoretical; this is our lives": How erasure impacts health care for transgender people.' *Journal of the Associations of Nurses in AIDS Care*, 20(5) pp. 348-361.
- Bhaskar, R., Danermark, B. and Price, L. (2017) *Interdisciplinarity and Wellbeing: A Critical Realist General Theory of Interdisciplinarity*. London: Routledge.
- Bilodeau, B. (2005) 'Beyond the Gender Binary: A Case Study of Two Transgender Students at a Midwestern Research University.' *Journal of Gay & Lesbian Issues in Education*, 3(1) pp. 29-44.
- Braidwood, E. (2019) 'Christian mother complains to education secretary over school's LGBT lessons.' *PinkNews*. [Online] 24<sup>th</sup> March. [Accessed on 24<sup>th</sup> March 2019] <https://bitly.com.np/hXjq8>
- Brewis, H. (2019) 'LGBT education lessons will be taught in primary schools following historic vote by MPs.' *Evening Standard*. [Online] 28<sup>th</sup> March. [Accessed on 1<sup>st</sup> April 2019] <https://bitly.com.np/MNPWO>
- Brockman, D. and Kalla, J. (2016) 'Durably reducing transphobia: A field experiment on door-to-door canvassing.' *Science*, 352(6282) pp. 220-224.
- Bruinsma, J. and Crutzen, R. (2018) 'A longitudinal study on the stability of the need for cognition.' *Personality and Individual Differences*, 127, June, pp. 151-161.
- Budge, S. L., Adelson, J. L. and Howard, K. A. S. (2013) 'Anxiety and depression in transgender individuals: The roles of transition status, loss, social support, and coping.' *Journal of Consulting and Clinical Psychology*, 81(3) pp. 545-557.



Burke, M. and Ferguson, M. (2019) 'Nancy Pelosi's 'Equality Act' Would Be Disastrous. Here Are 5 Likely Victim Groups.' *The Daily Signal*. [Online] 20<sup>th</sup> March. [Accessed on 30<sup>th</sup> March 2019] <https://bitly.com.np/gPZql>

Burke, S. E., Dovidio, J. F., LaFrance, M., Przedworski, J. M., Perry, S. P., Phelan, S. M., Burgess, D. J., Hardeman, R. R., Yeazel, M. W. and van Ryn, M. (2017) 'Beyond generalized sexual prejudice: Need for closure predicts negative attitudes toward bisexual people relative to gay/lesbian people.' *Journal of Experimental Social Psychology*, 71, July, pp. 145-150.

Cacioppo, J. T. and Petty, R. E. (1982) 'The Need for Cognition.' *Journal of Personality and Social Psychology*, 42(1) pp. 116-131.

Cacioppo, J. T., Petty, R. E., Feinstein, J. A., and Jarvis, W. B. G. (1996) 'Dispositional differences in cognitive motivation: The life and times of individuals varying in need for Cognition.' *Psychological Bulletin*, 119(2) pp. 197-253.

Calvin, K. L., Haidt, J. and Nosek, B. A. (2014) 'Moral elevation reduces prejudice against gay men.' *Cognition and Emotion*, 28(5) pp. 781-794.

Carroll, L., Gilroy, P. J. and Ryan, J. (2011) 'Counseling Transgendered, Transsexual, and Gender-Variant Clients.' *Journal of Counseling & Development*, 80(2) pp. 131-139.

Carter, J. D., Hall, J. A., Carney, D. R. and Rosip, J. C. (2006) 'Individual Differences in the acceptance of stereotyping.' *Journal of Research in Personality*, 40(6) pp. 1103-1118.

Chawla, D. S. (2017) 'One-size-fits-all' threshold for *P* values under fire.' *Nature*. [Online] 19<sup>th</sup> September. [Accessed on 26<sup>th</sup> March 2019] <https://bitly.com.np/bDyap>

Chodzen, G., Hidalgo, M. A., Chen, D. and Garofalo, R. (2019) 'Minority Stress Factors Associated With Depression and Anxiety Among Transgender and Gender Nonconforming Youth.' *Journal of Adolescent Health*, 64(4) pp. 467-471.

Cohen, A. R., Stotland, E., and Wolfe, D. M. (1955) 'An experimental investigation of need for cognition.' *Journal of Abnormal and Social Psychology*, 51(2) pp. 291-294.

