



## **Social Relationship Attitudes of Student-athletes toward Heterosexual, Gay, and Lesbian Peers in Taiwan**

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### **Authors' contributions**

*This work was carried out in collaboration among three authors. Author TSC designed the study, developed the instruments, performed the data analysis and wrote the first draft of the manuscript.*

*Author WTH collected data and facilitated access to the university gatekeepers. Author TWW contributed to the literature review and the refinement of ideas. All the authors read and approved the final manuscript.*

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### **ABSTRACT**

This study investigated Taiwanese student-athletes' social relationship attitudes toward heterosexual, gay, and lesbian peers in Taiwan. Participants were 192 male and 156 female heterosexual student-athletes from a sports university in Taiwan. The Social Relationship Attitudes toward Heterosexual/Gay/Lesbian Peers scales were used to measure participants' attitudes toward their peers with different sexual orientations. The results indicate that Taiwanese heterosexual student-athletes' social relationship attitudes toward peers are dependent on both student gender and the sexual orientation of the target. Male student-athletes' social relationship attitudes toward gays and lesbians are more negative compared to female student-athletes across personal, societal, and moral domains. Both male and female student-athletes' social relationship attitudes toward gays are more negative compared to their attitudes toward lesbians in the personal and societal domains. Male student-athletes indicate lower sympathy scores for gays than for

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lesbians. Females show no difference in their sympathy scores for peers with different sexual orientations.

*Keywords: Gays; lesbians; social relationship attitudes; student-athletes in Taiwan.*

## 1. INTRODUCTION

Negative attitudes toward gays and lesbians have been found to be more invisible and silent in a sports environment than in other public settings [1,2]. Within the domain of the university, athletic departments have been described as “the most homophobic place on campus” [3]. Similar reports have documented the prevalence of homophobia and homophobic bullying within sports and have offered recommendations for sports in Canada [4], the UK [5], and Australia [6].

Previous studies that examined student-athletes' attitudes toward gays and lesbians have been limited in three ways. First, the majority of studies were from the western countries. Comparatively, few empirical studies have focused on attitudes toward gays and lesbians within the context of sports in Asian countries. Second, most of these studies were primarily focused on the political issue of civil rights and less on social relationships with gay and lesbian peers. Finally, these previous studies didn't differentiate student-athletes' attitudes toward heterosexuals, gays, and lesbians. What is the nature of Asian heterosexual university student-athletes' attitudes toward gay and lesbian peers? Are there any identifiable patterns of social relationship attitudes toward heterosexuals, gays and lesbians between Asian heterosexual male student-athletes and female counterparts? These remain gaps in our knowledge about what social relationship attitudes toward heterosexual, gay and lesbian peers are among Asian heterosexual student-athletes. Therefore, the purpose of this study is to investigate heterosexual student-athletes' social relationship attitudes toward heterosexuals, gays, and lesbians at a sports university in Taiwan. We are particularly interested in whether Taiwanese heterosexual student-athletes' social relationship attitudes toward their peers would differ as a function of the gender of the respondent and the gender of the target.

## 2. CONCEPTUAL FRAMEWORK

### 2.1 Social Relationship Attitudes and Social Domain Theory

Social relationship, or social interaction is defined as a strong, deep, or close association or

acquaintance between two or more people that may range in duration from brief to enduring [7]. Social relationship attitude refers to an expression of favor or disfavor toward a social relationship with person or persons in the context of social, cultural and other influences. How do individuals come to a conclusion about their social relationship attitudes toward others? Research from social domain theory (SDT) [8,9,10] has demonstrated that individuals coordinate domains of social knowledge when making social relationship decisions. SDT provides a model for how individuals identify, evaluate, and coordinate domains of social knowledge when judging socially-relevant actions [8]. This theory includes three distinct domains: the moral (e.g., harm, fairness, rights), societal (e.g., group functioning, traditions, customs), and the personal (e.g., personal choice and individual prerogatives) [8,9,10].

The moral domain, which is structured by concepts of fairness, justice, and minimization of harm to others, is seen as a universal obligation across social or cultural settings [10]. For example, if gay or lesbian student-athletes were physically assaulted on campus due to anti-homosexual attitudes, the attack may be seen to have implications for moral notions of fairness and equality.

