



Full length article

Validity of the CAGE questionnaire for men who have sex with men (MSM) in China



Yen-Tyng Chen^a, Umedjon Ibragimov^a, Eric J. Nehl^{a,*}, Tony Zheng^b, Na He^c, Frank Y. Wong^a

^a Department of Behavioral Sciences and Health Education, Rollins School of Public Health, Emory University, Atlanta, United States

^b Shanghai Piaoxue, Shanghai, China

^c Department of Epidemiology, Fudan University School of Public Health, Shanghai, China

ARTICLE INFO

Article history:

Received 29 September 2015

Received in revised form 3 December 2015

Accepted 31 December 2015

Available online 24 January 2016

Keywords:

CAGE

MSM

China

Validity

ABSTRACT

Background: Detection of heavy drinking among men who have sex with men (MSM) is crucial for both intervention and treatment. The CAGE questionnaire is a popular screening instrument for alcohol use problems. However, the validity of CAGE for Chinese MSM is unknown.

Method: Data were from three waves of cross-sectional assessments among general MSM ($n = 523$) and men who sell sex to other men (“money boys” or MBs, $n = 486$) in Shanghai, China. Specifically, participants were recruited using respondent-driven, community popular opinion leader, and venue-based sampling methods. The validity of the CAGE was examined for different cutoff scores and individual CAGE items using self-reported heavy drinking (≥ 14 drinks in the past week) as a criterion.

Results: In the full sample, 75 (7.4%) of participants were classified as heavy drinkers. 32 (6.1%) of general MSM and 43 (8.9%) of MBs were heavy drinkers. The area under curve statistics for overall sample was 0.7 (95% CI: 0.36–0.77). Overall, the sensitivities (ranging from 18.7 to 66.7%), specificities (ranging from 67.5 to 95.8%), and positive predictive values (ranging from 14.1 to 26.4%) for different cutoff scores were inadequate using past week heavy drinking as the criterion. The ability of CAGE to discriminate heavy drinkers from non-heavy drinkers was limited.

Conclusions: Our findings showed the inadequate validity of CAGE as a screening instrument for current heavy drinking in Chinese MSM. Further research using a combination of validity criteria is needed to determine the applicability of CAGE for this population.

© 2016 Elsevier Ireland Ltd. All rights reserved.

1. Introduction

Alcohol use among men who have sex with men (MSM) is a major health problem worldwide. Global evidence shows that gay and bisexual men face higher risks of alcohol dependence than their heterosexual counterparts do (King et al., 2008). Alcohol use has been found to be prevalent among MSM in various countries of the world, including the USA (Pollock et al., 2012; Salomon et al., 2009; Santos et al., 2015), India (Mimiaga et al., 2011; Yadav et al., 2014), Peru (Deiss et al., 2013), Russia (Wirtz et al., 2015), and Spain (Folch et al., 2009). Chinese MSM have also been found to be at higher risk for reporting frequent drinking, alcohol abuse and dependence as compared to general male population (Nehl et al., 2012; Yu et al., 2013).

Globally, high-risk drinking (e.g., heavy alcohol use and drinking before or during sex) among MSM has been shown to be associated with increased prevalence of risky sexual practices, including larger numbers of male sex partners (Greenwood et al., 2001), unprotected anal intercourse (UAI; Colfax et al., 2004; Folch et al., 2009; Hirshfield et al., 2004; Koblin et al., 2003), and inconsistent condom use with a male partner (Yadav, 2014). A study by Koblin et al. (2006) has also reported a positive association between problem drinking and positive HIV serostatus in MSM. Several studies among Chinese MSM found associations between various types of alcohol misuse and other risky practices and negative health outcomes. In particular, Lu et al. (2013) reported an association between problem drinking (i.e., heavy or hazardous drinking, alcohol abuse or dependence) and positive HIV serostatus and a larger number of male sex partners; Li et al. (2010) found that drinking four or more times a month is associated with a higher risk of syphilis seroconversion; Liao et al. (2014) found that MSM reporting drinking more

* Corresponding author.

E-mail address: enehl@emory.edu (E.J. Nehl).

than three times a week in the past six months are also more likely to report UAI and drug use.

Given the scale of alcohol abuse and dependence among the MSM population in China and its health impact, early detection of potential alcohol use disorder in community settings is important to aid intervention and treatment. CAGE is a 4-item instrument developed as a screening tool for serious alcohol misuse in 1968 (Ewing, 1984). Its brevity and simplicity have made it a popular screening tool that can be used by prevention and treatment service providers with no professional training in diagnosing alcohol use disorders. This instrument has been applied to a wide range of populations in various regions of the world (Aalto et al., 2009; Akvardar et al., 2004; Bühler et al., 2004; Bisson et al., 1999; Chan et al., 1994; Devos-Comby and Lange, 2008; Ewing, 1984; Malet et al., 2005; Mdege and Lang, 2011), including studies of MSM in the US and China (Ross et al., 2001; Seage et al., 1998; Wong et al., 2008; Woody et al., 1999). It has been used to screen patients in clinics and primary care, to estimate population prevalence of severe alcohol misuse, and to measure alcohol abuse and dependence as a risk factor for other outcomes (Akvardar et al., 2004; Bobak et al., 2004; Campo-Arias et al., 2009; Cherpitel, 1998; Cherpitel et al., 2005; Deiss et al., 2013; Dhalla and Kopec, 2007; Etter and Gmel, 2011; Kerr-Corrêa et al., 2007; Koopitwoot et al., 2010; Messiah et al., 2008; Park et al., 2008).

