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Sexual Orientation and Vocational Interests Across 48 Countries: The Moderating Effect of Cultural Tightness–Looseness

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Vocational interests are an important factor in individuals' career choice and development. However, current understanding about the vocational interests of sexual minorities is underdeveloped. Using data from 31,348 men and 59,715 women (N = 91,063) from 48 countries who self-identified as heterosexual, gay/lesbian, bisexual, or asexual, this study used a fine-grained approach to investigating the relationship of sexual orientation to Holland's realistic, investigative, artistic, social, enterprising, and conventional interests, separately by gender. Across these countries, we also explored how the strength of social norms—that is, cultural tightness–looseness—moderates this relationship. Results indicated generally small sexual orientation differences in realistic, investigative, artistic, social, enterprising, and conventional interests within women and within men. On average, the interests of sexual minorities tend to be less gender-typical, but more investigative and artistic, than those of heterosexual people. Multilevel analyses show that cultural tightness–looseness moderated sexual orientation differences in realistic, investigative, artistic, social, enterprising, and conventional interests, such that some of these differences are smaller (larger) in tight (loose) cultures. This implies that tight cultures that have strong norms might constrain sexual minorities' vocational interests, whereas loose cultures that have weak norms offer greater latitude for them to pursue different interests. Altogether, this study advances our collective understanding of sexual minorities' vocational interests and highlights the role of the cultural context in shaping their career choices and development. Implications for counseling and career development of sexual minority clients are discussed.

Public Significance Statement
This study found modest but meaningful differences in the vocational interests of sexual minorities (gay/lesbian, bisexual, and asexual people) and same-gender heterosexuals. Some of these differences are attenuated by the strength of social norms (i.e., cultural tightness) across countries—implying that cultural contexts may shape the interest development of sexual minorities. Career counselors should consider the diverse interests of sexual minority clients and their cultural environments when providing career guidance.

Keywords: vocational interests, sexual orientation, cultural tightness–looseness, sexual minorities, sexual orientation differences

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> Love and work are inextricably linked in the lives of sexual minority people, and the study of sexual orientation in relation to work and career is critically important. (Mohr & Fassinger, 2013, p. 151)

Helping clients make career decisions is a central goal in counseling psychology (Nauta, 2010). Since the early 1900s, vocational interests have been widely used for career guidance and counseling (e.g., Parsons, 1909; Strong, 1943). People tend to gravitate toward academic or occupational environments that match their interests (Holland, 1997); thus, interests strongly predict educational and career choices (Hanna & Rounds, 2020). Research has also shown that vocational interests can predict income, occupational prestige

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Yan Yi Lance Du played a lead role in conceptualization, formal analysis, investigation, methodology, project administration, visualization, writing–original draft, and writing–review and editing. Michele J. Gelfand played a supporting role in conceptualization, methodology, and writing–review and editing and an equal role in supervision. Fritz Drasgow played a supporting role in conceptualization, methodology, and writing–review and editing and an equal role in supervision.

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(Hoff et al., 2022), and career success (Nye & Rounds, 2019). Given the importance of interests in career choice and development, psychologists have considered how vocational interests differ across sociodemographic characteristics, such as sex/gender (e.g., Morris, 2016) and sexual orientation (e.g., Chung & Harmon, 1994). In particular, substantial research has shown that women tend to prefer working with people (e.g., nurse, teacher), whereas men prefer working with things (e.g., mechanic, engineer; Du et al., 2025; Morris, 2016; Su et al., 2009).

As compared to sex differences in interests, far fewer studies have investigated sexual orientation differences in interests. Further, these studies were largely conducted in Western countries (e.g., Lippa, 2005a, 2008; for an exception, see Zheng et al., 2011). As a result, our current understanding of sexual minorities' vocational interests remains limited. As implied in the quote above, a full understanding of the relationship of sexual orientation to vocational interests is critically important for at least two reasons: (a) to guide individuals' career exploration and development and (b) to enhance research and practice in career counseling with sexual minority clients from diverse backgrounds (e.g., culture). Hence, leveraging large-scale data from 48 countries in six continents, the present study explicates the relationship of sexual orientation (heterosexual, lesbian/gay, bisexual, asexual) to Holland's (1997) realistic, investigative, artistic, social, enterprising, and conventional (RIASEC) interests. In addition, using multilevel analyses, this study explores how the strength of social norms in these countries—cultural tightness–looseness (TL)—moderates sexual orientation differences in interests.

Sexual Orientation and Vocational Interests

Haselkorn (1956) was the first to study sexual orientation differences in vocational interests. He found that, as compared to heterosexual men, gay men were more interested in female-typical occupations (e.g., teacher) and less interested in male-typical occupations (e.g., factory manager). Haselkorn (1956) also observed that the "interests of [gay men] tend to be highest in cultural, aesthetic, or expressive fields" (p. 10). Subsequently, using Holland's (1959, 1997) RIASEC model, Chung and Harmon (1994) found that gay men's interests were more social ($d = -0.40$) and artistic ($d = -0.63$) and less realistic ($d = 0.78$) and investigative ($d = 0.37$), than those of heterosexual men (Cohen's *d*s were computed from *M*s and *SD*s on p. 232).

At the turn of the century, psychologists began to study sexual orientation differences in gender-typical (male- vs. female-typical) interests using a single bipolar dimension called *masculinity–femininity occupational preferences* (MF-Occ; e.g., Lippa, 2000, 2001; Lippa & Tan, 2001). Lippa (2005a) proposed the *gender-shift hypothesis*. It states that the psychological traits (e.g., MF-Occ) of gay men/lesbian women will be *shifted* in the direction of the different sex (i.e., more similar to different-sex heterosexuals). Synthesizing eight studies on sexual orientation and MF-Occ, Lippa's (2005a) meta-analysis supported the gender-shift hypothesis: On average, lesbian women have a stronger preference for male-typical occupations than heterosexual women ($d = -1.46$); gay men have a stronger preference for female-typical occupations than heterosexual men ($d = 1.28$). Lippa (2008) further replicated these patterns in a British Broadcasting Corporation Internet Study, comprising more than 200,000 participants in five Western world regions (United States, United Kingdom, Canada, Western Europe, and Oceania). In addition, across both studies (Lippa, 2005a, 2008), these heterosexual–gay/lesbian differences in MF-Occ were very large[1] ($|d|_{average} = 1.20$, $|d|_{range} = 0.91$–1.46). Since then, there has been a longstanding claim that sexual orientation differences in (gender-typical) interests are large and "well established" (Bogaert et al., 2018, p. 954), with "effect sizes often exceeding one standard deviation unit" (Lippa, 2005b, p. 694).

Nevertheless, the current literature on sexual orientation and vocational interests remains underdeveloped in several ways. First, despite being the most widely used interest typology in counseling and organizational psychology (Nauta, 2010; Nye, 2022; Su, 2020), the RIASEC model has never been applied to study the interests of sexual minority women. Second, the longstanding claim that sexual orientation differences in interests tend to be very large (i.e., Cohen's $d > 1$; Lippa, 2005b) has not been tested with the RIASEC framework. Given that differences between sexual minority and heterosexual people's RIASEC interests hold implications for counseling practice, it is critical to reassess this longstanding proposition using the RIASEC model.

