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A comparison of hospital and community stay in patients who underwent compulsory admission before and after the 2007 Amendment to the Mental Health Act in Taiwan

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ABSTRACT

Objective: The main purpose of this study was to assess the empirical findings of compulsory admission for psychiatric disorders before and after the 2007 amendment to the Mental Health Act in Taiwan.
Methods: A matched case-control study design was applied. Participants were selected using the National Health Insurance Research Database (NHIRD) in Taiwan. The control and case data were collected in 2006 and 2011, and the number of compulsory admission cases was recorded with a case-control ratio of 1:4, along with information on age (±3 years) and gender. In 2006, the number of patients recruited was 9265, including 1853 compulsorily admitted patients and 7412 voluntarily admitted patients. In 2011, the number of patients recruited was 4505, including 901 compulsorily admitted patients and 3604 voluntarily admitted patients.
Results: The data collected for the patients who underwent compulsory admission before and after the amended Mental Health Act included gender, diagnosis, Charlson Comorbidity Index Score (CCIS), length of stay in an acute hospital ward (days), hospital accreditation level, ownership, teaching hospital status, psychiatrist gender and age, and hospital location. Although the number of compulsory admission cases (1853 vs. 901) markedly decreased and the length of stay in an acute hospital ward (30.7 ± 25.0 days vs. 39.0 ± 22.6 days) increased from 2006 to 2011, the readmission rate was reduced from 52.6% in 2006 to 42.5% in 2011.
Conclusions: The average lengths of hospital stay and community survival time were greater for compulsorily admitted patients than those for voluntarily admitted patients. This result might be attributed to a number of changes implemented since the 2007 amendment of the Mental Health Act, including a strict review process for compulsory admissions and a new discharge planning process, which require further research for approval.

1. Introduction

Mental health refers to the ability to cope with normal life stress and to work efficiently; this concept can be applied to individuals both with and without mental disorders. Changes in social patterns and complex interpersonal interactions have led to increasing mental pressures. Therefore, greater attention must be focused on the mental health of the population. As stated by the World Health Organization, there is "no health without mental health" (World Health Organization, 2004).

In Taiwan, psychiatry has developed rapidly since the 20th century. In 1981, the government commissioned a private mental health organization to develop a draft of the Mental Health Act with the purpose of protecting the public and reducing the dangers from patients with psychiatric disorders. This new law stressed the need to balance the rights of individuals with those of society (Shieh, Su, & Chou, 2016). Then, after the occurrence of two high-profile social incidents involving assaults perpetrated by individuals with psychiatric disorders – one individual threw sulfuric acid on children at Ying-Qiao Elementary School and another killed her government official husband out of acute paranoia –

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the Mental Health Act was finally enacted in 1990. This Act emphasizes that individuals with mental illness have the right to accept reasonable treatment (Wang, 1997). Following a few minor modifications and a substantial revision in 2007, the revised version of the Mental Health Act was formally enacted on July 4, 2008. This amendment includes 7 chapters and 63 articles. Act 41 also stipulates that compulsory admission for patients with severe mental illness (SMI) should be determined by two designated psychiatrists; compulsory hospitalization is primarily for patients with SMI exhibiting the potential to hurt themselves or others. In addition, an emergency placement should be started during the evaluation phase to protect the rights of the patients. According to the newly developed Mental Health Act regulations (the 2007 version), compulsory admission requires the review and approval of a Psychiatric Disease Mandatory Assessment and Community Care Review Committee (PDMACCRC) in addition to evaluations by two designated certified psychiatrists (assigned by the local health department). This committee consists of several different specialists or representatives, including psychiatrists, registered psychiatric nurses, occupational therapists, clinical psychologists, psychiatric social workers, lawyers, relatives, and patient-rights protection representatives (typically the caregiver or a family representative group). The role of this panel is to ensure that the criteria for compulsory admission are met (Hsieh, Wu, Chou, & Molodynski, 2016). Additionally, mandatory community treatment was established in this amendment act. The alternative treatment offers another compulsory treatment with lower limitations for freedom in patients with SMI. This mandatory community treatment still requires permission from PDMACCRC (Article 45). Mandatory community treatment services are provided by designated psychiatric institutions and include the following items: (A) pharmaceutical therapy; (B) assessment of pharmaceutical compound concentrations in blood or urine; (C) screening for alcohol or other addictive substances; and (D) other measures that can prevent deterioration of illness conditions or can promote patients' life-adapting functions. Mandatory community treatment may be performed without informing the patients with SMI. If necessary, police or fire-fighting agencies may be contacted to provide assistance in the administration of these treatments (Article 46) (Hsu, Wu, & Chou, 2017).

