

Exploring the Underpinnings of Trans-Negativity

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Abstract

The current study examines how conservative social ideologies and religiosity interact to predict lower levels of knowledge, social intolerance, and negative attitudes toward interacting with transgender and gender nonbinary (TGNB) individuals. An online cross-sectional research was conducted between March 2 and June 2, 2021. Two hundred and sixty-six participants were recruited for this study. The mean age was 29.30 ($SD = 11.98$, age range: 18-60 years). The study used a between-subject correlational design. A multiple regression model was used to predict participants' TGNB Knowledge, Attitudes, and Beliefs from the other research variables based on the importance of associations. We examined our hypotheses regarding the moderating role of conservative values and political positioning on the linkage between religiosity and TGNB knowledge, social tolerance, and attitudes toward interacting with TGNB individuals using PROCESS (Model 1). This study's results show that the conservative cis-normative system (i.e., religiosity, conservative values, and right-wing political orientation) seems significantly linked to TGNB social intolerance.

Keywords: Trans-negativity, religiosity, conservative values, right-wing political orientation.

Despite the transgender and gender nonbinary (TGNB) increased visibility in the past decade (Gillig et al., 2018), TGNB individuals continue to face prejudice in various ways, including financial hardships, legal troubles, and safety concerns (Human Rights Campaign, 2018). "Transgender" is an umbrella term (Billard, 2018) that encompasses the identities of individuals whose current gender identity, behavior and/ or expression does not match the sex they were assigned at birth (American Psychological Association, 2014). These identities include trans women and trans men, who were given the gender of a man/woman at birth but internally identified as a woman/man, along with several additional identities. While some transgender persons have identities inside the man/woman dichotomy, others fall beyond the binary as neither, both, or a combination of genders. The words nonbinary, agender, genderfluid, and genderqueer are used to describe these identities (Perez-Arche & Miller, 2021). The prefix "trans-" refers to various persons, including those who identify as cross-dressers, androgynous, queer, asexual, and transgender (Konopka et al., 2019).

Many members of the transgender community prefer not to use the word "transsexual" even though it is included in

several surveys of anti-trans attitudes (GLAAD, 2016). That is because it is not an all-encompassing or inclusive phrase. Thus in the current study, the labels transgender and trans will be used as descriptors for the variety of gender-nonconforming identities for this research (Greenburg & Gaia, 2019). Although the needs of TGNB people have become more focused in recent years (European Union Agency for Fundamental Rights, 2014), heteronormative expectations continue to pose difficulties for TGNB individuals and their families (Israel, 2005; Lampis et al., 2023).

Individuals identifying as TGNB go against the conventional gender identity concept, which holds that gender is biologically defined and allocated at birth (Konopka et al., 2019), and society generally disapproves of people who do not conform to gender expectations. (Perez-Arche & Miller, 2021). According to previous research, individual characteristics such as political positioning and religiosity relate to prejudice toward TGNB people (Hatch et al., 2022). Thus, due to their gender identification, trans persons frequently encounter more unpleasant situations than their cisgender counterparts (i.e., those whose gender identity corresponds to the sex given at birth) (National Coalition of Anti-Violence Programs [NCAVP], 2013). In particular, people who identify as transgender and gender nonbinary (TGNB) experience severe stresses as a result of transphobic and gender-normative discriminatory actions in society (i.e., macro), the local community (i.e., mezzo), and individuals (i.e., micro; Clary et al., 2023). Accordingly, many TGNB persons choose to avoid specific public places where they expect discriminatory conduct to cope with possible discrimination, such as binary toilets, gyms, clothes stores, public transportation, physicians' offices, bars/clubs, and streets (Aversa et al., 2021; Clary et al., 2023).

Considering that the level of anti-trans attitudes may be affected by culturally different individual characteristics (e.g., religiosity, conservative values, and right-wing political orientation) that translate into less accepting attitudes toward sexual and gender minorities (Donaldson et al., 2017; Konopka et al., 2019), that Western countries show more tolerance for the civil rights of sexual and gender minorities compared to Eastern and Central European countries (Stulhofer & Rimac, 2009), and that the general public's perceptions regarding TGNB persons have been the subject of comparatively little research (Clark & Hughto, 2020) this study examines attitudes toward TGNB individuals using a new 22-item scale that assesses TGNB knowledge, social tolerance, and attitudes toward interacting with TGNB individuals (T-KAB Scale; Clark & Hughto, 2020) and tries to identify specific context-related social-psychological and social-ideological predictors of trans-negativity.

In particular, the current study provides new interventions concerning attitudes toward gender nonconformists in a society (Greece) characterized by a tradition of sexual and gender inequality (Beltran -Tapia & Raftakis, 2021). First, it examines how context-related social-psychological and social-ideological factors influence trans-negativity. Agocha et al. (2014, p.183) argue that "culture provides a significant framework for understanding sexuality," which has not been examined thoroughly to make cross-cultural comparisons. Second, to the researcher's knowledge, attitudes toward TGNB have received little academic attention in Greece. Thus, the current study addresses a need for TGNB attitudinal research (Clark & Hughto, 2020) and enables the gathering of further empirical data in the field. To sum up, this study examines: How religiosity, political orientation, and conservative values influence knowledge, social tolerance, and attitudes toward interacting with TGNB individuals.

Trans-Negativity

Discomfort or negative attitudes toward people who identify as TGNB are referred to as trans-negativity or transphobia (Rye et al., 2019). Hill's (2002, p. 199) introduction to the Genderism and Transphobia scale (GTS) included the first description of transphobia, which he defined as "a motivating force for negative reactions to transgender people that involve fear and disgust in the observer." Later, the fear associated with the suffix "phobia" was scrutinized since its use might restrict how various cognitions and consequences are evaluated. As a result, "negativity" started to take its place. However, most research on the issue now alternately refers to "transphobia" and "trans-negativity," encompassing the rejection of the trans community from a wide-ranging standpoint (Lopez-Saez et al., 2022). Negative evaluation, stereotyping, and discrimination of people whose appearance or identity does not match gender norms constitute trans-prejudice and trans-negativity (Lampis et al., 2023; Winter et al., 2008), and individuals who identify as TGNB experience prejudice and discrimination regularly (Konopka et al., 2019).

According to recent studies, TGNB persons are three times more likely to be unemployed and four times more likely to live in poverty than their cisgender counterparts (Human Rights Campaign, 2017). They are more likely to be dismissed, mistreated, or refused a promotion because of their TGNB identity after employment (Human Rights Campaign, 2018). Due to court decisions and medical certification procedures, they encounter barriers to getting official identity cards with their correct gender (Human Rights Campaign 2018). This absence of proper identification may increase the risk of harassment or assault, or exclusion from public accommodations (Human Rights Campaign 2018). According to Brown et al. (2018), among mental health professionals, the most unfavorable attitudes toward TGNB persons are expressed by male, Caucasian, heterosexual, religious, and conservative participants. In addition, TGNB individuals experience high rates of homicide (Human Rights Campaign 2019).

Although currently, there seems to be a greater conversation about trans problems, trans-prejudice outweighs prejudice toward other sexual and gender minority individuals (Cunningham & Pickett, 2018). However, research on trans-prejudice and trans-negativity is still limited compared to research on lesbian and gay biases (Warriner et al., 2013). Several studies have shown societal stigma leads to violence against TGNB persons (Bockting, 2014; Hughto et al., 2015; Lombardi, 2001). According to Brohan et al. (2010) and Thornicroft et al. (2007), stigma comprises issues with knowledge (ignorance or disinformation), attitude (prejudice), and conduct (discrimination). Herek (2010) argued that one step in preventing such bias would be comprehending the underlying correlates of prejudice, ignorance, and discrimination.

