

Sex and Sexual Orientation Differences in Personality in China

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Abstract Using data from an Internet survey, we assessed masculinity-femininity (self-ascribed masculinity-femininity [Self-MF], gender-related interests, instrumentality, expressiveness) and Big Five personality traits in a Chinese sample of 201 heterosexual men, 220 homosexual men, 353 heterosexual women, and 215 homosexual women. Sex differences and sexual orientation differences were largest for gender-related interests and Self-MF. Homosexual-heterosexual differences in emotional stability were opposite for men and women, supporting the “gender shift” over the “social stress” hypothesis. Sex and sexual orientation differences in gender-related interests, Self-MF, and emotional stability observed in China were consistent with those found in other countries, suggesting possible biological influences. In contrast, group differences in other traits were more variable, suggesting possible cultural influences.

Keywords Sexual orientation · Sex differences · Personality · Chinese culture

Introduction

Comparing differences between men and women and between heterosexual and homosexual individuals across cultures allows researchers to probe factors that may influence these differences (e.g., see Buss, 1989; Costa, Terracciano, & McCrae, 2001; Eagly & Wood, 1999; Lippa, 2008; Schmitt, Realo, Voracek, & Allik, 2008). To the extent that sex differences and sexual orientation differences are consistent across cultures and unrelated to the strength of cultures’ gender roles, biological theories of group differences gain in plausibility. In contrast, to the extent that sex differences and sexual orientation differences vary across cultures, social-environmental and cultural theories garner support (Eagly & Wood, 1999; Lippa, 2008).

Sex Differences in Personality

Recent studies, conducted primarily in developed Western nations (i.e., in North America and western Europe), have shown that men and women consistently differ on some personality traits (e.g., see Costa et al., 2001; Feingold, 1994; Lippa, 2005a; Schmitt et al., 2008). Studies that focus on the Big Five super-factors of personality (i.e., extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience) document that sex differences tend to be strongest for agreeableness and neuroticism, with women higher than men on both traits (Costa et al., 2001; Feingold, 1994; Lippa, 2010a, b; Schmitt et al., 2008). In addition, men score higher than women on some extraversion facets (e.g., assertiveness, dominance), but lower on others (sociability, warmth). Researchers have focused on the Big Five traits because they are thought by many personality researchers to represent the fundamental empirically established dimensions of human personality (John & Srivastava, 1999).

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Research has also shown that men and women frequently show differences on the Big Five-related traits of instrumentality (e.g., assertiveness, dominance, independence) and expressiveness (e.g., warmth, sensitivity, nurturance)—traits that have been much studied in relation to the two-dimensional model of masculinity and femininity developed in the 1970s (see Bem, 1974; Spence, Helmreich, & Stapp, 1974). These traits are Big-Five related—i.e., instrumentality loads positively on extraversion and negatively on neuroticism, and expressiveness loads highly on agreeableness.

In addition to differing on personality traits, men and women also differ substantially in their interests, with the largest sex difference occurring along the people-things dimension of interests (Su, Rounds, & Armstrong, 2009). People-oriented individuals tend to be interested in activities and occupations that entail dealing with and thinking about people (e.g., counseling, managing others, writing fiction), whereas thing-oriented individuals tend to be interested in activities and occupations that focus on mechanical processes and deterministic systems (e.g., engineering, mechanical work, carpentry, computer programming). Men tend to be considerably more thing-oriented and less people-oriented than women are, with sex differences on the people-things dimension often exceeding one *SD* unit (Lippa, 1998).

Finally, men and women show differences in self-ascribed masculinity-femininity (Self-MF), that is, their conscious self-reported levels of masculinity and femininity (Lippa, 2005b, 2008). Men describe themselves as being considerably more “masculine” and less “feminine” than women.

