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Determining the quality of life of depressed patients in Singapore through a multiple mediation framework

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ABSTRACT

Quality of Life (QOL) is reported to be lower for patients with depression than the general population. This study aims to investigate the mediational effects of protective resource factors (PSFs), such as depressive symptom management ability, self-efficacy, social support and problem-focused coping act, in the relationship between dysfunctional attitudes and QOL. It is hypothesized that these PSFs have different mediating strengths. Self-report questionnaires which aimed to determine the influences of these PSFs through a multiple mediation framework were completed by 80 depressed adult outpatients from the National University Hospital of Singapore. PSFs have different influence on mental and physical QOL. Depressive symptom management ability is the most important PSF mediating both domains and better problem-focused coping abilities demonstrate improvement in the physical domain of QOL. Self-efficacy and social support are shown to be non-significant mediators. The results suggest for future effective interventions to focus primarily on improving depression patients' symptom management ability and problem-focused coping skills to raise their life quality. Furthermore, findings from this study have implications on the future investigation of QOL as a unitary construct.

1. Introduction

Depressed patients experience a lower Quality of Life (QOL) than the general population, patients with physical disorders such as diabetics, hypertension and breast cancer (Spitzer et al., 1995), as well as those diagnosed with other psychological disorders including schizophrenia (Koivumaa-Honkanen et al., 1996) and bipolar disorder (Russo et al., 1997). According to lifetime prevalence statistics, approximately 16.5% of the population will be affected by depression (Kessler et al., 2005). With a prevalence rate of 5.8%, depression is presently the most commonly seen psychiatric disorder in Singapore (Fones et al., 1998). Currently the fourth leading cause of disability worldwide, depression is predicted to emerge second by year 2020 (Murray and Lopez, 1996). Therefore, it is important to achieve clear understanding of the QOL experienced by depressed patients in Singapore.

Quality of Life (QOL) is the concept of one's personal satisfaction with life based on multi-dimensional objective and subjective indicators (Chan et al., 2006; Lim et al., 2008). Three domains (physical, psychological and social) are frequently integrated into existing QOL measures. These aspects evaluate the individuals' perception of their physical, cognitive and affective states, as well as their interpersonal associations (The WHOQOL Group, 1995). It underlies the direct effect of dysfunctional attitudes, and the possible mediating role played by protective resource variables in determining QOL.

2. Dysfunctional attitudes

According to Beck's (1967) cognitive theory of depression, negative health outcomes occur as a consequence of a self-reinforcing cycle of dysfunctional self-schema which brings about cognitive distortions and negative views about oneself, the world and the future. Such dysfunctional self-schemas promote irrational cognitive tendencies that results in inappropriate filtering and evaluation of information, such as screening out positive information or focusing on minor negative aspects of an event that is otherwise largely positive (Young et al., 2003).

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Direct relationship between dysfunctional attitudes and QOL has been established in both clinical and non-clinical Asian population samples (Jung et al., 2007). Nevertheless, the lack in difference of dysfunctional attitudes possessed between normal and clinically depressed populations as found by Lewinsohn et al. (1981) begets greater attention. Thus, there is a need to determine other factors that subsequently influence the perceived QOL. These other factors are known as protective resource factors in this paper, which are hypothesized to have mediational effects in the relationship between dysfunctional attitudes in depressive adult patients and their QOL.

3. Protective resource factors

3.1. Depressive symptom management

Management of depressive symptoms is defined as the number of depressive symptoms experienced by the individual, with fewer symptoms interpreted as better management ability (Barker, 2007). Extensive evidence supports association between good symptom management and QOL. Pyne and colleagues (1997) found that scores from Beck's Depression Inventory could account for 48% of variance in the Quality of Wellbeing Scale. Patients with recurrent major depressive disorder also perceived greater impairment in QOL as compared to those with a single episode (Aydemir et al., 2009). In a study of depressed Taiwanese patients by Chung et al. (2009), depressive symptom management mediated between cognitive expectancies and QOL and the patient's ability to manage his symptoms evoked the strongest influence on QOL.