The societal domain pertains to obligations that are considered to be contingent, culturally-relative, and potentially alterable by authority or societal consensus [10]. Societal convention is the consensually-determined standard of conduct particular to a given social group that promotes group functioning and group identity (e.g., marriage, partnership, and gender roles). When attitudes toward social relationships is seen as a societal convention, their existence is believed to result from traditions and the organization of society. Thus, same-sex partnerships may not be accepted by heterosexual peers due to the violation of Taiwanese societal conventions.

The personal domain refers to actions that comprise the private aspects of one's life (e.g., contents of a diary) and matters of preference and choice (e.g., friends) [10]. When social relationships are seen as a matter of personal choice, then individuals are perceived as deciding how to interact with their peers based

on their preferences instead of social convention. For example, if some students accept an invitation from a gay or lesbian student to work together on a class project and presentation, accepting a peer's invitation may be thought as a personal choice.

These three domains may be more or less salient depending on the intergroup attitude under investigation, but the context, target, and meaning attributed to the situation can also influence them [11]. For example, an individual could hold the belief that homosexuality is wrong because of the fear of sanction, but also hold the belief that it is wrong to discriminate against gay and lesbian people because it is unfair or hurtful to the person. These divergent and possibly conflicting attitudes toward gay and lesbian individuals arise out of different domains of social relationships. Student-athletes express more positive attitude toward their peers regardless of their sexual orientations only in relation to moral events, but not to personal and conventional events. Therefore, the thorough assessment of each domain is a precise way to pinpoint how social relationship attitudes may be changing.

## **2.2 Gender and Attitudes toward Gays and Lesbians in Sports**

Research suggests that gender is one of the most consistent and powerful predictors of attitudes toward gays and lesbians, and men have been found to hold significantly more negative attitudes than women [1,12,13,14]. Research [15] has confirmed such a difference in a meta-analysis of 109 studies addressing the relationship between the participant's gender and attitudes toward lesbians and gays. The same pattern among samples of 389 heterosexual student-athletes toward gays and lesbians has been found in the U. S. [13].

Historically, sports have been perceived as a male domain that honors masculinity; as such, gays are perceived as the heterosexual image of male failure. Many sports researchers [16,17,18] have indicated that heterosexual males come to know the meaning of manhood by defining themselves in opposition to anything associated with femininity or homosexuality. Within male gender myths, heterosexuality is a symbolic reaffirmation of those power differences. Thus, homosexuality is a loss of masculine power over women or may also include a fear of being subject to the power of other men through homosexual involvement.

On the other hand, females participating in sports are often labeled "mannish" or "masculine." Female participation in sports contradicts stereotypical notions of what it means to be "feminine." As a result, female athletes often find that their sexuality is called into question simply because they participate in sports. The fear of being labeled or identified as a lesbian has the potential to limit women in sports and forces many female athletes to go to extreme lengths to prove their heterosexuality. Given such evidence, we predicted that the influence of the participants' gender in the different domains of evaluated attitudes. The differences between female and male participants were tested, and we expected that the latter would show more negative attitudes than their female counterparts.

## **2.3 Homosexuality in Taiwan and Its Sport Fields**

In Taiwan's society, the family is perceived to be the most basic and important social institution, and filial piety is a core value. Filial piety emphasizes the production of male offspring to maintain the family name, as well as to offer sacrifices after death [19]. A typical Taiwanese family would have a feeling of "losing face" (i.e., feeling ashamed) if they had a gay son or lesbian daughter. Moreover, a Taiwanese family places more social pressure on boys than girls to live up to the behavioral norms associated with gender roles [20]. The image of being a lesbian has usually been less negative in Taiwanese family culture than that of being a gay male [21].

A previous research which explored the experiences and identity-formation process of gay student-athletes in Taiwan [21] indicated that attitudes within sports organizations were highly homophobic, sissy-phobic, and expressing homo-negative languages. Another research [22] assessed 315 college athletes' and 94 coaches' attitudes toward gays and lesbians and found that attitudes of both athletes and coaches toward sexual minority athletes were neutral and slightly positive. However, they explained that the attitude measures in their research are more about equality judgments (e.g., allowing openly gay and lesbian people on the sports team would be disruptive) and less about the individual's emotional response. As discussed earlier, the divergent and possibly conflicting attitudes toward gay and lesbian individuals arise out of different domains of social relationship, we might expect that Taiwanese student-athletes express more positive attitudes toward their peers in

relation to moral or civil rights component, but not to personal and conventional components.

