# Investigating the Moderating Role of Positive Intergroup Contact on the Association between Authoritarianism and Homophobia among Heterosexual Young Adults

Heteroseksüel Genç Yetişkinler Arasında Otoriterlik ve Homofobi Arasındaki İlişkide Gruplar Arası Pozitif Temasın Düzenleyici Rolünün İncelenmesi

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## Abstract

Authoritarian personality traits are associated with compliance and obedience to prevailing social norms and values. In contexts where the political climate fuels homophobia, people with authoritarian personality traits display more homophobic attitudes and behaviors. On the other hand, positive intergroup contact can reduce problems between groups. This positive intergroup contact, which emphasizes similarities by weakening baseless information about the outgroup, has long been used to reduce intergroup conflicts. In a heterosexual sample, whether positive intergroup contact will have a moderating role in the relationship between authoritarianism and homophobia is an open question. To answer this question, 241 young adults ( $M_{age} = 22.0$ , SD = 2.04; 59.3% female, 40.7% male) from 47 different cities of Türkiye were reached. Participants completed the right-wing authoritarianism scale, the social contact form with sexual minorities, and the Hudson & Ricketts homophobia scale. In parallel with the hypotheses, the findings show that authoritarian personality score positively predicted homophobia ( $\beta = .49, SE = .05, z =$ 10.07, p < .001), while positive intergroup contact negatively predicted homophobia ( $\beta$  = -.66, *SE* = .08, *z* = -8.67, *p* < .001). However, contrary to the hypothesis, no moderating role of positive intergroup contact in the association between authoritarianism and homophobia was observed (ß = -.03, SE = .05, z = -.53 p = .593). Simple slope analyzes showed that authoritarianism positively predicted homophobia at both high and low levels of positive intergroup contact. The findings are discussed in the context of intergroup contact theory.

**Keywords:** Authoritarianism, Homophobia, Intergroup Contact, LGBT, Young Adults.

#### Öz

Yetkeci kişilik özellikleri hâkim toplumsal norm ve değerlere uyum ve itaat ile ilişkilidir. Politik iklimin homofobiyi körüklediği bağlamlarda yetkeci kişilik özelliği taşıyan kişiler daha fazla homofobik tutum ve davranış sergiler. Öte yandan olumlu gruplar arası temas, gruplar arasındaki problemleri azaltabilir. Dış gruba yönelik temelsiz bilgileri zayıflatarak benzerlikleri vurgulayan olumlu sosyal temas, uzun süredir gruplar arası çatışmaları azaltmak için kullanılmaktadır. Heteroseksüel bir örneklemde, yetkeciliğin homofobi ile ilişkisinde gruplar arası olumlu temasın düzenleyici bir rolünün olup olmayacağı ise cevap bekleyen bir sorudur. Bu soruyu yanıtlamak için bu araştırmada Türkiye'nin 47 farklı şehrinden 241 genç yetişkine (Ortyaş = 22.0, SS. = 2.04; %59.3 kadın, %40.7 erkek) erişilmiştir. Katılımcılar sağ kanat yetkeciliği ölçeği, cinsel azınlıklarla sosyal temas formu ve Hudson ve Ricketts homofobi ölçeğini doldurmuşlardır. Hipotezler ile paralel olarak bulgular otoriteryen kişilik puaninin homofobiyi pozitif yönde ( $\beta$  = .49, SH. = .05, z = 10.07, p < .001), olumlu gruplar arası temasın ise homofobiyi negatif yönde ( $\beta$  = -.66, SH. = .08, z = -8.67, p < .001) yordadığı görülmüştür. Ancak hipotezin aksine, olumlu gruplar arası temasın yetkecilik ve homofobi arasındaki ilişkide düzenleyici bir rolü gözlenmemiştir (β = -.03, SH = .05, z = -.53 p = .593). Basit eğim analizleri hem yüksek hem de düşük olumlu gruplar arası temas düzeyinde yetkeciliğin homofobiyi pozitif yönde yordadığını göstermiştir. Bulgular, gruplar arası temas kuramı bağlamında tartışılmıştır.

Anahtar Kelimeler: Otoriterlik, Homofobi, Gruplar Arası Temas, LGBT, Genç Yetişkinler.

