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Association between exposure to gender and sexual diversity in media (GSDM) and Thai adolescents' attitude towards LGBT individuals: a cross-sectional study in Bangkok schools

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ABSTRACT

Objective In recent years, global media has increasingly represented lesbian, gay, bisexual and transgender (LGBT) individuals, contributing to greater societal acceptance of diverse sexualities and gender identities. However, in Thailand, negative attitudes towards LGBT individuals remain prevalent, and media portrayals, both positive and negative, play a critical role in shaping public perceptions. These portrayals can significantly influence how different groups, particularly adolescents, view LGBT individuals. Given the importance of media in shaping attitudes, this study aims to explore the association between Thai adolescents' exposure to gender and sexual diversity in media (GSDM) and their stigmatising attitudes towards LGBT individuals.

Setting A cross-sectional survey was conducted during the first and second semesters of the academic year 2021 in eight schools located in Bangkok, Thailand.

Participants Adolescents from these schools completed a survey assessing demographics, exposure to GSDM, and stigmatising attitudes towards LGBT individuals. The LGBTQ stigma scale was used for attitudes, and media exposure was measured using a researcher-developed questionnaire. Linear regression analysis was conducted to test the association between exposure to GSDM and stigmatising attitudes.

Results Out of 553 participants, with an average age of 16.34 years (ranging from 14 to 20 years), a third identified as LGBT (34.72%). Participants had moderate exposure to both positive and negative GSDM content (PGSDM and NGSDM, respectively), with those assigned female at birth more exposed to PGSDM than those assigned male at birth, and exhibiting lower levels of stigmatisation. Adolescents assigned female at birth and those who identified as LGBT displayed significantly lower stigmatisation than those assigned male at birth and non-LGBT individuals. Adolescents overall exhibited generally low stigmatisation towards LGBT individuals, with higher levels of stigmatisation linked to exposure to NGSDM (β=0.80, 95% CI 0.35 to 1.25). In contrast, PGSDM exposure was associated with reduced stigmatisation (β=−2.73, 95% CI −3.10 to −2.35).

Conclusions Thai adolescents generally exhibit low levels of stigmatisation towards LGBT individuals. The study found an association between positive GSDM exposure and lower levels of stigmatisation, while negative exposure was linked to higher levels of stigmatisation. These findings suggest that media literacy programmes emphasising positive portrayals of gender diversity may be beneficial in promoting acceptance and reducing bias.

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ This study investigated both positive and negative exposure to gender and sexual diversity in media across a wide variety of media types, offering a more comprehensive perspective compared with prior studies that focused on specific forms of media.
⇒ Previous studies often examined media content in isolation, whereas this study considered media exposure holistically, including a range of platforms.
⇒ As a cross-sectional study, it cannot determine causal relationships between media exposure and attitudes towards lesbian, gay, bisexual and transgender (LGBT) individuals.
⇒ The sample is limited to adolescents in the Office of the Basic Education Commission educational system in Bangkok, which may restrict the generalisability of the findings to broader populations.
⇒ Data collection through self-reported questionnaires is subject to bias, and the focus on LGBT individuals may not fully capture biases towards other sexual identities.

INTRODUCTION

In recent years, many countries have become more recognizant of sexual and gender diversity, as evidenced by an increase in media representation of lesbian, gay, bisexual and transgender (LGBT) individuals. According to the annual report by the Gay and Lesbian Alliance Against Defamation,[1 2] there were 775 LGBT characters broadcast during the survey

period from 1 June 2021 to 31 May 2022, accounting for 12% of all characters. This increased media representation is thought to be a contributing factor to the growing acceptance of diverse genders,[3] aligning with a previous study by Calzo and Ward,[4] which found a significant link between media consumption and more accepting attitudes towards homosexuality.

In Thailand, the 2022 National Institute of Development Administration (NIDA) poll[5] showed a growing acceptance of the third gender, often understood in the local context as trans individuals, with 92.82% of respondents accepting friends or colleagues as such (up from 90.15% in 2019), and 90.61% accepting family members or relatives (up from 86.81% in 2019). According to the Williams Institute's Global Acceptance Index,[6] social acceptance of LGBT individuals in Thailand has increased since the 1980s. However, compared with the USA and Western European countries, Thailand still exhibits lower acceptance levels. Despite positive trends, discrimination and stigmatisation persist in Thailand, particularly in areas like the workplace and access to gender-concordant identity documents. While same-sex relationships are not criminalised, Thailand has yet to fully legalise same-sex marriage, though the introduction of civil partnership bills indicates progress. Challenges remain for LGBT individuals, especially regarding full legal gender recognition, affecting their access to services and legal rights.

