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PSYCHOSOCIAL RISK AMONGST HEALTH CARE WORKERS AT TYPE D GENERAL HOSPITAL IN INDONESIA AMIDST THE COVID-19 PANDEMIC

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Abstract

This research aims to give insight on the psychosocial condition of health care workers at Type D general hospitals (Jatisampurna General Hospital and Bantar Gebang General Hospital) amidst the COVID-19 pandemic. Psychosocial hazards impact the health care workers by potentially inflicting psychological or physical harm. This research assesses the psychosocial condition related to clinical exposure risk of health care workers at transitional Type D general hospitals. The research utilized COVID-19 virus exposure risk assessment of health care workers and Copenhagen Psychosocial Questionnaire. Convenience sampling method was used, with a total of 157 health care workers as respondents. The validity and reliability of the instrument were tested. Psychosocial risk related to COVID-19 clinical risks was analysed using Fisher's exact test. The data were further analysed using a Fishbone diagram-based approach. The results showed that, compared to health care workers that are not clinically exposed to COVID-19, those clinically exposed to COVID-19 had fair quality of influence at work, control over working time, illegitimate tasks, and insecurity over working dimension (p-value < 0.05). COVID-19 clinical exposure risk affects the quality of the psychosocial condition namely the influence at work, control over working time, illegitimate tasks, and insecurity over working at of health care workers at Type D general hospitals.

Keywords: Psychosocial Risk, Health Care Workers, COVID-19.

1. Introduction

By the late March 2020, the COVID-19 outbreak has spread to a plethora of countries across the globe. The virus was first reported back in December 2019 as the Chinese government reported the cases in its city of Wuhan. Due to the close proximity to the mainland China, Indonesia finally falls as a victim. As the number of infections increase, Indonesia's healthcare facility is trying to ensure the equal distribution and services as well as targeting the least developed area. The government through the provincial government have transformed several community health centres (puskesmas) into a transitional state general hospital. The rapid spread of the virus due to the high mobility and lack of awareness have forced the government to transform even more community health centres to type D general hospitals. The process took a very concise period of time for the new hospitals to fully function let alone for the already existing class D general hospitals. Therefore, many hospitals don't meet the stricter healthcare standards imposed by the world health organization amidst the pandemic let alone equipped with sufficient health care workers, instruments, equipment, materials, as well as supporting non-medical staffs.

The lack of preparation and ill-equipped national health care system and facilities might endanger health care workers assigned as the frontline to treat the patients confirmed positive

with COVID-19. Moreover, understaffed health care facilities also forced them to simultaneously multitask and consequently affect their day to day practice. Serious risks posed by intensive need for constant contact with infected patients for extended periods of time may aggravate the already existing job-related hazards. Healthcare workers are particularly vulnerable to many job-related hazards, and undergo a considerable amount of emotional pressures in relation to their jobs (Talaee et al., 2020).

Occupational health and safety issues include work-related stress, psychosocial risks, violence, and harassment (psychological harassment, bullying, or mobbing). Psychosocial risks may result in a negative impact in terms of social, human, and even financial costs. Negative outcomes on the individual level include poor health and well-being, and also problems which may deteriorate interpersonal relationships in workplace as well as family life (British Standards Institution, 2011). Stress and burnout as the adverse effects of negligence toward psychosocial work environment may lead to further loss of motivation and work accident (Talaee et al., 2020).

As many as 83% of health workers across Indonesia have been experiencing moderate levels of physical and mental exhaustion due to the COVID-19 pandemic according to a study found by University of Indonesia Faculty of Medicine (Widjaja, Shatri, and Putranto, 2020). In this research, the business issue that is raised is the lack of psychosocial risk assessment amongst health care workers at hospitals in question. Psychosocial risks refer to the probability that work-related stressors will generate a negative impact on employees' health and safety through their perceptions and experience (British Standards Institution, 2011). Of the various types of hazards, psychosocial hazards impact the most on the mental wellbeing of health care workers, which have potential of inflicting psychological or physical harm (Okeafor and Alamina, 2018).