### 3. METHODS

This study adopted a cross-sectional survey model within general survey models. To address the research questions, a within-subject design was used as the methodological underpinnings of this study. That is, participants were asked to indicate their attitudes toward heterosexual, gay, and lesbian peers in one survey for controlling the variance and bias from the participants' individual differences.

#### 3.1 Participants

The participants were 192 male and 156 female undergraduate student-athletes from a sports university in Taiwan. Sports universities in Taiwan are for student-athletes or physical-education students who study athletic training and health, coaching or sport management. Generally speaking, the majority of students in the sports university major in the different competition sports including baseball, track and field, martial arts, etc. Participants were recruited using the snowball method through contacts of the author. Some students from the university were asked to help recruit their friends to fill out the survey. All participants selected "heterosexual" for the "sexual orientation" item at the beginning of the questionnaire. In this study, these students who directly self-identified as heterosexual were referred as "heterosexual student-athletes." Among the participants, 96 (27.6%) were freshmen, 79 (22.7%) were sophomores, 84 (24.1%) were juniors, 81 (23.3%) were seniors, and 8 (2.3%) selected "other" or did not indicate their year in school.

#### 3.2 Measures

The instruments used in this study were the Social Relationship Attitudes toward Heterosexual Peers (SRAH), Gay Peers (SRAG), and Lesbian Peers (SRAL) scales, respectively. The three domains of SDT, as discussed earlier, were applied as the framework of each of these three scales. The scale items were derived and revised from a previous study [23]. Each scale consisted of 10 social relationship situations followed by 10 bipolar adjectives (e.g., happy -

sad; disapproving - approving; good - bad). Participants expressed their reaction toward each situation by indicating a point on a semantic differential scale (a Likert-type scale of 1 to 7) that best captured the degree of their reactions. The 10 items were divided into three subscales: Friendship (akin to the personal domain), Love (akin to the societal domain), and Sympathy (akin to the modal domain).

Friendship including items 1 to 4, is about student-athletes' acceptance of friendships with peers. An exemplar item is "A student asks if you are interested in working together on the class project and presentation. Would you be willing or unwilling to accept the invitation?" Love, including items 5 to 7, is about student-athletes' acceptance of their peers' romantic. An exemplar is "You walk by male and female students sitting on a bench holding hands outside the student union. Do you approve or disapprove of this behavior?" Sympathy, including items 9 to 10, indicates that students express concern for their peers who have suffered from an illness, accident, or attack. An exemplar is "You learn that a resident down the hall is terminally ill. Do you sympathize with this student?"

Both the SRAG and SRAL scales were created in the same form as the SRAH, with the exception that each item of the SRAH referred to heterosexual peers (students whose sexual orientation was not specified), the SRAG referred to gay peers, and the SRAL referred to lesbian peers. To establish psychometrics of these scales, a pilot test of a sample of 494 general university students in Taiwan was conducted. Pilot participants were recruited using the snowball method through contacts of the author. It took about 10 minutes to complete the survey. The items were arranged by presenting the same situation, but for different sexual orientation targets in sequence for easy response. The coefficients of internal consistency reliability were .88, .92, and .91 for the SRAH, SRAG, and SRAL, respectively (see Table 1). The domain factors accounted for 71.42%, 79.46%, and 76.84% of the total variance for the SRAH, SRAG, and SRAL, respectively. The confirmatory factor analysis model also indicated that the hypothesized factor structure provided an acceptable fit for these three scales. Values larger than .90 for CFI and GFI, and values less than .08 for RMSEA, indicate good model fit [24].