Gender and Sexual Diversity in Media (GSDM) refers to the representation and portrayal of individuals of different sexual orientations and gender identities/expressions across various forms of media, including movies, TV shows, advertisements, news articles and social media. Social media, in particular, has significantly changed the portrayal of LGBT individuals, particularly transgender people, by offering more diverse and positive representations. Online platforms foster supportive communities, allowing transgender individuals to document their journeys and access real-life role models. This online presence helps counterbalance the stereotypical or negative perception of LGBT individuals.[7]

Research has shown that positive portrayals of GSDM are generally associated with lower levels of stigmatisation, while negative portrayals can reinforce prejudice.[8] However, conflicting findings complicate this narrative, as some studies suggest that even negative portrayals may reduce social distance and challenge stereotypes through increased visibility. Repeated exposure to LGBT characters, regardless of tone, can contribute to more positive attitudes.[9] Given the limited number of studies exploring both positive and negative portrayals of LGBT individuals, drawing firm conclusions about their overall impact remains challenging.

The impact of GSDM on shaping people's perceptions of gender roles and stereotypes, as well as how individuals are treated in society, underscores its significance as a research subject. Previous studies have highlighted that exposure to GSDM across various platforms can contribute to positive societal changes, especially among younger generations.[10] For instance, Thai films have played a critical role in providing a platform for individuals not traditionally accepted by mainstream society, facilitating a broader understanding of LGBT identities.[11] Similarly, a study on Yaoi (Y)-fiction literature, characterised by the Japanese terms 'yaoi' for male–male relationships and 'yuri' for female–female relationships, has shown its potential to increase acceptance of sexual diversity among readers, thus promoting gender equality.[12]

However, the portrayal of gender-diverse individuals in mainstream media has historically been problematic, often hypersexualising or mocking them. Encouragingly, the evolution of contemporary media platforms, such as streaming services, has paved the way for more authentic and nuanced depictions of love and relationships, subsequently leading to a surge in LGBT characters and content.[13] In particular, the trend involving Y-media, in forms of fiction and series, has witnessed a significant increase in recent days.[12]

While it is evident that exposure to such media has the potential to foster positive attitudes towards LGBT individuals, it remains an unfortunate reality that negative stereotypes persist, particularly in Thai media. Such negative portrayals can contribute to the solidification of narrow perceptions surrounding gender-diverse individuals, thereby perpetuating discrimination and curtailing their rights.[14] Furthermore, a survey conducted by the United Nations Development Programme[15] in 2018–2019 found that despite increased acceptance and representation of gender-diverse individuals in media and society, they still face restrictions on their rights and discrimination due to societal judgement. Moreover, the lack of understanding of the subgroups within the LGBT community leads to differing levels of acceptance towards these individuals.[2]

This study aims to assess the association between positive (positive content related to gender and sexual diversity in media (PGSDM)) versus negative (negative content related to gender and sexual diversity in media (NGSDM)) gender-diverse media portrayals and adolescent attitudes towards LGBT individuals in Thailand. Specifically, the research questions explore adolescents' levels of exposure to PGSDM and NGSDM, their attitudes towards LGBT individuals, and how exposure to both types of GSDM is associated with these attitudes. The hypotheses are that adolescents exhibit high levels of exposure to PGSDM, low levels of stigmatisation towards LGBT individuals, and that exposure to PGSDM is associated with less stigmatisation, while exposure to NGSDM is associated with higher levels of stigmatisation. This study addresses gaps in previous research, which has often overlooked the varied effects of different media portrayals and rarely examined the nuanced experiences within different LGBT subgroups, especially in a Thai context. By using a cross-sectional survey methodology, the study captures current attitudes and media exposure, providing valuable insights into the relationship between media