The research questions of this study are:

1. How is the current psychosocial condition amongst health care workers at type D general hospital amidst COVID-19 pandemic?
2. How is the COVID-19 community and clinical exposure risk amongst health care workers at type D general hospital amidst COVID-19 pandemic?
3. Are there any immediate psychosocial dimensions related to the COVID-19 clinical exposure risk amongst health care workers at type D general hospital amidst COVID-19 pandemic?
4. How should we manage psychosocial risk amongst health care worker at type D general hospital amidst COVID-19 pandemic?

The research objectives of this study are:

1. Assess the psychosocial risk amongst health care workers at type D general hospital amidst COVID-19 pandemic.
2. Investigate the COVID-19 community and clinical exposure risk amongst health care workers at type D general hospital amidst COVID-19 pandemic.
3. Ascertain immediate psychosocial risk related to the COVID-19 clinical exposure risk amongst health care workers at type D general hospital amidst COVID-19 pandemic.
4. Give appropriate approaches to overcome the psychosocial risk related to the COVID-19 clinical exposure risk amongst health care workers at type D general hospital amidst COVID-19 pandemic.

2. Literature Review

2. 1 Impact of Novel Coronavirus on Health Care Workers

Explaining the problem's formulation should cover the following points: (1) Problem recognition and its significance; (2) clear identification of the problem and the appropriate research questions; (3) coverage of problem's complexity; (3) novelty of the research, and (4) well-defined objectives. The pandemic's long-term impact on healthcare facilities and health care workers is now difficult to estimate. Healthcare workers, who are on the front lines of the pandemic's ongoing battle, should be treated as a distinct demographic in terms of both physical and mental health effects (Giannis et al., 2021).

Front-line health care professionals are at significant risk of infection because clinical management necessitates direct personal contact with SARS-CoV-2 patients. Since March 24, 2020 in the United Kingdom and March 29, 2020 in the United States, data from frontline health care professionals and the general public suggest that frontline health care employees had a nearly 12-fold higher chance of testing positive for COVID-19 than the general public. Furthermore, frontline health care workers who reported a lack of PPE had a 23% higher chance of testing positive (Nguyen et al., 2020).

Many aspects of professional and personal life are negatively impacted by stressful situations and cumulative exhaustion caused by a combination of increased workload, human shortages, transmission risk, and a lack of resources. Due to increased work demands and efforts, there is less time for relaxation, self-care, and even fundamental necessities such as personal hygiene and nutrition fulfilment (Petzold et al., 2020). Social engagement is limited while social distancing is even difficult to implement amongst the population of healthcare employees. Clinic rounds, interactive case discussions, and meal breaks take place in close quarters, and distance is not always possible (Belingheri et al., 2020). Isolation and neglect of one's own needs can lead to impatience, rage, and mood swings. Additionally, regular interaction with patients and a lack of resources contribute to the overall stress that healthcare staff experience at this period.

Amidst COVID-19 pandemic, medicine and life-saving equipment shortages may arise. COVID-19 has surpassed the capacity of healthcare resources and dramatically altered working conditions. Healthcare personnel have been advised to take proper steps to avoid getting the disease and preventing its spread. In the early phases of the pandemic, however, a lack of information resulted in high rates of COVID-19 transmission to healthcare personnel due to poor protection. The current record needed for protective equipment, such as masks, medical gowns, gloves, and eye–face protection devices, poses a serious health danger. Contracting the virus leads to missed workdays due to quarantine, as well as an increased risk of disease transfer to family members. If the healthcare professional becomes extremely ill, hospitalisation and/or ICU admission may be required. Increased workload, personnel shortages, transmission risk, and a lack of resources all have a negative impact on healthcare professionals' physical and emotional health, putting healthcare systems under significant strain (Giannis et al., 2021).

2. 2 Type D General Hospitals

Hospital is a health service institution that provides complete individual health services that provide inpatient, outpatient and emergency services. General Hospital is a hospital that provides health services in all fields and types of diseases. General Hospital is classified based on services, human resources, facility, infrastructure, and management. Based on the facilities and service, General Hospitals in Indonesia are classified into type A general hospital, type B general hospital, type C general hospital, and type D general hospital.

Type D hospitals are transitional hospitals because at one time they will be upgraded to type C hospitals. Type D general hospitals must have facilities and medical service capabilities of at

least 2 basic specialist medical services. The criteria, facilities, and capabilities of Type D general hospital include general medical services, emergency services, basic specialist medical services, nursing and midwifery services, clinical support services and non-clinical support services.