Sexual Orientation and Personality

Just as men and women differ on some personality and interest dimensions, so do heterosexual and homosexual individuals within each sex. Indeed, the two kinds of group differences seem to be closely related in that sexual orientation differences in personality often mirror sex differences—i.e., compared to heterosexual men, gay men are more female-typical in personality, and compared to heterosexual women, lesbian women are more male-typical in personality. Such differences reflect common stereotypes, which hold that gay men are more feminine than heterosexual men and that lesbians are more masculine than heterosexual women, on average (Bailey & Zucker, 1995; Kite & Deaux, 1987; Madon, 1997; McCreary, 1994). Lippa (2005b) meta-analytically synthesized data from eight studies that assessed personality traits and interests in heterosexual and homosexual men and women. On average, heterosexual men proved to be more masculine (i.e., thing-oriented) in their interests than gay men ($d = 1.28$) and higher on Self-MF (reporting more masculine self-concepts) than gay men ($d = .60$). In contrast, gay men were, on average, higher than heterosexual men on expressiveness, agreeableness, conscientiousness, neuroticism, and openness to experience (d s in the

small to medium range; verbal designations are based on Cohen's (1988) benchmarks describing “small,” “medium,” and “large” d values as 2, .5, and .8, respectively).

In Lippa's meta-analysis, heterosexual women scored higher than lesbians on neuroticism. In contrast, lesbians scored higher than heterosexual women on masculinity of interests, Self-MF, instrumentality, and openness to experience. For women, as for men, the largest homosexual-heterosexual differences were for gender-related interests ($d = 1.46$) and Self-MF ($d = 1.28$), and other differences (e.g., in Big Five traits) were small to moderate in size.

Lippa's (2005b) meta-analytic results were limited by the fact that heterosexual participants consisted primarily of California college students and homosexual participants consisted primarily of volunteers solicited at California gay pride festivals. To investigate whether results generalized to a broader and more diverse sample, Lippa (2008) examined homosexual-heterosexual differences in a very large ($N > 200,000$) international data set generated by a 2005 BBC Internet survey. In general, the earlier meta-analytic results were strongly replicated. Furthermore, heterosexual-homosexual differences in interests and personality proved to be stable across several countries and world regions (the U.S., UK, Canada, Australia/New Zealand, and an aggregate of western European nations)—findings that were consistent with a hypothesized biological component to heterosexual-homosexual differences in personality and interests.

Reasons for Sex and Sexual Orientation Differences in Personality

Both biological and social-cultural factors likely contribute to sex differences and sexual orientation differences in personality (Lippa, 2008). Biologically-oriented theories of sex differences and sexual orientation differences often focus on the prenatal effects of sex hormones on brain development. For example, prenatal events (e.g., low levels of exposure to androgens during critical periods of development) may “feminize” brain structures in most females and in some males (e.g., those who become gay men), whereas other events (high levels of exposure to androgens) may “masculinize” brain structures in most males and in some females (e.g., those who become lesbian women). In contrast to biological theories, social-cultural theories of sex differences and sexual orientation differences focus on the effects of social learning, social roles, social stereotypes, and socialization (Lippa, 2005a, 2005b; Ruble & Martin, 1998). Such theories propose that the relevant group differences in personality result from the influence of stereotypes and from socialization pressures that differ for boys and girls and for heterosexual and homosexual individuals.

The greater social disapproval experienced by homosexual individuals compared to heterosexual individual may also con-

tribute to homosexual-heterosexual differences in personality (Lippa, 2005b; Meyer, 2003). The “social stress hypothesis” proposes that gay men and lesbian women may experience, on average, higher levels of neuroticism (e.g., higher levels of anxiety and depression and reduced levels of self-esteem) compared to same-sex heterosexuals, because of their greater exposure to prejudice, discrimination, and social disapproval. As described earlier, research on the relation between sexual orientation and neuroticism in Western nations has shown that homosexual-heterosexual differences in neuroticism are small but significant. However, these differences are in opposite directions for men and women. On average, gay men report higher levels of neuroticism than heterosexual men do, whereas lesbian women report lower levels of neuroticism than heterosexual women do. Lippa (2005a) suggested that this pattern of results supports the “gender shift hypothesis” over the “social stress hypothesis”—i.e., both gay men and lesbian women tend to be shifted in the direction of the other sex, but they do not consistently show higher levels of neuroticism than same-sex heterosexuals.

Studying Sex and Sexual Orientation Differences in China

Many of the sex differences in personality and interests described previously tend to be consistent across cultures (Costa et al., 2001; Lippa, 2010a; Schmitt et al., 2008). To the extent that sex differences in personality vary across cultures, they tend to be larger in cultures with relatively weak gender roles, and smaller in cultures with strong, traditional gender roles (see Lippa, 2010a).

