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Psychometrické vlastnosti škály Diskriminačných tendencií voči sexuálnym a rodovým menšinám (DT-SGM-18) na online súbore dospelých Slovákov

Psychometric properties of the Discriminatory tendency towards sexual and gender minorities scale (DT-SGM-18) in online sample of slovak adults

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Abstrakt: Cieľom štúdie bolo overiť psychometrické vlastnosti novokonšturovanej škály Diskriminačné tendencie voči sexuálnym a rodovým minoritám (DT-LGBT-18). Výskum bol realizovaný prostredníctvom kvantitatívnej metodológie, ktorá pozostávala z dvoch dotazníkových metód. Prvou metódou bola škála Disriminačnej tendecie voči sexuálnym a rodovým minrotiám (Lenghart & Čerešník, 2022a), ktorá je kompiláciou položiek zahraničných metód (Hill & Willoughby, 2005; Hoffarth et al., 2016; Morrison & Morrison, 2002). Metóda Prosociálnych tendencií voči LGBTQIA+ komunite (Lenghart & Čerešník, 2022b) bola použitá v súvislosti s validizáciou. Výskumný súbor tvorilo 2019 dospelých Slovákov a Sloveniek, ktorých priemerný vek bol 27,33 (SD = 8,07). Výsledky štúdie ukazujú, že autorský nástroj je vhodný na použitie merania dsikriminačných tendencií voči vybraným seuxálnym a rodovím minoritám na území Slovenskej republiky.

Klíčová slova: diskriminačné tendencie voči LGBT; Slovenská populácia; psychometrické vlastnosti; sexuálne a rodové menšiny

Abstract: The aim of study was to validate the psychometric properties of the newly constructed Discriminatory Tendencies toward Sexual and Gender Minorities Scale (DT-LGBT-18). The research was conducted through a quantitative methodology that consisted of two questionnaire methods. The first method was the Discriminatory Tendencies Towards Sexual and Gender Minorities Scale (Lenghart & Cherry, 2022a), which is a compilation of items from foreign methods (Hill & Willoughby, 2005; Hoffarth et al., 2016; Morrison & Morrison, 2002). The Prosocial Tendencies toward the LGBTQIA+ Community (Lenghart & Cheresnik, 2022b) method was used in the context of validation. The research population consisted of 2019 adult Slovaks whose mean age was 27,33 (SD = 8,07). The results of the study show that the author's instrument is suitable for use in measuring dsicrimination tendencies towards selected sexual and gender minorities in the territory of the Slovak Republic.

Keywords: discriminatory tendencies towards LGBT; Slovak population; psychometric characteristics; sexual and gender minorities

1 Introduction

Effective data collection through online questionnaires in the field of attitudes research requires careful consideration of various factors. One important aspect is the design of the questionnaire, including the scale used to measure variables. The scale should be well-designed and appropriate for the research objectives (Couper, 2008). It is recommended to use scales that have been validated and shown to have good construct validity, high internal reliability, and acceptable test-retest reliability (Tapper et al., 2007). The scale should also be relatively quick to administer and simple to score (Tapper et al., 2007). When measuring variables in attitudes research, it is generally more effective to use a single questionnaire that includes multiple variables rather than using different questionnaires for each variable. This approach allows for a comprehensive assessment of attitudes and facilitates data analysis and interpretation (Knežević et al., 2014). However, it is important to ensure that the questionnaire is not too long or burdensome for respondents, as this may lead to non-response or incomplete responses (Couper, 2008).

When it comes to questionnaires measuring attitudes toward the LGBT community, there are specific considerations to keep in mind. These questionnaires may need to address sensitive topics and capture the nuances of attitudes toward sexual orientation and gender identity. Questionnaires measuring discrimination

toward the LGBT community can differ from general attitude questionnaires, as they may include items related to prejudice, stereotypes, and experiences of discrimination. It is important to use validated scales that have been specifically developed for measuring attitudes toward the LGBT community to ensure the accuracy and reliability of the data collected (Al-Sejari & Al-Ma'seb, 2021). Scholars like Herek (2000) have emphasized that attitudes toward the LGBT community are intricately linked to societal biases, stereotypes, and misconceptions. As such, questionnaires aimed at capturing these attitudes go beyond simple agree-disagree scales and delve into the deeper layers of prejudice. Items may inquire about beliefs in gender and sexual orientation stereotypes, as well as perceptions of societal norms. This approach allows researchers to disentangle the intricate web of underlying biases that contribute to discriminatory attitudes (Herek, 1988).

