CONCEPTUAL MODEL FOR MANAGING MENTAL HEALTH IN THE CULTURALLY DIVERSE CONSTRUCTION WORKFORCE

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Construction workers are exposed to a plethora of stressors which may cause psychological problems. Meanwhile, in the context of globalization, there is a growing trend of diverse culture within the construction industry which may aggravate the mental health issues of construction workforce. Therefore, to better address the mental health issues in a multicultural workplace, the impact of culturalrelated factor should be considered. However, how construction workers' mental health is influenced in a multicultural context remains unclear. Thus, there's a need to investigate the major determinants of mental health so as to reduce workers' psychological issues in the culturally diverse worksite. The aim of this research is to develop a conceptual framework of mental health for the multicultural construction workforce. Literature review was adopted as the research method to lay a solid theoretical foundation for the development of the conceptual framework. This study was grounded in the transactional theory of stress and coping. Cultural coping models were employed to justify the incorporation of cultural-related factors. Conceptualisation of intercultural coping was based on the tripartite model of attitude and intercultural competence model. The occupational stress model identified the sub-dimensions of personal and work stressors. Hypotheses regarding the relationships between the main factors were proposed and measurements of each items were determined. The conceptual model may contribute to the knowledge of mental health management in a multicultural construction workplace and provide an effective framework for workers to manage their mental health.

Keywords: workforce, coping, cultural diversity, mental health, stressor

INTRODUCTION

The construction industry is acknowledged as a stressful, challenging, and risky work environment (Loosemore *et al.*, 2010). Against the background, construction workers have constantly experienced a variety of mental health problems, such as anxiety, stress and depression (Lingard and Turner 2017). In the UK construction industry, around 70% of construction professionals were reported to have suffered from jobrelated stress, anxiety or depression (CIOB 2006). Similarly, about 55% of the UK construction labours in the worksite were found to have undergone mental health disorders, and 42% of the mental illnesses were work-related (Alderson 2017). Accordingly, the mental health issues have brought about a series of severe consequences in the construction industry. Construction workers' suicide rate was 3-7

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times of the industry average rate during 2011-2015 in the UK (Burki 2018). The project productivity and company profit would also be affected (Wong *et al.*, 2010). In the UK, there are £40 billion losses of the organizations and £25 billion losses for the government per year resulted from the mental health issues (Stevenson 2017). Given the prevalence of mental health problems and the severe consequences they bring, it is of great significance to develop effective coping measures to improve mental health in the construction industry.

In the context of globalization, there is a growing trend of workforce diversity in the construction industry where numerous transnational conglomerates emerge with migrate construction workers from various cultural backgrounds in the worksite (Findler et al., 2007). For instance, in the UK, non-UK nationals accounted for 40% (70,000) of the construction of buildings workforce in London (Office for National Statistics 2018). The construction industry has thus become one of the most culturally diverse workplaces (Wong et al., 2010). However, the increasing trend of cultural diversity in the construction workforce brings about new and complex challenges in terms of accommodating workers' requirements, interests and habits in the work environment, thus may lead to a variety of mental health problems (Pasca and Wagner 2011). The Hofstede model indicated that how construction workers manage their mental health issues is influenced by their national culture (Hofstede 2001). Besides, the cultural differences derived from national culture have a significant impact on an individual's perceptions and reactions to mental health problems, and the coping measures adopted by construction workers (Wong et al., 2010). Furthermore, Torres and Taknint (2015) suggested that stressful events resulted from cultural diversity may cause more critical psychological illnesses if not managed correctly. Therefore, in order to develop effective coping strategies to ameliorate the mental health of construction workers, the impact of cultural diversity should be considered. However, currently there is a paucity of work on improving construction workers' mental health in a multicultural construction workplace. Therefore, it is imperative to investigate the major determinants of mental health in a culturally diverse construction workforce so as to reduce workers' psychological issues. The aim of this research is to develop a conceptual framework of mental health for the multicultural construction workforce.