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# Investigating the Moderating Role of Positive Intergroup Contact on the Association between Authoritarianism and Homophobia among Heterosexual Young Adults

Topics that examine intergroup processes such as stereotype, prejudice, discrimination and minority influence are frequently included in social psychology. Social psychologists focus on these issues as they affect attitudes towards the outgroup in the social process. Especially in conservative communities, homosexuals are one of the common outgroups (Abrams & Hogg, 2000; Ellemers et al., 1999). These people face various discrimination and prejudice both in the past and today (Garnets & Kimmel, 2003; Sakallı & Uğurlu, 2002; Sakallı-Uğurlu, 2006). When the American Psychiatric Association (APA) removed homosexuality from the category of mental disorders in 1973, some heterosexuals expressed negative attitudes towards homosexuals with cultural or religious references. In this process, social psychologists also focused on heterosexual communities to understand and describe attitudes and behaviors towards homosexuals and to create intervention programs (Garnets & Kimmel, 2003). In addition to cultural and environmental factors, some social psychologists have also focused on which personality traits may be associated with negative attitudes towards homosexuals (Kite, 1984). In this study, we aimed to investigate the moderating role of positive intergroup contact on the association between authoritarianism and homophobia, which is observed in different levels of society (Yalçın, 2019) and which indicates negative affect, attitudes and behaviors towards homosexual individuals because of just being homosexual (Budak, 2019; Herek, 1988).

It is known that attitudes towards homosexuals are more negative compared to other communities of the society although there has been a decrease recently compared to previous periods (Güney et al., 2004). Even though it is fed by social values and norms, homophobia harms both society and individuals physically, cognitively and emotionally (Yalçın, 2019). For instance, D'Augelli (2002) reported that homosexuals are frequently exposed to physical violence, verbal abuse and domestic violence. Such situations cause people in the sexual minority group to hide their identities (Jordan & Deluty, 1998; Öztürk, 2011; Yalçınoğlu & Önal, 2014) and not be able to live their identities freely (Dürüst & Cağlar, 2015; Jordan & Deluty, 1998). In addition, homosexuals are excluded and discriminated against by the society for these reasons (Öztürk, 2011; Walters & Hayes, 1998). These problems may lead to bigger social problems and disrupt societal harmony. Moreover, exposure to discrimination and exclusion problems may pave the way for depression and psychological problems in homosexuals (D'Augelli, 2002; Heiden-Rootes et al., 2020; Okci, 2017; Wang et al., 2018; Yalçınoğlu & Önal, 2014). These social exclusions and psychological outcomes sometimes pave the way for suicide attempts (Eskin et al., 2005; Remafedi, 2002; Wang et al., 2018; Yalçınoğlu & Önal, 2014). For instance, D'Augelli (2002) stated that more than one-third of the sexual minority group he focused on had a history of suicide attempts at least once.

Social psychological studies have focused on the relationships between homophobia and various variables. For instance, Walch et al. (2010) found a positive relationship between age and homophobia. It is observed that homophobia decreases as the education level increases (Detenber et al., 2013; Herek and Glunt, 1993; Obeid et al., 2020; Walch et al., 2010). For instance, Lambert et al. (2006) showed that grade level has a positive effect on attitudes towards individuals with different sexual orientations and that upper-class students have open ideas towards homosexuals compared to lower-class students. In the same study, it was found that participants with higher grade levels had more positive views on different sexual orientations and these people stated that they wanted to interact with homosexuals more than those in the lower grade levels.

Religiosity is another variable associated with homophobia. It is observed that the level of religiosity was positively associated with homophobia (Altemeyer and Hunsberger, 1992; Detenber et al., 2013; Herek, 1988; Mahfir and Parameswari, 2020; Nagoshi et al., 2008). For instance, Obeid et al.

(2020) revealed that as the score for feeling religious increases, the homophobia score also increases among Lebanese Muslims. In addition, Çetiner and Assche (2021) revealed that people who define themselves as Muslims in the sample of Türkiye had higher homophobia scores than people who do not have religious views. On the other hand, it is known that gender may also have a significant effect on homophobia, although it is not observed in some studies (e.g., Mahfir & Parameswari, 2020). In this context, it has been observed that men exhibit higher homophobic attitudes and behaviors compared to women (Çırakoğlu, 2006; Kite, 1984; Metin-Orta and Metin-Camgöz, 2020; Nagoshi et al., 2008; Uğurlu, 2013; Walch et al., 2010). In fact, Kite and Whitley's (1996) meta-analysis showed that men had more negative attitudes towards homosexuals than women. It is known that gender roles are also associated with homophobia (Nagoshi et al., 2008; Reyes et al., 2019). Furthermore, adopting gender roles that exclude homosexuals is associated with higher level of homophobia (Black & Stevenson, 1984).

