Exploring the need for occupational psychological health management and interventions in the construction industry: An empirical study in Ghana.

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Abstract

Occupational psychology has recently attracted research attention in many professionals. However, research in occupational psychology is limited in the construction industry, with a focus on mainly stress studies. Psychological conditions such as depression, anxiety and job dissatisfaction could also affect the level of productivity and job performance of the construction employee, with consequential effects on the construction industry. This study aims at exploring the need for occupational psychological health management in the construction industry. This research aim was further divided into the following five research questions: (1) Are there psychological health indicators among the construction employees? (2) What are the construction work-related factors that are likely to expose construction employees to psychological health conditions? (3) What are the personal factors that might influence the psychological health conditions of the construction employees? (4) What are the coping behaviours adopted by the construction employees as their responses or efforts to deal with the psychological health conditions? and (5) What are the effects of the psychological ill-being conditions of construction employees on the construction industry? To achieve this research aim, structured questionnaires were distributed to 300 construction employees, comprising of 150 construction professionals and 150 construction trade workers, purposively selected from Ghana. Data analysis was done. The findings from the study confirms the need for occupational psychological health management and interventions for employees in the construction industry. Based on the results from the study, preliminary preventive psychological health management models were designed for the construction employees and the construction industry. The preventive models were divided into primary, secondary and tertiary strategies. The primary strategies sought to reduce construction employees' vulnerability to psychological health conditions, by focusing on personal factors such as good time management skills and good relationship with others. The secondary strategies for construction employees sought to build their coping strategies, and the tertiary strategies sort to moderate the effects of psychological health conditions on the employees. The primary strategies for the construction industry aim at reducing or eliminating the construction work psychological risk factors. The secondary work strategies aim at providing organizational protective factors and the tertiary work strategies aim at enhancing the psychological well-being of the construction employees. This study recommends the input of all construction workers, construction managers and supervisors in providing organizational psychological health support to enhance the well-being of construction employees. Proper occupational intervention and management will also promote a psychologically safe and healthy construction working environment.

Keywords: Occupational Psychology, Psychological Indicators, Psychological factors, Construction Employees, Ghanaian construction.

1. Introduction

Psychological issues are inevitable and have integral component in the performance, sequential growth and development of the organisation (Campbell, et. al., 2004). Human resources form the organisation and are the organisation, there is no functionality in the organisation without the existence of people (Ashleigh and Mansi, 2012). The well-being of employees should be a priority concern for stakeholders and management of all organisations (O'Donoghue, et. al., 2016). However, many organisations often ignore how employees conceptualize their daily experiences and concerns, to be incorporated into the goals of the organisation (Ashleigh and Mansi, 2012). Organisational pressure of keeping cost and expenditure at the minimum level, while maximizing profits, as well as doing more in less time, coupled with numerous personal roles to be fulfilled in ones' relationship and work, could have a toll on the psychological well-being of an employee (Landy and Conte, 2016).

Given that the nature of the construction work is crisis –ridden, complicated, dynamic and involves high speed, both construction professionals and construction trade workers could be exposed to psychological conditions (Leung, et. al., 2016). Psychological health conditions could have devastating consequences on the construction employee as well as the construction industry. The effects of psychological heath conditions on employees include: poor job performance and low productivity as well as violent or non-violent acts, with the consequences of stakeholders having to pay the price for dysfunctional or unhealthy behaviours at the construction workplace (Quick, et. al., 2013). The effects of psychological health conditions could be categorized under direct costs and indirect costs. The direct costs associated with employees' psychological ill-being in the construction industry include: absenteeism, high turnover, medical treatment and compensation costs (Bowen, et. al., 2014). Indirect costs of construction employees' psychological ill-being condition also include poor worker morale and job dissatisfaction (Campbell, et. al., 2004).

Occupational psychology concentrates on people's reactions to work and adopt action plans to boost workers job satisfaction for increased job performance (Landy and Conte, 2016). Extrinsic factors such as: job security, pay and pension benefits, as well as intrinsic factors such as: the feeling of being needed, valued, fulfilling personal and organisational goals, meeting deadlines, adequate job demands and good interpersonal relationships, could enhance the psychological well-being of the employees (Ashleigh and Mansi, 2012). The theories and basic principles of occupational psychology could be employed in the construction industry to enhance the psychological health and well-being of the construction employees. Occupational psychology research in the construction industry is however often limited to mainly stress studies. To bridge this knowledge gap, this study explores all psychological conditions that are prevalent among construction professionals and construction trade workers, as well as the factors that are likely to influence the psychological conditions of the construction employees. The findings from this study will confirm whether or not there is the need for occupational psychological health management and interventions in the construction industry, to enhance the psychological well-being of construction employees.