The current study focused on data collected in China. These data are of interest because China tends to have relatively strong and polarized gender roles compared to Western nations. For example, in a recent study of 53 nations, China scored quite low on a United Nations index of gender development and gender equality, with only Pakistan, India, Egypt, South Africa, Turkey, and Saudi Arabia scoring lower (Lippa, 2010a).

As noted earlier, sex differences in Big Five personality traits sometimes vary across cultures. Consistent with such findings, sex differences in personality appear to differ somewhat in Chinese and Western samples (e.g., see Zheng et al., 2008), perhaps because China has a more collectivist culture than do many Western nations (see Hofstede & Hofstede, 2005; Peabody, 1999). Because China’s collectivist culture encourages interpersonal harmony, for example, Chinese men are encouraged to display traits that might be considered “feminine” in many Western cultures (e.g., sympathy, agreeableness, and the ability to facilitate cooperative group interaction) (Cai, Huang, & Song, 2008). As a result, although Chinese men may score higher than women on instrumentality (as is often true in Western nations), Chinese men and women may not necessarily differ on expressiveness, a trait that is considered stereotypically feminine trait in many Western nations.

Similarly, cultural factors unique to China may influence heterosexual-homosexual differences in personality. Societal attitudes toward homosexuality tend to be more negative in China than in many Western nations (Crawford & Solliday, 1996; Kelley, 2001; Yang, 1997). While attitudes toward homosexuality in many Western nations have become more positive in recent years, Chinese attitudes continue to be quite negative, with homosexuality often viewed as a mental illness, a criminal offence, and a violation of tradition cultural and moral values. With rapid social change and westernization in some segments of contemporary Chinese society, however, attitudes toward homosexual people have gradually changed (Tang, Lai, & Chung, 1997). Still, majority attitudes remain quite negative, with only 24% of Chinese college students expressing acceptance of homosexuality in one recent study (Chen, Wei, Wu, Zeng, & Zhang, 2008). Because of negative attitudes toward homosexuality in China, Chinese gay men and lesbian women may experience more stigmatization and discrimination than do gay men and lesbians in many Western countries. Thus, the “social stress” hypothesis predicts that gay men and lesbians in China may show higher levels of neuroticism, compared to heterosexual men and women, than do gays and lesbians in many western nations.

The Current Study

The purpose of the current study was to investigate sex differences and sexual orientation differences in personality and interests in a large sample of Chinese participants and to compare these differences to corresponding differences in Western nations, as documented by recent research. As noted before, the “social stress hypothesis” proposes that negative social attitudes toward homosexuality contribute to higher neuroticism levels in homosexual individuals. Therefore, it predicts that, compared to heterosexuals, homosexual individuals will have higher levels of neuroticism and anxiety in countries like China than in Western nations. In contrast, the “gender shift hypothesis” proposes that gay men and lesbian women will, on average, show levels of neuroticism that are shifted in the direction of the other sex. Thus, if Homosexual-heterosexual differences in neuroticism observed in China mirror those observed in Western nations (i.e., gay men are higher and lesbian women are lower than same-sex heterosexuals), then the “gender shift hypothesis” garners support, despite the fact that the nation studied would seem an ideal nation in which to demonstrate the “social stress hypothesis.”

As described earlier, research from Western countries has shown that sex differences and sexual orientation differences in self-ascribed masculinity-femininity and gender-related interests tend to be much larger than corresponding differences in Big Five traits, instrumentality, and expressiveness (Lippa, 2005b, 2008). Prior research also has shown that homosexual-heterosexual differences in personality and interests often mirror sex

differences, with gay men shifted in female-typical directions and lesbian women shifted in male-typical directions, compared to same-sex heterosexuals. The current research attempts to extend these findings by exploring the pattern of sex and sexual orientation differences in personality and interests in China.

Method

Participants

Homosexual participants were recruited via notices placed on a number of Chinese web sites that serve homosexual individuals, including homosexual forums and chat rooms. Research participants responded to notices for a “free personality test,” which was offered as part of a research project conducted at Southwest University (of China). Potential participants were told that participation in the project would provide them with the opportunity to learn more about their personality traits, and they were assured that their personality information would be kept strictly confidential. Individuals interested in completing the personality test were instructed to send their e-mail address to the first author. Questionnaires were sent to prospective participants as e-mail attachments, and completed questionnaires were returned to the first author, again as e-mail attachments.