Costa, P. A. and Davies, M. (2012) 'Portuguese adolescents' attitudes toward sexual minorities: transphobia, homophobia, and gender role beliefs.' *Journal of Homosexuality*, 59(10) pp. 1424-1442.

Cramwinckel, F. M., Scheepers, D. T. and van der Toorn, J. (2018) 'Interventions to Reduce Blatant and Subtle Sexual Orientation- and Gender Identity Prejudice (SOGIP): Current Knowledge and Future Directions.' *Social Issues and Policy Review*, 12(1) pp. 183-217.

Duncan, D. T. and Hatzenbuehler, M. L. (2014) 'Lesbian, Gay, Bisexual, and Transgender Hate Crimes and Suicidality Among a Population-Based Sample of Sexual-Minority Adolescents in Boston.' *Research and Practice*, 104(2) pp. 272-278.

Equality Act 2006 (c. 3) London: HMSO.

Equality Act 2010 (c. 15) London: HMSO.

Fenton, S. (2016) 'LGBT relationships are illegal in 74 countries, research finds.' *The Independent*. [Online] 17<sup>th</sup> May. [Accessed on 31<sup>st</sup> March 2019] <https://www.independent.co.uk/news/world/gay-lesbian-bisexual-relationships-illegal-in-74-countries-a7033666.html>

Fish, J. (2008) 'Far from mundane: theorising heterosexism for social work education.' *Social Work Education*, 27(2) pp. 182–193.

Flores, A. R., Haider-Markel, D. P., Lewis, D. C., Miller, P. R., Tadlock, B. L. and Taylor, J. K. (2018) 'Transgender prejudice reduction and opinions on transgender rights: Results from a mediation analysis on experimental data.' *Research & Politics*, 5(1) pp. 1-7.

Frieze, I. H. and Ciccocioppo, M. (2009) 'Gender-Role Attitudes.' In Reis, H. T. and Sprecher, S. (Eds.) *Encyclopedia of Human Relationships*. Thousand Oaks, CA: SAGE Publications, Inc.

Furnham, A. and Thorne, J. D. (2013) 'Need for cognition: Its dimensionality and personality and intelligence correlates.' *Journal of Individual Differences*, 34(4) pp. 230-240.

García-Cueto, E., Rodríguez-Díaz, F. J., Bringas-Molleda, C., López-Cepero, J., Paíno-Quesada, S. and Rodríguez-Franco, L. (2015) 'Development of the Gender Role Attitudes Scale (GRAS) amongst young Spanish people.' *International Journal of Clinical and Health Psychology*, 15(1) pp. 61-68.

Garelick, A. S., Filip-Crawford, G., Varley, A. H., Nagoshi, C. T., Nagoshi, J. L. and Evans, R. (2017) 'Beyond the Binary: Exploring the Role of Ambiguity in Biphobia and Transphobia.' *Journal of Bisexuality*, 17(2) pp. 172-189.

Gender Recognition Act 2004 (c. 7) London: HMSO.

Glass, J. (2018) 'Is queer a slur? Twitter seems to think so.' *PinkNews*. [Online] 19<sup>th</sup> March. [Accessed on 4<sup>th</sup> April 2019] <https://www.pinknews.co.uk/2018/03/19/is-queera-slur-twitter-thinks-so/>

Green, S. B. (1991) 'How Many Subjects Does It Take To Do A Regression Analysis.' *Multivariate Behavioral Research*, 26(3) pp. 499-510.

Halle-Richards, S. (2019) 'Hundreds of parents join WhatsApp group to rage about LGBT lessons in schools.' *The Mirror*. [Online] 22<sup>nd</sup> March 2019. [Accessed on 24<sup>th</sup> March 2019] <https://bitly.com.np/tuvRP>

Herek, G. M. and McLemore, K. A. (2013) 'Sexual prejudice.' *Annual Review of Psychology*, 64(1) pp. 309–333.

Hill, D. B. and Willoughby, B. L. B. (2005) 'The Development and Validation of the Genderism and Transphobia Scale.' *Sex Roles*, 53(7-8) pp. 531-544.