2. Background of the Research

2.1 The concept of Occupational Psychology

Psychology in the workplace is a new trend and a very important area needed in all aspects of any organisation's life (Ashleigh and Mansi, 2012). Occupational psychology adopts ideas and research strategies from social psychology and combines with organizational behaviour to address the emotional and motivational part of the work (Landy and Conte, 2016). Psychology in the workplace have several names such as "occupational psychology", "work psychology", "organisational psychology", "industrial psychology", "vocational psychology" and "applied psychology" (Ashleigh and Mansi, 2012). These names could be used interchangeable to describe psychology in the workplace. European psychologists use the term "work psychology", those in Britain prefer to use "occupational psychology" and American psychologists use both "organisational and industrial psychology (Ashleigh and Mansi,

2012). In the mid-1960s, there was a demarcation between "modern" and "classic" thinking and industrial psychology was changed to organisational and industrial psychology by the Americans (Landy and Conte, 2016).

The definitions of occupational psychology have been changed concurrently over several years (Ashleigh and Mansi, 2012). Occupational psychology can be defined as the science of humans in the workplace, with the aim of improving employees' input and organisational responsibility of ensuring employees' well-being (Spector, 2003). Occupational psychology concerns itself with how workers are motivated and rewarded, how leaders behave and how leaders emerge, as well as considers the formal and informal structure of the organisation by focusing on groups, teams and sections (Furnham, 2005). The aim of occupational psychology is to enhance employees' well-being and work effectiveness, by conducting a systematic study of the processes in the organisation, which affects individuals as well as groups (Spector, 2003; Ashleigh and Mansi, 2012). The organizational influences on the feelings, thought and behaviours of employees are also evaluated, as a result of the imagined, implied or actual behaviours of management and other persons in the organisation (Furnham, 2005). Occupational psychology could therefore be described as the field of organisational behavioural science that looks at human behaviours in all aspects of an organisational settings (Landy and Conte, 2016).

2.2 Statement of the Problem

Psychological health conditions could have direct impact on the productivity and work performance of the construction employees, which could be seen in the team work and individual job outcomes (Leung, et.al., 2016). The main indicators of psychological well-being conditions of employees are job satisfaction and work engagement (O'Donoghue, et. al., 2016). The client's work satisfaction could be directly influenced by the construction employees' psychological well-being and health conditions (Quick, et. al., 2013). The main indicators of psychological ill-being conditions of employees are also workaholism and burnouts (O'Donoghue, et. al., 2016). Psychological ill-being conditions of construction employees, on the other hand, could negatively impact the financial returns of the construction firm (Xanthopoulou, et. al., 2009). Poor psychological health conditions of employees could also lead to some negative proactive behaviours at the construction workplace such as: aggression, hostility and offensive behaviours conditions (Quick, et. al., 2013). The predominant sign of psychological ill-being conditions of employees at the construction workplace could be frequent absenteeism of the construction employees. The rate of absenteeism or sick leave could be high, especially in cases where construction employees are exposed to poor working and environmental conditions, leading to psychological ill-being conditions of Burnout and the employees may take longer duration to be absent from duties (Chan, et. al., 2016; Leung, et. al., 2016). The consequences of such occurrences could have negative impact on the construction industry and the nation's economy, as it diminishes productivity, affect negatively the overall work performances and lowers the population of the workforce (Wang, et. al., 2017; Chan, et. al., 2016).

As it can be clearly seen, psychological conditions of construction employees can have severe consequences on the overall job outcomes of the construction firm. It is of essence for construction industries to pay critical attention to the psychological health of their employees and to understand causative factors that lead to construction employees' psychological ill-being and adopt preventive measures. As a developing country, the atmosphere in Ghana appears to be a breeding ground conducive enough for psychological health problems. It has become necessary to conduct an empirical investigation on the psychological health conditions of both construction professionals and construction trade workers in Ghana and the factors that lead to these conditions.

3. Research Aim

This research aims to identify the need for occupational psychological health management of construction employees in the construction industry.