**Table 1. The psychometric properties of the SRAH, SRAG, and SRAL scales**

No of item.	Heterosexual form			Gay form			Lesbian form			
	$\lambda$	%	$\alpha$	$\lambda$	%	$\alpha$	$\lambda$	%	$\alpha$	
Friendship		25.58	.81		25.28	.86		26.23	.85	
1	.72			.82			.82			
2	.81			.81			.82			
3	.72			.66			.69			
4	.75			.60			.72			
Love		23.99	.86		28.30	.95		25.93	.93	
5	.76			.85			.86			
6	.87			.87			.86			
7	.86			.85			.86			
Sympathy		21.85	.79		25.88	.86		24.69	.83	
8	.85			.87			.86			
9	.85			.85			.84			
10	.64			.78			.74			
Overall		71.42	.88		79.46	.92		76.84	.91	
		$\chi^2 = 73.21, df = 32$			$\chi^2 = 98.85, df = 32$			$\chi^2 = 85.22, df = 32$		
		$p < .05$			$p < .05$			$p < .05$		
CFA		GFI = .96			GFI = .94			GFI = .95		
		CFI = .98			CFI = .98			CFI = .98		
		RMSEA = .06			RMSEA = .07			RMSEA = .07		

#### 4. RESULTS

The results indicate that student-athletes' social relationship attitudes toward heterosexual peers for all three domains are highly positive (see Table 2). The scores of attitudes toward gays and lesbians are relatively low across domains, particularly the Friendship and Love domains toward gays. In order to control the type I error rate, a two-way mixed design of MANOVA is applied to test the effects of student gender and the sexual orientation of the target on the Friendship, Love, and Sympathy variables simultaneously. The result of MANOVA,  $F(4, 1376) = 11.32, p < .001$  is significant, which means that there is a two-way interaction across various levels of the domain variable. Therefore, a two-way analysis of variance is applied to test the effects of student gender and the sexual orientation of the target in the Friendship, Love, and Sympathy domains, respectively.

In the Friendship domain, the interaction effect is significant,  $F(2, 692) = 35.31, p < .017$  (see Table 2). There is no statistically significant difference,  $F(1, 1038) = 1.76, p > .05$ , between male and female student-athletes regarding their friendship attitudes toward heterosexual peers. However, male student-athletes express significantly more negative friendship attitudes toward gays  $F(1, 1038) = 81.29, p < .001$  and

lesbians  $F(1, 1038) = 19.94, p < .001$ , than do female counterparts.

The results indicate that male student-athletes score significantly lower in Friendship attitudes,  $F(2, 692) = 285.87, p < .001$  toward gays and lesbians compared to heterosexuals. Male students also indicate significantly lower Friendship attitude scores toward gays than toward lesbians. Female students express significantly lower attitude scores,  $F(2, 692) = 58.89, p < .001$  toward gays and lesbians compared to heterosexuals. Female students also indicate significantly lower Friendship attitude scores toward gays than toward lesbians.

In the Love domain, the interaction effect is significant,  $F(2, 688) = 35.25, p < .017$  (see Table 2). There is no statistically significant difference  $F(1, 1032) = 4.43, p > .05$  between male and female student-athletes regarding their acceptance of heterosexual relationships. However, male student-athletes express significantly more negative Love attitudes toward gays,  $F(1, 1038) = 78.35, p < .001$  and lesbians  $F(1, 1038) = 4.98, p < .001$  than do their female counterparts, respectively. The results of the comparison indicate that male student-athletes score significantly lower  $F(2, 688) = 253.75, p < .001$  for their acceptance of gay relationships compared to lesbian relationships. Similarly,

**Table 2. Means and standard deviations of social relationship as a function of student gender and the sexual orientation of the target (ANOVA results)**

Sexual orientation	Heterosexual		Gay		Lesbian		ANOVA $\eta^2$	Significance
Dimensions	M	SD	M	SD	M	SD		
<b>Friendship<sup>a</sup></b>								
Male (n=192)	5.38	1.11	3.37	1.45	4.15	1.56	G*	.09 H > L > GM***
Female (n=156)	5.57	.98	4.61	1.25	4.77	1.14	S*	.45 H > L > GM***
Total	5.56	1.06	3.92	1.50	4.43	1.42	G x S*	.09
Simple main effect			F>M***		F>M**			
<b>Love</b>								
Male (n=191)	5.52	1.35	3.34	1.84	3.96	1.75	G*	.12 H > L > GM***
Female (n=155)	5.77	1.07	4.79	1.49	5.11	1.33	S*	.41 H > L > GM***
Total	5.63	1.24	3.99	1.84	4.48	1.67	G x S*	.09
Simple main effect			F>M**		F>M**			
<b>Sympathy</b>								
Male (n=191)	5.80	1.13	5.13	1.51	5.28	1.41	G*	.08 H > L > GM***
Female (n=156)	6.18	.98	6.02	1.10	6.06	1.03	S*	.12
Total	5.97	1.08	5.53	1.41	5.63	1.31	G x S*	.05
Simple main effect			F>M**		F>M**			