Moreover, experiences of discrimination play a pivotal role in shaping attitudes. D'Augelli et al. (2005) highlighted that questionnaires seeking to assess discrimination against the LGBT community should encompass items that directly address individuals' encounters with prejudice and unequal treatment. These items could range from specific instances of verbal abuse or derogatory language to more subtle forms of discrimination, such as microaggressions or exclusion. By including such items, researchers gain a comprehensive understanding of the lived experiences that inform discriminatory attitudes.

Using one questionnaire that measures attitudes toward gay, lesbian, and transgender people can provide a comprehensive assessment of attitudes toward sexual and gender minorities. This approach allows for a holistic understanding of attitudes and can capture the interconnectedness of attitudes toward different groups within the LGBT community. It also reduces respondent burden by consolidating the measurement into a single questionnaire (Fisher et al., 2016).

Myriad instruments are measuring discriminatory tendencies and prejudices against sexual and gender minorities. For example, in the context of prejudice and discrimination against gays and lesbians, we can mention the Attitudes Toward Lesbian and Gay Scale (Herek, 1988), Homophobia Scale (Wright et al., 1999), or Modern Homonegativity Scale (Morrison & Morrison 2002). Attitudes or discrimination toward transgender people are often measured by scales and questionnaires like the Genderism and Transphobia Scale (Hill & Willoughby, 2005; Tebbe et al., 2014 – short version).

While creating new measurement instruments from scratch is a rigorous endeavor, researchers often explore the possibility of combining existing validated questionnaires to design comprehensive composite measures. This approach allows researchers to harness the strengths of established instruments while tailoring the measurement to their specific research objectives. For example, Liang and Chang (2016) provide an example of developing a composite measure called psycho-social work dependency. They draw on established theoretical frameworks and existing measures to create a comprehensive instrument that captures various dimensions of work dependency. This approach allows researchers to build on prior research and utilize validated scales while tailoring the measurement to their specific research context. Even though scarves have good psychometric properties, they have major pitfalls. The scales are too time-consuming because they contain an enormous number of items. For example, the Modern Homonegativity Scale contains 40 items (20 for the gay homonegativity subscale and 20 for the lesbian homonegativity subscale). The Genderism and Transphobia Scale contains 32 items. In this case, there are 72 items, and they only track discriminatory tendencies towards one sexual minority and one gender minority domain.

Therefore, the current study aimed to create a short questionnaire that would measure discriminatory tendencies towards sexual and gender identities in the primary acronym LGBT. Many scales and questionnaires measure prejudice and attitudes toward particular identities. Although no instrument aggregates items towards gender and sexual identities, it is not time-consuming and overly lengthy and uses validated items from other questionnaires. When researching discrimination against sexual and gender minorities, it is important to use scientifically and research-validated methods rather than creating one's items. Utilizing validated measures ensures the reliability and validity of the collected data. Psychometrically validated items have undergone rigorous testing to ensure their accuracy and effectiveness in measuring the constructs of interest (Boateng et al., 2018).

Conversely, using items that have not been psychometrically validated can potentially compromise the integrity of the data. Validated measures provide evidence of their reliability, validity, and sensitivity to change (Clinton-McHarg et al., 2016). They have been tested in various settings and cultures, making them more applicable and generalizable (Clinton-McHarg et al., 2016). By employing validated measures, researchers can ensure the quality and credibility of their data, leading to more accurate and meaningful findings in the study of discrimination against sexual and gender minorities. The main aim of this study is to verify the psychometric properties of this instrument through statistical procedures. The last objective is to report the basic descriptive indicators in the whole population of the research sample, intergender differences, and differences in the context of sexual orientation.