LITERATURE REVIEW

Coping theory

The transactional theory of stress and coping developed by Lazarus and Folkman (1984) is the most prevalent and frequently adopted theoretical approach to studying psychological stress and coping across multiple fields (Nel and Spies 2019). It has been modified and evolved by Lazarus and his colleagues over a long period of time. This theory depicts the entire cognitive process of stressors-coping-adaptational outcomes, including the antecedents (personal and situational stressors), mediator variables (appraisal and coping) and outcomes (immediate and long-term physical and psychological consequences). In this model, psychological stress refers to "a relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being" (Lazarus and Folkman 1984: 21). Coping is defined as "the person's constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the person's resources" (Lazarus and Folkman 1984: 141). Therefore, when the stress is appraised as exceeding the individual's resources and adverse to his or her well-being, coping is needed to

address the stressful events. Coping thus plays a crucial role in moderating the relationship between negative events and psychological health issues in a particular person-environment transaction (Folkman *et al.*, 1986). Coping is divided into two categories: problem-focused coping and emotion-focused coping. Problem-focused coping attempts to change the problematic person-situation relationship involved with mental health issues. In contrast, emotion-focused coping aims to regulate negative emotions of an individual and maintain moderate levels of arousal.

In the construction industry, a few efforts have been made to examine the relationships between coping behaviours and psychological issues. Langdon and Sawang (2018) explored the stressors, coping mechanism, and mental health for the construction labour workforce. They found that construction workers who adopted maladaptive coping strategies such as acceptance, self-blame, and disengagement when facing stressors had increased feelings of mental distress. Enshassi et al., (2018) investigated the two main coping measures of problem-focused and emotion-focused coping used by construction professionals. In terms of problem-focused coping, planned and constructive review problem-solving, need for social contributory support and confronted coping were found to be the three most frequently used ones. In relation to emotion-focused coping, the principal strategies were identified to be accepting responsibility, avoidance and seeking emotional support. Chan et al., (2018) developed a stressor-coping-stress model based on the expectancy theory in stress management for Hong Kong expatriate construction professionals. This research revealed the lack of attentions on the significant role of cultural stress on the expatriate construction professionals in the construction industry. Yip et al., (2008) examined the degree to which the different types of coping strategies (e.g. rational problem solving, resigned distancing, and passive wishful thinking) moderate the relationship between role overload and burnout among professional construction engineers. Rational problem solving were discovered to be the most significant one among all the coping strategies.

The existing literature review shows that the stress-coping research in the construction industry generally adopted the traditional coping strategies: problem-focused coping and emotion-focused coping based on the transactional theory of stress and coping (Lazarus and Folkman 1984). However, since the transactional theory has been criticised to have a clear lack of research in cultural context which neglects cultural-related factor, it may be insufficient to address the mental health issues in a culturally diverse construction workplace. Therefore, it is imperative to expand current stress-coping theories and frameworks by integrating cultural and multicultural contexts, as well as developing intercultural coping strategies.

Theoretical models of cultural coping

In a culturally diverse environment, cultural adaptation is an inevitable process an individual undertakes to manage and cope with stressors and diversities brought upon by being in an extended contact with new cultures (Berry 1997). Even though the transactional model of stress and coping laid a solid foundation in studying psychological coping, it has displayed a clear lack of research in cultural context. It concentrates on problem- focused and emotional-focused coping strategies rather than on cultural-specific coping behaviours (Wong and Wong 2006). Therefore, cultural coping models have been developed to fill in this gap of stress-coping theories.