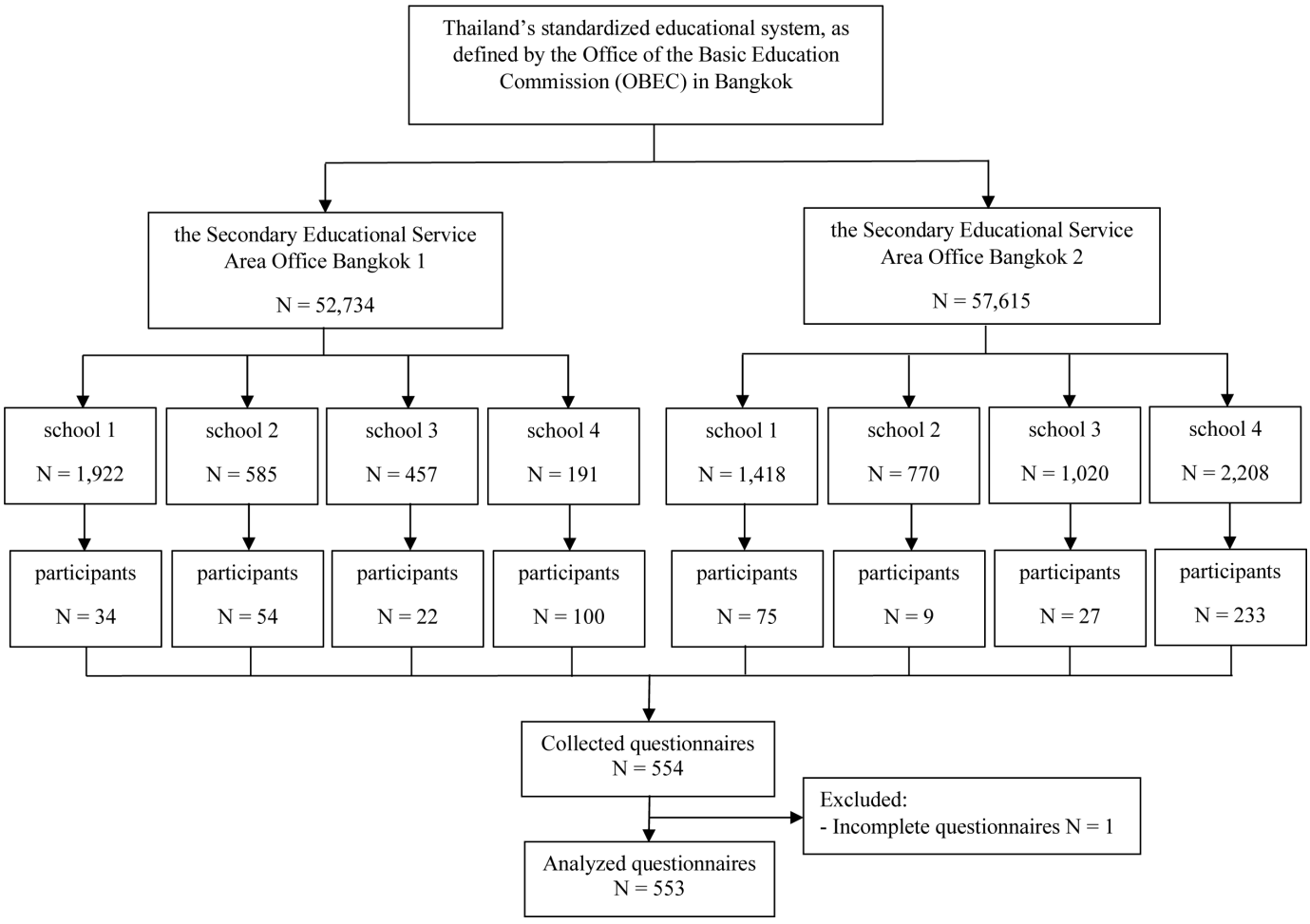

Figure 1 Stratified convenience sampling of school in Thailand's standardised educational system, as defined by the Office of the Basic Education Commission in Bangkok.

consumption and adolescents' attitudes towards sexual diversity in Thai society.

Methodology

The research adopted a cross-sectional survey methodology to collect data from students in Mathayom 4–6 (grades 10–12) within Thailand's standardised educational system, as defined by the Office of the Basic Education Commission (OBEC) in Bangkok, covering the Secondary Educational Service Area Office Bangkok 1 and 2. Data collection occurred during the first and second semesters of the academic year 2021 (figure 1).

Sample and participants

The sample size was calculated using the Taro Yamane formula targeting a 95% CI and a 5% margin of error, resulting in a minimum required sample size of 400 participants. To account for potential data loss, an additional 25% (100 participants) was added, bringing the total sample size to a minimum of 500 participants. Eligible students were those who could understand Thai and complete the questionnaire independently, with no exclusion criteria set for study participation.