Note. \*:  $p < .017$ ; \*\*:  $p < .0085$ ; \*\*\*:  $p < .0057$ ;  $\eta^2$ : partial Eta squared

Sample sizes are not the same across the three domains due to missing data.

a 7-point scale: 7 = Strongly agree; 1 = Strongly disagree. M: mean; SD: Standard deviation

H: Heterosexuals; GM: Gay males; L: Lesbians; F: Female; M: Male

G: Significant effect for student gender; S: significant effect for the sex orientation of the target;

G x S: Significant interaction effect for student gender by the sexual orientation of the target

female students score significantly lower,  $F(2, 688) = 40.62, p < .001$  for their acceptance of gay relationships compared to their acceptance of lesbian relationships. That is, the bias from both male and female student-athletes expressed toward gays was stronger than it was for lesbians.

In the Sympathy domain, the interaction effect is significant,  $F(2, 690) = 18.09, p < .017$  (see Table 2). The mean scores of male student-athletes' attitudes are significantly lower than those of their female counterparts on heterosexuals,  $F(1, 1035) = 8.37, p < .01$ , gays  $F(1, 1035) = 45.22, p < .001$ , and lesbians  $F(1, 1035) = 34.63, p < .001$ , respectively. This gender difference is more pronounced in Sympathy attitudes toward gays than in attitudes toward lesbians and toward heterosexuals. The results of the comparison indicate that male student-athletes significantly score the highest,  $F(2, 690) = 69.68, p < .001$  for the Sympathy dimension, with heterosexuals being the highest, followed by lesbians, and gays being the lowest. However, female students express no significant differences,  $F(2, 690) = 3.29, p > .05$  toward heterosexuals, gays, and lesbians.

## 5. DISCUSSION

The primary purpose of the present study was to explore possible gender differences in social

relationship attitudes toward heterosexual, gay, and lesbian peers, as well as the multifaceted nature of social relationship among a sample of university heterosexual student-athletes within the sports context in Taiwan. The results of this study revealed that (1) student-athletes' social relationship attitudes toward gay and lesbian peers for all domains are much lower than those toward heterosexual peers, particularly scores toward gays in the Friendship and Love are lowest. (2) Male student-athletes hold significantly more negative attitudes toward gays and lesbians than do their female counterparts. (3) The magnitude of discomfort of male and female students toward heterosexuals, gays, and lesbians varies across the social domains. The patterns of male and female student-athletes attitudes toward gays and lesbians are the same across Friendship (personal domain) and Love (societal domain), but different in Sympathy (moral domain).

### 5.1 Theoretical Implications

This study's finding pertaining to the predictive effects of respondents' gender, sexual orientation of the target, and the social domain on student-athletes' attitudes toward peers contribute to the literature in three ways. First, this study reveals that sexual orientation of target (heterosexual, gay and lesbian) can be predictive of student-

athletes' social relationship attitudes toward peers. Heterosexual students expressed the highest favorable attitudes toward heterosexuals, less for lesbians, and least toward gays. The findings are consistent with the results of previous studies on undergraduates on sports teams in the U.S. [25,13], Canada [4], the UK [17], and Australia [18,6]. In general, the sporting atmosphere is constructed from patriarchy and heterosexual hegemony, gays' and lesbians' existence in this environment challenges the traditional gender order or social identity [14].

Likewise, sports have been perceived in Taiwan as a masculine domain by both males and females in the sports field; as a result, gays are the heterosexual image of male failure [21]. As Liao's study shows, sports organizations in Taiwan are still rife with misogyny, homophobia, and sissy-phobia. In order to maintain patriarchy and the traditional gender order of heterosexual hegemony in the sport or athletic field, our participants express a greater tendency to exclude gays more than lesbians.