Based on Lazarus and Folkman's (1984) transactional model of stress and coping, the resource-congruence model of coping (Wong 1993) posits that adaptive coping can be

achieved where appropriate resources are available and congruent coping strategies are employed. In particular, this model emphasizes the significant role of culture plays on effective coping and its impact on all aspects of coping-well-being process, including potential stressors, primary and secondary appraisal, coping behaviors and outcomes. Coping is classified into three categories: creative coping, reactive coping and protective coping, among which creative coping specifically relates to cultural factors. The multiaxial model of coping postulates that cultural can impact on the coping process through factors of individual precise interpreting, culturally shared biases, family norms and illusions depended on personal, familial and cultural biases (Kuo 2011). Likewise, Chun et al., (2006) developed a transactional model of cultural stress and coping to clarify the interaction between culture and coping process. It depicts that culture is embodied in the whole process of stress and coping, as well as imposes effects on five systems (environmental systems, personal systems, transitory conditions, appraisal and coping skills, health and well-being). In addition, Aldwin (2007) proposed a sociocultural model of stress, coping, and adaptation which highlights the cultural context of the stress and coping process. This model also illustrates the influence of culture on the entire process of stress and coping.

The review of these cultural coping models demonstrated the significant impact of culture on the entire process of stressor-coping-well-being and the necessity to incorporate culture into coping research so as to better investigate mental health problems in a multicultural context. However, although these cultural coping models confirm the essential role of culture on coping process, they mainly consider the impact of national culture on the perception and management of mental health but fail to illustrate the impact of diverse culture derived from different cultural backgrounds. Further theoretical study is needed to investigate the impact of diverse culture on the coping-mental health process. Therefore, this research attempts to develop a conceptual framework incorporating cultural-related factors in a multicultural construction workforce based on the transactional model of stress and coping, in order to ameliorate the mental health of construction workers in this sector.

CONCEPTUAL MODEL

Conceptualising intercultural coping

The existing research on coping of mental health issues mainly adopted problem-focused and emotion-focused coping strategies based on the transactional model of stress and coping. Nevertheless, this culture-absent coping may not be applicable to the multicultural work environment. Moreover, research in the construction industry has found out inconsistent findings in regard with the efficacy of these two coping behaviours. Most studies demonstrated that problem-focused coping is more adaptive in enhancing the mental health of construction workers/professionals than emotion-focused coping, while other research indicated that some of the problem-focused coping strategies fail to improve mental health of them (e.g. Langdon and Sawang 2018; Yip *et al.*, 2008). Thus, effective coping should be developed to better address mental health problems in a multicultural workplace.

The tripartite model of attitude (also called ABC model of attitudes) (Rosenberg and Hovland 1960) identified three components of evaluative response, which are the affective, behavioural, and cognitive components of attitude. In this model, "attitude is defined as a response to an antecedent stimulus or attitude object, which may or may not be observable. And the three components are three classes of responses to that stimulus" (Breckler 1984). The affective component is focused on feelings or

emotions, such as sympathetic nervous responses and verbal statements of affect. The behavioural component is focused on behavioural intentions, including overt actions and verbal statements concerning behaviours. The cognitive component is targeted on beliefs containing the perceptual responses and verbal statements of beliefs (Ostrom 1969). This 'ABC' model of attitude has become an essential component of the general body of knowledge in the areas of psychology and organizational behaviour (e.g. Eagly and Chaiken 1998; Greenberg *et al.*, 1993). Meanwhile, coping is also recognized as evaluative response which manages specific stressful stimulus (Lazarus and Folkman 1984). Comparing with the implication of attitude from ABC model and coping from transaction theory, it can be referred that coping can be classified into three dimensions, including affective, behavioural, and cognitive components.