The process of recruiting heterosexual participants was similar, except that they were recruited via notices posted on general Internet forums and websites. Based on the e-mail addresses of participants, some apparently duplicate questionnaires were excluded from analyses. In total, we received 995 seemingly valid questionnaires between July and October 2007. Only participants who were 16 years of age or older were included in the analyses. The heterosexual sample consisted of 554 individuals (56% of the total sample) and the homosexual sample consisted of 435 individuals (44% of the total sample).

Characteristics of the Heterosexual Sample

The heterosexual sample included 554 participants (201 men and 353 women) from 101 cities across China. The mean age of participants was 23.4 years ($SD = 3.8$), ranging from 16 to 45 years. Fifty-three percent of heterosexual participants were students, and the remaining 47% were non-students employed in a variety of occupations. Nine participants (1.6%) reported a junior high school education or less, 40 (7.2%) a senior high school education, 430 (77.6%) a college education, and 75 (13.5%) a postgraduate level of education or higher.

Characteristics of the Homosexual Sample

The homosexual sample included 435 participants (220 men and 215 women) from 111 cities across China. The mean age

of participants was 23.6 years ($SD = 4.5$), ranging from 16 to 46 years. Forty-one percent of homosexual participants were students, and the remaining 59% were non-students employed in a variety of occupations. Nine participants (2.0%) reported a junior high school education or less, 64 (14.7%) a senior high school education, 323 (74.3%) a college education, and 39 (9.0%) a postgraduate education or higher. Because participants in both the homosexual and heterosexual samples tended to be more highly educated than the Chinese population in general, in some of the analyses that follow we treated education as a covariate.

Procedure and Measures

The questionnaire sent to participants included measures of gender-related traits (i.e., Self-MF, gender-related occupational and hobby preferences, instrumentality, and expressiveness), Big Five personality traits, and questions about demographic information (e.g., participants' sex, sexual orientation [“heterosexual” or “homosexual”]), age, current occupation, educational level, and city of residence. Questionnaires were written in Chinese.

Participants completed Big-Five personality scales and measures of gender-related traits, which included scales that assessed instrumentality, expressiveness, gender-related interests (occupation and hobby preferences), and self-ascribed masculinity–femininity.¹

IPIP Big-Five Factor Markers

Big Five scales consisted of items taken from the International Personality Item Pool (IPIP, see <http://ipip.ori.org/>), a set of publically available, non-copyrighted personality items. Fifty-item and 100-item IPIP inventories have been developed that assess the Big Five personality traits. The current study made use of the latter version, which contains 20-item scales for each of the Big-Five personality traits: Extraversion, Agreeableness, Conscientiousness, Emotional Stability (i.e., Neuroticism, reversed), and Intellect (an openness proxy). Participants responded to the IPIP items using a 5-point, Likert-type scale that ranged from 1 (“very inaccurate self-description”) to 5 (“very accurate self-description”), as in the original instrument (Goldberg, 1999). The 100 IPIP Big-Five factor items were translated into Mandarin Chinese (and then back-translated and checked for accuracy) by Xian Xu at the University of South Florida. Reliability and validity data for the Chinese version of IPIP Big-Five factor markers have been published by Zheng et al. (2008) and are acceptably high (.82 or greater).

¹ The Chinese and English versions of scales are available from the corresponding author upon request.

Instrumentality and Expressiveness Scales

Eleven items assessed instrumental traits (e.g., “I am assertive,” “I am independent”), and 11 items assessed expressive traits (“I am compassionate,” “I am an understanding person”). Participants rated all items on 5-point scales that ranged from 1 (“*Not at all true of me*”) to 5 (“*Strongly true of me*”) (see Lippa, 2005c). Instrumentality and expressiveness scores were computed by averaging items in the respective scales. The reliabilities of the instrumentality scale for all participants, men, and women were, respectively, .83, .82, and .83, and the corresponding reliabilities for expressiveness were, respectively, .80, .80, and .79.