On the other hand, the relationship of homophobia with variables such as personality traits has been less studied compared to other variables. Although a positive relationship is found between social dominance orientation as a personality trait and homophobia (Cetiner & Assche, 2021; Lippa & Arad, 1999; O'Brien et al., 2013; Serbes, 2017; Whitley & Lee, 2000), another personality trait that may be associated with homophobia is authoritarianism. Authoritarians are often followers of government members and traditional religious leaders in their community. Altemeyer's concept of authoritarianism, which is a socio-political structure, includes adopting the established values, thoughts and traditions in the society, being willing to accept the rules and behaviors of political or cultural powers and submitting, and displaying aggressive behaviors and attitudes approved by these powers as a personality trait (Altemeyer & Hunsberger, 1992). Authoritarian people think that homosexuality is perversion and sin (Alterneyer, 1996). These people describe themselves as more moral than those who are outgroup members. This moral virtue gives them legitimacy to convey negative attitudes and behaviors towards homosexuals. Since those with high levels of authoritarianism are strictly attached to the societal family structure and traditions, they have a negative attitude towards homosexuals who may harm customs and social values (Herek, 1988; Whitley & Lee, 2000). This idea, which points to the positive relationship between authoritarianism and homophobia, has been frequently studied (e.g., Altemeyer & Hunsberger, 1992; Lippa & Arad, 1999; Mahfir and Parameswari, 2020; Nagoshi et al., 2008; O'Brien et al., 2013; Serbes, 2017; Whitley & Lee, 2000). For instance, Çetiner and Assche (2021) showed that authoritarianism was positively related to homophobia in both Türkiye and Belgium samples. Haddock et al. (1993) also found that people with high levels of authoritarianism have more negative attitudes towards homosexuals. Researchers emphasized that it is important to increase social interaction with homosexual individuals and to reduce perceived differences between groups in order to change positively the attitudes of people with high levels of authoritarianism towards homosexuals (Haddock et al., 1993).

The intergroup contact paradigm has been used by social psychologists for a long time to increase the cohesion of groups with problems and conflicts and to reduce problems. Intergroup contact hypothesis proposed by Allport (1954) may reduce outgroup prejudice and conflicts under certain conditions (common goals, intergroup cooperation, equal group status and authority support). Pettigrew and Tropp's (2006, 2008) meta-analyses also supported this idea. In parallel with the implications of the intergroup contact hypothesis conceptualized by Pettigrew (1998) after Allport, many studies have tested whether contact with homosexuals differentiates homophobia (e.g., Çırakoğlu, 2006; Herek & Capitanio, 1996; Metin-Orta & Metin-Camgöz, 2020; Obeid et al., 2020; Serbes, 2017; Şah, 2012). For instance, experience of contact with homosexuals is associated with lower negative attitudes in people who state that they are more religious (Herek & Glunt, 1993). Anderssen's (2002) longitudinal study showed that increased contact with homosexuals also increased positive attitudes towards homosexuals.

Sakallı and Uğurlu (2002), on the other hand, found that contact with a homosexual person causes a decrease in negative attitudes towards these people. In parallel with this finding, Çırakoğlu (2006) showed that heterosexuals who come into contact with homosexuals have more positive attitudes towards them. Uğurlu (2013), on the other hand, found that participants who do not have homosexual friends approach homosexuality more prejudiced than participants who have homosexual friends. In an experimental study conducted by Sakallı and Uğurlu (2003), it was examined whether contact with a homosexual woman creates a change in attitudes towards homosexuals. According to the findings, it was seen that the contact with a homosexual woman caused a low level of difference in the negative attitudes of the participants. However, it was noted that this contact was not at a level enough to display a positive attitude. Herek (1984) also emphasizes that in order for related attitudes to change positively, the contact should continue positively for a while.