Hughes, S. (2014) 'Laverne Cox: 'We live in a binary world: it can change.' *The Independent*. [Online] 1<sup>st</sup> June. [Accessed on 30<sup>th</sup> March 2019] <https://bitly.com.np/FTSXZ>

Jones, C. (2019) 'Mother of gay teen who killed himself advocates for LGBT school lessons.' *PinkNews*. [Online] 18<sup>th</sup> March. [Accessed on 24<sup>th</sup> March 2019] <https://bitly.com.np/bRi4g>

Kågesten, A., Gibbs, S., Blum, R. W., Moreau, C., Chandra-Mouli, V., Herbert, A. and

Amin, A. (2016) 'Understanding Factors that Shape Gender Attitudes in Early Adolescence Globally: A Mixed-Methods Systematic Review.' *PLoS One*, 11(6) pp. 1-36.

Kanamori, Y., Cornelius-White, J. H. D., Pegors, T. K., Daniel, T. and Hulgus, J. (2017)

'Development and Validation of the Transgender Attitudes and Beliefs Scale.' *Archives of Sexual Behavior*, 46(5) pp. 1503-1515.

Killermann, S. (2012) What does the asterisk in "trans\*" stand for? 30<sup>th</sup> May. It's Pronounced Metrosexual. [Online] [Accessed on 1<sup>st</sup> April 2019] <https://itspronouncedmetrosexual.com/2012/05/what-does-the-asterisk-in-transstand-for/>

Klemmer, C. L., Arayasirikul, S. and Raymond, H. F. (2018) 'Transphobia-Based Violence, Depression, and Anxiety in Transgender Women: The Role of Body Satisfaction.' *Journal of Interpersonal Violence*, (no issue number) March, pp. 1-23.

Kotecha, S. (2019) 'Birmingham LGBT lessons row school staff 'distracted'.' *BBC News*. [Online] 25<sup>th</sup> March. [Accessed on 1<sup>st</sup> April 2019] <https://bitly.com.np/bjDZv>

Levesque, R. J. R. (2014) 'Sex Roles and Gender Roles.' In Levesque, R. J. R. (Ed.) *Encyclopedia of Adolescence*. New York, NY: Springer.

Logie, C. H., Perez-Brumer, A., Woolley, E., Madau, V., Nhlengethwa, W., Newman, P. A. and Baral, S. D. (2018) 'Exploring experiences of heterosexism and coping strategies among lesbian, gay, bisexual, and transgender persons in Swaziland.' *Gender & Development*, 26(1) pp. 15-32.

Makwana, A. P., Dhont, K., De Keersmaecker, J., Akhlaghi-Ghaffarokh, P., Masure, M. and Roets, A. (2018) 'The Motivated Cognitive Basis of Transphobia: The Roles of Right-Wing Ideologies and Gender Role Beliefs.' *Sex Roles*, 79(3) pp. 206-217.

Mayer, K. H., Bradford, J. B., Makadon, H. J., Stall, R., Goldhammer, H. and Landers, S. (2008) 'Sexual and Gender Minority Health: What We Know and What Needs to Be Done.' *American Journal of Public Health*, 98(6) pp. 989-995.

McCullough, R., Dispenza, F., Parker, L. K., Viehl, C. J., Chang, C. Y. and Murphy, T. M. (2017) 'The Counseling Experiences of Transgender and Gender Nonconforming Clients.' *Journal of Counseling and Development*, 95(4) pp. 423-434.

McFadden, C. and Crowley-Henry, M. (2017) "My People": the potential of LGBT employee networks in reducing stigmatization and providing voice.' *The International Journal of Human Resource Management*, 29(5) pp. 1056-1081.

McKinnon, R. (2014) 'Stereotype Threat and Attributional Ambiguity for Trans Women.' *Hypatia*, 29(4) pp. 857-872.

Meier, S. C. and Labuski, C. M. (2013) 'The demographics of the transgender population.' In Baumle, A. K. (Ed.) *International handbook on the demography of sexuality*. New York, NY: Springer.

Moss-Racusin, C. A., Phelan, J. E. and Rudman, L. A. (2010) 'When men break the gender rules: Status incongruity and backlash against modest men.' *Psychology of Men & Masculinity*, 11(2) pp. 140-151.

Nadal, K. L. (2013) *That's so gay!: Microaggressions and the lesbian, gay, bisexual, and transgender community*. Washington DC: American Psychological Association.