Third, to the best of our knowledge, no study has explored how *cultural factors* may moderate the relationship between sexual orientation and interests. This is a problematic omission because an important cornerstone of vocational theories is that the sociocultural environment plays a powerful role in interest and career development (Gottfredson, 2005; Holland, 1997; Lent et al., 1994). To advance our understanding of sexual minorities' interests, it is therefore essential to examine the role of the cultural context in shaping their expression of vocational interests (Spurk, 2021).

The Present Study

To address the above critical knowledge gaps, the present study has two overarching aims. First, drawing on Holland's (1997) interest model, we investigate the relationship of four sexual orientation categories—heterosexual, gay/lesbian, bisexual, or asexual—to the RIASEC interest dimensions, separately by gender (male/female). In doing so, we expand interest research on sexual minority women and asexual people.[2] Specifically, we expect that gay men's and lesbian women's gender-typical (i.e., realistic and social; Su et al., 2009) interests will be gender-shifted (i.e., significantly more similar to different-sex heterosexuals). Further, we will use the RIASEC framework to reevaluate the longstanding claim that sexual orientation differences in interests are large (Lippa, 2005b). Based on the effect sizes computed from Chung and Harmon (1994) (i.e., mean and range of Cohen's *d*s across the RIASEC interests:

[1] To evaluate sexual orientation differences in interests, we use empirically derived effect size benchmarks to indicate small, medium, and large effects (Hyde, 2005). Thus, a small effect is defined as Cohen's $d = 0.10$–0.35, medium $d = 0.35$–0.65, large $d = 0.66$–1.00, and very large $d > 1.00$. As compared to Cohen's (2013) effect size guidelines (i.e., small $d = 0.20$; medium $d = 0.50$; large $d = 0.80$), these benchmarks are generally smaller but more consistent with effect sizes found in the literature on individual differences (Gignac & Szodorai, 2016; Hyde, 2005).

[2] Asexuality has been defined as "an enduring lack of sexual attraction to others" (Bogaert et al., 2018, p. 953). It is estimated that about 1% of people are asexual (Bogaert et al., 2018). The extension of interest research to asexual people is timely, given that asexuality has been identified as the "fourth sexual orientation" that is receiving increasing public and scientific attention (Bogaert et al., 2018, p. 958).

$|d|_{average} = 0.43$; $|d|_{range} = 0.18–0.78$), we expect generally small-to-moderate sexual orientation differences in RIASEC interests.

Second, drawing on sociocognitive career theories (Lent et al., 1994; Morrow et al., 1996) and cultural TL theory (Gelfand et al., 2006), we explore whether the strength of social norms across cultures (i.e., cultural TL) moderates the relationship between sexual orientation and vocational interests. Accordingly, we analyzed data from 91,063 participants in 48 countries, who completed an online interest survey hosted by the Open-Source Psychometrics Project. In the ensuing section, we describe the relevant theoretical frameworks that motivate our research questions.

Theoretical Framework

Holland's RIASEC Theory

Vocational interests are traitlike preferences for work activities and environments that motivate goal-oriented behavior (Rounds & Su, 2014). The most influential and widely used theory of vocational interests is Holland's (1997) RIASEC model. Holland proposes that people and work environments can be classified into six interest dimensions: realistic, investigative, artistic, social, enterprising, and conventional. Realistic involves hands-on activities and working with things (e.g., mechanic, engineer). Investigative involves interest in scientific activities (e.g., biologist, physicist). Artistic involves interest in creative expression (e.g., painter, designer). Social involves working with and helping people (e.g., teacher, nurse). Enterprising involves interest in leadership and persuasive domains (e.g., CEO, finance manager). Conventional involves interest in data-oriented and structured work environments (e.g., accountant, office clerk). In addition, Holland (1997) broadly states that interests develop through interactions between the person and the environment, and a congruence between interests and work environments will be positively associated with job satisfaction.

Social Cognitive Career Theories

Social cognitive career theory (SCCT; Lent et al., 1994) describes how interests develop across the lifespan and how interests and goals translate into career choices. A key tenet of SCCT is that two primary sociocognitive factors—self-efficacy beliefs and outcome expectations—foster the development of interests. That is, people develop interests "for activities in which they feel efficacious and for activities that they perceive will provide positive and desirable outcomes" (Morrow et al., 1996, p. 137).

An extension of SCCT, *sociocognitive theory of sexual minority careers* (Morrow et al., 1996) proposes that sexual orientation influences interest development primarily through internalized *negative outcome expectations*. That is, when sexual minorities *expect* discrimination (e.g., from family, teachers, and potential employers) for pursuing certain interests and activities, they may be prohibited or discouraged from engaging in those activities, therefore foreclosing on their developing interests. This, in turn, restricts their range of interests and career choices. Sociocognitive theory of sexual minority careers further states that "societal forces can determine the direction of [sexual minorities'] outcome expectations" (Morrow et al., 1996, p. 145), suggesting that sociocultural factors, such as cultural TL, may moderate the relationship between sexual orientation and vocational interests.

Cultural Tightness–Looseness Theory

Cultural TL refers to the extent to which cultures vary in their strength of social norms and tolerance for social deviance (Gelfand et al., 2006, 2011). Tight cultures have strong social norms and little tolerance for deviant behaviors. Individuals who violate social norms experience strong sanctioning. Examples of tight cultures include China, Germany, Singapore, South Korea, and Türkiye. Loose cultures have weak norms and are highly tolerant toward deviant behaviors. They are more permissive and impose less severe punishments toward individuals who violate norms. Examples of loose cultures include the United States, Brazil, New Zealand, and Spain.

Note that cultural TL is distinct from individualism–collectivism (Gelfand et al., 2006), which refers to the extent to which societies value having strong ties to the in-group versus prioritizing individual needs and interests (Hofstede, 1980) and does not refer to how pervasive social norms are. Cultures can be tight and collectivistic (e.g., Singapore, Japan), tight and individualistic (e.g., Germany, Austria), loose and collectivistic (e.g., Spain, Brazil), and loose and individualistic (e.g., United States, Australia). Cultural TL is also distinct from gender egalitarianism (only moderately correlated with GLOBE's gender egalitarianism: $r = -0.35$; Gelfand et al., 2011), even though gender norms represent tightness in one domain of life (Jackson et al., 2020). Cultures can be tight and egalitarian (e.g., Norway, Singapore), tight and inegalitarian (e.g., Pakistan, China), loose and egalitarian (e.g., Australia, New Zealand), and loose and inegalitarian (e.g., Brazil).

The multilevel theory of cultural TL (Gelfand et al., 2006) proposes that cultural TL exerts "cross-level" effects on individual preferences and behavior through the psychological mechanism of felt accountability (Frink & Klimoski, 1998). Specifically, to avoid punishment and other negative consequences, people in tight cultures feel more compelled (i.e., higher *felt accountability*) to follow social norms than do people in loose cultures. Consequently, those in tight cultures are relatively more likely to adjust their preferences and behaviors to fit normative expectations. Thus, it is plausible that cultural TL would moderate the degree to which sexual minorities' interests and preferences comply with gender normative (and heteronormative) expectations in their cultures. Indeed, research suggests that people in tight cultures are more likely to act on social norms, whereas people in loose cultures are more likely to act on their personal values (Dimant et al., 2024; Elster & Gelfand, 2021).