Due to the COVID-19 pandemic's impact, some schools were hesitant to participate. Therefore, a purposive sampling method was employed to select four schools from each Secondary Educational Service Area Office Bangkok (1 and 2). Subsequently, researchers worked with teachers to choose classrooms and students via convenience sampling to fill out the online questionnaire. Prior to participation, the research team provided a verbal explanation of the study's purpose and procedures to all potential participants. Students were subsequently required to provide their consent via an online form, ensuring that they were fully informed and agreed to participate in the study voluntarily.

A total of 554 adolescents participated in the survey. However, one participant did not provide complete information, leaving 553 valid responses for analysis. As a result, the final analytical sample comprised 553 participants (figure 1).

Measurements

The data collection instrument was an online questionnaire divided into three sections. The first section aimed to collect basic demographic information, including age, birth sex (male or female), gender identity and sexual orientation (heterosexual, bisexual, homosexual, transgender and unsure). Participants who identified their

gender identity and sexual orientation as heterosexual were grouped into the non-LGBT category, while those who identified as transgender, homosexual, bisexual, or were unsure were grouped into the LGBT category. The questionnaire also collected information about the participants' academic level, religions and whether any of their family members identified as LGBT.

The second section examined participants' media consumption habits and exposure to positive and negative media content related to gender and sexual diversity. Participants were asked to self-report their average daily media usage across various platforms (eg, television, YouTube, books, e-books, mobile games and radio) over the past 6 months. The total time spent on media is derived from combining the time spent on each media type. This also included 28 questions on exposure to media content related to diverse sexualities (online supplemental questionnaire), with half focusing on PGSDM, and the other half on NGSDM. The questionnaire was developed by the researchers with insights from psychiatry and adolescent media use experts who also provided healthcare services to LGBT individuals. The questionnaire underwent a pilot test with five students sharing demographic similarities with the target group. Feedback was incorporated after consulting with the experts. Responses were measured on a scale from never (one point) to always (five points), indicating the frequency of exposure to PGSDM (min-max=14–70) and NGSDM content (min-max=14–70). The questionnaire's content validity was verified by three healthcare professionals with expertise in gender and sexual diversity, achieving an Item-Objective Congruence score of 0.90. Its reliability was confirmed through Cronbach's alpha, showing excellent internal consistency overall (α=0.92), and for questions on positive (α=0.86) and negative (α=0.89) media content exposure.

The third section used the LGBTQ stigma scale[2] to assess stigmatising attitudes towards LGBT individuals, adapted to the 'LGBT stigma scale' for better contextual relevance within Thai society. This scale has been used in previous studies, such as in 'Homophobia in the Country? Rural America and the Stigmatization of LGBTQ People: An Empirical Test of Norm-Centered Stigma Theory,' which examines stigma in rural populations. However, no known studies have applied this scale specifically to adolescents. This adaptation excluded references to individuals identifying as queer, as the term is not widely recognised in the Thai context. More specific terms like LGBT are commonly used, and including 'queer' could have caused confusion, affecting response accuracy. The scale, consisting of 84 self-rated questions, was translated into Thai following the World Mental Health Composite International Diagnostic Interview protocol[16] and piloted with five students. Revisions were made based on expert feedback. It covered six themes reflecting biases against various LGBT subgroups: lesbian women, gay men, bisexual women, bisexual men, transgender women and transgender men.[17] Each theme contained 14 items across six subthemes, ranging from social/family relationships to perceptions of femininity/masculinity. Responses ranged from strongly disagree (one point) to strongly agree (five points), with reverse scoring for items conveying positive sentiments (items 1, 2, 6, 7, 11 and 12 in each theme). The overall score ranged from 84 to 420, and each subscale score ranged from 14 to 70. Higher scores indicated stronger stigmatising attitudes towards LGBT individuals. The scale demonstrated excellent reliability (α=0.99), with each identity group section also showing good reliability (α ranging from 0.82 to 0.85).

Statistical analysis

The data were analysed using SPSS Statistics (V.16, IBM Corporation). Descriptive statistics were used to report the frequency, percentage, mean and SD of demographic data, time spent on each media type and stigmatisation score towards LGBT individuals. The χ^2 test was employed to examine differences in demographic data between males and females, and a t-test was used to compare the time spent on each media type and stigmatising attitudes scores towards LGBT individuals between these groups. A blockwise linear regression analysis was conducted to identify predictors of stigmatising attitudes towards LGBT individuals. In the first step, control variables, including age, birth sex, LGBT versus non-LGBT gender and sexual identity, presence of LGBT individuals in the family, and overall media usage time, were introduced into the model. The main predictors, PGDSM and NGSDM, were added in the second and third steps. This analysis was performed to test our hypotheses. Only one incomplete response (out of 554) was excluded from the analysis due to missing data.

