



Research report

High sex ratio as a correlate of depression in Chinese men

Xu Dong Zhou^a, Lu Li^a, Zheng Yan^b, Therese Hesketh^{c,*}^a School of Public Health, Zhejiang University, Hangzhou, Zhejiang, PR China^b School of Public Health, Guiyang Medical University, Guiyang, Guizhou, PR China^c UCL Institute of Global Health, 30 Guilford St, London, WC1N 1EH, UK

ARTICLE INFO

Article history:

Received 30 March 2012

Received in revised form

15 May 2012

Accepted 6 June 2012

Available online 26 July 2012

Keywords:

Depression

Suicide

Sex ratio

China

ABSTRACT

Background: There is a large and increasing excess of men in China, especially in poor rural areas, with millions now unable to marry. The study aimed to determine whether these high sex ratios influence the prevalence of depression.

Methods: The study was a cross-sectional survey, using a self-completion questionnaire, administered to adults of reproductive age in localities with widely varying sex ratios in three provinces: Zhejiang, Yunnan and Guizhou. Depression was measured using the Chinese version of the Beck Depression Inventory (BDI).

Results: A total of 7435 men and women aged 19–40 completed questionnaires. Moderate or severe depression was found in 17.6% of men and 17.0% of women, and suicide thoughts and wishes in 18.0% and 20.0% respectively. Independent correlates for depression and suicide ideation in men were high local sex ratio, rural residence, low education and poor economic status. Very high local sex ratio was the strongest independent determinant of depression in men.

Limitations: These include (1) selection bias: with just three provinces and a purposive sampling strategy, (2) reporting bias: the BDI score is arguably a crude measure for a complex psychological condition, and the veracity of responses to sensitive questions cannot be guaranteed, (3) information bias: county-level sex ratio figures may underestimate the actual sex ratio, especially in rural areas.

Conclusion: Very high sex ratios in parts of China are contributing to depression and suicidal tendencies in men, and women, but especially unmarried men. Proactive measures need to be taken to identify and treat vulnerable individuals.

© 2012 Elsevier B.V. All rights reserved.

1. Background

In China there are currently 118 male births for every 100 female, rising to 135 to 100 in some rural areas (National Bureau of Statistics of China, 2010). The sex ratio at birth (SRB) is defined as the number of males born for every 100 females and is remarkably constant across human populations at around 105. The figure of 118 seen in China equates to around 1 million excess male births every year. Such serious sex ratio imbalances are the result of a combination of son preference and easy access to sex-selective abortion (Sen, 2003). In China the SRB started to rise about 25 years ago: peaking at 121 in 2005 (Zhu et al., 2009). A slight downturn to 118 was reported in the latest national figures for 2010 (National Bureau of Statistics of China, 2010). The high SRB has thus recently started to impact the all-important reproductive age group. Today in China it is estimated that there are 20 million excess men of reproductive age, and this is

expected to rise over the next two decades (Zhu et al., 2009). This excess of men is not just a problem for China. In South Korea, Taiwan and parts of India, have reported distorted sex ratios for over two decades and now Vietnam, Azerbaijan, Georgia and Armenia are following suit (Hvistendahl, 2011). The impact of these distorted sex ratios on the well-being of populations is unclear. Concerns arise especially for the well-being of young men who will be unable to marry. A wealth of research from other countries finds that married people have fewer psychological problems and are healthier and more content than unmarried people (Dush and Amato, 2005; Bookwala and Fekete, 2009). Because such very high sex ratios are a recent phenomenon, the existing literature is predominantly theoretical. The small body of empirical literature is based either on studies from societies where the sex ratio is only marginally skewed (Secord, 1983; South and Trent, 1988) or on the behaviour of young unpartnered men from varying cultures (Barber, 2000). It is hypothesised that the reduced possibility of marriage and childbearing will lead to an increased susceptibility to depression and suicidal tendency (Lichter et al., 1995). This may be of greater concern in traditional cultures like China, where marriage and childbearing are an

* Corresponding author. Tel.: +44 207 905 2253; fax: +44 207 404 2062.
E-mail address: t.hesketh@ucl.ac.uk (T. Hesketh).

expectation and deemed necessary for acceptance in society (Zeng et al. (1993)). A qualitative study among older unmarried men in rural Guizhou Province found that they variously described themselves as aimless, hopeless, sad, angry and lonely (Zhou et al., 2011).

Moreover, it is assumed that the men who are most unable to marry, will be the poorest and least educated. This is because there is a general tendency for women to marry into a higher socio-economic class, leaving the least desirable men, usually uneducated peasants, with the most limited marriage prospects (Hesketh and Zhu, 2006).