General medical services consist of basic medical services, dental services and maternal child/family planning services.

1. Emergency services must be able to provide emergency services 24 hours and 7 days a week with the ability to conduct initial examination of emergency cases, perform resuscitation and stabilization in accordance with standards.
2. Basic Specialist Medical Services of at least 2 of 4 types of basic specialist services covering Internal Medicine, Child Health, Surgery, Obstetrics and Gynaecology.
3. Specialist Medical Support Services, namely laboratory and radiology.
4. Nursing and midwifery services consist of nursing care services and midwifery care.
5. Clinical Support Services consist of High Care Unit Care, Blood Services, Nutrition, Pharmacy, Instrument Sterilization and Medical Records.
6. Non-clinical support services consist of Laundry/Linen services, Catering/Kitchen services, Engineering and Maintenance Facilities, Waste Management, Warehouses, Ambulance,

Communications, Mortuary, Fire, Medical Gas Management and Clean Water Storage. The availability of health personnel is adjusted to the type and level of service.

1. In Basic Medical Services, there must be a minimum of 4 general practitioners and 1 dentist as permanent staff.
2. In Basic Specialist Medical Services there must be at least 1 specialist doctor out of 2 types of basic specialist services with 1 specialist doctor as permanent staff.
3. The pharmacy staff consists of at least 1 pharmacist as the head of the hospital pharmacy installation, 1 pharmacist who is on duty in outpatient and inpatient care assisted by at least 2 pharmaceutical technicians and 1 pharmaceutical production coordinator.
4. The ratio of nurses and beds is 2: 3 with the qualifications of nurses in accordance with the services in the hospital.
5. Allied health professions staff and other staff with the number and qualifications adjusted to the needs of hospital services including nutrition services, physical fitness, radiographers, medical technicians, medical records, hospital maintenance installation officers, waste management officers, mortuary officers.

2. 3 Psychosocial Variables

The interaction between an individual's ideas and behaviours and their social environment is referred to as psychosocial. Psychosocial variables are divided into two categories: psychological (hostility, depression, hopelessness, etc.) and social (work conditions). At the individual level, these variables interact synergistically, as seen by social support at work, which is a result of both job conditions and social skills (Singh-Manoux, 2003).

International Labour Office (ILO) and the World Health Organization (WHO) defined psychosocial factors at work as interaction between and among work environment, job content, organisational conditions and workers' capacities, needs, culture, personal extra-job considerations that through their perceptions and experience, influence health, work performance and job satisfaction (ILO, 1986).

Psychosocial factors include internal aspects of the job and work environment such as organizational climate or culture, work roles, interpersonal relationships at work, and the design and content of tasks (variety, meaning, scope, repetitiveness). Psychosocial factors include both the extra-organizational environment and personal characteristics such as attitudes and traits that can impact the development of work-related stress (Rugulies, 2018). Work organization and organizational factors are frequently used interchangeably with psychological factors.

Features which trigger stress are known as stressors. The psychosocial factors that potentially could cause stress are known as psychosocial hazards. In the occupational safety and health discipline, a hazard is the intrinsic potential capacity or property of an agent, process or situation such as working environment, work organization or working practices with adverse organizational outcomes to cause harm or adverse health effects to a person at work. There are ten types of psychosocial hazards divided into two groups: content of work, which is related to working conditions and work organization; and context of work, which concerns on the organization of work and labour relations (ILO, 2016).

Stress is described as an unpleasant intensive state of tension in a heavily aversive, threatening, subjectively long-lasting situation whose avoidance is subjectively crucial. Work-related stress is influenced by psychosocial hazards found in labour relations, work organization, and task design, and occurs when the job demands do not fit or exceed the capabilities, needs, and resources of the worker, or when the knowledge or abilities of an individual or group do not match the expectations of the organizational culture of an enterprise (ILO, 2016). In the context of work-related stress, psychosocial stimuli originate in a social interaction within a social structure and affect the individual through his or her experience and perception. Psychosocial stimuli then operate on human which is characterized by an individual psychobiological program or a propensity to react with certain pattern. This propensity is conditioned by existing genetic factors and environmental influences. When there is misfit between environmental opportunities and demands, and individual needs, abilities, and expectations happens, individual may react with various pathogenic mechanisms. This may turn to be the precursors of disease (Kalimo, et al., 1987).