Nagoshi, J., Adams, K. A., Terrell, H. K., Hill, E. D., Brzuzy, S. and Nagoshi, C. T. (2010) 'Gender Differences in Correlates of Homophobia and Transphobia.' *Sex Roles*, 59(7) pp. 521-531.

Nataf, Z. (1996) *Lesbians Talk Transgender*. London: Scarlett Press.

Ng, C. K. Y., Haines-Saah, R. J., Knights, R. E., Shoveller, J. A. and Johnson, J. L. (2017) "It's not my business": Exploring heteronormativity in young people's discourses about lesbian, gay, bisexual, transgender, and queer issues and their implications for youth health and wellbeing.' *Health*, 23(1) pp. 39-57.

North, A. (2014) 'What If We're Wrong About Depression?' *The New York Times*. [Online] 26<sup>th</sup> November. [Accessed on 24<sup>th</sup> March 2019] <https://bitly.com.np/g0IRc>

Nourafshan, A. M. (2017) 'The New Employment Discrimination: Intra-LGBT Intersectional Invisibility and the Marginalisation of Minority Subclasses in Antidiscrimination Law.' *Duke Journal of Gender Law and Policy*, 24(2) pp. 107-142.

Paisley, V. and Tayar, M. (2016) 'Lesbian, gay, bisexual and transgender (LGBT) expatriates: an intersectionality perspective.' *The International Journal of Human Resource*, 27(7) pp. 766-780.

Parveen, N. (2019) 'School defends LGBT lessons after religious parents complain.' *The Guardian*. [Online] 31<sup>st</sup> January. [Accessed on 24<sup>th</sup> March 2019]

<https://bitly.com.np/1udlc>

Passini, S. (2012) 'What do I Think of Others in Relation to Myself? Moral Identity and Moral Inclusion in Explaining Prejudice.' *Journal of Community & Applied Social Psychology*, 23(3) pp. 261-269.

Payne, C. (2013) 'Most gay, bisexual adults say society is more accepting.' *USA Today*. [Online] 13<sup>th</sup> June. [Accessed on 31<sup>st</sup> March 2019] <https://bitly.com.np/ZrxtG>

Perreault, S. (2017) 'Closure, need for.' In Moghaddam, F. M. (Ed.) *The SAGE Encyclopedia of Political Behavior*. Thousand Oaks, CA.: SAGE Publications, Inc.

Perry, D., Pauletti, R., Cooper, P. and Aults, C. (2016) 'Gender identity.' In Miller, H. (Ed.) *The SAGE encyclopedia of theory in psychology*. Thousand Oaks, CA: SAGE Publications, Inc.

Petty, R. E., Briñol, P., Loersch, C. and McCaslin, M. J. (2009) 'The Need for Cognition' In Leary, M. R. and Hoyle, R. H. (Eds.) *Handbook of Individual Differences in Social Behaviour*. New York: The Guilford Press.

Prosser, J. (1997) 'Transgender.' In Medhurst, A. and Munt, S. R. (Eds.) *Lesbian and gay studies. A critical introduction*: London: Cassell.

Qualtrics (2005) *Qualtrics*. Version November 2018. [Software] Provo: Qualtrics. [Accessed on 2<sup>nd</sup> November 2018] URL: <https://bitly.com.np/LWyn5>

Reed, B., Rhodes, S., Schofield, P. and Wylie, K. (2009) *Gender variance in the UK: Prevalence, incidence, growth and geographic distribution*. Unknown place of publication: Gender Identity Research and Education Society. [Online] [Accessed on 1<sup>st</sup> April 2019] <https://bitly.com.np/YyioG>

Reisner, S. L., Greytak, E. A., Parsons, J. T. and Ybarra, M. L. (2015) 'Gender Minority Social Stress in Adolescence: Disparities in Adolescent Bullying and Substance Use by Gender Identity.' *The Journal of Sex Research*, 52(3) pp. 243-256.

Roets, A. and Van Hiel, A. (2011) 'Item selection and validation of a brief, 15-item version of the Need for Closure Scale.' *Personality and Individual Differences*, 50(1) pp. 90-94.

Rothaus, S. (2015) 'Growing Up Transgender: Jazz Jennings.' *Miami Herald*. [Online] 25<sup>th</sup> June. [Accessed on 30<sup>th</sup> March 2019] <https://bitly.com.np/fekhx>

Rudin, J., Yang, Y. Ruane, S., Ross, L., Farro, A. and Billing, T. (2016) 'Transforming Attitudes About Transgender Employee Rights.' *Journal of Management Education*, 40(1) pp. 30-46.