Furthermore, sexual minorities may be seen as deviants from societal norms (Anteby & Anderson, 2014; Federo, 2024). As such, tight cultures may be less tolerant and impose stronger sanctioning toward sexual minorities than loose cultures. Indeed, research shows that tight cultures have greater discrimination and prejudice against sexual minorities than loose cultures (Jackson et al., 2019), and the tighter the culture, the more negative social attitudes are toward LGBTQ+ (lesbian, gay, bisexual, transgender, and queer) people in that culture (Vandello et al., 2023; see also Ikizer et al., 2024). Following sociocognitive theory of sexual minority careers (Morrow et al., 1996), sexual minorities in tight cultures would more likely hold negative outcome expectations (e.g., anticipated discrimination) when pursuing interests that do not conform to (hetero)normative expectations (e.g., gender-atypical interests). This restricts their range of interests and career choices, which would attenuate sexual orientation differences in interests. Conversely, loose cultures, which

are more tolerant and open toward sexual minorities (Vandello et al., 2023), should provide greater latitude for them to pursue different interests and, thus, observe larger sexual orientation differences in interests.

Summary of Research Questions

Because the present study is largely descriptive and exploratory, we propose the following research questions (RQs):

Research Question 1: How do the RIASEC interests of sexual minority (gay/lesbian, bisexual, and asexual) and heterosexual people differ within each gender (i.e., within women and within men)?

Research Questions 2: How large are sexual orientation differences in RIASEC interests?

Research Questions 3: Does cultural tightness–looseness moderate sexual orientation differences in RIASEC interests, such that these differences tend to be smaller (larger) in tight (loose) cultures?

Method

Data and Participants

Data were collected from the Open-Source Psychometrics Project (https://openpsychometrics.org/_rawdata/; Openpsychometrics.org, 2019). The original data set contains 145,828 responses from 182 countries to an online vocational interest survey and several demographic items, including age, gender, sexual orientation, and education level. The item on sexual orientation asked, "What is your sexual orientation?" and provided the following response options: *Heterosexual*; *Bisexual*; *Homosexual*; *Asexual*; *Other*. For the analyses of this article, we omitted responses that answered "other" for the sexual orientation or gender[3] items.

Next, to mitigate careless responding (Meade & Craig, 2012), we excluded responses that (a) reported age as higher than 99 years; (b) had consecutive identical answers throughout the survey (i.e., nonvarying responses); and (c) failed any one of three attention check items (for these items, see Supplemental Material A). Responses that did not report their education level or whether "English is [their] native language?" (i.e., demographic variables used as covariates in the analysis) were excluded. Respondents' nationalities were inferred by their internet protocol address; those whose country location could not be determined were excluded. Finally, to facilitate the cross-cultural analyses, we retained data from countries that (a) did not have missing data on cultural TL and (b) a minimum of 30 responses. The final sample consisted of 91,063 participants from 48 countries (31,348 men and 59,715 women, $M_{age} = 26.34$, $SD_{age} = 11.89$; 42.28% obtained a university degree or higher). Country-level sample characteristics and cultural TL scores are in Table 1.

Interest Measure

Vocational interests were measured using the 48-item brief RIASEC marker scale (Armstrong et al., 2008). The interest measure was administered in English. Participants rated each item on how much they would enjoy the following work activities on a 1–5 scale (1 = *dislike*, 2 = *slightly dislike*, 3 = *neutral*, 4 = *slightly enjoy*, 5 = *enjoy*). A sample item is "Conduct biological research." Overall Cronbach's α for the RIASEC subscales ranged from 0.83 to 0.90. We tested the interest measure for measurement invariance across sexual orientation and across culture. The interest measure demonstrated scalar invariance for both grouping variables (see Supplemental Material B for details).

Individual-Level Control Variables

We included three individual-level control variables in the multilevel analyses to test the moderating effects of cultural TL: (a) age, (b) education level ("How much education have you completed?": 1 = *less than high school*, 2 = *high school*, 3 = *university degree*, 4 = *graduate degree*), and (c) "Is English your native language?" (0 = *no*, 1 = *yes*; bivariate correlations of all individual-level variables are in Supplemental Material C).

Country-Level Scores of Cultural Tightness–Looseness

Cultural TL scores were obtained from Gelfand et al. (2021), which provide mean-centered TL scores for the 48 countries. Higher TL scores indicate higher (lower) levels of cultural tightness (looseness).

Transparency and Openness

We reported how we determined our sample size, all data exclusions, and all measures used in the study. All data, analysis code, and research materials are available at https://osf.io/taz27/. Data were analyzed using *R* Version 4.1.2 (R Core Team, 2021). This study and its analyses were not preregistered.

Data Analysis

Effect Sizes of Sexual Orientation Differences in Interests

Cohen's *d*. To examine sexual orientation differences in RIASEC interests, we used Cohen's *d* as the primary (univariate) effect-size measure, which reflects group mean differences in standard deviation units. Heterosexual women and heterosexual men were used as reference groups for all within-gender sexual orientation comparisons. Positive *d* values indicate higher means for heterosexuals; negative *d* values indicate higher means for sexual minorities (gay/lesbian, bisexual, or asexual). Following Hyde (2005), we define small effects as Cohen's $d = 0.10–0.35$, medium effects as $d = 0.35–0.65$, and large effects as $d > 0.65$.

Because a majority of the participants were from the United States ($N = 55,391$), we also conducted a sensitivity analysis that excluded U.S. participants (see Supplemental Material D). As the effect-size estimates for the overall ($N = 91,063$) and sensitivity analyses ($N = 36,028$) were largely similar in size and direction, we report the overall analysis as the main results of this study.

[3] Note that we consider gender as a spectrum and recognize that binary gender categories are limiting; they do not reflect gender identities that exist outside of this binary. Nevertheless, because only a relatively small sample reported gender as "other" ($n = 1,411$, 0.97%), we could not analyze their data for statistical reasons.

Table 1
Country-Level Sample Characteristics, Cultural TL Scores, and α Reliabilities