3.1 Research questions

1. Are there psychological health indicators among construction workers?
2. What are the construction work-related factors that are likely to expose construction employees to psychological health conditions?
3. What are the personal factors that might influence psychological health of construction employees?
4. What are the coping behaviours of construction employees as their responses or efforts to deal with psychological ill-being conditions?
5. What are the effects of the psychological ill-being conditions of construction employees on the construction industry?

4. Research Methodology

The methodology of the research which is objective-led, will cover the data collection and data analysis methods. This section provides a brief insight into the strategies and procedures adopted by the study as well as the type of data to be used in the study. The criteria for admissibility of field data and the treatment of the data are also considered.

In achieving the stated objectives, the study employed the following;

Observation: There was a general observation and review of organizational culture in some selected construction industries in Ghana. This helped to identify the philosophy to be used, and the theories/concepts to be tested.

Approach: Quantitative methods using structured questionnaires were more suitable to measure and access the level of frequency, likelihood and significance of the factors that would indicate the need for psychological health management and interventions in the construction industry.

Sampling: A non-probability sampling technique specifically purposive sampling method was adopted in selecting the research participants. The participants in the study were selected on the basis that (1) they have work experience in the Ghanaian construction industry and (2) they belong to either a construction professionals group or a construction working trade. A total of 300 participants were used for the study. This comprised of 150 construction professionals such as: architects, engineers, quantity surveyors, contractors, supervisors, construction managers and project managers. The remaining 150 participants belonged to the construction trade working group such as: carpenters, masons, plumbers, steel benders and others.

Ethical considerations: The American Psychological Association (APA) have provided some ethical code guidelines to guide the conduct of research in psychology. The goal of this code is to protect the rights and welfare of the survey respondents or groups who partake in a study. In the conduct of the present study, the researcher paid attention to ensuring the APA guidelines were adhered to the latter throughout the conduct of the study. In the selection of research participants for instance, under no circumstance was coercion or inducement utilized. Only persons who were willing to participate in the study were utilized for the research. As directed by the APA guidelines (2005) informed consent and right to decline participation at any point of the research were strictly adhered to. The participants were therefore informed at the beginning of their right to drop out of the study at any point they wished. Confidentiality of the responses of the participants was also adhered to at every step of this study.

Consent forms were also used to assure the participants of the confidentiality of their responses. Total anonymity of the participants was considered with focus on the appropriate research design method.

4.1 Materials

The questionnaire for the survey including all 5 research objectives were developed from either extensive literature reviews of related studies, interviews or focus group discussions with construction employees in Ghana. The details are as follows: (1) To identify the indicators of psychological conditions among the construction employees, the measures for this section were adopted from a previous study conducted by Hassard and Cox (2016). (2) To determine the construction work-related factors likely to expose construction employees to psychological conditions, the authors first conducted 16 focus group discussions with a total of 90 Ghanaian construction employees. The results revealed 39 possible factors, which were then categorized under 8 major constructs using thematic analysis to be utilized for this study. (3) To identify the personal factors that could make a construction employee vulnerable to psychological conditions, 6 measures were adopted based on comprehensive reviews of previous studies such as: O'Donoghue, et. al. (2016); Xanthopoulou, et. al. (2009) and Quick, et. al. (2013). (4) To determine the coping strategies adopted by construction employees as their effort or responses to deal with psychological conditions, interviews were conducted with 90 construction employees in Ghana. The findings revealed 25 coping strategies, with 8 being highly predominant which were adopted for this study. (5) To determine the effects of poor psychological conditions of construction employees on the construction industry, 11 measures were developed from extensive literature reviews from previous studies including: Chan, et. al. (2016); Wang, et. al. (2017); Leung, et. al. (2016) and Bowen, et. al. (2014).

A pilot study was conducted with 20 construction employees with more than 10 years of working experience, to test the appropriateness of the questionnaires by reviewing it. This initial exercise resulted in a modified final questionnaire with appropriate content validity. A Likert scale ranging from 1 to 5 was used to determine the level of frequency, likelihood, agreement or significance of the measures in the questionnaire.

4.2 Data Analysis

The method of data analysis employed depended on the type of data, method and design of data collected, research objectives and strategies (Ashleigh and Mansi, 2012). The quantitative data obtained were analysed using statistical techniques. The data was first organized and coded and then subjected to analysis using Statistical Package for Social Scientists, version 19. The study utilized both descriptive and inferential statistics in analyzing the data, for conclusions to be drawn from them.