Intercultural competence is acknowledged as effective ability to manage mental health stress in a culturally diverse work environment (Starren et al., 2013). It was defined as "the ability to develop targeted knowledge, skills and attitudes that lead to visible behaviour and communication that are both effective and appropriate in intercultural interactions." (Deardorff 2006). The intercultural competence model identified three constituent elements of intercultural competence: knowledge, skills and attitudes (Deardorff 2006). Knowledge mainly focuses on the cognitive aspect, including cultural self- awareness, culture specific knowledge, socio-linguistic awareness, grasp of global issues and trends. Attitude targeted at the emotional reaction which is constituted by respect (valuing other cultures); openness (withholding judgement); curiosity (viewing difference as a learning opportunity); discovery (tolerance for ambiguity). Additionally, skills embody the behavioural responses that is composed of listening, observing, evaluating; analysing, interpreting and relating. In view of the crucial role of intercultural competence in enhancing mental health, it is regarded as effective coping in multicultural workplace (Starren et al., 2013). Therefore, to improve the mental health of multicultural construction workforce, intercultural competence should be integrated into the development of effective coping. This research thus proposes the term of "intercultural coping" as effective coping to manage mental health issues in a multicultural construction workplace, and it can be identified as three dimensions, including affective intercultural coping, behavioural intercultural coping and cognitive intercultural coping.

Djebarni (1996) suggested that different types of coping behaviours are needed to tackle with specific types of stressors. Thus, it is essential to develop effective coping strategies specifically targeted at different stressors for construction workers. The measurement scale of intercultural coping was developed based on the intercultural competencies. Based on the intercultural competencies classification system (Lloyd and Hartel 2010), affective intercultural competencies were classified into dissimilarity openness, tolerance for ambiguity and cultural empathy; behavioural intercultural competencies had the dimensions of intercultural communication competence, emotion management skills and conflict management skills; cognitive intercultural competencies could be categorised as cognitive complexity and goal orientation. After adapting and modifying the measurement items of all the intercultural competence constructs, 24 measurement items were eventually developed to measure the concept of intercultural coping. Based on the discussion aforementioned, the first hypothesis is set out:

Hypothesis 1 - (Affective/Behavioural/ Cognitive) Intercultural coping has a positive impact on mental health.

Stressors of mental health in a culturally diverse construction workplace

Identifying the determinants of mental health is of significant in the stress-coping process. A better understanding of the determinants that have essential impacts on psychological well-being can contribute to the development of effective coping measures (Murphy 2000). Personal and situational stressors are identified as the main determinants in the transactional theory of stress and coping. Likewise, the occupational stress model of Cooper and Marshall (1976) postulated that the interactions of the individual characteristics and potential sources of stress in the workplace had crucial impacts on either coping behaviours or psychological illnesses. Besides, extra-organizational stressor was also recognized as a type of stressful situation which affected an individual's psychological well-being at work.

The occupational stress model identified five work-related stressors: factors intrinsic to a job, role in organization, career development, relationships at work, organizational structure and climate (Cooper and Marshall 1976: 14-22). Previous studies demonstrated that most of the occupational stressors in the construction industry were fitted well in the job-related factors as in the model (Johnson et al., 2005; Motowidlo et al., 1986; Rahman et al., 2014). The measurable items of work stressors were adapted from previous research works of Leung et al., (2017), Leung et al., (2005), and Fye and Staton (1981). Personal characteristics play an essential role in stress-coping process (Hendrix et al., 1985). Two of the most prevalent and frequently employed factors of personal characteristics in the psychological wellbeing are the behaviour pattern of an individual (Type A and Type B behaviours) and locus of control (external and internal locus of control) (Cooper 1972; Leung and Chan 2012). The extra-organizational stressors such as family problems and financial difficulties are found to be the most significant ones in regard with mental health issues in a workplace (Cooper and Marshall 1976; Hendrix et al., 1985). Since these elements are derived from the individual themselves, they are classified into the personal stressors. The personal stressors were measured by the Speed and Impatience construct (Friedman and Rosenman 1959), Introversion-Extraversion (I-E) Scale (Rotter's 1966), home-family relationships scale (Fye and Staton 1981), and Life Events Checklist (LEC), respectively.