Country code	Country	Total *N*	*N* (het men)	*N* (gay men)	*N* (bi men)	*N* (ace men)	*N* (het wom)	*N* (les wom)	*N* (bi wom)	*N* (ace wom)	$M_{age} \pm SD$	M_{edu}	TL score	α
ARG	Argentina	87	22	3	2	1	43	4	9	3	26.07 ± 11.63	2.37	1.50	.86
AUS	Australia	3,959	1,227	71	67	20	2,231	78	215	50	28.06 ± 12.43	2.51	1.89	.82
AUT	Austria	130	48	0	2	1	67	1	11	0	29.65 ± 9.91	2.85	2.11	.85
BRA	Brazil	915	327	31	18	4	432	10	82	11	22.47 ± 9.46	2.23	1.63	.86
CAN	Canada	5,279	1,731	97	100	32	2,782	108	368	61	27.37 ± 12.93	2.34	1.82	.85
CHL	Chile	102	40	2	4	0	47	2	7	0	24.59 ± 10.61	2.50	1.67	.87
CHN	China	337	105	5	2	3	177	9	30	6	21.23 ± 5.83	2.71	2.09	.85
COL	Colombia	90	29	2	2	0	48	1	5	3	22.39 ± 9.08	2.34	1.47	.83
CZE	Czechia	220	59	3	4	0	128	6	18	2	26.64 ± 8.95	2.60	1.55	.84
EST	Estonia	66	21	0	1	0	32	0	10	2	24.83 ± 7.31	2.41	1.57	.83
FIN	Finland	168	66	2	5	0	69	5	16	5	29.48 ± 11.25	2.58	1.69	.86
DEU	Germany	771	282	21	19	2	372	10	53	12	28.74 ± 9.39	2.88	2.04	.84
GHA	Ghana	38	9	0	3	2	19	0	4	1	26.34 ± 8.84	2.89	2.93	.85
GRC	Greece	152	55	5	1	0	77	2	11	1	28.89 ± 11.01	2.78	1.71	.86
HUN	Hungary	106	28	2	1	0	62	2	7	4	29.42 ± 10.07	2.73	1.46	.86
ISL	Iceland	41	13	0	2	0	23	0	2	1	27.66 ± 12.10	2.51	1.98	.84
IND	India	1,653	803	40	97	33	535	45	76	24	26.73 ± 9.43	3.26	2.53	.84
IDN	Indonesia	1,221	357	25	25	15	726	11	40	22	21.75 ± 7.22	2.42	2.33	.82
IRN	Iran	179	93	0	8	0	69	4	4	1	27.35 ± 7.84	3.21	2.26	.83
IRL	Ireland	327	99	11	6	2	181	5	20	3	30.43 ± 12.34	2.83	1.79	.85
ISR	Israel	103	45	2	1	0	49	0	5	1	32.77 ± 12.98	2.93	1.62	.83
ITA	Italy	408	175	7	7	4	168	5	34	8	27.95 ± 11.26	2.56	1.87	.85
JPN	Japan	218	97	2	7	0	90	2	15	5	31.38 ± 10.80	2.94	2.10	.83
KAZ	Kazakhstan	35	10	0	2	0	18	1	4	0	21.31 ± 8.09	2.11	2.11	.88
KEN	Kenya	460	183	4	15	14	196	6	14	28	23.42 ± 4.79	2.38	2.37	.83
MYS	Malaysia	5,468	1,178	94	150	70	3,079	191	350	356	21.08 ± 6.18	2.38	2.14	.85
MEX	Mexico	234	75	4	2	0	124	5	17	7	24.67 ± 10.44	2.46	1.66	.84
NLD	Netherlands	495	163	14	8	1	254	6	40	9	29.39 ± 11.84	2.80	1.50	.86
NGA	Nigeria	60	24	1	1	1	28	0	4	1	26.78 ± 8.73	2.97	2.37	.85
POL	Poland	425	137	11	12	0	212	7	40	6	21.86 ± 6.04	2.24	1.68	.88
PRT	Portugal	784	212	10	9	2	504	7	38	2	29.69 ± 9.20	2.93	2.02	.86
QAT	Qatar	47	12	0	1	0	30	0	4	0	24.38 ± 10.95	2.36	2.64	.85
RUS	Russia	166	72	1	5	4	58	4	20	2	25.32 ± 7.88	2.74	1.57	.84
SAU	Saudi Arabia	111	59	2	1	1	43	1	4	0	23.78 ± 9.98	2.46	2.45	.85
SGP	Singapore	4,190	1,454	72	111	53	2052	108	251	89	22.21 ± 9.72	2.17	2.25	.85
SVK	Slovakia	44	17	3	0	0	21	1	2	0	26.45 ± 9.67	2.64	1.66	.85
KOR	South Korea	155	57	3	1	1	81	1	10	1	26.59 ± 8.97	2.71	2.10	.82
ESP	Spain	223	83	5	3	0	102	3	24	3	31.07 ± 13.09	2.87	1.70	.86
LKA	Sri Lanka	93	43	1	6	1	33	1	7	1	22.24 ± 9.25	2.33	2.49	.86
SWE	Sweden	294	113	2	10	1	128	3	30	7	30.52 ± 11.35	2.64	2.20	.84
THA	Thailand	555	118	31	13	2	287	43	44	17	26.45 ± 7.43	3.08	2.15	.86
TTO	Trinidad and Tobago	96	14	1	2	1	67	2	6	3	25.98 ± 10.86	2.35	1.74	.85
TUR	Türkiye	266	70	3	4	1	152	11	22	3	24.18 ± 8.68	2.57	2.18	.82
UKR	Ukraine	58	25	0	1	0	26	0	4	2	28.02 ± 10.44	2.88	1.58	.84
ARE	United Arab Emirates	337	115	6	5	6	181	6	12	6	25.02 ± 10.71	2.58	2.34	.85
GBR	United Kingdom	4,130	1,348	116	64	13	2,194	75	272	48	34.31 ± 13.58	2.92	1.76	.84
USA	United States	55,391	16,065	969	778	288	31,372	1,253	3,863	803	26.43 ± 12.24	2.34	1.82	.87
VNM	Vietnam	376	92	12	15	0	185	25	36	11	21.32 ± 5.62	2.46	2.24	.83
	Overall total/*M*	91,063	27,470	1,696	1,603	579	49,854	2070	6,160	1,631	26.35 ± 9.76	1.97	2.62	.85

Note. Sample characteristics of the 48 countries represented in this study. Country codes from ISO3166-1 standard. Education is operationalized as a continuous variable (1 = *less than high school*, 2 = *high school*, 3 = *university degree*, 4 = *graduate degree*). α = Countries' mean Cronbach's α across the six RIASEC subscales. Wom = women; het = heterosexual; les = lesbian; bi = bisexual; ace = asexual; TL scores = cultural tightness–looseness scores (centered but not standardized) were obtained from Gelfand et al. (2021); edu = education; RIASEC = realistic, investigative, artistic, social, enterprising, and conventional.

Mahalanobis' *D*. In addition to using Cohen's *d*s as a univariate measure of effect size, we also used Mahalanobis' *D* as a multivariate effect-size measure (Eagly & Revelle, 2022). The purpose of using *D* was to compute the *overall* sexual orientation differences in interests for *all* six RIASEC dimensions. *D* cannot be negative, and *D* does not indicate whether heterosexual or nonheterosexual scores are higher or lower but is an overall measure of distance (i.e., similarity or dissimilarity) in a multivariate space (Del Giudice, 2013). As a multivariate effect-size estimate, *D* accounts for the intercorrelations among the RIASEC interests, which ensures that sexual orientation differences in correlated interest scales are not double counted. An important advantage of using Mahalanobis' *D* is that it can be easily translated into an overlap coefficient (i.e., overlap in joint distributions between two groups, assuming multivariate normality).

Multilevel Modeling

Because the data were hierarchical with participants nested in countries, we used multilevel modeling to examine the moderating effects of cultural TL. Specifically, we conducted intercept-as-outcomes hierarchical linear modeling (HLM)—regressing RIASEC interest scores on sexual orientation, cultural TL, and their interaction terms, while controlling for individual-level covariates[4] (i.e., age, education, and "Is English your native language?"; see Supplemental Material E for the HLM equations).

Results

Question 1: How Do the RIASEC Interests of Sexual Minorities and (Same-Gender) Heterosexuals Differ?

To address Research Question 1, Tables 2 and 3 present the standardized mean differences (Cohen's *d*) in RIASEC interests across sexual orientation for men and women, respectively (heterosexual as the reference group). Because of the large sample sizes, even very small effects may be statistically significant. We therefore report effect sizes of practical significance ($d \geq 0.10$; Hyde, 2005).