Patient and public involvement

Patients or the public were not involved in the design, conduct, reporting or dissemination plans of our research.

RESULTS

Demographic data

According to table 1, 553 participants responded to the questionnaire. The average age was 16 years (min–max=14–20, SD=0.86), with 43% assigned male at birth and 57% assigned female at birth. Two-thirds of the participants (65%) identified as non-LGBT, while one-third (35%) identified as LGBT. Additionally, 14% of participants reported having a family member who identified as LGBT.

Media exposure

Participants reported using various media forms over the past 6 months, with the most frequently used being online media, averaging 395.58 min per day (6 hours and 36 min) (online supplemental table 1), music was the next most popular, averaging 248.60 min per day (4 hours and 9 min), while radio programmes were the least used, averaging 18 min per day.

Table 1 Characteristics of the sample population

Demographic variables	Total n=553 N (%)	Male n=237 (42.91%) N (%)	Female n=316 (57.14%) N (%)	χ^2	P value
Sexual orientation					
Non-LGBT	361 (65.28)	187 (78.90)	174 (55.06)	33.96	<0.001***
LGBT	192 (34.72)	50 (21.10)	142 (44.94)		
Religion					
Buddhism	505 (91.32)	222 (93.67)	283 (89.55)	2.90	0.089
Others	48 (8.68)	15 (6.32)	33 (10.44)		
Current grade					
Grade 10	132 (23.86)	44 (18.57)	88 (27.85)	8.10	0.017*
Grade 11	88 (15.91)	158 (66.67)	175 (55.38)		
Grade 12	333 (60.21)	35 (14.77)	53 (16.77)		
Presence of LGBT in family					
No	473 (85.53)	215 (90.72)	258 (81.65)	9.01	0.003**
Yes	80 (14.46)	22 (9.28)	58 (18.35)		
Lesbian	27 (24.32)				
Gay	21 (18.92)				
Bisexual women	35 (31.53)				
Bisexual men	5 (4.50)				
Trans women	13 (11.71)				
Trans men	10 (9.01)				
Continuous variables	**Total Mean (SD)**	**Male Mean (SD)**	**Female Mean (SD)**	**t**	**P value**
Total media usage time (min)	1537.18 (1283.17)	1673.52 (1498.71)	1434.93 (1085.37)	2.08	0.038*
Exposure to GSDM content†					
PGSDM	48.46 (10.40)	43.67 (11.04)	52.05 (8.24)	−9.82	<0.001***
NGSDM	31.47 (7.78)	31.24 (8.56)	31.64 (7.15)	−0.58	0.561

*P< 0.05, **p< 0.01, ***p< 0.001.
†Range of the sum scores for exposure to GSDM content 63.14–70.00 means very frequent, 49.14–63.13 means frequent, 35.14–49.13 means occasional, 21.14–35.13 means rare and 14.03–21.13 means never.
GSDM, gender and sexual diversity in media; LGBT, lesbian, gay, bisexual, and transgender; NGSDM, negative content related to gender and sexual diversity in media; PGSDM, positive content related to gender and sexual diversity in media.

Most participants reported moderate exposure to GSDM content with an overall exposure score to GSDM content was 79.93. PGSDM content exposure was at a moderate level (average score=48.46), while NGSDM content exposure was at a low level (average score=31.47) (table 1). Although participants assigned male at birth spent more time on media than those assigned female at birth (t=2.08, p=0.038), participants assigned female at birth reported significantly more exposure to PGSDM content (t=−9.82, p<0.001). Exposure to NGSDM content was similar between participants assigned male and female at birth.

Attitudes towards LGBT individuals

As depicted by table 2, the overall mean score for the LGBT stigma scale was 165.82, within the possible range of 84.00–420.00, indicating a low level of stigmatisation (126.84–210.83). Each subscale had a possible range of 14.00–70.00. Participants showed the highest stigmatisation towards trans men (average score=28.06), followed by trans women (average score=28.03) and bisexual men (average score=27.95), all within the low stigmatisation range (21.14–35.13). Participants assigned male at birth had higher stigmatisation scores across all sexual and gender identities than those assigned female at birth, with mean stigma scores of 196.95 and 142.48, respectively. In terms of attitudes within LGBT subgroups, participants assigned male at birth demonstrated the highest stigma score against trans women. In contrast, those assigned female at birth showed the highest stigmatisation towards trans men.