Overall, because gender non-conformity deviates from traditional gender expectations, trans individuals frequently experience various forms of discrimination, harassment, violence, and devaluation, in a variety of contexts (e.g., bullying at various places such as work, in public spaces and services, school, inadequate healthcare, family rejection, economic marginalization, and police violence; Bradford et al., 2013; Fresan et al., 2022; Transgender Law Center, 2016). In light of these experiences of stigmatization and discrimination and the detrimental effects that follow, evaluating what might underpin these attitudes toward TGNB in different socio-cultural contexts is critical (Rye et al., 2019). Due to a lack of research data, little is known about Greek's knowledge, social tolerance, and beliefs regarding TGNB rights issues and attitudes toward interacting with TGNB individuals.

Religiosity

Religions offer a divinely mandated framework for understanding and interpreting the world (Glick et al., 2002). Most religious convictions rely on holy texts and traditions to support rigid gender roles and attitudes as prescribed by a God or other higher entity (Van Assche et al., 2019). Promoting literal interpretations of the Bible among some religious communities is one reason why religiosity may contribute to anti-trans attitudes (Burdette et al., 2005; Greenburg & Gaia, 2019).

Past research in diverse cultural contexts has demonstrated religiosity and religious fundamentalism's influence on trans-negativity (Costa & Davies, 2012; Grigoropoulos & Kordoutis, 2015; Hill & Willoughby, 2005; Makwana et al., 2018; Norton & Herek, 2013; Tebbe et al., 2014). Also, according to recent systematic research (Campbell et al., 2019), religious beliefs are significant in TGNB attitudes, and individuals who reported higher levels of religious fundamentalism also tended to express higher levels of negative attitudes toward the TGNB community (Perez-Arche & Miller, 2021). As a result, it would appear justified to include religiosity - the significance of religion in a person's life and participation in religious rituals - while examining anti-trans attitudes. However, although a large body of research suggests that religious beliefs are related to trans prejudice, other findings indicate that this relationship is weak (Garellick et al., 2017). Therefore, further research is needed to explore this relationship across studies and cultures (Hatch et al., 2022). Hence, the current study examined whether religiosity relates to anti-trans attitudes.

Religiosity might also reflect the degree of commitment to societal norms, which is the leading cause of discrimination towards gender nonconformists (Nagoshi et al., 2008). Moreover, many followers believe that non-conforming sexual and gender minorities threaten the church and, in some ways, the social status quo because mainstream religions defend the nuclear family and marriage between a man and a woman as the ultimate norm (Adkins, 2016). The relationship between religiosity and conservatism is quite apparent, given that religions frequently emphasize traditionalism and maintaining the status quo of society (Jost et al., 2014). Religiosity was consistently associated with right- and conservative-leaning ideologies in 15 of 16 nations, across religions, according to a large-scale study that examined the extent to which religiosity accounted for ideological orientations (Caprara et al., 2018). Thus, we reasoned that conservatism in the form of conservative values and right-wing political positioning would also be a significant predictor of trans-negativity. This seems logical since TGNB people fall short of what constitutes social "appropriateness" (Konopka et al., 2019).

Overall, to the researcher's knowledge, there is limited research concerning the hypothesis that religious trans-negativity, is increased by conservatism (i.e., tendencies to maintain the status quo by justifying it). This research aimed to analyze how religiosity affects attitudes, knowledge, and beliefs toward TGNB individuals and whether conservative political ideology and conservative values enhance this influence. By proposing that religiosity predicts trans-negativity and that conservatism, in the form of conservative values and right-wing political positioning, intensify this relationship, we seek to extend knowledge in this area. We outline our suggestion below following the research concerning conservatism.

Right-Wing Political Orientation

Scholars tend to define "conservatives" as those who fall between the "center" and "right" placements of the ideological scale (Araujo & Gatto, 2022). Political ideology is linked to sexual prejudice. In particular, political liberalism is associated with less transgender discrimination, according to a large body of research, while greater political conservatism is associated with opposition toward gender nonconformists (Locantore & Wasarhaley, 2019). Politically conservative people tend to hold less favorable opinions on gay, lesbian, and TGNB people and their rights (Perez-Arche & Miller, 2021).

Political views may be related to bias towards transgender people in several ways. According to Jost et al. (2003), political conservatism is generally characterized by an intolerance of ambiguity, which may manifest itself if someone thinks a TGNB person is not presenting as either a man or a woman (Hatch et al., 2022). Single-item surveys that ask participants to rate their political leanings on a Likert-type scale as liberal or conservative are methods that political opinions have been studied in research. Even though this evaluation of political views seems to predict transgender prejudice consistently, other research implies no substantial correlation between political views and transgender prejudice (Hatch et al., 2022). Specifically, political views were associated with people from the U.S. but not with people from India, indicating that participants' specific socio-cultural contexts may also impact how strongly political ideas relate to transgender prejudice (Elischberger et al., 2018).

Conservative Values

Allport (1954, p.170) claimed that "a person's prejudice is unlikely to be merely a specific attitude to a specific group; it is more likely to reflect his whole habit of thinking about the world." According to Jost (2017), conservative values are crucial to people's motives for maintaining the status quo. Conservatism is a way of thinking (a belief system) that aims to keep things as they are in society, especially by upholding social norms, preserving order and stability in the community, opposing change, honoring authority, and punishing those who are acting outside of social norms (McClosky, 1958). Likely, any "sexual violator" (such as a TGNB person) will cause similar reactions among conservative people (Fassinnger & Arseneau, 2007). Previous research has repeatedly demonstrated a connection between conservatism and various types of discrimination toward sexual and gender minorities (Tenorio de Souza et al., 2022). This phenomenon emerges because the most conservative individuals are more intensely motivated to defend the system (Jost & Thompson, 2000). Any substantial changes compromising the legitimacy of established values make more conservative people feel threatened (Feather, 1984). By challenging the binary understanding of gender, transgender people subvert the established social order and may be viewed as a danger to both (Konopka et al., 2019).

In the current study, we assessed conservative values by employing a measure that most directly approaches the conservative concept. We used a conservativeness index obtained from the Portrait Values Questionnaire (PVQ), whose constituents more precisely operationalize the fundamental component of conservatism (see Schwartz, 2001). Thus, in the present study, conservative values and right-wing political orientation can be logically assumed to increase trans-negativity. Hence, the current study examines how conservative social ideologies and religiosity interact to predict trans-negativity. Based on the system justification theory (Jost et al., 2014), we predicted that religion would be associated with a conservative tendency to defend the status quo in society.

Aligning with earlier studies showing that religiosity and conservatism are linked to sexual discrimination (Barth & Parry, 2009; Herek & McLemore, 2013), we also tested a model arguing that conservative values and right-wing political orientation intensify the link between religiosity and trans-negativity. Although not previously tested, conservatism (conceptualized as conservative values or right-wing political orientation) can be assumed to moderate the relationship between religiosity and trans-negativity.