Increased heart rate, blood pressure, muscle tension, sweating, increased adrenaline production and secretion, and shallow breathing at higher frequencies are all physiological responses to stress. Fear, impatience, depression, anxiety, rage, and a lack of motivation are examples of emotional reactions. Impaired attention, narrowed perception, forgetfulness, less effective reasoning, less problem solving, and reduced learning ability are all possible cognitive effects. Reduced productivity, increased smoking, increased drug and/or alcohol usage, making mistakes, and reporting sick are all examples of behavioral reactions (WHO, 2007).

The psychosocial work environment, as defined by Lindström et al. (1995), is a complex system that encompasses the work, the people, and their surroundings. Kompier (2003) identified seven main theoretical models of psychosocial work environment namely Socio-Technical Approach, Vitamin Model, Job Characteristics Model, Michigan Model, Demand Control Model, Effort-Reward Imbalance and Action Theoretical Approach. These important theoretical approaches are characterized in order to find the factors in work that effect psychosocial well-being.

Psychosocial risk is likelihood that psychosocial factors have hazardous influence on employees' health through their experience and perceptions and the severity of ill health that can be caused by exposure to them. Work-related psychosocial risks concern aspects of the management and design of work within its social and organizational contexts that have the potential for physical or mental harm. The process of managing psychological risks is quite similar to that of managing conventional occupational health and safety risks. (British Standards Institution, 2011). In principle, they are both based on the concept of a control cycle namely identification of

hazards and assessment of risks, design and implementation of interventions and evaluation and review. There are five steps that must be observed in the psychosocial risk assessment in context of health care workers namely identifying hazards and those at risk, evaluating and prioritising risks, deciding on preventive action, taking action and documentation, and monitoring and review (European Commission Directorate-General for Employment, social affairs and inclusion, 2011).

2. 4 Copenhagen Psychosocial Questionnaire

Copenhagen Psychosocial Questionnaire (COPSOQ) is an instrument for research on the assessment of psychosocial conditions and health promotion at workplaces. COPSOQ was developed under the theoretical considerations and basic principles: the questionnaire covers all fundamental aspects of the psychosocial work environment stressors as well as resources, the questionnaire should be not be based on single theory, the dimensions should be related to different analytical levels (company, department, job, individual, and individual-work interface), and the questionnaire should be generic. COPSOQ is designed for workplace psychosocial risk assessment and for organizational development by addressing psychosocial hazards to achieve safe and healthy working conditions for workers regardless of tasks, job, or any other social condition (Llorens et al., 2019). The COPSOQ III questionnaire consisted of 45 dimensions with 138 questions. The dimensions include quantitative demand, work pace, cognitive demands, emotional demands, demands for hiding emotions, influence at work, possibilities for development, variation of work, control over working time, meaning of work, predictability, recognition, role clarity, role conflicts, illegitimate tasks, quality of leadership, social support from supervisor, social support from colleagues, sense of community at work, commitment to the workplace, work engagement, job insecurity, insecurity over working conditions, quality of work, job satisfaction, work life conflict, horizontal trust, vertical trust, organizational justice, gossip and slander, conflicts and quarrels, unpleasant teasing, cyber bullying, sexual harassment, threats of violence, physical violence, bullying, self rated health, sleeping troubles, burnout, stress, somatic stress, cognitive stress, depressive symptoms, and self-efficacy. Respondents' response score on Likert scales of 5 points on a 0–100 range. All scales are then calculated as average scores (Llorens et al., 2019).