In recent years, volition for contact with outgroup has been found to be a vital factor for the effectiveness of intergroup contact (Bagci et al., 2021). This indicates that contact with the outgroup may not always be voluntary, and in some cases, people may be in compulsory contact with the members of the outgroup. This obligation theoretically precludes establishing a direct association between authoritarianism and contact or between contact and homophobia. In other words, the inability to establish a direct relationship between the variables legitimizes the moderator models instead of the mediator ones. In addition, the moderating role of positive intergroup contact and its effectiveness is frequently discussed in the literature. Studies show its moderating role on various social psychological factors and attitudes and behaviors towards outgroups (e.g., Vezzali et al., 2021). High positive contact may reduce the effect of authoritarianism, which indicates negative attitudes towards the outgroup, on homophobia, while low positive contact may increase the likelihood of this homophobia being viewed as legitimate. Based on this, we thought that positive social contact might have a moderating role in the current study.

At this point, does contact predict homophobia for people with high authoritarian personality traits? Moreover, does homophobia differ among people with different levels of authoritarian personality, depending on the score of positive intergroup contact? To answer these questions, in the light of the above findings, this study focused on the moderating role of positive intergroup contact on the association between authoritarianism and homophobia. Our hypotheses are as follows:

H1. Authoritarianism will positively predict homophobia.

H2. Positive intergroup contact will negatively predict homophobia.

H3. There will be the moderating role of the positive intergroup contact on the association between authoritarianism and homophobia.

As stated above, intergroup contact is a vital issue to focus on as it can reduce negative attitudes and behaviors towards sexual minorities. Although it is a notable social problem that needs to be addressed, the number of studies focusing on sexual minorities in Türkiye is very few. Furthermore, there are some limitations in these limited studies. For instance, the samples are mostly university students who continue their education in the provinces of Istanbul and Ankara. The political stances of the relevant university students are more liberal than the Turkish sample (Inglehart et al., 2014). This makes it difficult to interpret the findings for the Turkish sample. Unlike other studies, we focused on university students who continue their education in various regions of Türkiye. Thus, we try to increase findings' external validity. Moreover, when paying attention to risky situations of this sexual minority, it is crucial to determine the variables that is related with homophobia. Therefore, we think that the findings of this study will make a unique contribution to the field of social psychology. Moreover, scientific knowledge about stigmatized groups such as homosexuals (Dijker & Koomen, 2007) is not only used for etiology, but is also of essential for social intervention programs and social policies. In this context, employees working in the field of psychology in higher-level social, cultural and various ethnic groups such as universities need to know the behavior and attitudes of individuals who are studying, towards groups stigmatized by society. On the other hand, before intervening in large-scale social projects, politicians should adapt the scientific knowledge obtained to the problems of groups stigmatized by society (Çırakoğlu, 2006). In this respect, we think that our research can pave the way for the development of intervention programs to reduce homophobia levels among society.

# Method

# **Participants**

Two hundred and forty-one heterosexual university students, 143 female (59.3%) and 98 male (40.7%), aged between 18-36 (Mean = 22.0, S. = 2.04) continuing their education in various regions of Türkiye participated voluntarily in this study. Thirty-six participants (14.9%) were university freshmen, 40 were university sophomores (16.6%), 64 were third-year students (26.6%), 93 were fourth-year students (38.6%), and 7 were others (2.9%). Most of the participants (n = 127, 52.7%) consider themselves to be in the middle socioeconomic level, and they lived 47 different cities (mainly Erzurum 25.1%, Samsun 14.6%, Istanbul 11.7%, and Ankara 9.6%) among Türkiye. Heterosexual volunteers over the age of 18 who have spent most of their life in Turkey, who can read and write, participated in the study. Participants who spent most of their lives in a country other than Turkey and who were not heterosexual (e.g., homosexual, bisexual, etc.) were excluded from the study. In addition, participants who stated that they had never come into contact with LGBT individuals in their daily lives were not included in the study.

## Measures

## **Demographic Information Form**

Information about the variables of gender, sexual orientation, age, department, education level and socioeconomic level of the participants were collected with the demographic information form created by the researchers.