The current status of TGNB attitudes and rights in Greece

Greek society is conservative. However, the newly modified legal framework significantly improved TGNB rights by enabling people to change their gender identity legally voluntarily (Voultsos et al., 2021). The Greek Criminal Code has penalized gender identity violence and discrimination since 2013, and the anti-racism statute, statute n.4285/2014, strengthened this legal protection. More recently, Law n. 4491/ 2017 gave people the option to change their gender identification legally starting at age 15(Voultsos et al., 2021). This law represents a significant advancement in the liberty of transgender persons. Also, it strengthens TGNB people's ability to modify their official gender registration by their personal conception of their gender identity without needing therapy that affirms that identification. Under the new law, young persons (between the ages of 15 and 17) are now permitted to request legal changes to their gender identification following receiving a certificate from a medical council. The bill aligns Greek law with that of most E.U. nations (Smith, 2017), and Transgender Europe (2017) praised the measure.

Greek society is significantly influenced by religion, especially regarding marriage and sexuality. The Law n. 4491/2017, according to the Orthodox Church of Greece, is "a satanic deed" that would "destroy societal coherence" (Smith, 2017). Greek cultural beliefs emphasize heterosexual coupledness supporting the idea that it's essential for personal satisfaction (Kantsa, 2014). It should come as no surprise that changes to the law seldom affect culturally based issues. For years, the Greek Orthodox Church has significantly impacted people's moral and social views (Giannou, 2017). The Greek Orthodox Church is a significant institution profoundly affecting moral and sexual issues and family values (Grigoropoulos et al., 2023a, b, 2022a, c, 2018), while at the same time, it promotes traditional gender and family roles (Grigoropoulos, 2022b, 2021a, b).

Given that religion provides believers with a strict moral framework that involves specific attitudes toward certain social groups, attitudes toward TGNB individuals might reflect religious proscriptions. On the other hand, opposition to TGNB individuals may also be enhanced by conservative tendencies to maintain the status quo. In addition, the recent harsh austerity policies that Greece has implemented have fueled far-right groups' growth. As a result, verbal and physical homophobic and transphobic violence has significantly increased (European Commission Against Racism and Intolerance, 2015).

This study

Religions provide a divinely ordained framework for understanding and interpreting the world. Most religious convictions rely on holy texts and traditions to support rigid gender roles (Van Assche et al., 2019). Thus, it seems reasonable to

consider religiosity while examining trans-negativity.

This study's conceptual framework is based on the notion that people have an inherent psychological drive that leads them to act in ways that maintain the status quo (Toorn et al., 2017); this inclination is particularly prevalent in conservative people (Jost, 2017). We suggest that this motive takes the form of a conservative propensity for maintaining society's values, which in turn fosters prejudice. Any substantial changes that call into question the legitimacy of established values make more conservative people feel threatened (Osborne et al., 2023). Prejudice and conservatism have been proven to be positively correlated in the past (Onraet et al., 2015). This happens because the most conservative individuals are more driven to defend the status quo (e.g., Jost & Thompson, 2000).

Given the strong correlations between conservative values, right-wing political orientation, and religiosity (Duriez & Van Hiel, 2002), this research assesses each factor's relative contribution to explaining individual differences in trans-negativity. This raises the question of how religion compares to conservatism (conceptualized as conservative values and right-wing political orientation) in predicting anti-trans attitudes. In this research we also test the hypothesis that conservative ideology (in terms of conservative values and right-wing political orientation) increases religious opposition to TGNB individuals. Our reasoning indicates that, in addition to religiosity being a predictor of anti-TGNB attitudes, different facets of conservative ideology may also play a critical role in enhancing this relationship.

The current study helps to clarify trans-negativity and offers insight into how a particular society views TGNB people. In addition, this might aid in policymakers' efforts to change their practices, better comprehend society's attitudes, and inform the public about these issues. In turn, this may lessen stigma and any potential prejudice.

Method

Procedure and Participants

An online cross-sectional research was conducted between March 2 and June 2, 2021. A convenience non-probability sample based on easiness of access was recruited. In particular, word-of-mouth, university email listservs, and Facebook groups were all used to find participants. Participants confirmed their approval to participate by checking the consent option on the anonymous online survey. Being at least 18 years old and consenting to participate were requirements for participation. The survey included APA's (2018) description of transgender and cisgender to minimize the effect of disinformation gaps.

The current study adhered to all the ethical guidelines and directives of the institution to which the researcher belonged as well as the Helsinki Declaration on Principles of Ethical Conduct in the Use of Human Subjects in Medicine. According to the relevant institutional guidelines and regulations, ethical approval was unnecessary for this study. By completing the survey, participants signed their informed consent. Participants received no compensation.

Two hundred and sixty-six participants were recruited for this study. According to Green's (1991) formulation, this was an

adequate sample size for multiple regression analyses with four variables to have sufficient power to identify a medium effect at 80% power. The mean age was 29.30 (SD = 11.98 age range: 18-60 years). Only cisgender individuals participated in the study, even though TGNB individuals were welcome to join the study. Most participants were heterosexual (n = 237, 89.1%). A portion identified as lesbian/gay (n = 15, 5.6%), bisexual (n = 13, 4.9%), and pansexual (n = 1, 0.4 %). Most of the participants were undergraduate students; 57.1% (152), 32.3% (86) held graduate degrees, and 10.5% (28) had post-graduate degrees. All participants reported their religious affiliation as Orthodox Christian.

Respondents completed measures of demographics, religiosity, political positioning, conservative values, and a new 22-item scale to measure transgender knowledge, attitudes, and beliefs (T-KAB) that has been created and validated in the United States (see Clark & Hughto, 2020). The results of Clark & Hughto's (2020) study show that the 22-item T-KAB scale is reliable and valid in a broad national sample of the general US population. Overall ($\alpha = .97$) and for each of the three subscales, namely acceptance of the gender spectrum, social tolerance and comfort and contact related to transgender individuals, the scale's internal consistency was strong with alphas of 0.95, 0.93 and 0.91 respectively. The T-KAB scale (Clark & Hughto, 2020) also showed significant discriminant validity against unrelated components (e.g., job stress and number of years in one's current profession) and excellent convergent validity against related items (e.g., Homophobia Scale and SDO scale) indicating that current measures of bias do not already capture the construct of transgender acceptance. The T-KAB aims to offset the shortcomings of the transgender attitude scales that are already accessible (Clark & Hughto, 2020). Back translation has been used for all scales to verify translation accuracy in the Greek context (Brislin, 1970).

Measures

Explanatory Variables

Participants filled out the demographic section of the survey by reporting their age in a numerical entry box, sexual orientation (heterosexual, gay, lesbian, bisexual, or other, with a description required), gender identity (cisgender, transgender, other – please specify), level of education (below high school, high school diploma, undergraduate student, university degree, post-graduate degree), political affiliation (left party, center-left party, center party, center-right party, right party) and religious affiliation.

Religiosity

Religiosity was assessed using a translated version of the six items that comprise the religiosity scale created by Mathur (2012). Example items are "I believe in God" and "My religion is very important to me." A five-point Likert scale was used to ask respondents to rate their level of agreement or disagreement with each of the six statements (1 = strongly agree, 5 = strongly disagree). All elements on the scale were reverse-coded to ensure that a higher religiosity score signified a greater level of religiosity. Religiosity has been calculated by averaging the response items.

Conservative Values

To assess conservative values, we used six items. The items came from Schwartz's Portrait Values Questionnaire (2001). Items were associated with Conformity (e.g., "I believe that people should do what they are told; I think people should follow rules at all times, even when no one is watching), Tradition (e.g., "I think it is important to do things the way we learned from our family; I want to follow their customs and traditions) and safety (e.g., "the safety of my country is very important for me"; I want my country to be safe from its enemies"). Using a six-point scale, participants (1 = this has nothing to do with me" to 6 = Exactly like me") indicated whether specific moral values influence their decisions and way of life. Conservative values have been calculated by averaging the response items.