Despite the valuable insights of person-work stressors provided by transactional theory of stress and coping and occupational stress model, these models viewed the transactions of stressors and coping in a mono-cultural background, which displayed a clear lack of focus on cultural and multicultural context (Wong and Wong 2006). However, given the essential role of culture plays and the absence of research on the impact of cultural diversity on the coping-well-being process, it is imperative to incorporate the cultural-related factor in the present framework. Cultural stressors are recognized as the conflicts and difficulties that originated from the process of intercultural contacts (Pan et al., 2007). Interactions with different cultures generally bring about a set of negative status, such as mental health symptoms (anxiety, depression, stress), feelings of isolation and marginality, and confusion of self-identity (Berry, et al., 1987). Currently only a limited number of studies have explored the cultural barriers in the construction industry. From the findings of extant studies, racial discrimination, language barriers and cultural value conflicts have been identified as the most prevalent cultural stressors in the multicultural construction workplace. Four items of racial discrimination in the construction workplace were adopted from Wong and Lin (2014). Three questionnaire items of language barriers were adapted from Leung et al., (2017). Two items of national cultural conflicts were

adapted from Al-Bayati *et al.*, (2017). Therefore, Hypothesis 2 is proposed in accordance with previous literature review:

Hypothesis 2 - (Personal/Work/Cultural) Stressors have a negative impact on mental health

As has illustrated above, stress-coping theories and literature review have illustrated the significant role of coping plays in moderating the relationships between stressors and psychological outcomes. Furthermore, in this study, the intercultural coping refers to effective coping strategies to alleviate stressful states and ameliorate mental health of construction workers in a culturally diverse workplace. Thus, the following hypotheses are proposed:

Hypothesis 3 - Effects of (Personal/Work/Cultural) stressors on mental health are moderated by (Affective/Behavioural/Cognitive) intercultural coping.

Based on the hypotheses mentioned above, a conceptual framework for managing mental health of multicultural construction workforce is proposed (Figure 1).

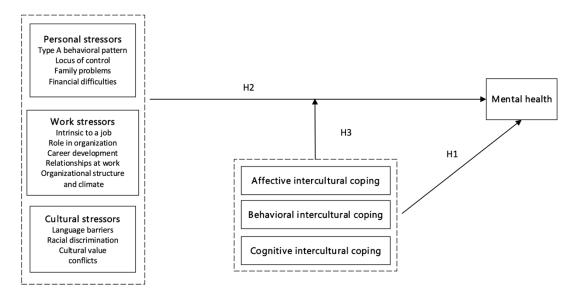


Figure: 1 Conceptual model for managing mental health in the culturally diverse construction workforce

CONCLUSION

This research developed a conceptual model for managing mental health in the culturally diverse construction workforce. Literature review method was employed as the research approach. The transactional theory of stress and coping was adopted as the theoretical basis. The incorporation of cultural-specific factor into the framework was justified with cultural coping models. Based on the tripartite model of attitude and intercultural competence model, the term "intercultural coping" and its three dimensions (affective/behavioural/cognitive) were developed. In accordance with the occupational stress model, three stressors (personal/work/cultural) of mental health were identified. Three hypotheses were proposed and measurements for each item were determined. This research is of significance both theoretically and practically. Theoretically, it may contribute to the knowledge of mental health management in the field of multicultural construction work environment. Particularly, the present study might be the first research which emphasizes the significance of multicultural context on mental health by incorporating cultural-specific factor, providing theoretical

development of intercultural coping and clarifying the associations of stressors, coping and mental health in the context of the construction industry. In practical, this study provides a framework for construction workers to manage their mental health problems in the multicultural workplace. Next step of the research is to collect data via questionnaire survey method and analyse the collected data. To avoid the effect of cultural segregation, the screening questions (e.g. working with team members from different cultural backgrounds) for potential respondents will be used. Only the respondents who pass the screening questions will get access to the official questionnaire. Moreover, the moderating effect of intercultural coping on relationships between stressors and mental health will be examined by the Structural equation modelling (SEM). Effective coping strategies will be developed based on the findings.

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