Relationship between exposure to GSDM and stigmatising attitudes towards LGBT individuals

Table 3 reveals that exposure to PGSDM content was significantly associated with lower stigmatisation levels

Table 2 Mean of LGBT stigma scores and differences between males and females

Stigmatisation towards LGBT	Min	Max	Total n=553 mean of sum score (SD)	Male n=237 (42.91%) mean of sum score (SD)	Female n=316 (57.14%) mean of sum score (SD)	t	P value
LGBT individuals in general†	84	275	165.82 (56.69)	196.95 (53.49)	142.48 (47.05)	12.47	<0.001***
Lesbian women‡	14	46	26.63 (8.68)	31.40 (8.68)	23.05 (6.75)	12.27	<0.001***
Gay men‡	14	54	27.69 (9.52)	32.85 (9.08)	23.82 (7.87)	12.25	<0.001***
Bisexual women‡	14	52	27.47 (9.93)	32.86 (9.48)	23.43 (8.21)	12.24	<0.001***
Bisexual men‡	14	48	27.95 (10.11)	33.23 (9.48)	23.98 (8.66)	11.78	<0.001***
Trans women‡	14	58	28.03 (10.24)	33.35 (9.56)	24.03 (8.82)	11.72	<0.001***
Trans men‡	14	50	28.06 (10.18)	33.26 (9.68)	24.16 (8.72)	11.40	<0.001***

***P< 0.001.
†The average overall score of stigmatisation towards LGBT (378.84–420.00 means the highest level of stigmatisation, 294.84–378.83 means a high level of stigmatisation, 210.84–294.83 means a moderate level of stigmatisation, 126.84–210.83 means a low level of stigmatisation and 84.00–126.83 means the least level of stigmatisation).
‡Average total score of stigmatisations against LGBT separated by subgroups (63.14–70.00 means the highest level of stigmatisations, 49.14–63.13 means a high level of stigmatisation, 35.14–49.13 means a moderate stigmatisation, 21.14–35.13 means a low level of stigmatisations and 14.00–21.13 means the least level of stigmatisation).
LGBT, lesbian, gay, bisexual, and transgender.

towards LGBT individuals in general (β=−2.73 (−3.10 to −2.35), p<0.001), as well as across all LGBT subgroups (β ranging from −0.48 (−0.54 to −0.41) to −0.43 (−0.49 to −0.37), p<0.001). Conversely, exposure to NGSDM content was associated with higher stigmatisation levels towards LGBT individuals in general (β=0.80 (0.35 to 1.25), p=0.001), and across all subgroups (β ranging from 0.11 (0.04 to 0.18) to 0.15 (0.07 to 0.24), p=0.001–0.005). Together, PGSDM and NGSDM explained a significant portion of the variance in stigmatising attitudes (R^2 = 0.47).

Control variables significantly associated with higher stigmatising attitudes were being assigned female at birth (vs assigned male at birth) and being LGBT (vs non-LGBT). Participants assigned female at birth (β=−26.71 (−34.50 to−18.92), p<0.001) and LGBT participants (β=−18.50 (−26.24–−10.77, p<0.001) demonstrated significantly lower stigmatisation levels towards LGBT individuals overall and across every subgroup (details on significant values can be found in online supplemental table 2).

DISCUSSION

This study aimed to explore Thai adolescents' exposure to GSDM and its association with stigmatising attitudes towards LGBT individuals. Specifically, we hypothesised that exposure to PGSDM would be associated with lower levels of stigmatisation, while exposure to NGSDM would be associated with higher levels of stigmatisation. Furthermore, we sought to address the gap in understanding how Thai adolescents engage with diverse media content and how this engagement shapes their attitudes towards LGBT individuals and subgroups.

The study found that Thai adolescents are moderately exposed to GSDM, with a majority reporting more exposure to positive representations of gender and sexual diversity than negative ones. Adolescents assigned female at birth reported higher exposure to positive GSDM content than those assigned male at birth. Overall, adolescents in Thailand demonstrate low stigmatising attitudes towards LGBT individuals in general and subgroups. As hypothesised, exposure to PGSDM content is associated with lower levels of stigmatisation towards LGBT individuals in general and sub-groups, while exposure to NGSDM content is associated with higher levels of stigmatisation.

Exposure to GSDM among adolescents

The study revealed that Thai adolescents are moderately exposed to GSDM content, with positive representations reported more frequently than negative ones. This shift contrasts with earlier studies from the 2000s, which documented negative stereotypes of LGBT individuals in media, particularly on TV.[18 19] Social media has played a key role in this change by offering more diverse and positive portrayals of LGBT individuals, especially transgender people, and providing real-life role models. This aligns with research by Cook[20] and Nölke,[13] who observed an increasing number of positive LGBT representations in mainstream media.

