

## Reliability and Validity of Addiction Severity Index in Drug Users with Methadone Maintenance Treatment in Guizhou Province, China<sup>1</sup>

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**Objective** To evaluate the reliability and validity of the Chinese version of addiction severity index (ASI)-5th version (ASI-C-5), in illegal drug users receiving methadone maintenance treatment (MMT) in China. **Methods** One hundred and eighty-six heroin addicts (144 men and 42 women) receiving MMT at three clinics in Guizhou province, southwest China, were recruited. They were all interviewed with a questionnaire of ASI-C-5 and 35 were re-interviewed at an interval of seven days to assess its test-retest reliability. **Results** Cronbach's alpha for internal consistency of CSs varied from 0.60 to 0.81 in all domains. Test-retest reliability of composite scores (CSs) of ASI-C-5 were satisfactory ( $r=0.38-0.97$ ). Based on item analysis and expert's suggestions, five items were deleted and one item was modified in ASI-C-5. Criterion validity of ASI-C-5 was found acceptable, as compared to addicts' self-rating anxiety scale (SAS) and self-rating depression scale (SDS) ( $r=0.59$  and  $0.45$ ) except for social support rating scale (SSRS). **Conclusions** ASI-C-5 can be used for heroin addicts receiving MMT with acceptable reliability and validity.

**Key words:** Drug dependence; Addiction severity index; Reliability; Validity; Methadone maintenance treatment

### REFERENCES

1. Qian H Z, Schumacher J E, Chen H T, *et al.* (2006). Injection drug use and HIV / AIDS in China: review of current situation, prevention and policy implications. *Harm Reduct J* **3**(4), 1-26.
2. UNAIDS (2006). Report on the global AIDS epidemic executive summary: a UNSAIDS 10th anniversary edition. Geneva: UNAIDS.
3. China National Narcotics Control Commission (NNCC) (2002). *Annual Report on Drug Control in China*. Beijing: Office of NNCC. (In Chinese)
4. Tang Y L, Zhao D, Zhao C Z, *et al.* (2006). Opiate addiction in China: current situation and treatments. *Addiction* **101**, 657-665.
5. Chinese Center for Disease Control and Prevention (China CDC) (2004). National Sentinel Surveillance Report of HIV Infection. Beijing: CDC. (In Chinese)
6. Zanis D A, McLellan A T, Cnaan R A, *et al.* (1994). Reliability and validity of the Addiction Severity Index with a homeless sample. *J Subs Abuse Treat* **11**(6), 541-548.
7. Zhao M, Li X, Hao W, *et al.* (2004). The preliminary study of the reliability and validity of addiction severity index. *Chin Med Res J* **4**(8), 679-689. (In Chinese)
8. Drake R E, McHugo G J, Biesanz J C (1995). The test retest reliability of standardized instruments among homeless persons with substance use disorders. *J Stud Alcohol* **56**(2), 61-67.
9. Joyner L M, Wright J D, Devine J A (1996). Reliability and validity of the Addiction Severity Index among homeless substance misusers. *Subs Use and Misuse* **31**, 729-751.
10. The University of Pennsylvania/ Veterans Administration Center for Studies of Addiction (1990). *Addiction severity index manual question by question guide*. 5th ed. Philadelphia: Treatment Research Institute.
11. McLellan A T, Cacciola J C, Alterman A I, *et al.* (2006). The addiction severity index at 25: origins, contributions and Transitions. *Am J Addict* **15**, 113-124.
12. McGahan P L, Griffith J A, McLellan A T (1986). *Addiction severity index: composite scores manual*. Philadelphia: Treatment Research Institute.
13. McLellan T A, Kushner H, Metzger D, *et al.* (1992). The 5th edition of the Addiction Severity Index. *J Subs Abuse* **9**, 199-213.
14. Wang X D edition (1999). *Bullet of mental health measurement*. Beijing: Publishing House of China Journal of Psychological Health.
15. Alterman A I, Brown L S, Zaballero A, *et al.* (1994). Interviewer severity ratings and composite scores of the ASI: a further look. *Drug Alcohol Depend* **34**(3), 201-209.
16. Hendriks M, Kaplan C D, Limbeek J V, *et al.* (1989). The addiction severity index: reliability and validity in a Dutch

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- addict population. *J Subs Abuse Treat* **6**, 133-141.
17. Bratko J J, Carpenter W T (1976). On the methods and theory of reliability. *J Nerv Ment Dis* **163**(5), 307-317.
  18. Shrout P E, Fleiss J L (1979). Intraclass correlations: uses in assessing rater reliability. *Psychol Bull* **86**(2), 420-428.
  19. Hodgins D C, EL-Guebal N (1992). More data on the addiction severity index: reliability and validity with the mentally ill substance abuser. *J Nerv Ment Dis* **180**(3), 197-201.
  20. McLellan A T, Luborsky L, Woody G, *et al.* (1980). An improved evaluation instrument for substance abuse patients: the addiction severity index. *J Nerv Ment Dis* **168**, 26-33.
  21. Scheurich A, Muller M J, Wetzell H, *et al.* (2000). Reliability and validity of the German version of the European Addiction Severity Index (EuropASI). *J Stud Alcohol* **61**(6), 916-919.
  22. McLellan A T, Luborsky L, Cacciola J, *et al.* (1985). New data from the Addiction Severity Index. Reliability and validity in three centers. *J Nerv Ment Dis* **173**(7), 412-423.
  23. Daepfen J B, Burnand B, Schnyder C, *et al.* (1996). Validation of the Addiction Severity Index in French-speaking alcoholic patients. *J Stud Alcohol* **57**, 161-167.
  24. Zanis D A, McLellan A T, Corse S (1997). Is the Addiction Severity Index a reliable and valid assessment instrument among clients with severe and persistent mental illness and substance abuse disorders? *Community Ment Health J* **33**, 213-227.

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