Outcome Measure

The Transgender Knowledge, Attitudes, and Beliefs scale (T-KAB; Clark & Hughto, 2020) was translated into Greek. The T-KAB is a self-reported, three-factor scale with twenty-two items that can be answered using a Likert scale from 1 (strongly disagree) to 4 (strongly agree). Fifteen of the twenty-two items are reverse-scored (Clark & Hughto, 2020).

The three components of the T-KAB are acceptance of the gender spectrum (eight items related to an accurate understanding of TGNB individuals - knowledge), comfort and contact (seven items related to attitudes toward interacting with TGNB individuals- attitudes), and social tolerance (seven items related to ideology on the inherent value of transgender people, including the rights of transgender people- beliefs; Clark & Hughto, 2020). Higher scores reflect better knowledge, more accepting attitudes, and beliefs toward TGNB individuals (Clark & Hughto, 2020). The TGNB knowledge, attitudes, and beliefs have been calculated by averaging the response items.

Data Analysis

The study used a between-subject correlational design. IBM SPSS Statistics version 19 and IBM SPSS AMOS version 20 were used to examine the data. Techniques for data filtering were utilized before the primary statistical analysis. To determine if the data distribution was normal, the Shapiro-Wilk test was applied. Data were not dispersed normally. Bivariate correlation (Kendall's Tau correlation analysis) was used to examine the relationships between the relevant variables. Based on the importance of the connections, a multiple regression model was then used to predict participants' TGNB Knowledge, Attitudes, and Beliefs from the other research variables. We examined our hypotheses regarding the moderating role of conservative values and political positioning on the linkage between religiosity and TGNB knowledge, social tolerance, and attitudes toward interacting with TGNB individuals using Hayes's (2013) PROCESS macro for SPSS (Hayes, 2013. Model 1). Alpha level was set at 0.05.

Psychometric properties of the measures used

Using confirmatory factor analysis (CFA) in AMOS-21, the factorial validity of the newly translated scales was examined in the preliminary data analysis. The 22 components of the T-KAB were subjected to Confirmatory Factor Analysis (CFA), specifying the three-factor solution based on the relevant literature. Utilizing the AMOS program, the CFA was carried out

using the Unweighted Least Square (ULS) Estimation Method because the data were not normally distributed, and the Maximum Likelihood Estimation Method (ML) was inappropriate. For CFA, sample size requirements of 100 to 200 individuals were reached (Kline, 2005). As a result, fit measures that are consistent with the ULS technique were used to estimate model fit instead of chi-square (Byrne, 1994). AMOS assesses model fit for ULS method using the Standardized Root Mean Residual (SRMR), the Goodness-of-fit Index (GFI), the Adjusted Goodness-of-Fit Index (AGFI), and the Normed Fit Index (NFI) (Arbuckle, 2005; Marsh & Hau, 1996). As regards the acceptability measures, SRMR has a cut-off value close to .08 (Hu & Bentler, 1999). GFI and AGFI values beyond .90 show tolerable model fit, whereas values beyond .95 report a statistically significant model fit (Hu & Bentler, 1999). Also, NFI values beyond .90 or .95 show a sustainable fit (Schumacker & Lomax, 2004). The CFA results showed that the T-KAB's three-factor model showed a good fit GFI=.984, AGFI=.981, NFI=.981, SRMR=.072 (Figure 1). The indexes met acceptable levels, suggesting a model that fits the data relatively well (Hu & Bentler, 1999). Cronbach's alphas for the eight acceptance of the gender spectrum components, the seven comfort and contact components, and the seven social tolerance components were $\alpha = .91$, 95% CI [.89,.92], $\alpha = .88$ 95% CI [.71,.78] and $\alpha = .92$, 95% CI [.91,.93] respectively.

The CFA results for the religiosity measure showed that the one-factor model fit well GFI=.991, AGFI=.979, NFI=.986, SRMR=.057 (see Figure 2). Cronbach's alphas for the six religiosity components was $\alpha = .88$, 95% CI [.85,.90].

The one-factor structure of conservative values was also tested. Item 1 was removed because of its low weight leaving item 2,3,4,5,6 for Conservative values. According to the CFA results, the one-factor model suited the conservative values measure well GFI=.979, AGFI=.938, NFI=.937, SRMR=.077 (see Figure 3). Cronbach's alphas for the five religiosity components was $\alpha = .72$, 95% CI [.66,.77].

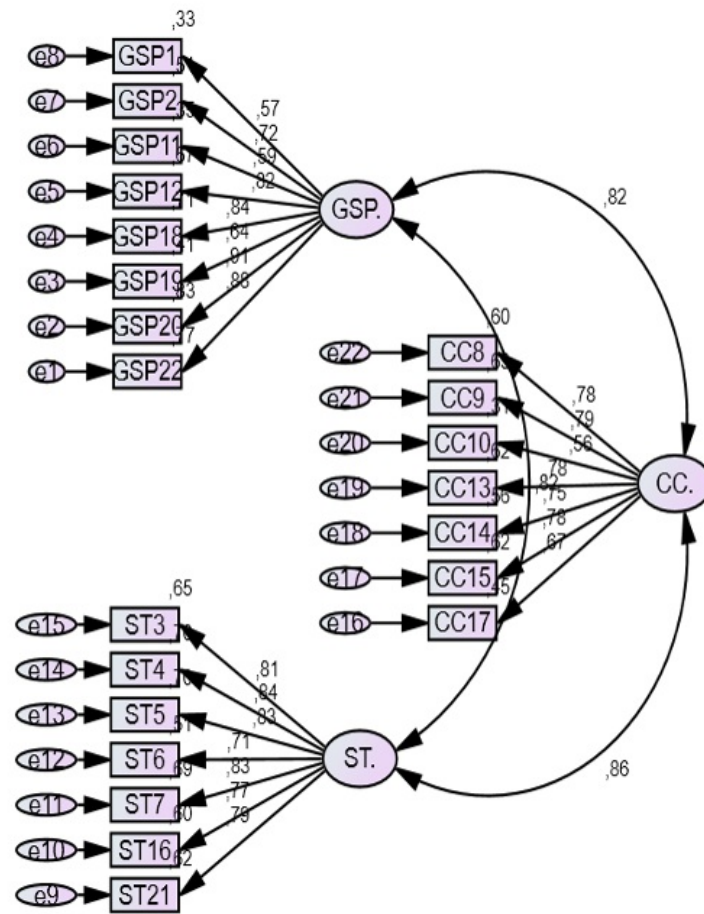


Figure 1.

