Validation of the "Security Needs Assessment Profile" for measuring the profiles of security needs of Chinese forensic psychiatric inpatients

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ABSTRACT

Mapping forensic psychiatric services with the security needs of patients is a salient step in service planning, audit and review. A valid and reliable instrument for measuring the security needs of Chinese forensic psychiatric inpatients was not yet available. This study aimed to develop and validate the Chinese version of the Security Needs Assessment Profile for measuring the profiles of security needs of Chinese forensic psychiatric inpatients. The Security Needs Assessment Profile by Davis was translated into Chinese. Its face validity, content validity, construct validity and internal consistency reliability were assessed by measuring the security needs of 98 Chinese forensic psychiatric inpatients. Principal factor analysis for construct validity provided a six-factor security needs model explaining 68.7% of the variance. Based on the Cronbach's alpha coefficient, the internal consistency reliability was rated as acceptable for procedural security (0.73), and fair for both physical security (0.62) and relational security (0.58). A significant sex difference ($p = 0.002$) in total security score was found. The Chinese version of the Security Needs Assessment Profile is a valid and reliable instrument for assessing the security needs of Chinese forensic psychiatric inpatients.

1. Introduction

1.1. Security

"Security" means "the activities involved in protecting a country, building or person against attack and danger and "security" has always been a feature of psychiatric care that those caring for the mentally disordered patients are responsible to prevent the patientsfrom harming others (Crichton, 2009). The purpose of security in psychiatric care is to provide a safe and secure environment for patients, staff and visitors which facilitates appropriate treatment for patients and appropriately protects the wider community (Crichton, 2004, p.10). "Security needs" for the mentally disordered patients are their needs to be cared for in safe and secure treatment settings, from admission to rehabilitation to community placements, according to their risk and dangerousness (Kennedy, 2002; Scott, 1977). The Health of the Nation Outcome Scale for Users of Security and Forensic Service (HoNOS-secure) described the "security needs" of forensic psychiatric patients according to their different aspects of risk such as "risk of harm to adults or children", "risk of self-harm (deliberate or accidental)", "need for building security to prevent escape", "need for a safely staffed living environment", "need for escort on leave (beyond the secure perimeter)", "risk to individual from others", and "need for risk management procedures" (Dickson, Sugarman, & Walker, 2007).

1.2. Security needs of forensic patients

Mental health services should be organised to stratify patients according to the risk they present so that they can be cared for in an environment that is safe and secure but imposes the minimum necessary restrictions and intrusions (Kennedy, 2002). Forensic mental health services differ from other mental health services mainly by including subsystems which are at higher levels of security than those necessary in general mental health services (Kennedy, 2002). Secure services for forensic patients are categorised as high, medium, and low. A number of

studies have discussed the problems of forensic patients being detained under conditions of security greater than that are necessary for them (Barlett et al., 1996; Collins & Davies, 2005; Shaw et al., 1994).

The Butler report and the Reed report laid out the requirements and principles for the delivery of secure psychiatric services (Home Office & Department of Health and Social Services, 1975; Kennedy, 2002; Reed, 1992). The reports further highlighted the importance of mapping forensic psychiatric services with the security needs of patients and the process of mapping shall be a salient step in service planning, audit and review. Therefore, a scientific method to describe and compare the security needs of forensic psychiatric patients and the level of security of the services or units are crucial. Having a full understanding of each patient's security needs is required in order to make an informed judgement of which level of security they should be placed at, so as to better enhance an appropriate treatment pathway. Before mapping the services with the security needs of forensic psychiatric patients, the level of security that the services or units can provide should be defined and the security needs of the patients should be assessed. In the context of the provision of forensic mental health services, researchers identified three major domains of security: physical security, procedural security, and relational security (Collins & Davies, 2005; Kinsley, 1992; Kinsley, 1998; Parker, 1985).

Physical security refers to the design and maintenance of estate and fittings and is considered as the most obvious domain of security which includes physical elements such as the height and style of construction of perimeter fences, electronic intrusion alarms, electronic door and locking systems and CCTV cameras (Collins & Davies, 2005; Kennedy, 2002).

Procedural security refers to the policies and practices for controlling risk at the systems level and at the patient level and covers the various procedures that take place within the physical elements to maintain security integrity (Collins & Davies, 2005; Kennedy, 2002; Kinsley, 1998). Examples of procedural security include the arrangements for professional governance, risk management, crisis and contingency planning, the restriction of certain items such as potential weapons within a unit, the searching of the environment and patients, the frequency of patient observation, the systems and routines for the control and checking of patients' movements, and the supervision or restriction of visitors (Collins & Davies, 2005; Kennedy, 2002; Kinsley, 1998).