## Hudson and Ricketts Homophobia Scale (HRHS)

We used Hudson and Ricketts homophobia scale (Hudson & Ricketts, 1980) was adapted to Turkish by Sakallı & Uğurlu (2002) to measure participants' homophobia scores. The scale was developed to assess homophobic attitudes of heterosexual individuals towards homosexuals, and it consists of 6-point Likert type (1 = I strongly disagree, 6 = I strongly agree) 24-items (e.g., I feel uncomfortable being in a homosexual group). The scale consists of three factors and the average score of the scale is considered as the homophobia score. Cronbach's  $\alpha$  of the scale was .90 in the original study and was .94 in the adaptation study. Cronbach's  $\alpha$  was found as .93 in the current study. High scores on the scale indicate high homophobic attitudes.

## Right-Wing Authoritarianism Scale (RWAS)

We used right-wing authoritarianism scale (Altemeyer, 1981) was adapted to Turkish by Güldü (2011) to measure participants' authoritarian personality traits. The scale consists of 9-point Likert type (1 = I strongly disagree, 9 = I strongly agree) 18-items and one factor (e.g., If we do not destroy the unconventional values that eat away at our beliefs and morals, one day our country will collapse). Cronbach's  $\alpha$  was .90 in the original study and was .85 in the adaptation study. Cronbach's  $\alpha$  was found as .79 in the current study. A high score on the scale indicates a high authoritarian personality trait.

## Social Contact with Sexual Minorities Form (CSMF)

We used the social contact form developed by Çoksan (2021, Cronbach's  $\alpha = .70$ ), adapted to the context of the current study which is intergroup contact between heterosexual people and sexual minorities like lesbian, gay, bisexual or transgender (LGBT). The scale consists of 5-point Likert type (from 1 to 5) 4 questions. Two questions focus on the quality of the contact (e.g., How positive is your communication with gay, bisexual or transgender people in your daily life?), and the others cover its quantity (e.g., How often in your daily life do you come into contact with gay, bisexual or transgender people (talk to them, chat, shop, etc.)?. Cronbach's  $\alpha$  of the current study was .72. Higher scores indicate greater intergroup contact perception.

## Procedure

After obtaining the institutional review board (IRB) permission, the aim of the study was published on online platforms in order to find volunteer participants, and a total of 125 people were reached. At the same period, various departments of the universities in the city where the research was conducted were visited, and the purpose of the research was conveyed to the potential participants, and a total of 116 participants were reached.<sup>i</sup> Participants who gave written consent completed the RWAS, CSMF, and HRHS, respectively, after the demographic information form. Finally, the research was concluded by receiving feedback with the feedback form. The data were collected in March-April 2022 and the participants completed the research in an average of 20 minutes. No incentives were offered to the participants.

# Results

## **Analytical Approach**

The simple moderation model (see, Hayes, 2022, pp. 223-409) with authoritarianism as the predictor (X), homophobia as the outcome (Y), and positive intergroup contact as the moderating variable (W) was analyzed with Jamovi (R Core Team, 2021) version 2.3 (The Jamovi Project, 2022) using *medmod* package was adapted from *R-lavaan* (Rosseel, 2012) package to examine the hypotheses. Standard error was estimated with 5000 bootstraps. The low and high values of the moderating variable were determined according to 1 standard deviation difference. Correlations between variables are presented on Table 1.

# Table 1

#### Correlations Between Variables

|                                | М    | SD   | 1 | 2       | 3      |
|--------------------------------|------|------|---|---------|--------|
| 1. Authoritarianism            | 4.12 | 1.18 | _ | .673*** | 425*** |
| 2. Homophobia                  | 2.77 | 1.16 |   |         | 609*** |
| 3. Positive Intergroup Contact | 3.03 | .70  |   |         |        |

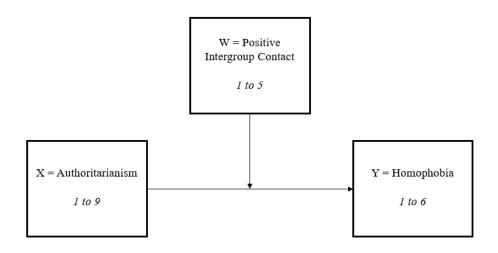
*Note*. Coefficients are Pearson's *r*. \*\*\* p < .001.

# **Simple Moderation Analysis**

The analyzed model is presented in Figure 1.