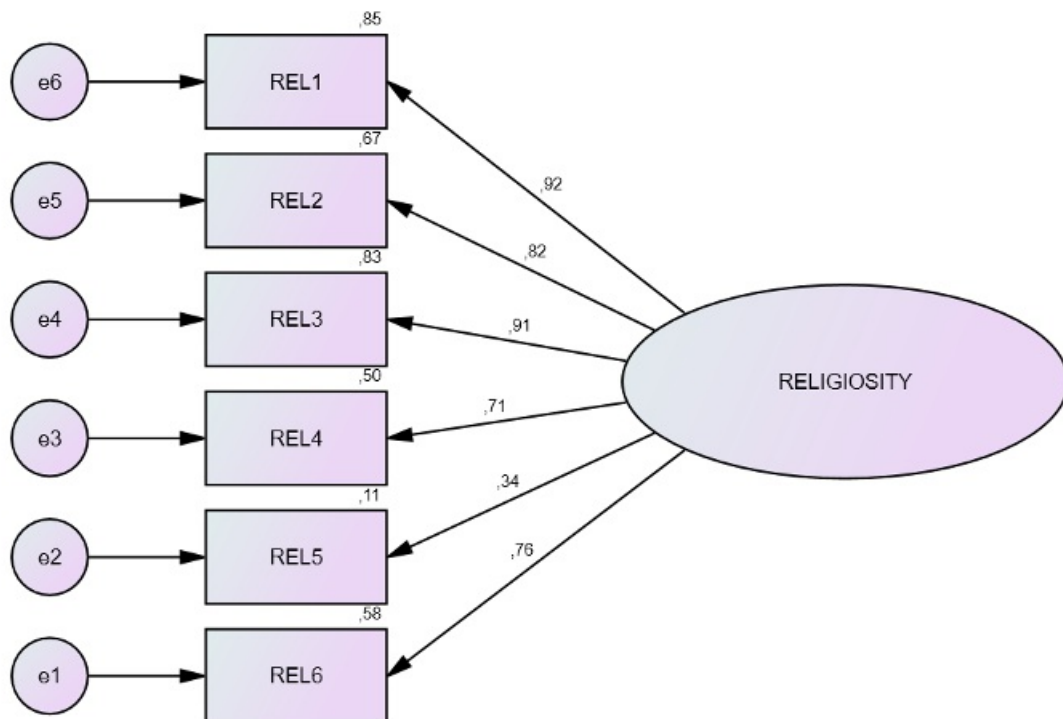


Figure 2.

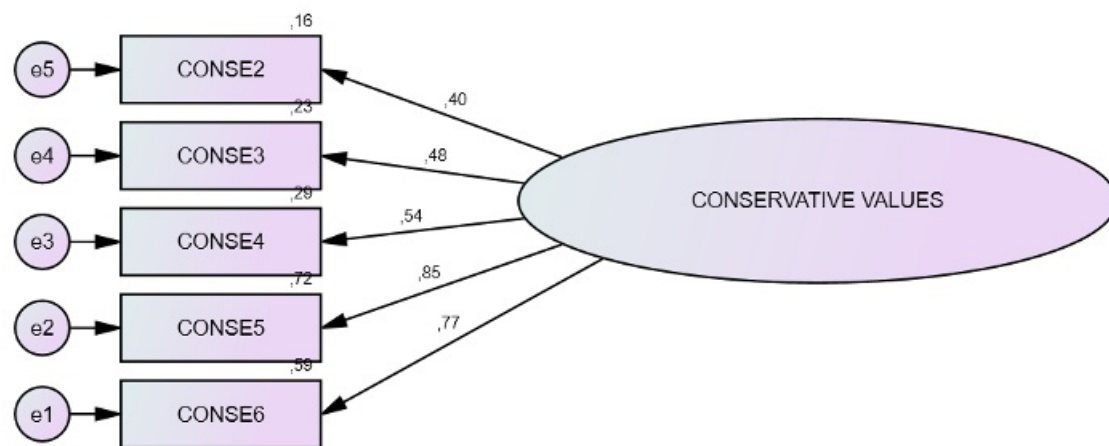


Figure 3.

Next, bivariate correlation (Kendall's Tau correlation analysis) was developed to examine the relationships between the relevant variables. The means, standard deviations, and correlations of the study's measurements are displayed in Table 1.

Table 1. Cross-Scale Correlations for the study variables (n = 266)

	Mean	SD	1	2	3	4	5	6	7
Variables									
1. Political Positioning	2.79	0.67	—						
2. Conservative Values	4.06	0.96	.475**	—					
3. Religiosity	3.05	0.97	.319**	.467**	—				
4. GSP	2.88	0.88	-.217**	-.431**	-.487**	—			
5. ST	3.22	0.84	-.323**	-.462**	-.543**	.754**	—		
6. CC	2.98	.81	-.259**	-.443**	-.427**	.741**	.778**	—	

Note. GSP = Gender Spectrum Acceptance, ST = Social Tolerance, CC = Comfort and Contact

** $p < .01$, * $p < .05$

There were significant relationships between all predictor variables. T-KAB's three factors strongly correlated with each other, which is logical due to subscales measuring the same overall construct.

Results

Multiple Regression Analysis

Using multiple linear regression analysis, the relationship between the predictor variables and T-KAB's three factors, namely gender spectrum acceptance, attitudes toward interacting with TGNB individuals, and social tolerance (ideology on the inherent value of TGNB people, including their rights) was examined. All assumptions for multiple linear regression analyses were satisfied, according to Osborne and Waters (2002). The variance inflation factor (VIF) values were below 5, showing a lack of multicollinearity across the predictor variables.

Predictors of Gender Spectrum Acceptance

Standard multiple regression analysis was conducted with Gender spectrum acceptance as the dependent variable. The assumption of independent errors was met (Durbin-Watson value = 1.42). The results showed (see Table 2) that the model was statistically significant ($R^2=.291$, $F_{(3,262)} = 35.84$, $p<.001$). Religiosity ($B = -.369$, $p<.001$), and conservative values ($B = -.273$, $p<.001$) contributed significantly to the model. Together these predictors accounted for almost 30% of the variance in Gender spectrum acceptance. The semi-partial correlation between religiosity and Gender spectrum acceptance (but controlling for conservative values) was $sr = -0.323$. Accordingly, the semi-partial correlation between conservative values and Gender spectrum acceptance (but controlling for religiosity) was $sr = -0.230$.

Table 2. Regression analysis for variables predicting Transgender Knowledge, Attitudes and Beliefs ($N=266$)

	<i>b</i>	SE <i>b</i>	β	95%CI	VIF
Political positioning	0.39	.079	.030	-.116, .194	1.31
Religiosity	-.337	.054	-.369	-.444, -.231	1.30
Conservative values	-.251	.059	-.273	-.367, -.135	1.50

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

Predictors of Social Tolerance

Standard multiple regression analysis was conducted with social tolerance as the dependent variable. The assumption of independent errors was met (Durbin-Watson value = 1.64). The results showed (see Table 3) that the model was statistically significant ($R^2=.356$, $F_{(3,262)} = 48.20$, $p<.001$). Religiosity ($B = -.408$, $p<.001$), and conservative values ($B = -.232$, $p<.001$) contributed significantly to the model. The semi-partial correlation between religiosity and social tolerance

(but controlling for conservative values) was $sr = -0.370$. Accordingly, the semi-partial correlation between conservative values and Gender spectrum acceptance (but controlling for religiosity) was $sr = -0.235$.

Table 3. Regression analysis for variables predicting Social Tolerance ($N=266$)

	<i>b</i>	<i>SE b</i>	β	95%CI	VIF
Political positioning	-.104	.071	-.083	-.244, .037	1.31
Religiosity	-.355	.049	-.408	-.451, -.258	1.30
Conservative values	-.203	.053	-.232	-.308, -.098	1.50

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

Predictors of attitudes toward interacting with TGNB individuals

Standard multiple regression analysis was conducted with the comfort and contact component as the dependent variable. The assumption of independent errors was met (Durbin-Watson value = 1.78). The results showed (see Table 4) that the model was statistically significant ($R^2 = .259$, $F_{(3,262)} = 30.52$, $p < .001$). Religiosity ($B = -.278$, $p < .001$), and conservative values ($B = -.300$, $p < .001$) contributed significantly to the model. The semi-partial correlation between religiosity and attitudes toward interacting with TGNB individuals (but controlling for conservative values) was $sr = -0.249$. Accordingly, the semi-partial correlation between conservative values and attitudes toward interacting with TGNB individuals (but controlling for religiosity) was $sr = -0.275$.