As with other survey and screening instruments, it is important to ensure that CAGE is adapted to a particular setting, population, and/or culture. Overall, CAGE has demonstrated a high level of sensitivity and specificity for detecting severe drinking problems in patients in clinical settings (for review see Dhalla and Kopec, 2007). However, since there is conflicting evidence for the validity of CAGE outside of clinical settings (Bisson et al., 1999; Chan et al., 1994; Cherpitel, 1998; Etter and Gmel, 2011; Messiah et al., 2008), application of this instrument in different populations and settings requires caution. First, ensuring that a translated instrument is linguistically and conceptually equivalent to the original version is a challenging process (for instance, see Guillemin et al., 1993; Wang et al., 2006). Second, cultural differences in perceptions and attitudes toward alcohol use and abstinence may limit the external validity of CAGE and other screening instruments (Bloomfield et al., 2002; Cherpitel, 1998). Finally, cultural specifics not related to the construct of interest (in our case, alcohol), such as social desirability, may also introduce measurement error (Van de Vijver and Poortinga, 1997). To date, only one study exploring the validity of a Mandarin Chinese version of CAGE has been published. The study was conducted among hospitalized patients in Taiwan; it found that in detecting hazardous drinking among males CAGE demonstrates lower sensitivity, specificity, and positive predictive value against the reference standard Schedule for Clinical Assessments in Neuropsychiatry as compared to other screening instruments (e.g., AUDIT; S.I. Wu et al., 2008). To our knowledge, no studies have investigated the validity of CAGE among MSM in mainland China, nor have such studies been published for MSM in other countries. Therefore, the aim of this study was to assess the validity of a Chinese-translated version of the CAGE instrument using self-reported current heavy drinking as a criterion among MSM in China.

2. Methods

2.1. Study sample and procedure

The data for the current study were collected from the Shanghai Men's Study, a series of three cross-sectional surveys examining prevalence of HIV and sexually transmitted infections and related sexual risk factors among MSM and money boys (men who sell sex

to other men) in Shanghai, China. The study recruited 1352 participants (721 MSM and 631 money boys) between August, 2008 and April, 2012 via respondent driven sampling (RDS), community popular opinion leaders (CPOLs), and venue-based sampling (VBS). RDS (Heckathorn, 1997, 2002) started with recruiting eight seeds—gay-identified and non-gay identified money boys and non-money boy MSM. Each seed recruited up to three peers, who then completed surveys and received three recruitment coupons to distribute to their peers. More details on this recruitment method can be found elsewhere (Huang et al., 2012). CPOLs recruitment involved selection of 40 community popular opinion leaders (CPOLs) from money boy and non-money boy segments of MSM population, who were trained to recruit 10–15 money boys or general MSM from their respective networks. Detailed description of CPOL recruitment is available elsewhere (Nehl et al., 2015). VBS entailed recruiting participants via various Internet and smartphone applications (such as “QQ”, JACKD and GRINDR), as well as in bathhouses and bars frequented by MSM by posting fliers with a hotline number and arranging “hangout” time with potential participants at the permission of venue owners. The eligibility criteria for the Shanghai Men's Study included: (1) at least 18 years old, (2) self-identified as a male, (3) being able to give verbal and written consent, and (4) having had sex with another man during the 12 months prior to the survey (oral, anal, or both).

All participants provided informed consents. A standard and rigorous translation and back-translation were carried out for all protocols, informed consent and other human subject forms, and questionnaires. Interviews were conducted by trained interviewers using a standardized pencil-and-paper questionnaire. The interviews lasted approximately 45 min. Each participant was compensated with US \$40 for completing the survey. All consents and human subject forms and procedures had been reviewed and approved by the Institutional Review Boards of Emory University and Fudan University in China.

2.2. Measures

2.2.1. Socio-demographic characteristics. Participants were asked to report socio-demographic characteristics, including *date of birth*, *Hu-Kuo or hometown*, (Shanghai vs. other), *sexual orientation* (openly gay/bisexual, closeted gay/bisexual, heterosexual/other), being self-identified as *money boy* or not, *ethnicity* (Han vs. non-Han), *educational attainment* (illiterate/primary school, middle school, high school or equal, college or above), *marital status* (never married, currently married/living together, divorced/widowed), and *monthly income* (0–2999, 3000–4999, ≥5000 Yuan; ~US \$1 = 6.3 Yuan).

2.2.2. Alcohol use. Based on previous literature, we chose self-reported alcohol use as the criterion of validity (Adams et al., 1996; Aithal et al., 1998; Bisson et al., 1999; King, 1986; Skogen et al., 2011). *Past week alcohol use* was assessed by summing responses to a series of questions about the amount of drinks in the week prior to the survey (“in the past week, how many drinks did you consume for each of the following type of alcoholic beverage?”). Alcoholic beverage types included beer, yellow wine or rice wine, Chinese white wine, Western white wine, red wine, and Western hard liquor. Participants were categorized into heavy drinkers if they drank 14 or more drinks in the past week (National Institute on Alcohol Abuse and Alcoholism, 2015).

2.2.3. The CAGE questionnaire. We used the Mandarin Chinese version of the standard 4-item CAGE translated from the original English version (Ewing, 1984). Participants were instructed to answer “yes (1)” or “no (0)” to the following four items: (1) “have you ever felt the need to cut down on your drinking?”, (2) “have you

Download English Version:

<https://daneshyari.com/en/article/1069717>

Download Persian Version:

<https://daneshyari.com/article/1069717>

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