Relational security refers to the staff's detailed understanding of the patients receiving secure care and ways of managing those patients. An example of relational security includes a competent forensic psychiatric nurse having an extensive knowledge of a patient and this knowledge allows the nurse to constantly assess the patient's behaviours, patterns of behaviours, and changes in mental state that have a direct relationship with any immediate or potentially dangerous, offending behaviours. Hence, relational security is considered as the most abstract and complex domain of security, yet it is viewed by some researchers as the most important domain among the three (Tighe & Gudjonsson, 2012). Therapeutic security is the term used to describe the combination of these three domains of security (Collins & Davies, 2005).

1.3. Measurement of security needs of forensic patients

There are instruments available in measuring the level of the domains of security that a service or unit provided and in assessing the security needs of forensic psychiatric patients (Collins & Davies, 2005; Forensic Network Working Group, 2004). Among the instruments, the "Matrix of Security" and the "Security Needs Assessment Profile" are the comprehensive ones which provide structured guidance on the different levels of secure psychiatric care as well as the patients' security needs (Collins & Davies, 2005; Forensic Network Working Group, 2004). The Matrix of Security was developed basing on the work of Kennedy (2002) by the Forensic Network Working Group (2004) (Thomson, 2008). It set out a detailed description of physical and procedural security for open wards, low-, medium-, and high-security forensic units and assisted the clinical teams in the decision-making on the levels of security (Thomson, 2008). Despite its comprehensiveness, it did not include the domain of relational security and had not been validated. In addition, a user manual with operational criteria and case vignettes is not available. The Security Needs Assessment Profile (SNAP) was developed in 2005 by detailed analysis of practices in security units through extensive consultations with clinicians and security staff (Collins & Davies, 2005; Thomson, 2008), which was designed to provide a more robust scientific method to assess the security needs of each individual patient. It consisted of 22 security items categorised under the three domains of physical, procedural, and relational security. Each of the 22 items was rated on a 4-point scale and each point on the scale was criterion-referenced. For each item, there was a general descriptor and a case vignette with criteria set for the rating of the 4-point scale on the level of security need: 0 = open, 1 = low, 2 = medium, 3 = high; and a comprehensive user's manual is available upon request from the authors. SNAP could be used to assess the levels of security provided by a psychiatric unit and could be used to measure security needs across open-, low-, medium-, and high-secure forensic mental health services. Moreover, it could be used to assess the security needs of patients and assist in decision-making regarding the appropriate level of security for a psychiatric inpatient. SNAP was found to serve the purpose of differentiating patients with different security needs with statistically significant difference between the mean overall scores for the open (15.11), low (26.19), medium (32.39) and high (49.75) best placement groups and a one-way analysis of variance (ANOVA) test revealed a significant difference, F (3, 143) = 46.37, $p <$ 0.01(Collins & Davies, 2005). The overall security needs scores show strong agreements between raters with a Pearson correlation coefficient of 0.73, which was significant at $p < 0.01$ (two-tailed). Principal components analysis yielded three factors: factor 1: internal management and protection of others; factor 2: management of external influence; factor 3: notoriety (Collins & Davies, 2005). SNAP was subsequently validated in 35 secure units in the United Kingdom in 2012 with item definitions revised to reflect more broadly based clinical practice and this revised version was adopted in the present study (Davies, Collins, & Ashwell, 2012).

1.4. Forensic psychiatric services in Hong Kong

In Hong Kong, the Forensic Psychiatric Department of Castle Peak Hospital was established in 1995 providing territory-wide forensic psychiatric services and the service scopes include inpatient, outpatient and community psychiatric services as well as outreach visiting psychiatric services to the Correctional Services Department. Forensic psychiatric patients, who have both mental illness and criminal involvement, may pose significant risks to self and others and the Forensic Psychiatric Department of Castle Peak Hospital is the only sub-specialty in Hong Kong which provides specialised services for the care of them. Apart from patients involved in criminal offences, the inpatient psychiatric services of the Forensic Psychiatric Department of Castle Peak Hospital also admit highly violent and highly disruptive patients from other psychiatric services in Hong Kong. The inpatient psychiatric services provided by the Forensic Psychiatric Department of Castle Peak Hospital shall have a security level that can meet the security needs of the patients and an instrument to measure the security needs of Chinese forensic psychiatric inpatients is in need.

1.5. Aim of this study

Upon the design of this study, there had been no validated Chinese version of any instrument to measure the levels of security provided by a forensic psychiatric unit and the security needs of forensic psychiatric patients in Hong Kong. This study aimed to develop and validate the Chinese version of the "Security Needs Assessment Profile" for