Table 4. Regression analysis for variables predicting Social Tolerance ($N=266$)

	<i>b</i>	<i>SE b</i>	β	95%CI	VIF
Political positioning	-.033	.074	-.027	-.179, .112	1.31
Religiosity	-.234	.051	-.278	-.334, -.133	1.30
Conservative values	-.254	.055	-.300	-.363, -.145	1.50

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

Conservative Values Moderation Effect on the Relationship between Religiosity and T-KAB's Factors

Next, we examined whether conservative values affect the strength of the relationship between religiosity and T-KAB's three factors. For this purpose, a series of moderation models were performed. The results demonstrate a significant negative moderating effect of conservative values on the relationship between religiosity and social tolerance ($b = -0.096$, t

= -2.525, $p = .012$).

As shown in Figure 4, the influence of conservative values strengthens the negative relationship between religiosity and social tolerance. Thus, for participants who reported higher-than-average levels of conservative values, the relationship between religiosity and social tolerance was stronger ($b = -.43$, S.E. = .05, 95%CI [-.54, -.32], $p < .001$) when compared to average or lower levels of conservative values ($b = -.34$, S.E. = .04, 95%CI [-.44, -.24], $p < .001$; $b = -.25$, S.E. = .06, 95%CI [-.38, -.12], $p < .001$, respectively). These results show the moderating effect of conservative values. Thus, our hypothesis that conservative values would moderate the relationship between religiosity and social tolerance was supported, such that the negative relationship between religiosity and social tolerance was stronger among participants scoring higher, but not lower, on conservative values.

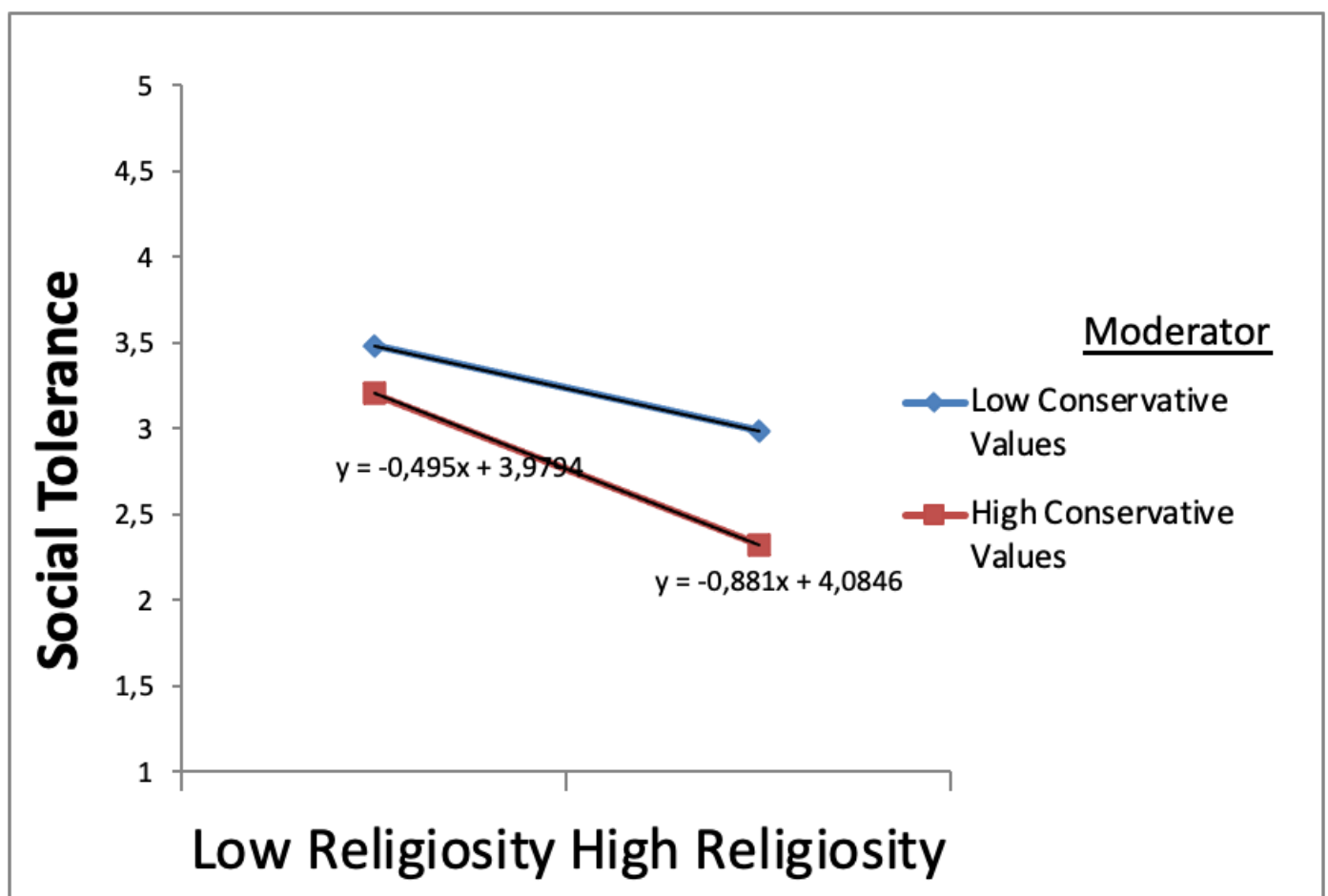


Figure 4. Moderation effect: The relationship between religiosity and social tolerance at lower (-1 SD) and higher (+1 SD) levels of conservative values

However, the moderating effect of conservative values on the relationship between religiosity and gender spectrum acceptance and between religiosity and attitudes toward interacting with TGNB individuals was insignificant ($b = -.003$, $t = -0.090$, $p = 0.039$; $b = -0.016$, $t = -0.408$, $p = .683$; respectively).

Political Positioning Moderation Effect of on the Relationship between Religiosity and T-KAB's factors

We examined whether political positioning affects the strength of the relationship between religiosity and T-KAB's three factors. For this purpose, a series of moderation models were performed. The results demonstrate a significant negative moderating impact of political positioning on the relationship between religiosity and social tolerance (i.e., ideology on the inherent value of TGNB people, including their rights; $b = -0.146$, $t = -2.739$, $p = .006$). As shown in Figure 5, political positioning strengthens the negative relationship between religiosity and social tolerance.