2 Methods

2.1 Participants and procedure

The sample of two thousand eighteen respondents from the territory of the Slovak Republic was obtained through voluntary sampling. Voluntary sampling was carried out through personal profiles on social networks. Through a poster and a link that was shared on social media (namely Facebook, Reddit, and Discord), respondents were able to participate in the research study actively. The poster contained basic information about the research. Facebook pages that reach a high number of respondents (e. g., Zomri) were also contacted. Respondents were aged from 18 to 64 years (M = 27,33; SD = 8,07). The exact social and demographic characteristics are shown in Table 1. The first part of the online study involved expressing agreement or disagreement with participation in the study. Participants provided their informed consent or non-consent to participate in the research and the processing of their personal data for analysis. In the informed consent, participants were informed of their complete anonymity and that they could leave the study at any time during the questionnaire survey. All procedures conducted in the study were guided by the ethical standards of the 1964 Declaration of Helsinki and its subsequent amendments. We did not seek ethics committee approval to conduct this study.

2.2 Measures

The Discriminatory Tendency Towards Selected Sexual and Gender Minorities Scale (DT-SGM-18) is an 18-item scale that measures the degree of discriminatory tendency towards selected sexual and gender identities. It focuses exclusively on the primary sexual and gender identities in the original acronym L (lesbian women), G (gay men), B (bisexual women and men), and T (transgender men and women). In addition to capturing the degree of discrimination against these identities, the scale allows the administrator to capture the overall degree of discriminatory tendency towards the LGBT community.

The tool is a compilation of international research instruments that measure prejudice and discrimination against the above identities. The tool was developed in response to the creation of a single instrument measuring discrimination against selected and sexual identities, but also capturing a measure of overall attitudes towards LGBT people. Three items for each of the sexual and gender identities were extracted from these instruments.

For discrimination against gays and lesbians, items from the ***Modern Homonegativity Scale*** (Morrison & Morrison, 2002) was used. Both gay male and lesbian female versions were used. From the MHS scale, specific items were used for discriminatory tendencies toward gay men ("Gay men should stop shoving their lifestyle down other people's throats"; "If gay men want to be treated like everyone else, then they need to stop making such a fuss about their sexuality/culture"; and

Tab. 1 Social and demographic characteristics of the research sample (N = 2018)

	n	%
Residence		
Urban	1253	62,1
Rural	766	37,9
Education		
Primary	83	4,2
High school without matriculation	49	2,4
High school with matriculation	890	44,2
Undergraduate	395	19,5
Graduate	510	25,3
Postgraduate	76	3,7
High Vocational	16	0,7
Social status		
Employed	1083	53,7
Unemployed	78	2,9
Student	811	41,1
Parental leave	42	2,0
Retired	5	0,3

	n	%
Sexual Orientation		
Heterosexual men	492	24,6
Heterosexual women	539	26,6
Gay men	374	18,5
Lesbian women	209	10,3
Bisexual men	148	7,3
Bisexual women	257	12,7
Gender		
Cisgender men	1027	50,8
Cisgender women	900	44,7
Transgender men	51	2,5
Transgender women	41	2,0

"Many gay men use their sexual orientation so that they can obtain special rights and privileges"), for lesbian version were used two items from ALG which were slightly modified in our version. Here, we present the original version of the used items ("I think male homosexuals are disgusting" and "Male homosexuality is a perversion"). Item number 1 (see Table 6) was constructed for the purpose of this questionnaire construction.

The Attitude Toward Asexual Scale was transformed for discrimination against bisexual men and women (Hoffarth et al., 2016). For the discriminatory tendency toward bisexual men, three items from this scale were used ("Asexuality is probably just a phase"; "Asexuality simply represents an immature, childlike approach to life"; and "A lot of asexual people are probably homosexual and, in the closet). Discriminatory tendencies toward bisexual women were also used in three items ("A woman who claims she is 'asexual' just has not met the right man yet"; "People who identify as 'asexual' probably just want to feel special or different"; and "Asexuality is a 'problem' or 'defect'). Some of the wording of the items has been slightly modified.

Items from the ***Genderism and Transphobia Scale*** (Hill & Willoughby, 2005) were used to identify levels of discrimination against transgender people. For the discriminatory tendency toward transgender men was used three items ("It is morally wrong for a woman to present herself as a man in public"; "I would avoid talking to a man if I knew he had a surgically created penis and testicles"; and "Women who see themselves as men are abnormal"). For the discriminatory tendency toward transgender women, three items were used ("I have teased a man because of his feminine appearance or behavior"; "Feminine men make me feel uncomfortable"; and "If I encountered a male who wore high-heeled shoes, stockings, and makeup, I would consider beating him up").