Results show that gay men have lower realistic ($d = 0.59$) interest, but higher artistic ($d = -0.20$) and social interests ($d = -0.15$) than heterosexual men. Lesbian women have higher realistic ($d = -0.27$) and artistic ($d = -0.11$) interests, but lower social ($d = 0.14$) and enterprising ($d = 0.11$) interests than heterosexual women.

Bisexual men have higher investigative ($d = -0.14$), artistic ($d = -0.30$), and social ($d = -0.13$) interests, but lower realistic ($d = 0.18$) interest than heterosexual men. Bisexual women have higher investigative ($d = -0.21$) and artistic ($d = -0.34$) interests, but lower social ($d = 0.18$), enterprising ($d = 0.15$), and conventional interests ($d = 0.15$) than heterosexual women.

Asexual men have higher conventional interest ($d = -0.18$), but lower artistic ($d = 0.14$) interest than heterosexual men. Asexual women have higher realistic ($d = -0.23$), investigative ($d = -0.13$), and artistic ($d = -0.15$) interests, but lower social interest ($d = 0.24$) than heterosexual women.

Question 2: How Large Are Sexual Orientation Differences in RIASEC Interests?

To answer Research Question 2, we computed the absolute average and range of effect-size estimates (Cohen's *d*s) of sexual orientation differences in RIASEC interests, separately by gender (see Tables 2 and 3). Sexual orientation differences in RIASEC interests within men ($|d|_{average} = 0.14$) and within women ($|d|_{average} = 0.15$) were generally small. None of the effect sizes exceeded the large threshold of $d > 0.65$ ($|d|_{range}$ for men = 0.01–0.59; $|d|_{range}$ for women = 0.03–0.34). Therefore, as predicted, we found small-to-moderate sexual orientation differences in RIASEC interests.

Overall Sexual Orientation Differences in RIASEC Interests

Using scores from *all* RIASEC scales, we obtained multivariate Mahalanobis' *D*s of 0.72, 0.42, and 0.27 for gay, bisexual, and asexual men, respectively (heterosexual as reference group). Converted into overlap coefficients, these *D*s correspond to 72% overlap between the interest distributions of gay and heterosexual men, 83% overlap between the distributions of bisexual and heterosexual men, and 90% overlap between the distributions of asexual and heterosexual men.

We obtained *D*s of 0.40, 0.51, and 0.42 for lesbian, bisexual, and asexual women, respectively. These *D*s correspond to 84% overlap between lesbian and heterosexual women, 80% overlap between bisexual and heterosexual women, and 84% overlap between asexual and heterosexual women. Contrariwise, a Cohen's *d* of 1.20 would correspond to only a 55% overlap between the interest distributions of sexual minorities (e.g., gay men/lesbian women) and heterosexual people (cf. Lippa, 2005a, 2008). Thus, the multivariate indices (*D*s) indicate substantial overlap between the RIASEC interests of sexual minorities and heterosexual people.

Question 3: Does Cultural TL Moderate Sexual Orientation Differences in RIASEC?

We conducted HLM to test the proposed moderation of cultural tightness on sexual orientation differences in interests. HLM results for men and women are in Tables 4 and 5, respectively. The focal effects are the cross-level interactions of Cultural TL × Sexual Orientation. Due to the large sample sizes, we set the significance level at $p < .01$. Results indicated that cultural TL significantly moderated sexual orientation differences in (a) realistic for gay men and asexual women; (b) investigative for bisexual men and women; (c) artistic for bisexual men and lesbian, bisexual, and asexual women; (d) social for asexual men and women; (e) enterprising for asexual women; and (f) conventional for lesbian women (estimated regression coefficients and *p* values associated with these significant cross-level interactions are in Tables 4 and 5). Figures 1 and 2 (i.e., cross-level interaction plots) show that sexual orientation differences in interests tend to be smaller in tight cultures than in loose cultures. This implies that tight cultures tend to restrict the vocational interests of sexual minorities, whereas loose cultures offer them greater latitude to pursue their unique interests.

Discussion

The first aim of the present study is to examine the relationship of sexual orientation to vocational interests, separately by gender. Our

[4] In addition, we controlled for individualism–collectivism as a Level 2 covariate and report the results in Supplemental Materials F. Results remained unchanged.

Table 2
Male Sexual Orientation Differences in RIASEC Interests, SMD (Cohen's d)

Vocational interest	SMDhet-gay	SMDhet-bi	SMDhet-ace	Pattern of male SO differences
Realistic	**0.59 (0.54, 0.64)**	**0.18 (0.13, 0.23)**	–0.07 (–0.15, 0.01)	Gay and bi < het
Investigative	0.03 (–0.02, 0.08)	**–0.14 (–0.19, –0.09)**	0.07 (–0.01, 0.15)	Bi > het
Artistic	**–0.20 (–0.25, –0.15)**	**–0.30 (–0.35, –0.25)**	**0.14 (0.06, 0.23)**	Gay and bi > het; ace < het
Social	**–0.15 (–0.20, –0.10)**	**–0.13 (–0.18, –0.08)**	0.08 (–0.01, 0.16)	Gay and bi > het
Enterprising	0.04 (–0.01, 0.09)	0.01 (–0.04, 0.06)	0.03 (–0.05, 0.12)	Nonsignificant
Conventional	0.05 (0.00, 0.10)	–0.04 (–0.09, 0.01)	**–0.18 (–0.26, –0.10)**	Ace > het

Note. Positive SMD values indicate that het scored higher than gay/bi/ace. Negative SMD values indicate that gay/bi/ace scored higher than het. N_{male} = 31,348; N_{het} = 27,470, N_{gay} = 1,696, N_{bi} = 1,603, N_{ace} = 579. Values in bold indicate significant small–medium effects, where small d = 0.10–0.35, medium d = 0.35–0.65, and large d > 0.65. 95% confidence intervals are in parentheses. SO = sexual orientation; het = heterosexual men; gay = gay men; bi = bisexual men; ace = asexual men; SMD = standardized mean difference; RIASEC = realistic, investigative, artistic, social, enterprising, and conventional.

focus on the RIASEC model offers more nuanced insight into sexual minorities' interests (see Supplemental Material G for their mean-level RIASEC interest profiles). Results support the following patterns. First, gay men's and lesbian women's realistic and social interests were substantially less gender-typical (i.e., "shifted" toward different-gender heterosexuals). These patterns support the gender-shift hypothesis (Lippa, 2005a) and replicated the findings of previous studies (Chung & Harmon, 1994; Lippa, 2005a, 2008). Second, bisexual people have higher investigative interest than same-gender heterosexuals. Third, sexual minorities generally have higher artistic interest than heterosexuals (asexual men are the only exception). Fourth, sexual minority women have lower enterprising (e.g., persuasive and leadership) interest than heterosexual women, but these differences are small. Fifth, sexual orientation differences in conventional interest were small to nonexistent.

Finally, we found meaningful differences between heterosexuals' and asexuals' RIASEC interests. Of note, there were more significant heterosexual–asexual differences in interests for women than for men (see Tables 2 and 3). One possible explanation is that asexual women may experience greater marginalization than asexual men because women's social value tends to be based more on their relationship status (Gupta, 2019), which may in turn promote larger heterosexual–asexual interest differences for women vis-à-vis men.