Second, males indicate more negative scores toward gays and lesbians than do their female counterparts. Moreover, the scores of their attitudes toward gays are much lower than those toward lesbians. The findings provide evidence to support the proposition that gender differences figure largely in negative attitudes toward gays and lesbians [26,13,14]. Such findings stem from the notion that violating gender roles is interpreted as more severe for men than for women [27]. A previous research has identified perceptions of gender role which can mediate the relationship between gender and negative attitudes toward gay men and lesbians [26]. These gender role perceptions can range from traditional (e.g., men should provide financially for their families, women should care for their children and their homes) to nontraditional (e.g., it is appropriate for men to care for children and for women to work outside of the home). Most males, particularly males on the sports fields in Taiwan, receive stronger gender role socialization than do females [21,26]. Therefore, male student-athletes indicate more negative attitudes toward gay men and lesbians than females.

This study found that female students also discriminate against gays and lesbians. The reason for this needs to be explored based on the nature of sports. Originally, sports tended to be perceived as a male-dominant domain.

Excelling in sports frequently requires strength, speed, and endurance, as well as a competitive mentality. These were attributes expected of men. Moreover, the role and characteristics of athletes were almost equivalent to the macho temperament that most contemporary societies value highly across eastern and western countries [28]. Nonetheless, as females began to improve performance levels in some sports which were traditionally seen as more suitable for males, they may be seen as rebellious and failing to meet the feminine expectations that societies require of them [28]. Further, some female heterosexual athletes were labeled lesbians to discredit them and, as a result, they feared that they would be mistaken as being lesbians due to their strong sports performance [29]. This might be the reason why female students also discriminated against gays and lesbians.

Third, the magnitude of discomfort of male and female students toward heterosexuals, gays, and lesbians varies across the social domains. This finding confirms Turiel's Social Domain Theory which suggests that "individuals coordinate domains of knowledge when evaluating social situations" [10]. In this study, gays and lesbians are not as accepted as their heterosexual counterparts by heterosexual male student-athletes in the context of friendship, love and sympathy, and by heterosexual females in the context of friendship and love, at a sports university in Taiwan. Therefore, when discussing student or student-athletes' attitudes toward gays and lesbians, not only does student gender and the sexual orientation of targets need to be taken into account, but the context and situation should be considered. In other words, gender cannot be taken alone without considering the situations when discussing students' attitudes toward gay and lesbian peers.

For example, in both Friendship and Love domains, female student-athletes express more negative attitudes toward gays than lesbians. The female heterosexual student-athletes in this study may have expressed more negative attitudes toward gays than lesbians to avoid homophobia or sissy phobia, and to maintain their strong image in their sport fields. Another explanation is that female student-athletes may feel that they need to condemn their gay male peers in the Friendship and Love domains more than their lesbian peers in order to assert their own heterosexuality and femininity. However, in the Sympathy domain, female student-athletes show no difference in sympathy attitude scores

among heterosexuals, gays, and lesbians. It could be the case that females in Taiwanese society are simply asked to be more accepting or tolerant of others who differ from themselves in terms of beliefs, attitudes, or behaviors. This study does suggest that female student-athletes express more concern and sympathy for their peers regardless of their sexual orientation, only in relation to moral events. This finding confirms a previous study [11] that demonstrated that females are more likely than males to judge negative intergroup interactions as being wrong because they are unfair or harmful.

## 5.2 Practical Implications

This study has some practical implications. First, the association of sexual orientation and heterosexual student-athletes' social relationship attitudes towards their peers has implications for the implementation and promotion of gay- and lesbian-friendly campus development and student-support quality. This finding also highlights the need for university coaches to be trained in affirmative practices since coaches are the key person in fostering and supporting a positive and healthy climate for student-athletes with sexual and gender diversity.

Second, gender difference in negative attitudes toward gays and lesbians has suggested that the intervention/prevention strategies or approaches for changing heterosexual male and female anti-gay and anti-lesbian attitudes should not be identical. The prevention / intervention should be in accordance with the climate and nature of sport and in particular the relationship formation in male and female groups, respectively.

Third, the significant interaction effects of respondents' gender and sexual orientation of the target across the social domains suggests that sport teachers and coaches to take student gender, student sexual orientation, and campus life situation together into consideration when creating and maintaining a warm and friendly learning environment for their student-athletes; expressing positive communication and support for each other is vital for achieving optimal sport performance.