Gender-Related Interests

Hobby Preferences Participants rated their degree of interest in 22 hobbies, 11 of which tended to be preferred more by men and 11 of which tended to be preferred more by women, based on results from U.S. samples (see Lippa, 2005c). Participants rated their hobby preferences using a 5-point scale that ranged from 1 (“I strongly dislike this hobby”) to 5 (“I strongly like this hobby”). Interest items are often corrected for “elevation response set”—the general tendency for respondents to prefer many or few hobbies—by computing ipsatized items (e.g., subtracting from each item the individual’s mean rating on all items; see Lippa, 1998, 2008; Prediger, 1982; Tracey & Rounds, 1993). The reliabilities of male-typical versus female-typical hobby preferences computed from ipsatized items for all participants, men, and women were respectively .76, .75, and .77. As Lippa (2010a) has noted, alphas based on ipsatized items provide a more accurate estimate of scale reliabilities than alphas based on raw items.

Occupational Preferences Participants also completed a short, 10-item measure of gender-related occupational preferences that was used in a recent BBC Internet survey (Lippa, 2008). Using a 7-point scale ranging from “strongly dislike” to “strongly like,” participants rated their degree of interest in the following jobs: “car mechanic,” “costume designer,” “builder,” “dance teacher,” “carpenter,” “school teacher,” “electrical engineer,” “florist,” “inventor,” and “social worker.” Pre-testing in U.S. samples had earlier indicated that the odd-numbered items in this list tend to be preferred more by men than women, whereas even-numbered items tend to be preferred more by women than by men. The male-preferred occupations tend to be more thing-oriented, and the female-preferred occupations tend to be more people-oriented.

A scale of male-typical versus female-typical occupational preferences was computed by averaging the male-preferred items and the reversed female-preferred items. The reliabilities of occupational preferences computed from ipsatized

items were .70, .71, and .69, for all participants, men, and women, respectively.

Self-Ascribed Masculinity-Femininity

Four items (taken from Storms, 1979) were used to assess Self-MF: “I am a masculine person,” “I am a feminine person,” “I act, appear, and come across to others as being masculine,” “I act, appear, and come across to others as being feminine.” Participants rated these statements on 5-point scales that ranged from 1 (“Not at all true of me”) to 5 (“Strongly true of me”). Self-MF was computed as the mean of the two masculine items and the two reversed feminine items. The reliabilities of Self-MF for all participants, men, and women were, respectively, .88, .84, and .86.

Hobby preference, occupational preference, and Self-MF scales were translated from English to Chinese by five psychology postgraduates at Southwest University. The Chinese versions were then back-translated and corrected by a Southwest University psychology professor proficient in English. The final Chinese versions were rechecked by a psychology professor at Southwest University.

Data Analysis

We conducted a 2×2 (sex by sexual orientation) MANCOVA on all assessed measures (Self-MF, instrumentality and expressiveness, MF of hobby and occupational preferences, Big Five personality traits) as a preliminary omnibus test of group differences, with education treated as a covariate. Effect sizes (d) were computed for group differences for each dependent variable.

Results

Table 1 presents the means and *SD* for all assessed traits, presented separately for heterosexual men, gay men, heterosexual women, and lesbians. The MANCOVA on all assessed traits yielded a significant interaction between sex and sexual orientation, multivariate $F(10, 975) = 27.62, p < .05$, partial $\eta^2 = .22$. This interaction resulted from the fact that heterosexual men and women showed greater differences on many measures than gay men and lesbians did.

Sex Differences in Personality and Interests

Our sample included large numbers of homosexual men and women, which served to confound sex differences with sexual orientation differences. Accordingly, to assess sex differences we conducted a one-way MANCOVA on all assessed traits for

Table 1 Means and *SD* on all variables by sex and sexual orientation

Personality traits	Male				Female			
	Het men (<i>n</i> = 201)		Gay (<i>n</i> = 220)		Het women (<i>n</i> = 353)		Lesbians (<i>n</i> = 215)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Self-MF ^a	3.96	.69	3.67	.78	2.65	.84	3.29	.94
Occupational preferences ^b	4.01	.60	3.53	.65	3.41	.62	3.83	.72
Hobby preferences ^a	3.00	.26	2.70	.29	2.66	.28	2.90	.31
Instrumentality ^a	3.64	.54	3.61	.60	3.43	.59	3.59	.59
Expressiveness ^a	3.93	.48	3.98	.48	3.84	.46	3.83	.50
Extraversion ^a	3.07	.64	3.11	.66	3.01	.62	3.07	.61
Agreeableness ^a	3.64	.47	3.63	.47	3.53	.44	3.52	.44
Conscientiousness ^a	3.52	.60	3.48	.57	3.25	.58	3.30	.58
Emotional stability ^a	3.07	.72	2.92	.67	2.76	.71	3.00	.68
Intellect ^a	3.48	.48	3.43	.51	3.33	.51	3.44	.85