Globally, studies have shown that adolescents report varying levels of exposure to positive and negative GSDM content. For instance, studies in Western contexts indicate that exposure to positive LGBT representations is becoming more common,[21] while negative stereotypes persist in certain media formats.[8]

In Thailand, the media landscape has evolved over the years, with portrayals of LGBT individuals, once

Table 3 Relationship between exposure to gender and diverse sexual media content (GSDM) and LGBT stigma score

	LGBT individuals in general	Lesbian women	Gay men	Bisexual women	Bisexual men	Trans women	Trans men
	β (95% CI)	β (95% CI)	β (95% CI)	β (95% CI)	β (95% CI)	β (95% CI)	β (95% CI)
Age (years)	1.48 (–2.55 to 5.51)	0.18 (–0.45 to 0.80)	0.28 (–0.41–.970)	0.27 (–0.45 to 0.98)	0.33 (–0.41 to 1.078)	0.20 (–0.57 to 0.96)	0.23 (–0.53 to 0.98)
Female	–26.71 (–34.50 to –18.92)***	–4.21 (–5.41 to –3.01)***	–4.50 (–5.83 to –3.17)***	–4.69 (–6.08 to –3.307)***	–4.47 (–5.91 to –3.04)***	–4.59 (–6.0 to –3.12)***	–4.25 (–5.71 to –2.78)***
LGBT	–18.50 (–26.24 to –10.77)***	–2.17 (–3.36 to –0.98)***	–3.16 (–4.48 to –1.83)***	–2.90 (–4.28 to –1.53)***	–3.29 (–4.72 to –1.86)***	–3.31 (–4.7 to –1.85)***	–3.67 (–5.13 to 2.22)***
Presence of LGBT in family	–2.17 (–12.42 to 8.08)	0.10 (–1.48 to 1.68)	–0.52 (–2.28 to 1.23)	–0.09 (–1.92 to 1.73)	–0.37 (–2.27 to 1.52)	–0.52 (–2.46 to 1.41)	–0.76 (–2.68 to 1.17)
Media usage time	0.00 (0.00 to 0.01)	0.00 (0.00 to 0.01)	0.00 (0.00 to 0.01)	0.00 (0.00 to 0.01)	0.00 (0.00 to 0.01)	0.00 (0.000 to 0.001)	0.00 (0.00 to 0.01)
PGSDM	–2.73 (–3.10 to –2.35)***	–0.43 (–0.49 to –0.37)***	–0.44 (–0.51 to –0.38)***	–0.48 (–0.54 to –0.41)***	–0.47 (–0.54 to –0.40)***	–0.46 (–0.53 to –0.39)***	–0.46 (–0.53 to –0.39)***
NGSDM	0.80 (0.35 to 1.25)**	0.11 (0.04 to 0.18)**	0.14 (0.06 to 0.22)**	0.14 (0.05 to 0.22)**	0.15 (0.07 to 0.24)***	0.14 (0.06 to 0.23)**	0.12 (0.04 to 0.21)**

*P< 0.05, **p< 0.01, ***p< 0.001.
LGBT, lesbian, gay, bisexual, transgender; NGSDM, negative gender and sexual diverse media content; PGSDM, positive gender and sexual diverse media content; Trans, transgender.

dominated by negative stereotypes,[22] becoming more nuanced. While genres such as Boys Love dramas have contributed to increasing visibility for gay characters,[23] other LGBT identities remain under-represented in both entertainment and news media.[14] The findings of this study also highlight a difference in exposure to PGSDM content based on birth sex, with participants assigned female at birth showing greater exposure than those assigned male at birth. This may be attributed to differing media preferences, as previous research shows males spent more time on gaming media,[24] while females engaged more with e-books and romance genres, which often feature diverse representations of gender and sexuality.[25 26]

Attitudes of adolescents towards LGBT individuals

Our study revealed that adolescents in Thailand reported, on average, low levels of stigmatising attitudes towards LGBT individuals in general and subgroups, aligning with previous surveys conducted by NIDA,[5] as well as findings from other Southeast Asian nations such as Singapore and the Philippines.[27]