Salmon, N. (2017) 'British people rank among most depressed people in Western World.' *The Independent*. [Online] 13<sup>th</sup> September. [Accessed on 24<sup>th</sup> March 2019] <https://bitly.com.np/5O38n>

Sexual Offences Act 1967 (c. 60) London: HMSO.

Sharek, D. B., McCann, E., Sheerin, F., Glacken, M. and Higgins, A. (2014) 'Older LGBT people's experiences and concerns with healthcare professionals and services in Ireland.' *International Journal of Older People Nursing*, 10(3) pp. 230-240.

Strobel, A., Grass, J., Pohling, R. and Strobel, A. (2017) 'Need for Cognition as a moral capacity.' *Personality and Individual Differences*, 117, October, pp. 42-51.

Strohm, M. (2019) 'Transgender activist Laverne Cox urges Penn to prioritize mental wellness at SPEC event.' *The Daily Pennsylvanian*. [Online] 20<sup>th</sup> March. [Accessed on 30<sup>th</sup> March 2019] <https://bitly.com.np/m8nwG>

Stryker, S. (2008) 'Transgender History, Homonormativity, and Disciplinarity.' *Radical History Review*, Winter(100) pp. 145-157.

Summersell, J. (2018) 'Trans women are real women: a critical realist intersectional response to Pilgrim.' *Journal of Critical Realism*, 17(3) pp. 329-336.

Tam, K., Au, A. and Leung, A. K. (2008) 'Attributionally more complex people show less punitiveness and racism.' *Journal of Research in Personality*, 42(4) pp. 1074-1081.

Tebbe, E. A., Moradi, B. and Ege, E. (2014) 'Revised and abbreviated forms of the Genderism and Transphobia Scale: Tools for assessing anti-trans prejudice.' *Journal of Counseling Psychology*, 61(4) pp. 581-592.

Tebbe, E. N. and Moradi, B. (2012) 'Anti-transgender prejudice: A structural equation model of associated constructs.' *Journal of Counseling Psychology*, 59(2) pp. 251-261.

The Guardian (2013) 'Anxiety or depression affects nearly one in five UK adults.' *The Guardian*. [Online] 19<sup>th</sup> June. [Accessed on 24<sup>th</sup> March 2019] <https://bitly.com.np/u4Wh2>

Wagenmakers, E. (2007) 'A practical solution to the pervasive problems of  $p$  values.' *Psychonomic Bulletin & Review*, 14(5) pp. 779-804.

Webster, D. M. and Kruglanski, A. W. (1994) 'Individual Differences in Need for Cognitive Closure.' *Journal of Personality and Social Psychology*, 67(6) pp. 1049-1062.

Weinberg, G. (1972) *Society and the Healthy Homosexual*. New York: St. Martins Press.

Whiteman, H. (2010) 'Gay outrage over cardinal's child abuse comment.' *CNN World*. [Online] 14<sup>th</sup> April. [Accessed on 26<sup>th</sup> March 2019] [https://web.archive.org/web/20101018182049/http://articles.cnn.com/2010-0414/world/vatican.homosexuality.pedophilia\\_1\\_pedophilia-gay-rights-cardinal-tarcisio-bertone?s=PM%3AWORLD](https://web.archive.org/web/20101018182049/http://articles.cnn.com/2010-0414/world/vatican.homosexuality.pedophilia_1_pedophilia-gay-rights-cardinal-tarcisio-bertone?s=PM%3AWORLD)

Williams, A. (2017) 'Risk factors for suicide in the transgender community.' *European Psychiatry*, 41, April, suppl., pp. S894.

Yarns, B. C., Abrams, J. M., Meeks, T. W. and Sewell, D. D. (2016) 'The Mental Health of Older LGBT Adults.' *Current Psychiatry Reports*, 18(60) pp. 1-11.

Yuksel, S., Ertekin, B. A., Ozturk, M., Bikmaz, P. S. and Oglagu, Z. (2017) 'A clinically neglected topic: Risk of suicide in transgender individuals.' *Archives of Neuropsychiatry*, 54(1) pp. 28-32.