^a Absolute range, 1–5

^b Absolute range, 1–7

just the heterosexual sample. This analysis yielded a significant main effect for sex, multivariate $F(10, 542) = 52.31$, $p < .001$, partial $\eta^2 = .49$. The magnitudes of heterosexual sex differences (*d* values) for various traits are shown in Table 2, as well as significance levels for group differences based on *t*-tests. Sex differences and sexual orientation differences in Big Five traits were reported previously in Zheng et al. (2008) and are presented here for the sake of comparison with corresponding differences in other traits.

There were significant sex differences in all traits except extraversion. Heterosexual men scored much higher than heterosexual women on Self-MF ($d = 1.70$) and reported much more masculine interests than women ($d = .98$ for occupational preferences and $d = 1.26$ for hobby preferences). Heterosexual men scored moderately higher than heterosexual women on instrumentality and slightly higher on expressiveness. There were significant but modest sex differences in a number of Big Five personality traits, with heterosexual men scoring moderately higher than heterosexual women on conscientiousness and

emotional stability, and slightly higher on intellect and agreeableness.

Sexual Orientation Differences in Personality Traits and Interests

Differences in Personality Between Heterosexual Men and Gay Men

A one way MANCOVA on all assessed traits that compared heterosexual men and gay men yielded a significant main effect for sexual orientation, multivariate $F(10, 409) = 14.12$, $p < .001$, partial $\eta^2 = .26$. The magnitudes of heterosexual–homosexual male differences are also shown in Table 2. Heterosexual men reported much more masculine interests than gay men ($d = .77$ for occupational preferences and 1.09 for hobby preferences), and they were moderately more masculine than gay men on Self-MF ($d = .39$). There were no significant heterosexual–homosexual differences in men's

Table 2 Effect sizes (*d*-statistics) for sex differences and sexual orientation differences in personality traits

Personality traits	Het men–women	Gay–lesbians	Het–gay men	Het–les women
Self-MF	1.70***	.44***	.39***	–.72***
Occupational preferences	0.98***	–.44***	.77***	–.63***
Hobby preferences	1.26***	–.67***	1.09***	–.81***
Instrumentality	.37***	.04	.07	–.27**
Expressiveness	.19*	.31**	–.11	.01
Extraversion	.10	.06	–.07	–.09
Agreeableness	.24**	.25*	.02	.01
Conscientiousness	.46***	.31**	.07	–.10
Emotional stability	.43***	–.11	.22*	–.36***
Intellect	.30***	.01	.30	–.17**

$N_{\text{men}} = 201$, $N_{\text{women}} = 353$,

$N_{\text{gay}} = 220$, $N_{\text{lesbians}} = 215$

* $p < .05$; ** $p < .01$; *** $p < .001$

instrumentality or expressiveness. Heterosexual men reported slightly higher emotional stability than gay men ($d = .22$).

Differences in Personality Between Heterosexual Women and Lesbians

A one-way MANCOVA on all assessed traits that compared heterosexual women and lesbian women yielded a significant main effect for sexual orientation, multivariate $F(10, 556) = 13.82$, $p < .001$, partial $\eta^2 = .20$. Differences between heterosexual and lesbian women are shown in Table 2. Heterosexual women were considerably more feminine than lesbian women on Self-MF ($d = .72$) and on gender-related interests ($d = .63$ for occupational preferences and $.81$ for hobby preferences). There were modest heterosexual-lesbian differences in women's instrumentality but not in expressiveness, and heterosexual women scored higher on intellect than lesbian women did. Finally, heterosexual women reported moderately lower emotional stability than lesbian women did ($d = .36$).

Discussion

Analyzing data from a large Chinese sample, we found differences between heterosexual men and women in all traits except for extraversion. The largest sex differences were for Self-MF and gender-related interests, consistent with previous research conducted in western nations. Instrumentality showed a small sex difference in the direction observed in western nations, with men higher than women. However, expressiveness showed a small sex difference opposite in direction to that found in Western countries, with Chinese men scoring higher than Chinese women on expressiveness. Heterosexual-homosexual differences in the Chinese sample were generally consistent with corresponding differences observed in Western samples.