Descriptive Statistics

Descriptive statistics were used to analyze the data by describing and or summarizing the data in a meaningful way. This allowed for simpler interpretation, such that patterns were derived from the data. Descriptive statistics analyzed the data by employing two forms of statistical methods namely: measures of central tendency and measures of spread (Norusis, 2001). Measures of central tendency were used to describe the central location of the frequency distribution using statistical forms such as: median, mean and mode. Measures of spread were used to summarize the data by indicating how the results of the data have been spread out. The SPSS statistical tool was used to describe the spread which includes: range and standard deviation. Using Blom's fractional rank estimation method the data obtained from the two construction working groups were tested to be normally distributed for all variables. The results of the two groups could then be compared for all the variables (Lo, 2018).

Relative importance index (RII)

To determine the ranks of the various measures, relative importance index (RII) was calculated using the method recommended by Enshassi, et. al. (2016). The RII formula is as follows:

$$\mathrm{RII} = \frac{\Sigma\, \mathrm{w}}{\mathrm{H} \times \mathrm{N}_{\%100}}$$

where:
w = the weighting given by the respondents from the scale of 1 to 5.
H = 5, the highest of the weighting
N = total number of respondents in each construction working group (150 each).

Inferential Statistics

Inferential statistics were adopted to interpret the data and for conclusions to be drawn that extended beyond the immediate data. Independent two sample T-test was used to assess whether the means of the construction professionals group statistically differed from the means of the construction trade workers group. This form of analysis was appropriate for comparing the means of two groups from which the samples are normally distributed (Norusis, 2001). Equality of the mean variances between the two groups was determined using Levene's test and the F- values presented in Table 1.

Hypothesis Testing Approach

The null and alternative hypothesis were to be stated. The null hypothesis is the hypothesis to be tested, which is usually represented with "H_0". The alternative hypothesis is the hypothesis to be considered after the null hypothesis has failed the test and is to be rejected. The alternative hypothesis is also usually represented with "H_1". The null hypothesis is usually easy to state. The Alternative hypothesis on the other hand, could be more difficult to state, but this is usually very important to state (Lo, 2018).

The Test statistics was stated, and this was used as the basis to decide whether the null hypothesis should be rejected or not.

The value of the test statistics was 0.05.

For this study;

The null hypothesis, H_0, assumed there is no statistical difference between the mean scores of construction professionals "X" and construction trade workers "Y" for all variables measured.

The alternative hypothesis, H_1, assumed there is statistical difference between the mean scores of construction professionals "X" and construction trade workers "Y" for all variables measured.

If the p-value ≤ 0.05, this means the difference in the mean scores is significant and hence the null hypothesis will be rejected, and the alternative hypothesis considered.

If the p-value ≥ 0.05, this means the difference in the mean scores is not significant and hence the null hypothesis will not be rejected.

Reliability and Internal Consistency Testing

Cronbach's alpha is commonly used to test the reliability and internal consistency of the variables (Enshassi, et. al., 2016). The alpha value ranges from zero to one. Reliability or internal consistency is considered unacceptable unless is 0.7 or above (Lo, 2018). The test revealed the alpha value for all items measured in this study was 0.920, which indicates that the data obtained from the survey are reliable and that the variables are consistent with the sample.

5. Results

Table 1: Summary of results from construction professionals[1] and construction tradeworkers[2]