We found that LGBT participants exhibited lower levels of prejudice towards LGBT individuals compared with non-LGBT groups, which aligns with Worthen's work.[2] Additionally, participants assigned female at birth exhibited lower stigmatisation levels towards LGBT individuals than those assigned male at birth. This difference may be due to the rigid socialisation of men into traditional masculinity, which often involves rejecting traits perceived as feminine. Trans women, who challenge these norms by embodying femininity, may experience higher levels of stigmatisation from men. Research shows that men often react negatively to gender non-conformity, as it is perceived as a threat to traditional masculine identities. Conversely, those assigned female at birth may stigmatise trans men, viewing them as rejecting conventional female roles, which can disrupt traditional gender expectations and cause discomfort.[28 29] Greater exposure to LGBT matters, enhanced empathy and openness to gender and sexuality may contribute to these differences.[30] Personal relationships with LGBT individuals, such as friends or family members, can also significantly influence attitudes, particularly among women, underscoring the importance of fostering understanding and empathy towards LGBT individuals across society.

Relationship between exposure to GSDM and stigmatising attitudes towards LGBT individuals

The study found that exposure to PGSDM content is associated with lower levels of stigmatisation towards LGBT individuals in general and subgroups, while exposure to NGSDM content is associated with higher levels of stigmatisation. These findings align with previous research, such as a study by Bonds-Raacke *et al*[31] found that thinking positively about gender-diverse characters led to more favourable attitudes towards gay individuals. Kathinthong's[12] research underscored the influence of Y-fiction on acceptance levels of gender and sexual diversity among female readers, revealing their potential to promote gender equality. These findings underscore the potential of media representation in shaping attitudes towards LGBT individuals and highlight the responsibility of media creators to present diverse and positive portrayals. Informed by social cognitive learning theory, media characters and scenes serve as symbolic representations that influence adolescents' attitudes. The recurrence of media exposure may foster fixed perceptions, in line with representation theory, which suggests that media tends to emphasise certain characteristics of people or objects, potentially distorting the audience's perception of reality.

Strengths and limitations

This study investigated exposure to GSDM content in both positive and negative aspects across a variety of media types, covering both positive and negative aspects, which is a strength compared with previous studies that focused on specific types of media such as news, television programmes and films. With the prevalence of online media, adolescents can now choose much of the content they consume (eg, streaming specific movies or following social media channels). Adolescents with less stigmatising attitudes towards LGBT individuals may be more inclined to consume LGBT-positive media, which is a limitation when interpreting the results.

Several limitations should be considered when interpreting the findings. First, as a cross-sectional study, the direction of the causal relationship cannot be conclusively determined. Second, the study's sample is limited to adolescents in the educational system of the OBEC in Bangkok, and therefore, the results may not be generalised to the broader population. Although a notably high percentage of adolescents (34.72%) identify as LGBT in this study, this figure may be influenced by factors such as challenges in disclosing gender identity and sexual identity, internal concerns about societal acceptance, and external pressures to conform to traditional gender norms. The fear of encountering stigma and discrimination may lead many transgender and non-binary youth to conceal their identities, complicating demographic assessments.

Furthermore, the COVID-19 pandemic affected the data collection, as many schools were hesitant to participate, potentially impacting the sample's representativeness. Third, the data were collected through a self-report questionnaire, which is subject to bias and may not accurately represent the participants' attitudes. Fourth, the research focused on attitudes towards LGBT individuals and did not explore bias towards other gender and sexual identities such as asexual, queer and non-binary individuals. Lastly, other potential factors influencing attitudes towards LGBT individuals, such as knowledge about LGBT, and LGBT acquaintances, were not explored in this study. Future research should explore these factors in more depth.

CONCLUSION

These findings suggest that media exposure may influence attitudes towards LGBT individuals and that exposure to positive representations of gender and sexual diversity is potentially associated with greater acceptance and lower levels of bias. Additionally, the study highlights the importance of considering the role of gender in media usage behaviours and exposure to different types of content related to gender and sexual diversity. Overall, the study provides insights into the attitudes and experiences of Thai adolescents towards gender and sexual diversity, which may help inform efforts to promote greater acceptance and understanding of LGBT individuals in general and subgroups.

Application of the study

The findings of this study offer potential applications. Media literacy programmes could be designed to help adolescents critically engage with gender and sexual diversity in media, encouraging reflection on how these portrayals shape attitudes. Policy-makers may find value in these results when considering guidelines for more inclusive media representation. Similarly, media professionals could focus on creating more balanced portrayals of LGBT individuals. While this study only identifies associations, future research should explore how long-term media exposure influences adolescents' attitudes towards LGBT individuals.

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