Further, our study revealed that sexual orientation differences in RIASEC interests were only small to moderate. Although this contradicts past studies that found very large sexual orientation differences in MF-Occ (Lippa, 2005a, 2008), it is consistent with Eagly and Revelle's (2022) review on gender differences, which found that multivariate interest scales (i.e., RIASEC) tend to yield smaller effect sizes than bipolar interest scales (e.g., MF-Occ). Eagly and Revelle suggested that very large effect sizes in MF-Occ can be attributed to an *aggregation effect* that strengthens as the number of items increases (e.g., d = 2.58 for a 70-item MF-Occ scale). Importantly, the current results do not support the longstanding claim that interest differences between heterosexuals and sexual minorities are large (Lippa, 2005b); instead, their RIASEC interest distributions substantially overlap (>70%). Thus, the interests of sexual minorities and heterosexual people may not be as dissimilar as suggested by past research.

The second aim of this study is to explore the moderating effect of cultural TL on sexual orientation differences in RIASEC interests. Multilevel analyses found significant cross-level moderation by cultural TL, such that loose (tight) cultures tend to exhibit larger (smaller) sexual orientation differences in interests. The most striking finding is that in looser (less tight) countries, sexual minority(ies)' investigative and artistic interests tend to increase and diverge from their heterosexual counterparts—implying a greater preference for science- and creative-oriented (e.g., science, technology, engineering, and math) occupations (cf. Figures 1B, 1C and 2B, 2C). Critically, our study advances cultural TL theory (Gelfand et al., 2006) by revealing cultural TL as a multilevel phenomenon that shapes the career development of sexual minority people. That is, loose cultural contexts, which are more open and tolerant, afford them greater latitude to pursue their intrinsic interests, thus promoting a

Table 3
Female Sexual Orientation Differences in RIASEC Interests, SMD (Cohen's d)

Vocational interest	SMDhet-les	SMDhet-bi	SMDhet-ace	Pattern of female SO differences
Realistic	**−0.27 (−0.31, −0.22)**	−0.08 (−0.11, −0.05)	**−0.23 (−0.28, −0.18)**	Les and ace > het
Investigative	−0.03 (−0.07, 0.02)	**−0.21 (−0.23, −0.18)**	**−0.13 (−0.18, −0.08)**	Bi and ace > het
Artistic	**−0.11 (−0.15, −0.06)**	**−0.34 (−0.37, −0.31)**	**−0.15 (−0.20, −0.10)**	Les, bi, and ace > het
Social	**0.14 (0.09, 0.18)**	**0.18 (0.15, 0.20)**	**0.24 (0.19, 0.29)**	Les, bi, and ace < het
Enterprising	**0.12 (0.07, 0.16)**	**0.15 (0.12, 0.18)**	0.05 (0.00, 0.10)	Les and bi < het
Conventional	0.03 (−0.01, 0.08)	**0.15 (0.12, 0.17)**	−0.07 (−0.12, −0.03)	Bi < het

Note. Positive SMD values indicate that het scored higher than les/bi/ace. Negative SMD values indicate that les/bi/ace scored higher than het. N_{female} = 59,715; N_{het} = 49,854, N_{les} = 2,070, N_{bi} = 6,160, N_{ace} = 1,631. Values in bold indicate significant small–medium effects, where small d = 0.10–0.35, medium d = 0.35–0.65, and large d > 0.65. 95% confidence intervals are in parentheses. SO = sexual orientation; het = heterosexual women; les = lesbian women; bi = bisexual women; ace = asexual women; SMD = standardized mean difference; RIASEC = realistic, investigative, artistic, social, enterprising, and conventional.

Table 4
HLM Testing Cultural TL as a Cross-Level Moderator of Male Sexual Orientation Differences in Interests

	Outcome variable											
	Realistic		Investigative		Artistic		Social		Enterprising		Conventional	
Effect	β	*SE*	β	*SE*	β	*SE*	β	*SE*	β	*SE*	β	*SE*
Fixed effects												
Age	0.07**	0.01	0.07**	0.01	0.07**	0.01	0.09**	0.01	−0.04**	0.01	0.02*	0.01
Education	−0.05**	0.01	0.08**	0.01	0.11**	0.01	0.15**	0.01	0.01*	0.01	−0.00	0.01
Engnat	−0.04**	0.01	0.00	0.01	−0.01*	0.01	−0.04**	0.01	−0.07**	0.01	−0.08**	0.01
Gay	−0.60**	0.03	−0.06*	0.02	0.15**	0.02	0.11**	0.02	−0.05*	0.02	−0.05*	0.02
Bisexual	−0.22**	0.03	0.19**	0.03	0.33**	0.03	0.12**	0.03	−0.08**	0.03	−0.03	0.02
Asexual	0.01	0.05	−0.01	0.04	−0.10*	0.04	−0.13**	0.04	−0.16**	0.04	0.08	0.04
Cultural TL	0.07**	0.02	−0.01	0.01	0.00	0.02	0.12**	0.02	0.09**	0.02	0.11**	0.02
Gay × Cultural TL	0.13**	0.02	−0.00	0.02	−0.04	0.02	−0.03	0.02	0.03	0.02	0.04	0.02
Bisexual × Cultural TL	0.02	0.02	−0.11**	0.02	−0.12**	0.02	−0.02	0.02	0.03	0.02	0.04*	0.02
Asexual × Cultural TL	0.02	0.03	−0.04	0.03	−0.01	0.03	0.09**	0.03	0.05	0.03	−0.02	0.03
Intercept	0.48**	0.03	0.12**	0.02	0.14**	0.03	–0.38**	0.03	0.04	0.04	0.13**	0.04
Random effects												
Intercept	0.03		0.01		0.02		0.04		0.06		0.06	
Residual	1.03		0.98		0.90		0.96		0.92		0.88	

Note. Heterosexual men were the reference group. All predictors, except sexual orientation, were group-mean-centered and standardized. To obtain regression coefficients that can be interpreted in relation to a standardized effect-size metric, the outcome variables—RIASEC interests—were also standardized. Sexual orientation was left uncentered. N = 31,348; N countries = 48; HLM = hierarchical linear models; TL = tightness–looseness; Engnat = English as native language (0 = *no*; 1 = *yes*); RIASEC = realistic, investigative, artistic, social, enterprising, and conventional.
* $p < .05$. ** $p < .01$.

more "fluid" process of career development and choice (Morrow et al., 1996).