Sex and Sexual Orientation Differences in Gender-Related Traits in China and Western Nations

Sex differences and sexual orientation differences in two traits—gender-related interests and Self-MF—proved to be quite similar in Chinese and Western samples. Men tended to have more thing-oriented interests and more masculine self-concepts than women did. Also, heterosexual men tended to have more thing-oriented interests and masculine self-concepts than gay men did, whereas heterosexual women tended to have more feminine self-concepts and people-oriented interests than lesbians did.

Consistent with the pattern observed for heterosexual sex differences, heterosexual-homosexual differences in the Chinese sample were largest for Self-MF and for gender-related interests. Heterosexual-homosexual differences in Self-MF were

considerably larger for Chinese women ($d = -.72$) than for Chinese men ($d = .39$), a finding that again is consistent with corresponding results from western countries (Lippa, 2005b, 2008). One possible explanation for this pattern is that many gay men do not like to be labeled as “feminine” or “effeminate” (see Bailey, Kim, Hills, & Linsenmeier, 1997; Lippa, 2005b). Thus, some gay men may shift their Self-MF in the socially desirable direction, toward greater masculinity. Lesbians, in contrast, appear to be more willing to embrace a relatively masculine self-concept, in comparison to heterosexual women.

Sexual orientation differences in Self-MF and gender-related interests mirrored heterosexual sex differences, with gay men shifted in female-typical directions and lesbians shifted in male-typical directions. These results were also consistent with corresponding results from Western cultures (Lippa, 2005b, 2008), and provide new evidence that sex differences and sexual orientation differences in gender-related interests tend to be consistent across cultures. If such findings are replicated in other non-Western countries, then results would be consistent the hypothesis that biological factors contribute to these differences.

When homosexual and heterosexual individuals within each sex were compared on instrumentality and expressiveness, only one difference proved to be significant: Lesbians were modestly higher than heterosexual women on instrumentality. In this regard, lesbians were more stereotypically “masculine” than heterosexual women. However, this difference was small in magnitude, and most heterosexual-homosexual differences in instrumentality and expressiveness were not significant.

Comparing the “Social Stress” the “Gender Shift Hypothesis” for Emotional Stability

Another result that was the same in China and in Western countries was the finding that heterosexual men were, on average, higher than gay men on emotional stability, whereas heterosexual women were, on average, lower than lesbian women on emotional stability. These findings support the “gender shift hypothesis” over the “social stress” hypothesis. Demonstrating the “gender shift hypothesis” in a Chinese sample is noteworthy because, as discussed earlier, negative attitudes toward gay men and lesbians are likely stronger in China than in many Western nations. Because of this, it seems reasonable to expect that the “social stress hypothesis” might find stronger support in China than in Western nations. However, this was not the case.

The largest heterosexual-homosexual difference in a Big Five trait documented by Lippa (2005b, 2008) and the only heterosexual-homosexual difference that was in the same direction for men and women was the difference in openness, with both gay men and lesbian women scoring moderately higher on this trait than same-sex heterosexuals. In the Chinese data, which reported group differences in an “intellect” rather than openness scale, the western results replicated for women

but not for men. It is not clear whether results differed in Chinese and western samples because of cross-cultural differences or because of the different scales that were used.

Summary and Limitations

Overall, sex differences and sexual orientation differences in Chinese participants showed a number of important consistencies with corresponding differences documented in Western samples. Sex differences and sexual orientation differences in Self-MF and gender-related interests were quite similar in China and in Western nations, and the direction of these differences tended to support the “gender shift” hypothesis—that homosexual individuals’ self-concepts and interests are shifted in cross-sex directions. At the same time, sex differences and sexual orientation differences in some personality traits (i.e., in instrumentality, expressiveness, and Big Five traits) sometimes differed in China and Western samples, suggesting that these group differences may be relatively more influenced by cultural and social factors.

In conclusion, it is worth noting several limitations to the current data. First, the participants in the current study were not drawn from a random sample. Because participants were solicited via the Internet, they were likely more educated and affluent than the typical Chinese citizen is. Second, because gay and lesbian individuals in China may tend to be less open about their sexual orientation than those in the West, the gay and lesbian participants in the current research may have constituted a non-representative sample of the larger Chinese gay and lesbian population. Finally, the current research made use of questionnaire scales and materials that were translated from English, and thus it is possible that the meanings of some scale items were altered as a result of the translation process.

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