# Figure 1

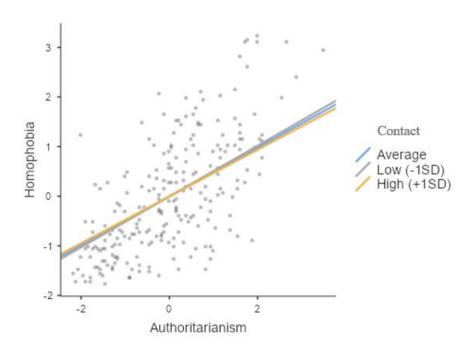
Analyzed Simple Moderation Model



Authoritarianism positively predicted homophobia ( $\beta = .49$ , SE = .05, z = 10.07, p < .001), and positive intergroup contact negatively predicted it ( $\beta = -.66$ , SE = .08, z = -8.67, p < .001). However, we did not observe any moderating role ( $\beta = -.03$ , SE = .05, z = -.53 p = .593).<sup>ii</sup> Simple slope analysis showed that authoritarianism positively predicted homophobia on both low-positive intergroup contact conditions ( $\beta = .51$ , SE = .06, z = 8.00, p < .001) and high-positive intergroup contact condition ( $\beta = .47$ , SE = .06, z = 8.26, p < .001).<sup>iii</sup> Simple slope plots of the results are presented in Figure 2.

# Figure 2

Simple Slope Plots



## Discussion

In this study, we aimed to examine the moderating role of positive contact with LGBT people on the association between authoritarianism and homophobia. The first hypothesis of the study was that there would be a positive and significant association between authoritarianism and homophobia. The results supported our hypothesis. Findings indicated that authoritarianism positively predicted homophobia. Authoritarianism, which refers to being highly attached to the traditional social structures and traditions, is associated with negative attitudes towards homosexual individuals which are regarded as a threat to social values and traditions (Herek, 1988; Whitley & Lee, 2000). In addition, those with high authoritarian personality spikily classify the world as ingroup and outgroup (Altemeyer & Hunsberger, 1992). From this point of view, as the authoritarianism of heterosexual young adults who constitute the sample of the current study increased, the behavior of evaluating LGBT people as an outgroup may have increased. Accordingly, LGBT people may be perceived as a threat; hence, there may be a positive relationship between authoritarianism and homophobia. This relationship between them has been investigated both national (Cetiner and Assche, 2021; Serbes, 2017) and international level (Altemeyer and Hunsberger, 1992; Haddock et al., 1993; Lippa and Arad., 1999; Mahfir and Parameswari, 2020; Nagoshi et al., 2008; O'Brien et al., 2013; Whitley and Lee, 2000) is consistent with our findings.

Our second hypothesis was that positive contact between groups would predict homophobia negatively, and the findings supported our hypothesis. As positive contact increased, homophobia decreased in the current study. Allport (1954) suggested in the contact hypothesis that bias can be reduced through egalitarian interactions between majority members and minority members. The fact that the level of homophobia decreases as the positive social contact with LGBT people increases can be explained by the fact that the members of the out-group interact with each other and get to know each other, and the decrease in their prejudices by recognizing their common characteristics. Similar findings are also found in various studies (e.g., Anderssen, 2002; Çırakoğlu, 2006; Herek & Capitanio, 1996; Herek & Glunt, 1993; Metin-Orta & Metin-Camgöz, 2020; Obeid et al., 2020; 2001; Sakallı & Uğurlu, 2003; Serbes, 2017; Şah, 2012; Uğurlu, 2013). Based on the inference that positive intergroup contact may change people's cognition positively by increasing positive information about the outgroup, it may be stated that encouraging people to have information about LGBT people may reduce negative attitudes. Education may be the most important tool that can be used to change the socio-cultural structure of societies in a way that protects the rights of broader social layers (Herek et al., 1991). It is recommended that professionals who have direct contact with people, such as teachers, doctors, and psychologists receive supportive training on this subject in order to develop positive attitudes towards minorities like homosexuals (Sargin & Circir, 2015). Based on this suggestion, educational activities may be implemented in which teachers and students can be conscious, especially in educational institutions, in order to create an atmosphere where students come into contact with homosexuals with respect and understanding and have knowledge about each other.

