

**Project Title:****A Randomised Controlled Trial to Promote Resilience for HIV Prevention amongst Female Sex Workers in Hong Kong (Project Code: MSS 204R)****Executive Summary:****Objectives**

Female sex workers (FSWs) are often considered as a vector for HIV and other sexually transmitted infections entering into different communities. Building upon the existing evidence on the role of psychological health in sexual health, this study aimed to: (1) investigate the effectiveness of the resilience-promoting intervention that targeted at psychological well-being i.e. self-esteem, self-efficacy, to facilitate adaptation and ultimately safe sexual practices among FSWs; and, (2) increase our understanding of the relationships between individual resilience, psychological health and sexual health practices, so as to provide a new direction for HIV prevention.

**Design**

Multi-centred randomised controlled trial

**Setting**

Intervention sessions were conducted at three local non-governmental organisations (NGOs), including Action for REACH OUT, JJJ Association and the Society of Rehabilitation and Crime Prevention, Hong Kong.

**Participants**

127 FSWs who: (1) were 18 years or older; (2) admittedly had been working as a FSW in Hong Kong in the previous 6 months; and, (3) were able to give informed consent, were recruited. They were randomly assigned to the intervention or usual care control groups in this randomised controlled trial.

**Intervention**

Based on the resilience framework, the resilience promoting intervention was comprised of six sessions to improve FSWs' resilience attributes, including coping, self-esteem and self-efficacy. Each session was one-to-three weeks apart to accommodate FSWs' working hours and mobility. The intervention was focused on the awareness, expression and management of emotions, identifying roles and personal strengths, and effective problem-solving skills. Questionnaires were administered by an independent assessor at baseline, post-treatment (after completion of all sessions or 18 weeks whichever comes earlier) and 3-month post-intervention. As for the usual care control group, they received standard service, including outreach visits, HIV/STI screening, and social activities at the NGOs.

**Main outcome measures**

Primary outcome was the scores on resilience scale measured by Connor-Davidson Resilience Scale. Secondary outcomes included scores on perceived stress, self-esteem, self-efficacy, coping, and psychological distress, risk behaviours (e.g. substance use), and

safe sex behaviours (e.g. condom use, HIV/STI testing). All of these outcomes were assessed at baseline, post-treatment and 3-month post-intervention through self-administered questionnaires. Difference of the differences between the two groups and intention-to-treat analysis were adopted in the analysis.

### **Results**

There were significant differences on the score on resilience, self-esteem and general mental health status between groups at post-intervention and 3-month follow-up. The rate of condom use improved with time but significant difference between groups was only observed at 3-month follow-ups. Regression models showed that, after controlling for marital status and family size, intervention group assignment (OR = 2.95, 95% CI: 1.19-7.35) and self-efficacy ( $t = 2.48$ ,  $p < 0.05$ ) was significantly associated with improved resilience scores.

### **Conclusions**

The results suggest that the programme was effective in promoting resilience, self-esteem and the mental health status among female sex workers in Hong Kong. While further research is needed to confirm the effect of resilience on safe sex behaviours among female sex workers, this programme significantly enhanced their resilience in response to stress.

### **Publications**

1. Yuen WWY, Wong WCW, Tang CSK, Holroyd E, Tiwari AFY, Fong DYT, Chin WY. Evaluating the effectiveness of personal resilience and enrichment programme (PREP) for HIV prevention among female sex workers: a randomised controlled trial. *BMC Public Health*. 2013, 13:683 (26 July 2013).
2. Wong WCW, Yuen WWY, Holroyd E, Tang CSK, Tiwari AFY, Fong DYT, Chin WY. Two decades of misplaced emphases on HIV prevention amongst female sex workers in Hong Kong and China. Symposium presented at 18<sup>th</sup> IUSTI Asia Pacific Conference 2014; Thailand: 2014 Nov 11-14.
3. Yuen WWY, Wong WCW & Tang CSK. Understanding psychological health among women in sex work: the role of resilience and coping strategies. Paper presented at the 28th International Congress of Applied Psychology: France: 2014 Jul 8-13.