In many countries, compulsory admission for patients with psychiatric disorders is mainly performed when the patients present an immediate danger to themselves or others (Steinert, Lepping, Baranyai, Hoffmann, & Leherr, 2005). Additionally, if a patient with psychosis cannot take care of himself/herself, he/she is subject to compulsory admission, which does not meet the Taiwan compulsory admission criteria (Fisher et al., 2001; Georgia legal code; Kaltiala, Laippala, & Salokangas, 1997; Luchins, Cooper, Hanrahan, & Rasinski, 2004). The rule of compulsory admission in many states in the USA involves grave disability and need-for-treatment (Segal, 2012). Studies in different countries have demonstrated that after their release, at least 30% of compulsorily admitted patients believe that the original admission treatment was necessary; however, more respect and care should be given to patients who undergo compulsory admission because their human rights can be violated (Grudzinskas & Albert, 2002; Katsakou & Priebe, 2006; Priebe et al., 2009).

According to a retrospective study in 1996 and 1997 in England, the mean age of the first compulsory admission is 40 years of age. Most compulsorily admitted patients are Asians, followed by blacks and Caucasians (Law-Min, Oyebode, & Haque, 2003). One study focused on an inner-city region of London revealed that most cases of compulsory admission involved young black male patients (Bebbington et al., 1994).

A large-scale study in the US demonstrated that among 2200 compulsory admissions, 1755 represented the patient's first admission. The most common demographic features of these patients included young age, unmarried, African American males diagnosed with schizophrenia, and those with comorbid substance abuse (Sanguineti, Samuel, Schwartz, & Robeson, 1996). In addition, a previous study found that "types of diagnosis of mental illness", "higher mental illness severity", and "violent behavior" were the most common factors related to compulsory admission (Nicholson, 1986).

Several previous studies have focused on the patient characteristics of compulsory admission cases, including age, sex, marital status, race, diagnosis, socioeconomic status, and severity of illness (Eytan, Chatton, Safran, & Khazaal, 2013; Law-Min et al., 2003; Lay, Nordt, & Rossler, 2011; Martinez-Ortega et al., 2012; Nicholson, 1986).

In Taiwan, the total numbers of voluntary admissions were 223 and 233 people per 100,000 in 2006 and 2011, respectively, in Taiwan. The total numbers of compulsory admissions were 14 and 5 people per 100,000 in 2006 and 2011, respectively, in Taiwan. Additionally, the number of patients with mandatory community treatment increased from 0 patients in 2006 (not formally performed) to 63 patients in 2013 (Ministry of Health and Welfare [Internet], 2014; Shieh et al., 2016). Since the 2007 version of the Mental Health Act was implemented, the number of patients with compulsory admission was significantly reduced by 83%, corresponding to decreases from 3129 patients in 2006 to 3171 patients in 2007 and 728 patients in 2014.

Although approximately 70,000 people consented to hospitalization, only 0.96% of these individuals were compulsorily hospitalized, which is significantly reduced compared with the 6–58% who is compulsorily hospitalized in the United States and Europe (Chou, 2015; Shieh et al., 2016). Thus, the main purpose of this study was to address the influence and changes in compulsory admission before and after the 2007 amendment to the Mental Health Act in Taiwan. In particular, the present study sought to explore the empirical findings of the amendment to the Mental Health Act in terms of the number of cases subject to compulsory admission, the length of stay, the readmission rates, and patient attributes.

2. Methods

2.1. Study design and subjects

A matched case-control study design was applied. Participants were selected from the National Health Insurance Research Database (NHIRD) in Taiwan. The NHIRD, which is organized and managed by the National Health Research Institute, is derived from the National Health Insurance Program. The National Health Insurance Program, which has existed in Taiwan since 1995, has enrolled up to 99% of the Taiwanese population and is contracted with 97% of the medical providers. The National Health Insurance Bureau of Taiwan randomly reviews the charts of one per 100 ambulatory and one per 20 inpatient-claimed cases and patient interviews to verify the accuracy of the diagnosis (Tsai, Lee, Chou, Su, & Chou, 2012).

Because NHIRD data have been released only up to the year 2012, we used the data from 2006 (before the Mental Health Act amendment) and 2011 (after the amendment) to form the study and control groups. The number of patients in the control group was larger than that in the study group, as there was some difficulty involved in recruiting a sufficient number of patients for the control group to age match each patient in the study group (1:4). Therefore, we selected age (±3 years) instead of an exact age match. Additionally, confounding factors, especially age and gender, can be present in most epidemiological studies, especially without a pre-study design due to ethical issues and empirical considerations; therefore, we controlled for age (±3 years) and gender variables in this study. These data from 2006 and 2011 were categorized into the study group or the control group based on the number of compulsory admission cases by age (±3 years) and gender, with a case-control ratio of 1:4. Analyses were performed to detect any significant differences in patient characteristics, psychiatrist characteristics, and hospital characteristics. Data collection for the patients who underwent compulsory or voluntary admission was divided into two periods: 2006 (January 1st–December 31st) and 2011 (January 1st–December 31st).

Compulsory admission data were collected according to the following criteria: (a) if patients experienced multiple admissions in 2006 or 2011, only the first admission was counted; (b) the diagnosis was