We advise that both gay and lesbian student-athletes might appreciate learning that most of their heterosexual peers expressed outrage at incidents of physical violence toward a gay male or lesbian student. These findings may influence the interaction patterns of gays and lesbian with these peers and may suggest ways in which both

gay and lesbian student-athletes may target efforts to educate the campus community. Heterosexual male and female student-athletes can benefit from panel presentations with gay and lesbian student-athletes from diverse backgrounds and experiences. Heterosexual student-athletes' attitudes toward gay and lesbian peers might improve through opportunities to develop personal relationships and contact with gay and lesbian peers so that heterosexual student-athletes' anxieties about personal interactions can be confronted.

## 6. CONCLUSION

A primary contribution of this study is to elucidate university heterosexual student-athletes' social relationship attitudes toward heterosexual, gay, and lesbian peers regarding acceptance of friendships with gay and lesbian peers, acceptance of same-gender relationships, and concern for gay and lesbian peers, within the context of a sports university in Taiwan. The results reveal that heterosexual student-athletes' relationship attitudes toward peers on social domains are dependent on both student gender and the sexual orientation of the target. Male student-athletes' social relationship attitudes toward gays and lesbians are more negative compared to female student-athletes across personal, societal, and moral domains. Both male and female student-athletes' social relationship attitudes toward gays are more negative compared to their attitudes toward lesbians in the personal and societal domains. Male student-athletes indicated lower sympathy scores for gays than for lesbians. Females show no difference in their sympathy scores for peers with different sexual orientations. This study suggests that administrators should be aware of their students' needs within different domains of social relationships, while providing necessary support to them. Moreover, it is crucial for the sport administrators, teachers, and coaches to take student gender, student sexual orientation, and social domain together into consideration when creating and maintaining a warm and friendly learning environment for their student-athletes; expressing positive communication and support for each other is vital for achieving optimal learning.

## 7. LIMITATIONS AND FUTURE DIRECTIONS

Despite the theoretical and practical implications, some of the study's limitations should be



addressed in future research. First, this study only scratches the surface of student-athletes' anti-gay and anti-lesbian prejudice which is too complex to be explained by a single variable of gender, and thus, other mechanisms are plausible. It would be meaningful to investigate mediating factors relating gender to anti-gay and anti-lesbian attitudes. For example, biological gender may impact ones' sex role which in turn influence social relationship with others. Hence, sex role might be an appropriate mediating factor. In addition to mediators, researchers could consider involving moderators. For instance, student-athletes in team sports may have different attitudes toward masculinity than those in individual sports. The type of sport and contact experience are associated with student athletes' attitudes toward gay and lesbian peers [13]. Attitudes toward lesbians and gay men are more negative among men's team sport participants compared to men's individual, women's team, and women's individual sports [13]. Contact experiences are associated with more positive attitudes toward lesbians and gay men. Future research is encouraged to examine the moderation effect of type of sport and contact experience on social relationship attitude toward gay and lesbian peers among male and female student-athletes.

Second, we have found that male student-athletes were found to hold more negative attitudes toward lesbians and gay men and male and female differed in their attitudes toward gay and lesbian peers across social domains. As we know that the universities in U.S. have adopted the inclusive policy to be committed to diversity, inclusion and gender equity among their student-athletes, coaches, and administrators from diverse backgrounds [30]. Future research is encouraged to take some universities in Asian countries as a sample to explore the inclusive policy or program in fostering and supporting a positive and healthy climate for male athletes and female athletes and investigate the difference and similarity of attitude changing between male and female athletes after adopting inclusive practices.

Third, the three instruments used in this study are scales designed to survey heterosexuals' social relationship attitudes toward heterosexuals, gays, and lesbians. However, this implies that the answers are a detailed description of common sense responses of the student-athletes in a public survey. This is a general methodological limit of questionnaire survey.

Therefore, future research may want to examine the original reasons why student-athletes accepting gay and lesbian peers, vice versa. Also, these scales exclude heterosexuals' attitudes toward transgender and bisexual athletes; this is another salient issue for future study on sexual and gender identities and heterosexual students' social relationship attitudes.

Finally, our sample came from the Taiwanese context, which doesn't permit generalization to other cultures. Although our findings are consistent with the social domain theory that underpinned our study, it is recommended to replicate our findings using samples across cultures and sport settings in the future research.

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## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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