N	Variables	Mean	RII (%)	F- value	Sig. (Equal)	Rank
Indicators of psychological conditions						
1.	Lifestyle: *exercise, diet, sleep, drugs use, alcohol intake and behaviour changes.*	3.53[1], 3.67[2]	70.7[1], 73.3[2]	6.299	0.013	3[1], 4[2]
2.	Psychosocial symptoms: *stress, anxiety, depression, resilience and abuse/ violent.*	3.77[1], 3.93[2]	75.3[1], 78.7[2]	8.497	0.004	1[1], 2[2]
3.	Physical health: *cardiovascular, musculo-skeletal, general health, medical history.*	3.70[1], 4.00[2]	74.0[1], 80.0[2]	23.062	0.000	2[1], 1[2]
4.	Work engagement: *job satisfaction, level of commitment and advocacy*.	3.40[1], 3.73[2]	68.0[1], 74.7[2]	26.970	0.000	4[1], 3[2]
Construction work-related factors						
5.	High task demands	3.71[1], 4.00[2]	74.1[1], 80.0[2]	4.280	0.039	3[1], 2[2]
6.	High role demands	3.79[1], 3.93[2]	75.9[1], 78.7[2]	5.417	0.021	1[1], 3[2]
7.	Poor working relationships	3.73[1], 4.08[2]	74.5[1], 81.6[2]	11.689	0.001	2[1], 1[2]
8.	Poor working conditions	3.55[1], 3.73[2]	70.9[1], 74.5[2]	4.510	0.035	4[1], 6[2]
9.	Poor environmental conditions	3.53[1], 3.87[2]	70.6[1], 77.3[2]	5.254	0.023	5[1], 4[2]
10.	Lack of work autonomy	3.47[1], 3.57[2]	69.3[1], 71.3[2]	5.355	0.021	7[1], 8[2]
11.	Unfair rewards and treatment	3.49[1], 3.80[2]	69.7[1], 76.0[2]	14.152	0.000	6[1], 5[2]
12.	Lack of feedback	3.21[1], 3.69[2]	64.3[1], 73.9[2]	7.544	0.006	8[1], 7[2]
Personal factors						
13.	Low self-esteem	4.00[1], 3.95[2]	80.0[1], 78.9[2]	4.056	0.045	3[1], 1[2]
14.	Negative personality traits	4.09[1], 3.59[2]	81.9[1], 71.9[2]	4.156	0.042	2[1], 5[2]
15.	High unproductive core beliefs	3.84[1], 3.56[2]	76.8[1], 71.2[2]	4.584	0.033	4[1], 6[2]
16.	Poor self-evaluation concepts	3.83[1], 3.71[2]	76.5[1], 74.3[2]	7.151	0.008	5[1], 3[2]
17.	Poor time management skills	4.13[1], 3.87[2]	82.7[1], 77.3[2]	10.534	0.001	1[1], 2[2]
18.	Work and family conflicts	3.73[1], 3.67[2]	74.5[1], 73.3[2]	4.887	0.028	6[1], 4[2]
Coping strategies						
19.	Procrastination	3.00[1], 3.27[2]	60.0[1], 65.3[2]	4.252	0.040	5[1], 8[2]
20.	Isolation from social activities	3.02[1], 3.55[2]	60.4[1], 70.9[2]	11.986	0.001	4[1], 7[2]
21.	Take out anger on others.	2.67[1], 3.60[2]	53.3[1], 72.0[2]	12.783	0.000	8[1], 6[2]
22.	Poor sleeping habits	3.84[1], 3.71[2]	76.8[1], 74.3[2]	16.823	0.000	1[1], 3[2]
23.	Use of drugs or pills for relaxation	2.94[1], 3.67[2]	58.8[1], 73.3[2]	8.654	0.004	6[1], 4[2]
24.	Excess smoking/ alcohol intake	2.87[1], 3.87[2]	57.3[1], 77.3[2]	12.650	0.000	7[1], 2[2]
25.	Poor eating habit	3.53[1], 3.90[2]	70.7[1], 78.0[2]	5.412	0.021	2[1], 1[2]
26.	Take in more caffeinated drinks	3.43[1], 3.66[2]	68.7[1], 73.1[2]	13.962	0.000	3[1], 5[2]
Effects on construction industry						
27.	Poor work performance	4.27[1], 4.03[2]	85.3[1], 80.7[2]	10.627	0.001	2[1], 1[2]
28.	Low productivity	4.33[1], 3.99[2]	86.5[1], 79.9[2]	42.530	0.000	1[1], 2[2]
29.	High turnover	3.89[1], 3.58[2]	77.9[1], 71.6[2]	8.067	0.005	6[1], 8[2]
30.	Absenteeism/ Sick leave	3.91[1], 3.71[2]	78.3[1], 74.1[2]	8.478	0.004	5[1], 3[2]
31.	Work stoppage	3.87[1], 3.43[2]	77.3[1], 68.7[2]	49.376	0.000	7[1], 9[2]
32.	Medical costs	4.00[1], 3.66[2]	80.0[1], 73.2[2]	14.648	0.000	4[1], 6[2]
33.	Errors in decisions	4.19[1], 3.70[2]	83.7[1], 74.0[2]	10.724	0.001	3[1], 4[2]
34.	Low motivation	3.84[1], 3.63[2]	76.8[1], 72.5[2]	10.324	0.001	8[1], 7[2]
35.	Job dissatisfaction	3.72[1], 3.68[2]	74.4[1], 73.6[2]	4.304	0.039	10[1], 5[2]
36.	Breakdown in communication	3.65[1], 3.25[2]	73.1[1], 64.9[2]	29.369	0.000	11[1], 10[2]
37.	Violence at work	3.78[1], 3.15[2]	75.6[1], 63.1[2]	13.967	0.000	9[1], 11[2]

