Comparison of the mental health status of methamphetamine-dependent inmates and drug-addiction rehabilitation program participants in Japan

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In Japan, the annual number of methamphetamine-related arrests has exceeded 10 000 in this decade alone, and 66.2% of these arrests in 2017 were of repeat offenders, according to the Ministry of Justice. The prevalence of drug dependence in Japan is lower than that in European and American countries, according to the Ministry of Health, Labour and Welfare. However, collaboration between the judicial and health–welfare sectors to prevent repeated arrests due to methamphetamine use and to implement drug-dependence recovery programs has not been fully realized in Japan.

This study was performed to assess the mental health status of prison inmates whose sentences were related to methamphetamine use and among participants in drug-dependence recovery programs to evaluate preparedness for relapse prevention. Face-to-face individual interviews using a questionnaire established by the authors that included self-rated health questions (answered on a 4-point Likert scale) and the Kessler 6-item Psychological Distress Scale (K6, range: 0–24) were conducted with methamphetamine-dependent inmates in Japan and participants at a drug-addiction rehabilitation center (DARC) who had served a sentence in prison and/or had been arrested for the use of illegal drugs, such as methamphetamines. After receiving oral and written explanations regarding the study objectives, procedures, management of data collected, confidentiality, and ethical considerations on participation or refusal to participate in the study, the study participants were interviewed. Written consent to participate in the study was obtained by the prison among the inmates, and using an anonymous name among the DARC participants. This study was approved by the Ethics Committees of Nagasaki University Graduate School of Biomedical Sciences (authorization number: 18110803 for the inmate study, 17101202 for the DARC study) before implementation.

All interviewees were male, and responses from 15 inmates and 14 DARC participants were analyzed. The inmates ranged in age from their 20s to their 70s, while the DARC members ranged in age from their 30s to their 50s. Only one inmate reported a medical history that included taking medication to treat mental health issues, compared with 10 (71.4%) DARC participants. Most inmates and DARC participants had only a junior high school education (the compulsory education level in Japan) and had started to use methamphetamines in their mid-teens or early 20s. The median number of sentences served as adults was five (range: 2–12) for the inmates and three (range: 1–9) for the DARC participants. Most of the study participants had experienced being arrested, although some had not been prosecuted and/or had had a stay of execution, and some of them had stayed in a reformatory prior to the age of 18 years in addition to serving sentences as adults.

The median K6 scores were 4 (0–8) for the inmates and 8.5 (1–14) for the DARC participants (Mann–Whitney U-test, \( P = 0.007 \)); the scores for the inmates were lower than those for male Australian inmates in a study in which the median was 5.1 The cut-off point for K6 exhibited variation, and the authors considered a participant psychologically distressed if their K6 score was 10 or higher in accordance with a previous study among the Japanese general population.2 Five (35.7%) DARC participants were found to be psychologically distressed, which was a higher proportion than the 10% found among males in a previous study.2 However, no inmates were found to be psychologically distressed in this study (Fisher’s exact test, \( P = 0.017 \)), although 11.9% of the male Australian inmates were found to be psychologically distressed when the criterion was a K6 score of 13 or higher.3 Regarding self-rated health, 13 (86.7%) inmates and 10 (76.9%) DARC participants reported being in ‘very good/good health’ (Cochran–Armitage test, \( P = 0.533 \)), which was a higher proportion than that found in the previous study (62.2%).2 There was no statistical correlation between the K6 scores and the self-rated health scores among the inmates (\( p = 0.148, P = 0.599 \)) and DARC participants (\( p = -0.109, P = 0.736 \)) based on Spearman’s rank moment correlation coefficient. Although the interviewees were not representative samples from each group, the inmates demonstrated better mental health status than did the DARC participants; however, there was no difference regarding self-rated health.

Further studies are required to provide a reasonable explanation for these findings and identify the factors associated with better mental health conditions among addictive drug users. However, it is possible that the inmates denied or did not fully recognize their illnesses because they were protected from real society by the dynamics of active and passive drug provision, while DARC participants recognized their illnesses and consequently were participating in the rehabilitation program and were confronted with the reality of their situation. These findings on mental health status among drug users should be considered when a program of recovery from drug dependence is implemented to ensure the successful prevention of relapses.

Disclosure statement
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Cognitive performance and salivary cortisol levels in school children

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Low cognitive performance in school children may cause undesirable phenomena, such as stress. Stress has been associated with disturbed activation of the hypothalamic–pituitary–adrenal axis. Children can present higher levels of cortisol in response to stressful events as well as a