Higher scores on each subscale indicate higher levels of discriminatory tendencies towards particular sexual and gender identities. The overall score of discriminatory tendency in the LGBT community can be calculated by summing the scores on the individual subscales. The total score in the discriminatory tendency toward the LGBT community ranges from 18 points (low discrimination) to 90 points (high discrimination).

For validity purposes, the author's ***Prosocial Tendencies Towards the LGBTQ+ Community Scale*** (Lenghart & Čerešník, 2022) was used. The scale maps two primary domains: 1) digital prosociality – six items (e. g., "I speak positively about LGBT people in comments on social media to prevent discrimination." and 2) public prosociality – six items (e. g., "I would provide moral support to my LGBT friend who is going through a difficult time (e. g. coming out, transitioning, etc.") toward the LGBTQ+ community. Respondents answer to the items that reflect situations they have been in during their experience or represent potentially new situations for them. Respondents answer how they have reacted/are reacting/how they would react on a scale from 1) never to 4) always. Scores on the digital prosociality subscale range from 6 (no prosociality) to 24 (high prosociality). Scores on the public prosociality subscale range from 6 (no prosociality) to 24 (high prosociality). Overall prosociality towards the LGBTQ+ community can be calculated by summing the individual subscales. A high score indicates a high level of prosociality and vice versa.

3 Results

3.1 Descriptive and comparative statistics

Selected descriptive variables were used to examine the characteristics of the variables tested, which are presented in Table 2. Before applying any other statistical procedures in the comparison of groups, we performed a normality test using skewness values, kurtosis, and the Shapiro-Wilk test. Table 2 shows that the distribution of the tested variables was not normal in the total study population. In this case, we decided to use nonparametric statistical tests.

Intergroup differences in the context of gender and sexual orientation were detected through the Kruskal-Wallis H test. The results show that significant differences disadvantage the cisgender heterosexual population compared to the LGBT population. More detailed statistics are presented in Tables 3–4.

3.2 Confirmatory factor analysis

Confirmatory factor analysis based on the above results showed that the six-factor model, which predicted the six factors of the questionnaire, was confirmed. The indexes in the model fit and the standards estimate are presented in Tables 5 to 6. Since the RMSEA (0,085) did not exceed .1, we can conclude that it shows sufficient model fit to describe the data. The SRMR value (0,045) did not exceed the characteristic < 0,08, which we can consider acceptable. The high chi-square value can be attributed to the high representation of the study population (N = 2019). Based on the reporting of acceptable values, we can conclude that our model presents a good fit with the real data and is applicable in this form. The tested model is shown in Figure 1.

3.3 Reliability

Cronbach's α and McDonald's ω were used to evaluate the internal consistency of DT-SGM-18. The results of these analyses show good reliability not only of the subscales but of the scale overall. The values range from 0,71 to 0,92 in Cronbach's α, whereas in McDonald's ω

Tab. 2 Descriptive results for full research sample (N = 2019)

	M	*ME*	*Min*	*Max*	*W*	*p*	*SKE*	*K*
DT-SGM	28,76 (13,24)	24,00	18,00	90,00	0,783	< 0,001	1,76	8,65
GM	3,96 (2,17)	3,00	3,00	15,00	0,515	< 0,001	2,85	0,54
LW	5,49 (3,28)	4,00	3,00	15,00	0,773	< 0,001	1,25	0,31
BM	5,37 (2,86)	4,00	3,00	15,00	0,808	< 0,001	1,10	4,50
BW	4,44 (2,26)	3,00	2,00	15,00	0,694	< 0,001	2,02	2,54
TM	4,77 (2,87)	3,00	3,00	15,00	0,678	< 0,001	1,80	2,92
TW	4,71 (2,48)	3,00	3,00	15,00	0,733	< 0,001	1,73	3,02

Note. DT-SGM = Discriminatory tendency towards sexual and gender minorities; GM = discriminatory tendency towards gay men; LW = discriminatory tendency towards lesbians; BM = discriminatory tendency towards bisexual men; BW = discriminatory tendency towards bisexual women; TM = discriminatory tendency towards transgender men; TW = discriminatory tendency towards transgender women; W = Shapiro-Wilk's test statistics; SKE = skewness; K = kurtosis; M = mean; Min = minimal score; Max = maximal score; ME = median