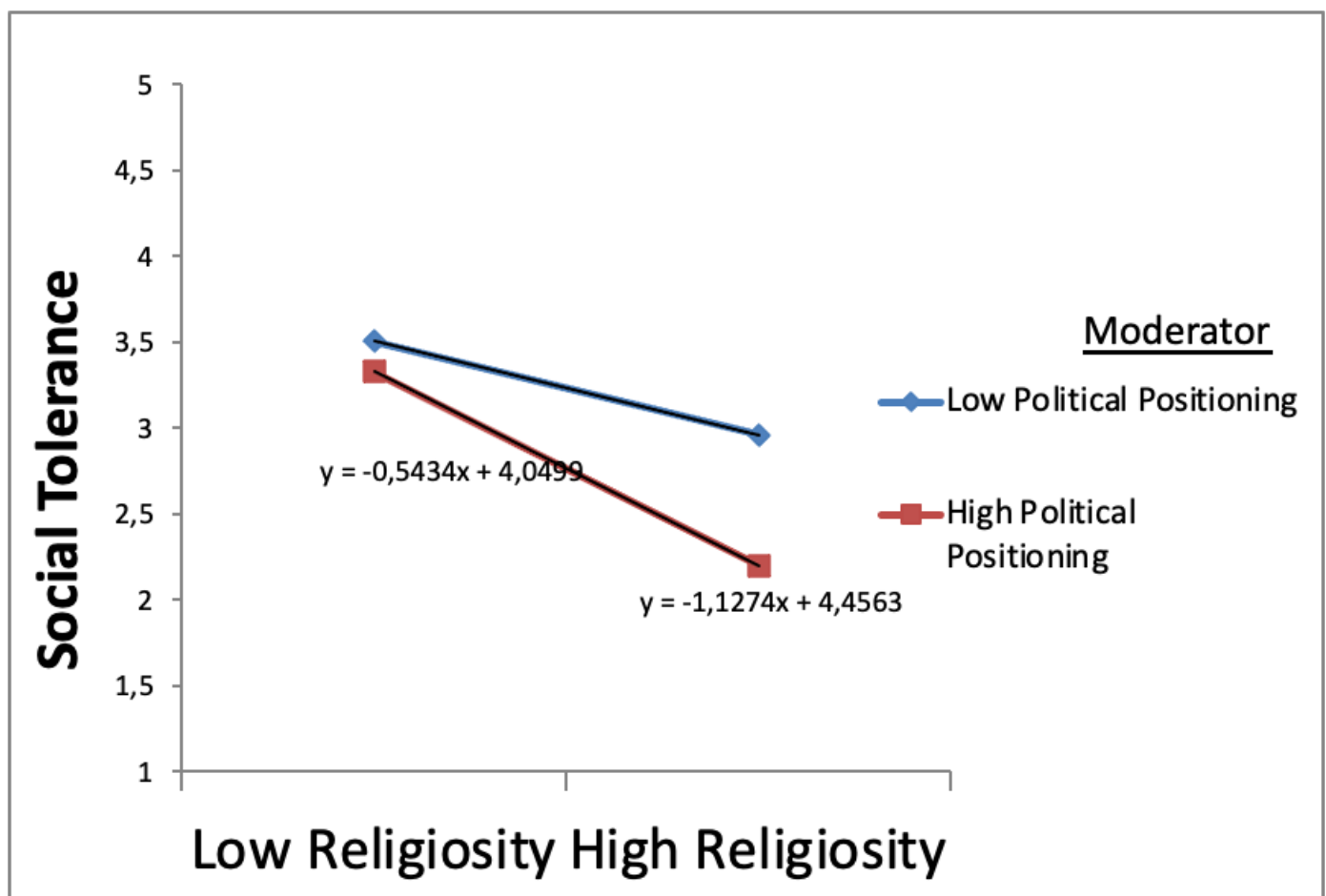


Figure 5. Moderation effect: The relationship between religiosity and social tolerance at lower (-1 SD) and higher (+1 SD) levels of Political Positioning

Thus, for participants who reported far-right political positioning -than-center or far-left political positioning, the negative relationship between religiosity and social tolerance was stronger ($b = -.51$, S.E. $= .05$, 95%CI $[-.62, -.40]$, $p < .001$) when compared to center or far-left political positioning ($b = -.41$, S.E. $= .04$, 95%CI $[-.50, -.32]$, $p < .001$; $b = -.31$, S.E. $= .06$, 95%CI $[-.43, -.20]$, $p < .001$, respectively). These results show the moderating effect of right-wing political orientation. Hence, our hypothesis that far-right political positioning would moderate the relationship between religiosity and social tolerance was supported, such that the negative relationship between religiosity and social tolerance was stronger among

those who typically favor socially traditional ideas. However, the moderating effect of political positioning on the relationship between religiosity and gender spectrum acceptance and between religiosity and attitudes toward interacting with TGNB individuals was insignificant ($b = .081$, $t = 1.366$, $p = 0.172$; $b = -0.033$, $t = -0.596$, $p = .551$; respectively).

Discussion

Individuals who identify as TGNB endure prejudice and discrimination. Nearly 40% of research participants reported encountering discrimination and harassment due to their gender identity, even in the least conservative nations like Sweden or Finland (Donaldson et al., 2017). Transnegativity stems from widespread ignorance and prejudice against people who do not match the prevalent socially prescribed gender categories and irrational fear and hate of trans individuals (Fresan et al., 2022).

Thus this study focused on the levels of social tolerance, acceptance across the gender spectrum, and attitudes toward interacting with TGNB individuals (T-KAB scale; Clark & Hughto, 2020) in a cultural context (Greece) with limited tolerance for non-normative sexual relationships and sexual minorities (Grigoropoulos, 2021a, b, 2020, 2019). In particular, this study examined how religiosity compares to more general socio-ideological individual differences in predicting acceptance of the gender spectrum, social tolerance, and attitudes toward interacting with TGNB individuals and whether the influence of religiosity on knowledge, attitudes, and social tolerance of TGNB individuals would be moderated by right-wing political positioning and adherence to conservative values. To the researcher's knowledge, there needs to be more research looking at whether these factors may vary in their effects on TGNB's social tolerance, attitudes, and knowledge; this study aimed to highlight and contribute to filling that gap in the literature.

Given the strong associations between right-wing political orientation and conservative values with religiosity (Duriez & Van Hiel, 2002), examining each factor's distinct contribution within a unified design seemed especially helpful. Accordingly, we hypothesized that higher scores on religiosity and greater adherence to social conventionalism (i.e., conservative values and right-wing political orientation) would predict lower scores on the three T-KAB factors: levels of social tolerance, acceptance across the gender spectrum, and attitudes toward interacting with TGNB individuals.

This study's findings partially support context-related religiosity and social conventionalism's role in determining participants' knowledge, attitudes, and social tolerance toward TGNB people. In the present study, religiosity and adherence to conservative values predicted participants' lower tolerance levels, knowledge levels, and negative attitudes toward interacting with TGNB individuals. This study's results also show that the depth of one's religiosity appears to matter above and beyond one's conservative values. However, our assumption that right-wing political positioning would also be a significant predictor was not supported. Thus people scoring lower on the three T-KAB factors seem to be characterized by high religiosity and conservative-based values rather than right-wing political tendency.

Despite the current inquiry into the legitimacy of bias against TGNB people, it is still pervasive in some institutions (i.e., religious institutions) and ideological systems. Studies on religiosity have shown that religiosity is often predictive of TGNB prejudice (Kanamori & Xu, 2022) and that religiosity may depict overall conservatism (Hone et al., 2021). Religious beliefs

can generally increase prejudice against people who violate religious principles (Jackson & Hunsberger, 1999). The conservative path can be explained by acknowledging that the church frequently supports traditional messages. Many religious people hold conservative values (Guth et al., 2006; Kelly & Morgan, 2008). Thus, religious institutions promote specific values that shape attitudes and propagate anti-trans attitudes. This study's results coincide with recent theorizing asserting that "an important but underappreciated function of religion is to provide ideological justification for the existing social order, and to establish the perception that prevailing institutions and arrangements are legitimate and just, and therefore worth obeying and preserving" (Jost et al., 2014). However, this viewpoint perpetuates stigmatizing those with gender identity and roles outside of "normativity's" standards. In this manner, prevailing religious and conservative socio-cultural values functioning as a hegemonic social system may discredit any non-traditional TGNB person. The non-conforming TGNB person may be considered deviant whenever the sexual-normativity paradigm is violated (Webb et al., 2017).