There have been few large scale population studies of the epidemiology of depression in China. Early studies gave the impression that the depression rates were considerably lower than in other countries (Chiu, 2004). This was partly because of low reporting rates, but it was also attributed to sociocultural differences, a perceived tendency to stoicism and fatalism, reluctance to seek help, and because of the tendency to somatise (Tseng et al., 1995, Parker et al., 2001). However, since the advent of standardised scales for the measurement of depressive symptomatology, these assumptions have been challenged and rates of depression appear to be higher than originally thought, though still lower than in many other countries (Lee et al., 2009). There is now a growing body of research on mood disorders in China, though prevalence estimates are still hampered by the range of definitions and tools used for measurement. The strongest studies focus on particular population groups: the elderly (Li et al., 2011), on women (Gan et al. (2012)) and urban areas (Lee et al., 2009). However a major population study conducted in urban and rural areas of four provinces from 2001 to 2005 found the prevalence of major depressive disorder to be higher in women (2.6%) than men (1.6%) and in rural (2.2%) rather than urban settings (1.6%) (Phillips et al., 2009). Lee's large study in Beijing and Shanghai found no gender difference in moderate to severe depression, but even in these major cities less than one quarter of depression sufferers had sought any kind of help and only 5% from mental health professionals (Lee et al., 2009). In contrast to the relatively low prevalence of depression, suicide rates in China are reported to be among the highest in the world and two to three times the global average, (Law and Liu, 2008) with the rate in rural areas three times higher than in urban areas, and in females three times that of males (Conner et al., 2007). This apparent contradiction between rates of depression and suicide has been attributed to the observation that determinants of suicide appear to differ from those in Western countries. Indeed it appears that there is a low rate of psychiatric illness, including depression in Chinese suicide victims. (Law and Liu, 2008) In China the determinants of suicide include relationship and family issues, loss of face, low socio-economic status and ease of access to the means to commit successful suicide (in rural areas usually pesticides kept at home) and weak emergency health services (Zhang et al., 2004, Law and Liu, 2008). The latter all help to explain the particularly high rates of suicide in rural females.

The objectives of this study therefore were firstly, to determine, the overall rates of depression and suicide ideation in a large population sample of young adults in urban and rural China, and secondly, to determine whether high local sex ratios influence rates of depression and suicide ideation. We aimed to test the hypotheses that:

- (1) Men in high sex ratio areas would be more predisposed to depression and suicide ideation than men in normal sex ratio areas.
- (2) Unmarried men would be more predisposed to depression and suicide than married men, especially in high sex ratio areas.

2. Methods

The study was a cross-sectional survey using a self-completion questionnaire. This study was conducted from November 2009 to October 2010 and was part of a large multidisciplinary study exploring the effects of the high sex ratio on the lives of individuals in the reproductive age group and on wider society in China. Using data from the 2005 National Intercensus Survey (Zhu et al., 2009) we selected three provinces to represent a range of sex ratios in the 20–39 age group. The provinces were: Zhejiang with a sex ratio of 108, Yunnan 112, and Guizhou 119, with per capita GDPs in 2010 of \$9000, \$4300 and \$2800, respectively (Economist, 2011). Sex ratio data are also available at the level of county, and there are wide differences in county level sex ratios within provinces. We therefore obtained county-level sex ratio figures for all urban districts and rural counties, and then identified an urban district and a rural county in the highest and lowest quartiles of sex ratio for each province. This yielded a range of sex ratios between 100 and 129 (Table 1).

We aimed to achieve a sample size of 2400 individuals in each province and to include a range of socio-economic backgrounds within the 20 to 40 age range at each of the twelve sites. A purposive sampling approach was adopted to achieve this. In urban areas between 15 and 20 work-units, including government and private sector companies, factories, shops, hotels, and educational establishments were included. The numbers participating in each workunit varied between 10 and 50. In rural areas two townships were randomly selected in each county and four villages in each township respectively. Village authorities were then asked to identify individuals within the age range from locally-held lists of residents. Potential participants were contacted, informed about the purpose and nature of the survey and invited to participate. In each village sampling continued until sufficient numbers were acquired and to achieve the sample size of 600 in each location with roughly equal numbers of men and women.

The self-completion questionnaire was developed specifically for the survey. We had conducted a prior qualitative study using semi-structured interviews among 220 opinion makers and members of the general public, and the results informed the content of the quantitative survey. The questions covered a wide range of lifestyle and well-being issues. This paper reports on the items relating to depression and its determinants.

Standard questions were used to determine sociodemographic variables. Because of widely differing purchasing powers between different areas, we used a question about subjective wealth (*do you feel wealthier, similar to, or poorer than the average in your community?*) rather than pure income. To assess levels of depression we used the Chinese version of the Beck Depression Inventory (BDI), which has been validated for use in Chinese

Table 1

The 12 sites by location and ranked by sex ratio in the 20–39 age group.

	Area	Sex ratio
Lowest quartile	Zhejiang rural (1)	100
	Guizhou urban (1)	105
	Yunnan urban (1)	105
Second quartile	Zhejiang urban (1)	106
	Zhejiang rural (2)	108
	Yunnan rural (1)	111
Third quartile	Yunnan urban (2)	113
	Zhejiang urban (2)	116
	Guizhou rural (1)	117
Highest quartile	Guizhou urban (1)	118
	Guizhou rural (2)	122
	Yunnan rural (2)	129

Download English Version:

<https://daneshyari.com/en/article/6234900>

Download Persian Version:

<https://daneshyari.com/article/6234900>

[Daneshyari.com](https://daneshyari.com)