Tab. 3 Descriptive statistics and comparison in the context of gender

Variables	Gender identification						
	CM_{1027}	CW_{900}	TM_{41}	TW_{51}	H_{2019}	*p*	η^2
DT-SGM	31,85 (14,43)	26,15 (11,32)	20,12 (5,30)	19,51 (2,13)	210,672	< 0,001	0,06
GM	6,03 (3,67)	5,07 (2,79)	3,85 (1,89)	3,35 (0,79)	60,644	< 0,001	0,03
LW	4,15 (2,34)	3,82 (2,04)	2,17 (0,62)	3,02 (0,14)	43,788	< 0,001	0,01
BM	6,17 (3,16)	4,62 (2,26)	3,56 (1,65)	3,74 (1,42)	172,247	< 0,001	0,08
BW	4,85 (2,44)	4,10 (2,03)	3,29 (1,30)	3,23 (0,68)	105,236	< 0,001	0,03
TM	5,28 (3,23)	4,35 (2,41)	3,04 (0,21)	3,07 (0.39)	89,668	< 0,001	0,04
TW	5,34 (2,84)	4,17 (1,88)	3,19 (0,55)	3,07 (0.39)	143,031	< 0,001	0,07

Note. DT-SGM = Discriminatory tendency towards sexual and gender minorities; GM = discriminatory tendency towards gay men; LW = discriminatory tendency towards lesbians; BM = discriminatory tendency towards bisexual men; BW = discriminatory tendency towards bisexual women; TM = discriminatory tendency towards transgender men; TW = discriminatory tendency towards transgender women; CM = cisgender men; CW = cisgender women; TM = transgender men; TW = transgender women; H = results of Kruskal-Wallis test; η^2 = effect size

these values range from 0,82 to 0,92. In this context, the five-factor contingency model exhibits good internal consistency. The exact results are shown in the Table 7.

3.4 Validity

Spearman's rho correlation coefficient measured the criterion validity of the scale. It was decided to verify the relationship between the DT-SGM and PT-LGBTQ scale. All subscales and the summary score of the scale were moderately negatively correlated with digital prosociality. The subscales and total scale scores were moderately and strongly negatively correlated with public prosociality. Correlations were also made concerning sexual orientation and gender. The results showed that gender and sexual orientation are negatively correlated with discriminatory attitudes. In this case, it means that the lower the sexual orientation and gender, the more discriminatory tendency increases. The negative relationships in this case can be traced through the coding

Tab. 4 Comparative statistics in the context of sexual orientation

	HM_{492}	HW_{539}	GM_{374}	LW_{209}	BM_{148}	BW_{257}	H_{2019}	*P*	η^2
DT-SGM	38,88 (15,93)	29,73 (12,48)	25,73 (8,51)	21,77 (5,28)	22,66 (9,31)	20,93 (7,34)	592,844	< 0,001	0,24
GM	8,27 (3,60)	6,9 (3,30)	3,75 (2,30)	3,47 (1,32)	4,20 (2,52)	3,85 (1,68)	749,714	< 0,001	0,31
LW	4,90 (2,81)	4,27 (2,39)	3,36 (1,25)	3,12 (0,68)	3,60 (1,98)	3,24 (1,20)	339,321	< 0,001	0,09
BM	6,65 (3,16)	5,11 (2,48)	6,43 (3,24)	4,43 (1,93)	3,72 (1,65)	3,62 (1,47)	339,909	< 0,001	0,16
BW	5,47 (2,89)	4,55 (2,31)	4,52 (1,73)	3,75 (1,35)	3,42 (1,42)	3,30 (1,24)	275,089	< 0,001	0,10
TM	6,90 (3,61)	4,97 (2,78)	3,69 (1,78)	3,52 (1,12)	3,75 (1,89)	3,43 (1,38)	493,500	< 0,001	0,21
TW	6,68 (3,40)	4,72 (2,60)	3,97 (1,94)	3,46 (1,60)	3,94 (1,93)	3,48 (1,34)	520,791	< 0,001	0,23

Note. DT-SGM = discriminatory tendency toward sexual and gender minority scale; GM = gay men; LW = lesbian women; BM = bisexual men; BW = bisexual women; HM = heterosexual men; HW = heterosexual women; DT-SGM = Discriminatory tendency towards sexual and gender minorities; GM = discriminatory tendency towards gay men; LW = discriminatory tendency towards lesbians; BM = discriminatory tendency towards bisexual men; BW = discriminatory tendency towards bisexual women; TM = discriminatory tendency towards transgender men; TW = discriminatory tendency towards transgender women; H = results of Kruskal-Wallis test; η^2 – effect size