Our third hypothesis was that positive intergroup contact would have a moderating role in the association between authoritarianism and homophobia. However, the findings did not indicate any moderating role. Although social relations are crucial, positive social contact with homosexuals may not differentiate homophobia by having different effects on different levels of authoritarianism. In other words, our expectation was that the effect of contact would be lower among the participants with high-authoritarianism scores than those with low-authoritarianism scores, but no difference was observed between these two slopes. The reason for this may be that the contact, which may affect the environmental and relative behaviors with a lower strength, cannot sufficiently affect a more stable variable such as the authoritarian personality trait. Moreover, the outgroup of authoritarianism is

associated with perceiving the outgroup as a homogeneous group (Frederic & Falomir-Pichastor, 2018). Considering that LGBT individuals are an outgroup, people may have perceived homosexuals as a homogeneous whole, and therefore, the moderating role may not have been seen. (see Herek et al., 1991). Furthermore, as stated in the introduction, the effectiveness of positive intergroup contact can be possible in the presence of authority's support for the contact (Pettigrew, 1998). However, although the political powers in Türkiye claim that they protect human rights and do not perpetuate social stereotypes, they sometimes refer to the contact with homosexuals with negative references when it comes to *traditional values*. These rhetorics may leave sexual minority groups legally unprotected by encouraging the society about hate speech and crimes against sexual minority groups (Sezer, 2011). Due to this political climate in Türkiye, we may not have been able to observe the interaction of contact with authoritarianism.

The current study is the first attempt to investigate the role of positive intergroup contact with homosexuals as a moderator of the association between authoritarianism and homophobia to the best of our knowledge. Studies on homophobia in Türkiye are few in terms of quantity compared to western countries. The few studies that exemplify Türkiye, on the other hand, focus on the causes of homophobia. Although the number of studies in this field has increased recently, homophobia is a phenomenon that needs to be addressed in more detail from a social perspective. Thus, it can be said that there is a need for more diverse scientific research for intervention programs to reduce homophobia in society. Experimental studies to reduce homophobia in individuals with different personal characteristics such as authoritarianism may contribute to the literature. Hence, it is thought that the current study may raise awareness for future studies, especially in the field of social psychology.

We would like to point out that the study has some limitations as well as its strengths. The first of these is that the generalizability of the research findings to different age groups and socioeconomic levels is limited due to the fact that the sample group of the research consists of university students. Second, the entire sample consists of university students, that is, there are studies in the literature that conclude that attitudes towards homosexual individuals change positively as the level of education increases (Herek, 1984; Lambert et al., 2006; Walch et al., 2010). Therefore, future studies for findings with higher external validity may reach participants at different educational levels. Third, it is suitable for experimental designs on the basis of moderation analysis and, accordingly, methods from which causal inferences can be made (Rohrer et al., 2022). However, this research is in relational design. Future studies may overcome this limitation by examining similar models with the same analyzes using experimental or quasi-experimental designs. Forth, all participants are at the same education level. This homogeneity may have prevented us from seeing the effects of different levels of contact. Therefore, a moderating role may not have been observed. Future studies may focus on participants with different educational levels. Fifth, we measured positive intergroup contact with only four items adapted to the current context. Future studies may use contact scales with more items whose reliability and validity have been completed for LGBT people. Finally, having homophobic attitudes towards sexual minorities is one of the factors that make the self look nefarious (Raja & Stokes, 1998). Young adults may hide their homophobic attitudes out of social desirability to show their selves more positively. Future studies may overcome this limitation by questioning similar hypotheses with patterns to control social desirability.

## **Compliance with Ethical Standards**

## **Ethical Standards**

All study procedures involving human participants followed institutional and/or national research committee ethical standards and the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

### **Ethical Approval**

The study was carried out with the approval of the Scientific Research and Publishing Ethical Board of Erzurum Technical University, numbered 2022/4-5.

#### **Author Contributions**

AŞ, BS and BG developed the idea, AŞ, BS, and BG collected data, SÇ run the analyses, AŞ, BS, BG, and SÇ wrote the manuscript, SÇ supervised the process. Both authors approved the last version of the manuscript.

#### **Declaration of Conflicting Interests**

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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#### **Data Availability**

The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

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## Notes

<sup>&</sup>lt;sup>i</sup> No difference was found between online and face-to-face group in terms of homophobia.

<sup>&</sup>lt;sup>ii</sup> Instead of taking the positive intergroup contact score as an average of the quality and quantity of the positive contact, no moderating effect was observed in the models in which we examined these two indicators as the moderating variables in the same model.

<sup>&</sup>lt;sup>iii</sup> No confounding effect of participants' age was found when we added it to the model.