Values obtained from the construction professionals group are indicated with "[1]"and values from the construction trade workers group are indicated with "[2]

"

6. Discussion

Psychological conditions such as stress, anxiety or depression could directly affect the job performance and productivity of construction employees, with consequences on the construction industry (Leung, et.al, 2016; Chan, et. al., 2016). The results from the study revealed that there are some forms of psychological conditions among both the construction professionals and the construction trade workers, which are manifested in their lifestyle, psychosocial, physical health and work engagement. The mean results of the two groups compared indicated that psychological conditions were more prevalent among the construction trade workers than the professionals. The significant difference in this outcome could be due to factors such as: differences in job demands, level of task, pay differences, level of education and individual characteristics (Bowen, et. al., 2014; Landy and Conte, 2016).

It is very important for organizations such as the construction industry to understand the conditions and factors that lead to employees' well-being and attempt to eliminate or minimize those factors that lead to workers' psychological ill-being conditions (O'Donoghue, et. al., 2016). The results from the study revealed that the construction work related factors predicted are all significant to expose construction employees to psychological conditions, as their mean scores were all above 3.0. The most likely factors ranked by the construction professionals and construction trade workers are high role demands and poor working relationships respectively. Role demands of construction professionals could include role conflicts, excess workload and time pressures, which could affect their psychological well-being and health (Bowen, et. al., 2014). Poor working relationship has also been regarded as a significant predictor of psychological conditions, as it threatens one's personal goals and sense of value (Quick, et. al., 2013; Leung, et.al, 2016).

The study also revealed that personal factors of poor time management skills and low self-esteem were indicated by the construction professionals and trade workers respectively as factors that could make them vulnerable to psychological conditions. Good time management skill of employees has been revealed to mitigate all kinds of stressors at the workplace, enhancing employees' psychological health and well-being (Campbell, et. al., 2004; Quick, et. al., 2013). Hence, poor time management skills could trigger psychological conditions. A person with low self-esteem will also be vulnerable to psychological conditions. O'Donoghue, et. al. (2016) advocated that to enhance employees' psychological health, there is the need for positive core self- esteem, as this is an individual's personal resource in the management of their occupational psychological conditions. The coping strategies mostly adopted by construction professionals and trade workers to deal with psychological conditions were also revealed to be poor sleeping habits and poor eating habits respectively. Lack of sleep and poor eating habits (such as under or over eating) are unhealthy coping strategies, which could eventually lead to various forms of psychological conditions (Bowen, et. al., 2014). The effects of psychological conditions on the construction industry perceived were all significant with the most significant ones being low productivity and job performance as revealed by the construction professionals and construction trade workers respectively. These findings were in conformity with previous studies conducted by Leung, et. al. (2016) and Chan, et. al. (2016).

Despite institutional arrangements put in place in certain construction industries in Ghana and globally to promote work and happiness, less than optimal working conditions and inadequate yet dwindling work factors could conspire with other personal factors and coping strategies to expose construction employees to psychological health conditions. These could have both direct and indirect cost consequences on the construction industry. It was advocated by Dadzie (2013) that, stakeholders of the construction industry should be responsible for the well-being of their employees both physically

and psychologically. The culture of every organization should therefore incorporate in it an aspect or element of occupational psychology, to ensure that the values and attitudes of the managers and workers are geared towards improved health and well-being conditions of people in the construction industry.

Based on the findings from the study, a model has been developed and presented in Figure 1 as preliminary preventive psychological health management and intervention for construction employees.