Tab. 5 Results of confirmatory factor analysis: goodness of fit measures and internal consistency (N = 2019)

	n_{items}	χ^2	df	p	CFI	TLI	RMSEA	RMSEA 90% CI	
								LLCI	ULCI
The model with six factors	18	1855	120	0,000	0,929	0,909	0,085	0,081	0,088

Note. χ^2 – chi-square; df – degree of freedom; CFI – comparative fit index; TLI – Tucker-Lewis index; RMSEA – root mean square error of approximation

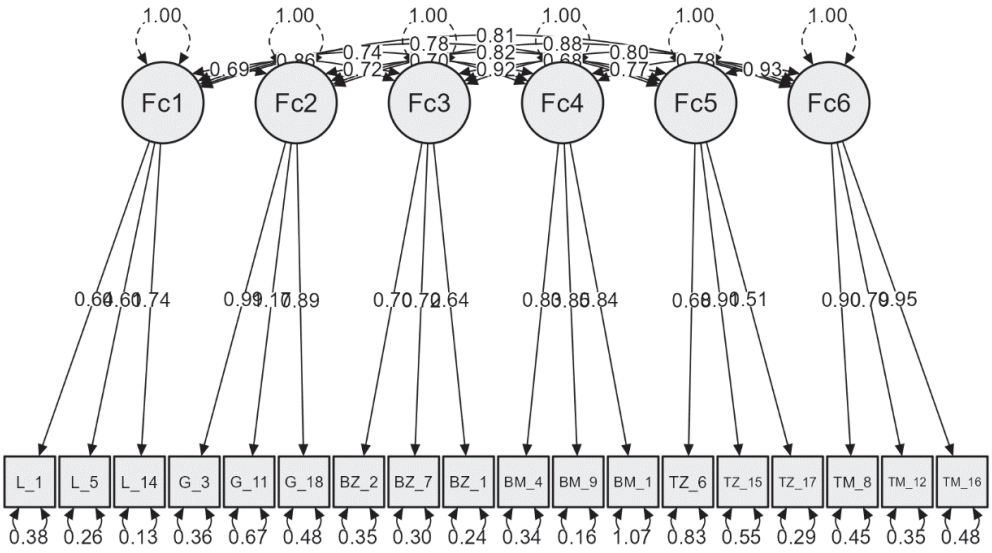

Fig. 1 Confirmatory factor analysis

Tab. 6 Results of confirmatory factor analysis: factor loadings

	Items	Std. Estimate
	Six-factor model	
Lesbian women	(1) Sex between two women is just wrong	0,63
	(5) I think lesbians are disgusting	0,60
	(14) Female homosexuality is a perversion	0,73
Gay men	(3) Gays should stop showing their lifestyle in public and presenting themselves to other people	0,98
	(11) If gay men want to be treated like everyone else, then they need to stop making such a fuss about their sexuality/culture	1,16
	(18) Many gay men use their sexual orientation so that they can obtain special rights and privileges	0,88
Bisexual women	(2) Women who claim to be bisexual probably haven't met the "right" man yet	0,69
	(7) Women who identify as bisexual just want to feel special	0,71
	(10) Bisexuality in women is a "societal problem".	0,63
Bisexual men	(4) Bisexuality in men is probably just a phase	0,83
	(9) Male bisexuality simply represents an immature approach to life	0,85
	(13) Many bisexual men are homosexual; they just don't want to admit it	0,83
Transgender women	(6) I have teased a man because of his feminine appearance or behavior	0,67
	(15) Feminine men make me feel uncomfortable	0,91
	(17) If I encountered a male who wore high-heeled shoes, stockings, and makeup, I would consider beating him up	0,51
Transgender men	(8) It is morally wrong for a woman to present herself as a man in public	0,90
	(12) I would avoid talking to a men if I knew he had a surgically created penis and testicles	0,78
	(16) Women who see themselves as men are abnormal	0,95

Tab. 7 Results of reliability analysis for 18 items: internal consistency

		Cronbach's α	McDonald's ω
Subscales	Lesbian women	0,83	0,83
	Gay men	0,85	0,86
	Bisexual women	0,82	0,82
	Bisexual men	0,82	0,82
	Transgender women	0,71	0,73
	Transgender men	0,84	0,84
Summary score	Six-factor model	0,92	0,92