Consistent disparity between measures of symptom management and patients' evaluations of their QOL have been found. Daly et al. (2010) observed that depressive symptom management proficiency was only moderately associated with mental and physical QOL in a sample of depressed outpatients. This is further supported by findings demonstrating lowered QOL experienced by depression patients despite extended periods of symptom remission. This constant underestimation of QOL by symptom management measures alone hints at the possibility of concurrent presence of other factors influencing patients' perception of QOL.

Depressive symptoms have also been found to regress onto various domains of QOL differently. Both Aydemir et al. (2009) and Daly et al. (2010) illustrated higher correlation present between depressive symptom severity and the psychological domain, as opposed to the physical domain of QOL using a single measure of overall QOL. There remains a knowledge gap on whether protective resource factors mediate physical and mental QOL differently within an Asian population, and the appropriateness of studying QOL as a unitary construct.

3.2. Social support

Social support can be divided into two domains – structural and functional (Thoits, 1982). While the former is concerned with the quantity of social relationships possessed, functional support is concerned with qualitative content of relationships (Thoits, 1982). Consistent evidence reveals that functional support is a better predictor of QOL than structural size of the network (Carney-Crompton and Tan, 2002; Vandervoort, 1999).

Numerous western studies demonstrated beneficial effects of social support on QOL, with lower perceived support associated with poorer mental QOL (Carney-Crompton et al., 2002) and increased availability of support associated with better physical health outcomes (Uchino, 2004). However, contradictory findings were found in Asian populations regarding the mediating role of social support (Chan et al., 2009). A Malaysian study conducted on inpatients diagnosed with chronic pain demonstrated that perceived support was not associated with both the mental and physical aspects of QOL (Avicenna and Rahman, 2010). A plausible explanation could be that the individual's perception of QOL and social support is strongly culturally-dependent (Fisher et al., 2002). While Western cultures value independence and self-realisation, Asian cultures tend to emphasize on interdependence and group harmony (Xiang et al., 2008) as a consequence of the Confucian ethics imbued.

3.3. Self-efficacy

The importance of self-efficacy in promoting QOL is well-established in existing literature (Chung et al., 2009; Shin et al., 2007). Particularly, a longitudinal study by Kunzmann et al. (2002) illustrated that self-efficacy is predictive of the psychological domain of QOL for mid-term period of at least four years.

Self-efficacy is an important factor in regulating relationship between dysfunctional attitudes and QOL, explained through the expectancy-value theory (Bandura, 1994). The intensity of dysfunctional attitudes endorsed is but a secondary factor; the crux lies in the belief that one is self-efficacious and is able to exert control over life events (Bandura, 1994). Although the mediating role of self-efficacy in Asian populations is well-established, there is lack of information on its mediating strength in comparison to other protective resource variables like social support and coping style.

4. Problem-focused coping

Coping styles are known to mediate stress and health-related outcomes, and is regarded as critical protective resource in determining the individual's well-being. Multiple typologies of coping styles such as problem-focused and emotional-focused coping exist, of which they are not mutually exclusive, and the use of active coping methods is often driven by personal traits (Gan et al., 2010). Contradictory evidence regarding the effectiveness of problem-focused coping has been found in western and asian populations, and hypothesized to be culturally-dependent (Noh et al., 1999). There is a need to better determine if possession of problem-focused coping skills necessarily promotes QOL amongst Asian depression patients, and determine relative importance of problem-focused coping in comparison to other protective resource factors, in mediating the relationship between dysfunctional attitudes and QOL.

There is paucity of literature on QOL of Asian psychiatric populations and determination of QOL of adult depressed patients in Singapore despite high cost of depression at both personal and economic level. Furthermore, very few studies have looked at the relative influence of mediators on QOL. Most existing studies employ simple mediation in their investigation of only one to two psycho-social resource factors, such as mastery or self-esteem, on QOL. Little work has been done to determine relative influencing strength of various psycho-social mediators on QOL. Addressing this gap is imperative because it allows better identification of patients at risk for lower QOL, and determine elements that should receive greater attention when formulating programmes and policies for depressed patients. This study, henceforth, aims to contribute by investigating comparative influences of these protective psycho-social mediators through a multiple mediation model.

Our hypothesis include: (1) severity of dysfunctional attitudes is negatively associated with perceived QOL; (2a) depressive symptom management mediates relationship between dysfunctional attitudes and QOL; (2b) social support mediates relationship between dysfunctional attitudes and QOL; (2c) self-efficacy