Practical Implications

Our findings hold microlevel and macrolevel implications for career counseling and development of sexual minority clients. On the microlevel, counseling psychologists may develop specific strategies to help clients expand a restricted range of interests. To begin, counselors should create an LGBTQ-affirmative environment for clients who may be navigating sexual and vocational identity development simultaneously (Lyons et al., 2020). They may connect their clients with sexual minority role models who can increase awareness of viable career choices and counter prevailing stereotypes. For instance, visibility campaigns (e.g., 500 Queer Scientists) can provide sexual minorities aspiring to occupations that

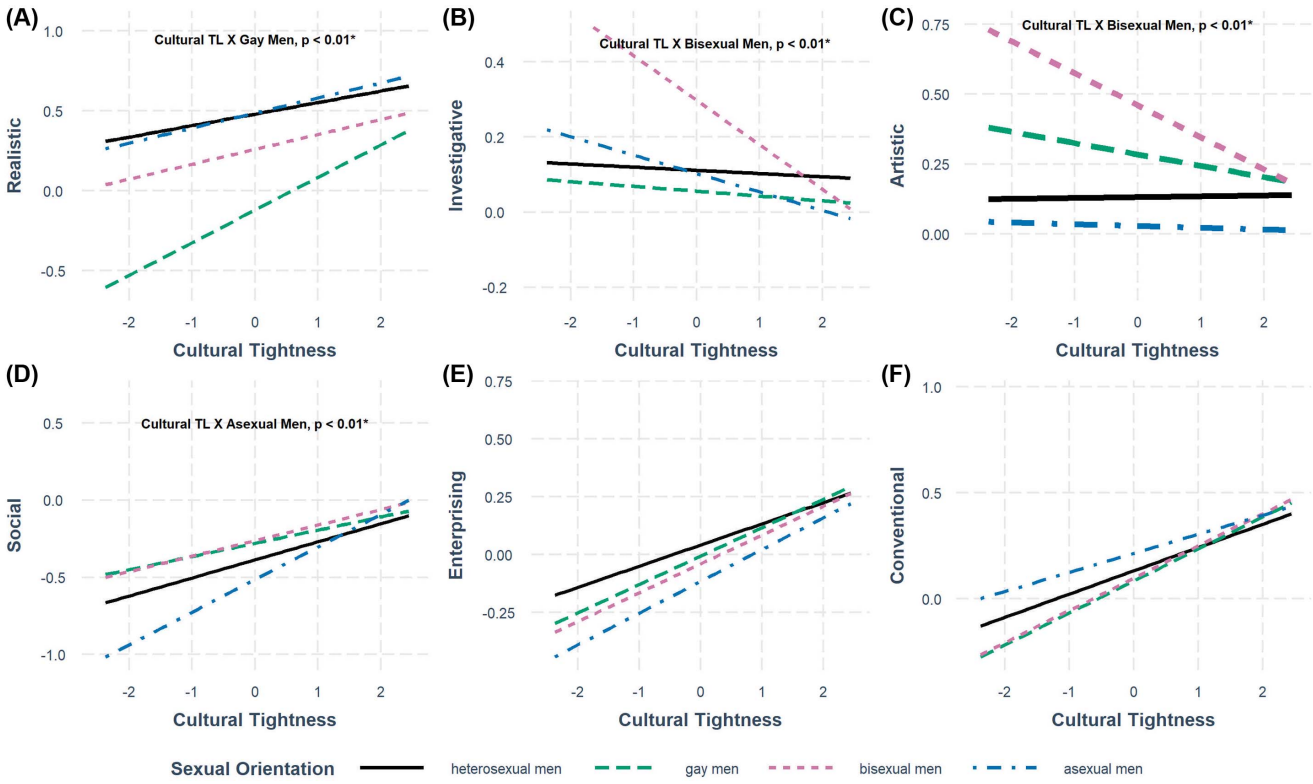
Table 5
HLM Testing Cultural TL as a Cross-Level Moderator of Female Sexual Orientation Differences in Interests

	Outcome variable											
	Realistic		Investigative		Artistic		Social		Enterprising		Conventional	
Effect	β	*SE*	β	*SE*	β	*SE*	β	*SE*	β	*SE*	β	*SE*
Fixed effects												
Age	0.11**	0.00	0.02**	0.01	0.04**	0.01	0.04**	0.00	0.00	0.01	0.16**	0.01
Education	0.01*	0.00	0.02**	0.01	0.06**	0.00	0.11**	0.00	−0.03**	0.00	−0.01*	0.00
Engnat	−0.06**	0.00	0.00	0.00	−0.02**	0.00	0.02**	0.00	−0.07**	0.00	−0.07**	0.00
Lesbian	0.23**	0.02	0.03	0.02	0.12**	0.02	−0.12**	0.02	−0.15**	0.02	−0.03	0.02
Bisexual	0.12**	0.01	0.22**	0.01	0.37**	0.01	−0.12**	0.01	−0.15**	0.01	−0.07**	0.01
Asexual	0.17**	0.02	0.16**	0.03	0.17**	0.03	−0.24**	0.02	−0.18**	0.03	0.03	0.03
Cultural TL	0.08**	0.01	−0.01	0.01	0.03*	0.02	0.06**	0.02	0.06**	0.02	0.09**	0.02
Lesbian × Cultural TL	−0.02	0.02	−0.00	0.02	−0.11**	0.02	0.05*	0.02	0.05*	0.02	0.06**	0.02
Bisexual × Cultural TL	−0.01	0.01	−0.04**	0.01	−0.08**	0.01	0.03*	0.01	0.02	0.01	0.02	0.01
Asexual × Cultural TL	−0.06**	0.02	−0.06*	0.02	−0.10**	0.02	0.15**	0.02	0.09**	0.02	0.05*	0.02
Intercept	−0.14**	0.02	0.01	0.02	0.25**	0.03	0.00	0.03	0.16**	0.04	−0.07	0.04
Random effects												
Intercept	0.02		0.01		0.03		0.04		0.06		0.06	
Residual	0.71		0.98		0.97		0.87		0.97		0.97	

Note. Heterosexual women were the reference group. All predictors, except sexual orientation, were group-mean-centered and standardized. To obtain regression coefficients that can be interpreted in relation to a standardized effect-size metric, the outcome variables—RIASEC interests—were also standardized. Sexual orientation was left uncentered. N = 59,715; N countries = 48; HLM = hierarchical linear models; TL = tightness–looseness; Engnat = English as native language (0 = *no*, 1 = *yes*); RIASEC = realistic, investigative, artistic, social, enterprising, and conventional.
* $p < .05$. ** $p < .01$.

Figure 1

Cross-Level Interaction Plots for the Moderation of Cultural Tightness × Male Sexual Orientation



Note. Figure was generated based on the HLM models presented in Table 4. HLM = hierarchical linear models; TL = tightness–looseness. See the online article for the color version of this figure.

* $p < .01$.