Tab. 8 Results of validity analysis: Spearman's rho correlation

	1	2	3	4	5	6	7
1. DT-LGBT	–						
2. Lesbian women	0,67***	–					
3. Gay men	0,78***	0,57***	–				
4. Bisexual women	0,76***	0,59***	0,49***	–			
5. Bisexual men	0,81***	0,53***	0,47***	0,73***	–		
6. Transgender women	0,71***	0,56***	0,61***	0,39***	0,42***	–	
7. Transgender men	0,78***	0,65***	0,69***	0,54***	0,54***	0,67***	–
8. Digital prosociality	–0,53***	–0,38***	–0,59***	–0,33***	–0,29***	–0,49***	–0,51***
9. Public prosociality	–0,68***	–0,50***	–0,71***	–0,51***	–0,39***	–0,56***	–0,65***
10. Sexual orientation	–0,44***	–0,26***	–0,46***	–0,31***	–0,32***	–0,40***	–0,39***
11. Gender	–0,25***	–0,11***	–0,19***	–0,19***	–0,28***	–0,26***	–0,20***

Note. *p < .001

in the data matrix. Sexual orientation was coded as follows: heterosexual men (1), heterosexual women (2), gay men (3), lesbian men (4), bisexual men (5), and bisexual women (6). Gender identification was coded in the same way: cisgender men (1), cisgender women (2), transgender men (3), and transgender women (4). We report more detailed information within each subscale in Table 8.

4 Discussion

The main goal of the present study was to investigate the psychometric properties of the 18-item Discriminatory Tendency Toward Sexual and Gender Minorities Scale and to examine the validity of evidence. Overall, the results of this study suggest that the DT-SGM-18 is a psychometrically adequate measure of discriminatory tendencies toward gay men, lesbian women, bisexual men, bisexual women, transgender men, and transgender women.

The scale is unidimensional and demonstrates acceptable levels of reliability. Analysis of the relationships between the subscales of discriminatory tendency, prosocial tendencies, gender, and sexual orientation provide evidence of the construct validity of the DT-LGBT. Comparison of the results in the context of gender and sexual orientation shows that the heterosexual respondent population demonstrates higher rates of discriminatory tendencies toward selected sexual and gender minorities and toward the LGBT community's original acronym overall, compared to LGB individuals alone. It was also found that cisgender individuals exhibit higher rates of these discriminatory tendencies compared to transgender individuals alone. The findings of the study indicate that the constructed instrument is reliable and valid in measuring discriminatory tendencies towards selected sexual and gender minorities. This instrument can help researchers as well as the general public in mapping the extent of discriminatory tendency in their societal epicenters.

One of the key strengths of the study lies in its innovative approach to questionnaire development. The DT-SGM-18 amalgamates elements from various international research tools that gauge prejudice and discrimination against specific sexual and gender identities. By strategically selecting items from established scales like the Modern Homonegativity Scale, Attitudes Toward Lesbian and Gay Men, Attitude Toward Asexual Scale, and the Genderism and Transphobia Scale, the researchers ensured a comprehensive coverage of discriminatory tendencies across these identities. This integrative strategy enhances the tool's content validity, offering a nuanced perspective on discriminatory biases within the LGBT community.

However, the study does come with certain limitations. The reliance on self-report measures, while common in psychological research, can introduce response biases and social desirability effects. Participants might underreport or misrepresent their discriminatory tendencies due to perceived societal expectations or concerns about social acceptance. Moreover, the study's sample may not fully represent the diversity of sexual and gender identities, potentially limiting the generalizability of findings beyond the primary identities included in the acronym LGBT.

Regarding statistical procedures, the decision to use non-parametric tests due to the non-normal distribution of variables is justified, but it is essential to acknowledge that this choice might impact the sensitivity and specificity of the results. Additionally, while Confirmatory Factor Analysis (CFA) provided support for the proposed six-factor structure of the DT-SGM-18, CFA is inherently limited by its reliance on the model specified by the researchers, and other potential factor structures could exist.

Furthermore, while the study established correlations between discriminatory tendencies and prosocial behaviors, it is important to acknowledge that correlation does not imply causation. Complex relationships and potential third variables could be influencing these associations.

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