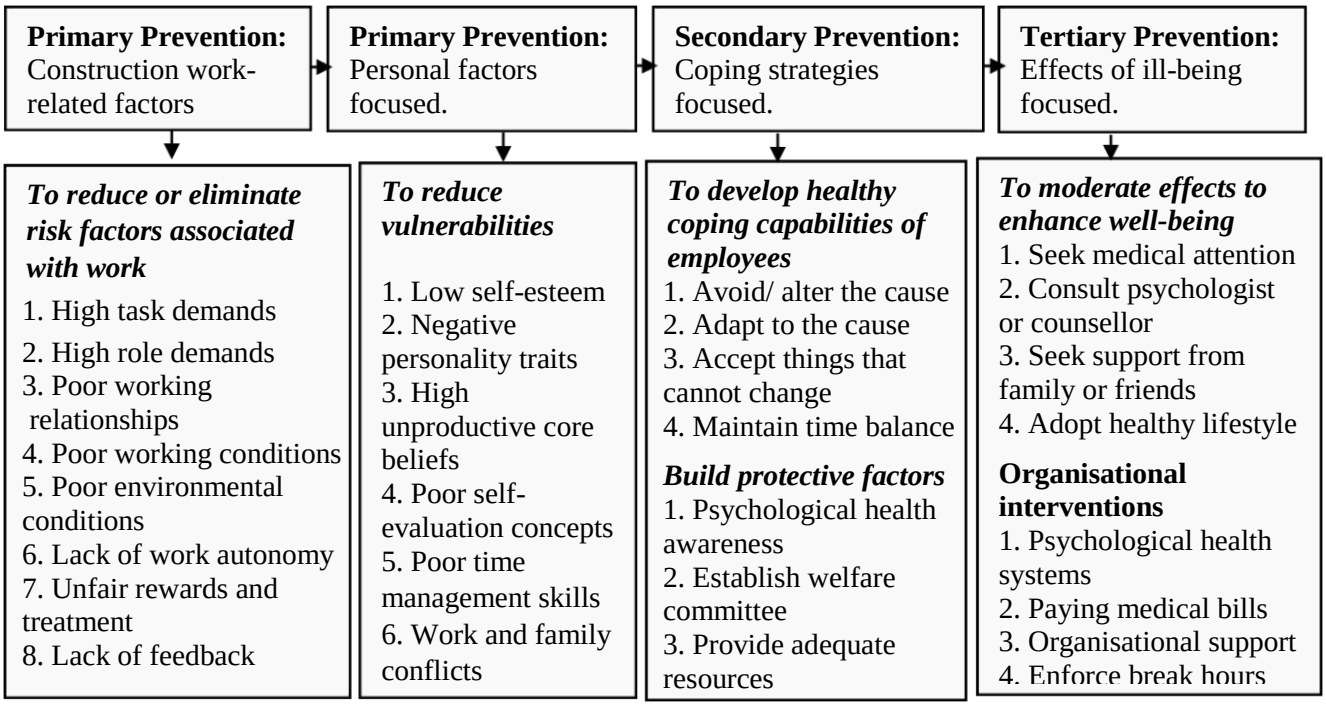

Figure 1: Preventive Occupational Psychological Health Management Model

7. Conclusion

This study sought to explore the need for occupational psychological health management and interventions in the construction industry. The findings from the survey revealed that there are indeed some forms of psychological conditions among both the construction professionals and the construction trade workers. However, psychological conditions were more prevalent among the construction trade workers. Construction work factors that are likely to expose employees to psychological health conditions were also identified, with the highly risk factors being high role demands and poor working conditions. Personal factors that could make construction employees vulnerable to psychological conditions were revealed to include low self-esteem and poor time management skills. The most common coping strategies adopted by construction employees as their efforts or responses to deal with psychological conditions were identified to be poor sleeping and eating habits. Effects of psychological conditions of construction employees on the construction industry were also revealed, which could have both direct and indirect cost consequences. Though the mean scores compared between the two construction working groups varies significantly for all variables. This study advocates the need for occupational psychological health management and interventions for all construction employees.

This study recommends that to ensure a psychologically safe and healthy construction environment, there is the need to adopt protective factors such as: establish welfare committee and increase psychological health awareness. Construction employees experiencing some forms of psychological conditions are also recommended to adopt the following strategies such as: seek medical attention, consult a professional psychologist or counsellor, seek support from family or friends and adopt healthy lifestyle (example exercise regularly, have regular sleeping schedule and adopt healthy

eating habits). To enhance construction employees' psychological well-being, stakeholders of the construction industry could also adopt strategies such as: provide psychological health systems, provide interventions for symptoms (example paying medical bills), provide psychological support from management and co-workers, encourage employees to take leave and enforce break hours. This study therefore adds to the body of knowledge on occupational psychology in the construction industry. Further research will be conducted to test the significance of the factors proposed as preliminary preventive psychological health strategies that could be adopted in the construction industry.

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