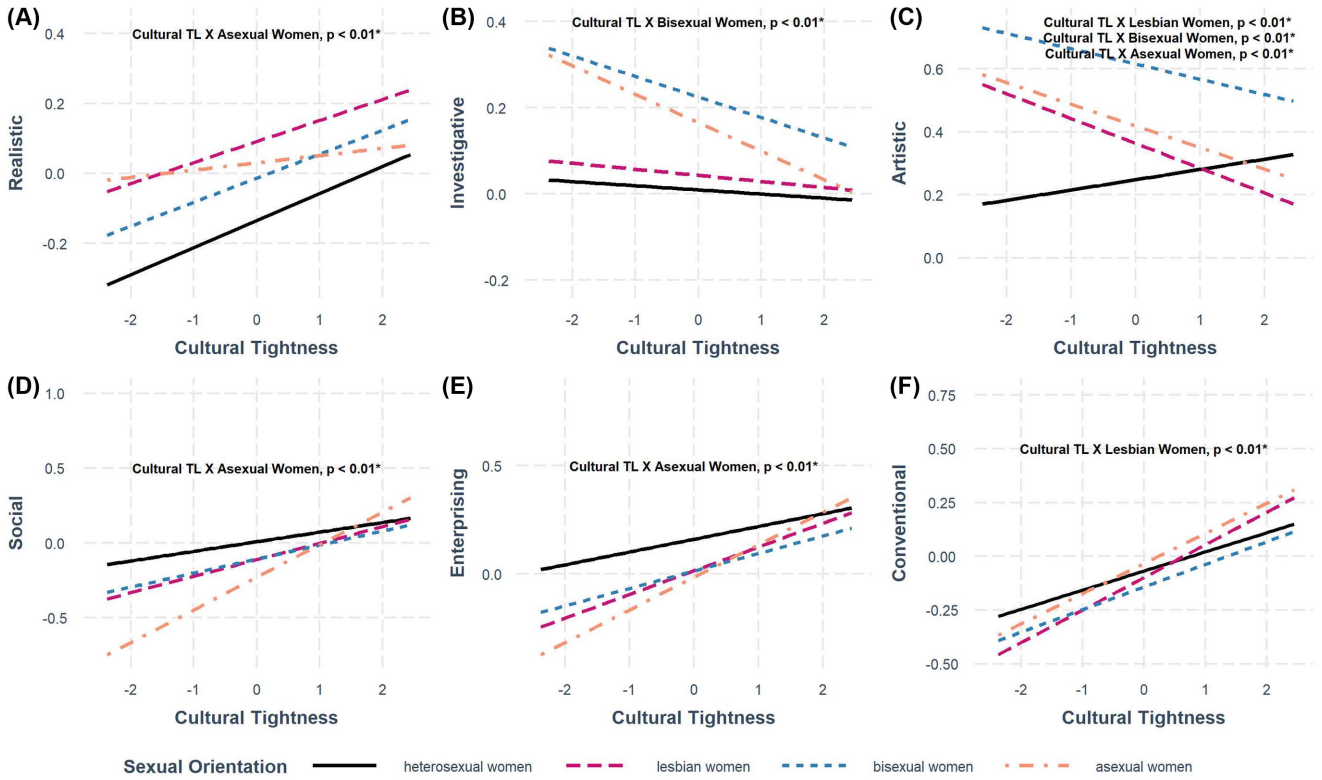
are stereotypically heterosexual and cisgender (e.g., science, technology, engineering, and math careers) with invaluable allyship and role models (Freeman, 2018). In addition, counselors may also consider how cultural factors (e.g., tightness–looseness) may influence clients' career decision making and provide appropriate intervention. This may include helping their clients challenge negative outcome expectations, which may arise due to tight societal norms, to empower them to pursue their intrinsic interests. In particular, because of anticipated discrimination or fear of "outness," clients might foreclose on developing interests and career choices that might otherwise offer good person-job fit and high job satisfaction (Lyons et al., 2005). In this regard, counselors may work with their clients to explore effective sexual identity management strategies, which may help reduce discrimination (Shih et al., 2013) and improve perceptions of fit with potential careers and employers (Lent et al., 2021).

Given that the RIASEC taxonomy is used in many countries worldwide for career guidance and workforce development (Hanna et al., 2019), counselors should consider how the RIASEC interests of sexual minorities may differ from those of heterosexual people (e.g., less gender-typical, more investigative, and more artistic). Nevertheless, counselors should also be cognizant of the influence of occupational stereotyping on clients' career choices (Hancock et al., 2020). Finally, our study reveals that the interests of sexual minorities and heterosexual people might also be rather similar, implying that external factors (e.g., opportunity structures, employment discrimination, and workplace climate), rather than personal preferences, could play a greater role in sexual minorities' occupational attainment (Finnigan, 2020; Tilcsik, 2011; Ueno et al., 2013). To facilitate effective career decision making, counselors should therefore have a realistic sense of the level of discrimination against sexual minorities in certain professions.

On the macrolevel, our findings suggest that cultural contexts (i.e., cultural TL) may constrain sexual minorities' vocational interests through environmental barriers (e.g., normative pressures, discrimination, and marginalization). From a social justice perspective, policymakers and organizations should advocate for LGBT-inclusive institutional and workplace policies, which can minimize contextual barriers to sexual minorities' career development (e.g., safeguarding them from employment discrimination). Indeed, studies have shown that more LGBT-inclusive countries—which generally offer sexual minorities greater latitude to develop different (e.g., gender nontraditional) interests and skills—are able to better utilize their human capital and, thus, enjoy more innovative and productive economies (Badgett et al., 2019; Vu, 2022). Thus, advocacy efforts may focus on macrolevel (e.g., international-, federal-, and state-level) policies that improve social acceptance toward sexual minorities and explicitly prohibit employment discrimination on the basis of sexual orientation.

Figure 2

Cross-Level Interaction Plots for the Moderation of Cultural Tightness × Female Sexual Orientation



Note. Figure was generated based on the HLM models presented in Table 5. HLM = hierarchical linear models; TL = tightness–looseness. See the online article for the color version of this figure.

* $p < .01$.

Strengths

The present study has several key strengths: (a) It has one of the largest and most diverse sample in interest research (91,063 participants in 48 nations; four sexual orientation groups); (b) the large sample of sexual minorities (n = 13,739) allows for more reliable estimation of effect sizes; and (c) measurement equivalence across culture and sexual orientation was supported.

Limitations and Future Directions

The present study has a few limitations. First, this study utilized a convenience sample recruited through the internet, and thus, we cannot assume that the participants were representative of their nationalities. However, the internet offers one of the most effective methods to collect data from hard-to-reach sexual minorities and "can yield diverse samples and results that are similar to those from other sampling methods" (Moradi et al., 2009, pp. 13–14).

Second, this study used only a single interest assessment. Although our results broadly replicated previous research that used a different interest measure (Chung & Harmon, 1994), sexual orientation differences in interests may vary by interest assessment. Researchers may also use more specific and precise interest assessments, such as basic interest inventories (e.g., Su et al., 2019), to provide an even more refined picture of sexual orientation differences in interests.

Third, although we draw upon SCCT and cultural TL theory to hypothesize the moderating effects of cultural TL, this study did not actually measure the associated mediating mechanisms (i.e., outcome expectations and felt accountability). Future studies may include these mediators for a more complete test of the theorized mechanisms. We also acknowledge that sexual minorities, especially those from tight cultures, may feel less open to reporting their sexual identities. Nevertheless, due to survey anonymity and the large samples in the present study (Moradi et al., 2009), we believe socially desirable responding would not affect the validity of our findings.

Lastly, sample characteristics (e.g., sample sizes, demographics) prevented us from studying other sexual and gender minorities. Additional scholarship is needed to investigate how the interests of other sexual and gender minorities (e.g., pansexual, queer, intersex, transgender, nonbinary) may differ from those of heterosexual people.

Conclusion

Using large-scale data from 48 countries, the present study examined the relationship of sexual orientation (heterosexual, gay/lesbian, bisexual, and asexual) to RIASEC vocational interests and the moderating effect of cultural TL on this relationship. Overall, we found meaningful but *modest* differences between sexual minorities' and heterosexual people's interests—echoing the words of celebrated poet Maya Angelou, "Human beings are more

alike than we are unalike." Importantly, the cross-level moderation by cultural TL suggests that the cultural context plays a critical role in shaping sexual minorities' interest development. Providing counseling tailored to clients' diverse interests and their unique contextual environments should help facilitate career decision making and increase satisfaction with career choices.

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