Moreover, following the Dual Process Model (Duckitt, 2001), this study provides evidence that religiosity's connection with TGNB lower social tolerance relates to conservative values and right-wing political tendencies. Thus, when some of the 'active ingredients' of social conventionalism are considered, they significantly moderate religion's distinctive role in explaining trans-negativity. Specifically, this study provides evidence that religiosity and decreased social tolerance toward TGNB individuals were more strongly associated with participants who scored higher on conservative values and with participants who reported far-right political positioning. However, this does not apply to acceptance levels across the gender spectrum or attitudes toward interacting with TGNB individuals.

The current study elucidates previous findings providing evidence that TGNB opposition is directed explicitly to the rights of TGNB people (social tolerance) as they seem to evoke more significant opposition among the more conservative participants.

Conservatives may oppose TGNB individuals because they may be perceived as defying religious beliefs, which constitute essential elements that we anticipate conservatives to feel negative about (Peterson & Zubriggen, 2010). Notably, the moderating role of conservative values and right-wing political tendency on the association between religiosity and social tolerance toward TGNB individuals may indicate that participants' TGNB social intolerance (i.e., the inherent value of TGNB people, including TGNB rights) results also from participants' underlying conservative ideology. This finding coincides with previous research showing that conservatism may be seen as a constant feature in understanding the character of all types of biased views toward minority groups (Altemeyer, 1981; Duckitt, 2006; Osborne et al., 2017). The current study underlines that religiosity and socially conservative ideologies may underpin prejudice against those who do not conform to cis-heteronormativity.

A potential explanation for the significant predictive power of religiosity and conservative values in our model and the absent predictive power of right-wing political tendency is that a single-item political tendency question captures participants' ideas about their political positioning. This does not always consider other types of political beliefs (such as social or economic attitudes; Hatch et al., 2022). For instance, a person may favor liberal social policies yet embrace conservative economic principles (Hatch et al., 2022). According to Pew Research Center (2014, 2021), various political

typologies exist. Within these typologies are variances between the liberal and conservative groupings, but there are parallels even on what appear to be essential concerns. For instance, the progressive left (i.e., liberals who typically support liberal policies) and establishment liberals (i.e., liberals who support liberal policies but may not hold the same strong opinions) may differ on topics like racial discrimination (Pew Research Center, 2014, 2021). The aforementioned arguments may explain why right-wing political tendency as a single variable did not predict lower scores on the three T-KAB factors. However, these results also elucidate the contradictory findings around the single-item political orientation question.

Theoretical Contribution

Because there is currently little to no research evaluating whether religiosity, conservative values, and right-wing political tendencies may vary in their impacts on TGNB levels of knowledge, social tolerance, and attitudes toward interacting with TGNB individuals (T-KAB scale; Clark & Hughto, 2020), this study contributes to filling that gap in the literature. Regarding religion and values, several studies have shown a strong link between religiosity and conservative values of conformity and tradition (Saroglou et al., 2004). Religiosity still identifies with conservative ideology (Kelly & Morgan, 2008; Layman & Carmines, 1997). Thus, the levels of social tolerance, acceptance across the gender spectrum, and attitudes toward interacting with TGNB individuals should be considered by those working to change the attitude toward TGNB people. Those interested in TGNB issues are probably not conservative.

The T-KAB has an advantage over other scales: it assesses the knowledge, comfort and contact, and social tolerance of TGNB individuals. That allows for a better understanding of the causes of negative behaviors toward TGNB people, which can be helpful in the development of intervention strategies and public policy intended to lessen transphobia and ensure inclusion in various contexts. By concentrating on the levels of social tolerance, acceptance across the gender spectrum, and attitudes toward interacting with TGNB individuals rather than only TGNB-specific attitudes, this study's findings can lead to initiatives to reduce TGNB discrimination. Thus, such interventions may benefit from focusing on highly religious conservative and far-right politically orientated individuals who may exhibit more significant anti-trans bias. The identification of levels of tolerance or unfavorable attitudes toward transgender people in several cultures, as well as the provision of targeted information and awareness interventions, could all be aided by the translation and validation of the T-KAB scale into other languages. Identifying which subgroups would most benefit from culturally appropriate, transgender-specific information, awareness campaigns, or interventions to improve transgender acceptance and foster inclusive environments is most significant.

This study's findings show that individuals with higher levels of trans-negativity, such as highly religious, conservative, and right-wing politically oriented individuals, are ideal candidates for interventions to decrease trans discrimination. Prejudices, ignorance, and conservative views of the cis-normative system are all fundamentally linked to anti-TGNB attitudes and discriminatory acts toward trans individuals (Clark & Hughto, 2020). Tracking changes in the levels of social tolerance, acceptance across the gender spectrum, and attitudes toward interacting with TGNB individuals over time may also help to evaluate the value or efficacy of particular educational initiatives or awareness campaigns.

Limitations

Although the present study offered new insight into the variables affecting knowledge, social tolerance, and comfort toward TGNB people, there were significant limitations. First, since only individuals interested in topics about TGNB persons and gender diversity may have answered the survey, there may have been bias in the results due to the lack of a randomized sample.

The sample type may impact TGNB prejudice, with young student samples showing more favorable opinions than non-student samples. Education has been linked to reduced trans prejudice (Norton & Herek, 2013) and support for trans rights (Flores et al., 2016). Other researchers contend that there may be disparities between student samples and non-student samples, including changes in the directionality of the effects as well as statistical significance (Peterson, 2001). Students tend to have less rigid views than older people, possibly related to developmental differences (Sears, 1986). Even though Hanel and Vione's (2016) research reveals that student samples are just as diverse as representative samples, further research needs to be done to examine these indicators in groups of non-students. Similarly, the sample's feminization could have had an impact on this study's results.

As a result, our findings should be evaluated cautiously, and validity and reliability investigations of the Greek T-KAB should continue. Future research should study the T-KAB in populations with a broader range of sociodemographic traits (such as age, religion, ethnicity, and academic achievement).

The present study's reliance on self-report methods and the risk of common method bias is a further limitation. However, Conway and Lance (2010) argued that one option to reduce common method bias was to employ measures with evidence of construct validity. Thus we contend that this bias is of low significance for this study because we used measures with this evidence. Understanding how conservative ideologies impact trans-negativity in the broader public requires further research, including experimental studies.

Despite its shortcomings, this research is a significant step toward gaining a more comprehensive knowledge of the psychological foundations of trans-negativity.

Conclusion

TGNB people might pose a threat to traditional views on gender and sexuality. This study's novel findings suggest that a broader definition of conservatism encompassing conservative values and right-wing political orientation may be useful in predicting trans-negativity. Accordingly, this study's results show that more religious and socially conservative participants perceive TGNB individuals as violating religious or conservative values, and they may be more likely to exhibit lower levels of social tolerance, lower acceptance across the gender spectrum, and negative attitudes toward interacting with TGNB individuals. Finally, in the battle over equality, other problems like access to parenting and parental rights, including adoption, acquire center stage.

Availability of data

Publicly accessible data in a repository that publishes datasets <https://doi.org/10.6084/m9.figshare.23608275>

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