2. 5 Conceptual Framework

In this research, the author assesses the exposure and risk of COVID-19 virus infection among health care workers Jatisampurna Type D General Hospital and Bantar Gebang Type D General Hospital. Community exposure to the COVID-19 virus was assessed using the WHO COVID-19 exposure risk assessment tool. If a healthcare worker answered "yes" to having a history of staying in the same household or classroom environment with a confirmed COVID-19 patient, or having a history of traveling together in close proximity (within 1 m) with a confirmed COVID-19 patient in any mode of transportation, he or she was considered communally exposed to COVID-19 virus. Clinical (occupational) exposure to COVID-19 virus was also assessed using the WHO COVID-19 risk assessment tool. If respondents answered "yes" to performing any of the following activities on a COVID-19 patient: providing direct care to a COVID-19 patient, performing/being present when aerosol-generating procedures were performed on COVID-19 patients, and having direct contact with the environment where a confirmed COVID-19 patient was cared for, clinical exposure to COVID-19 virus was indicated (Ashinyo et al., 2020).

The aim of this research is to assess any psychosocial factors that possess potential hazardous effects toward the psychosocial work environment. The psychosocial factors cover wide range of aspects which include internal organizational aspects, external organizational aspects, as well as individual aspect. The plausibility for psychosocial factors to cause harms towards employees and their day-to-day activities is known as psychosocial risks. The psychosocial hazards referred to its stress generating features. Thus, the term is interchangeable with stressor. The

psychosocial hazards are classified into two categories. Content of work include environment and equipment, task design, work load and pace, and work schedule. Context of work include organizational culture and function, role in organization, career development, decision latitude, interpersonal relationships, home-work interface (Cox, 1993; Cox and Griffiths, 2005).

Risk assessment in this research is aimed to evaluate current psychosocial condition if exposed to any hazards. These psychosocial hazards or commonly referred as stressors are antecedents or precursor of imbalance which raise issues within the psychosocial work environment. The Copenhagen Psychosocial Questionnaire is one tool that has methodological support and can be applied in the workplace scenario to analyse these potential psychosocial hazards or stressors. This questionnaire is a commonly used self-report tool that examines a variety of psychosocial aspects linked to occupational stress, as identified by prominent occupational stress theories. The original COPSOQ was theoretically based on this work by Kompier (2003), and the COPSOQ items were constructed to include all of the key theories of workplace functioning, as well as the important elements identified by them. The unpropitious circumstance caused by stressors in work environment could be examined through seven theoretical approaches which include sociotechnical theory, demand-control theory, effort-reward imbalance, job-characteristics theory, vitamin, Michigan, and action theory model (Kompier, 2003). This condition is further analysed by its relation with COVID-19 clinical exposure as aggravating factors of possible poor or fair psychosocial domains. The final goal of risk assessment itself is to construct solution in order to prevent adverse outcome that may usher to work-related stress (WHO, 2007).

3. Method, Data, and Analysis

3. 1 Sampling

The population of the research are health care worker of Jatisampurna Type D General Hospital and Bantar Gebang Type D General Hospital. The sampling method utilized is convenience sampling technique. This technique is chosen due to the change in shift rotation and attendance uncertainty as there is possibility for self isolation. The participants of this final project are employees of General Hospital with inclusive criteria namely medical and non-medical staff of General Hospital. The exclusive criteria are staff that are unable to attend work due to sick leave, maternity leave, urgency leave, marriage leave, or annual leave in May and June and suspended on full pay.

The total number of employees from both hospitals counted as the number of population are 338 employees. Due to the employees taking leave during May and June, only 327 employees met the inclusive criteria. The number of samples is determined using the Isaac and Michael technique (Sugiyono, 2015). The number of samples obtained is 177 samples.

3. 2 Data Collection

This research was conducted in May and June 2021 in the area of Jatisampurna Type D General Hospital and Bantar Gebang Type D General Hospital. This research uses mixed qualitative and quantitative methods using both descriptive and analytical technique. Descriptive technique is used to disclose data on sociodemographic and initial data collection on each variable. Analytical technique looks at the relationship between the variables studied. The two main variables are COVID-19 exposure risk and psychosocial dimensions. The research assesses whether there are certain psychosocial dimensions that show distinct quality on clinically exposed individuals.

Primary data used in this research are direct data obtained from completing the COVID-19 Risk Assessment of Health Care Workers designed by WHO and Copenhagen Psychosocial Questionnaire III (COPSOQ III) and from open-ended (unstructured) interview concerning the

psychosocial hazards. Secondary data include textbooks, journals, company annual reports, articles, case reports, government departments, organizational records, and data that was originally collected for other research purposes that can support and supplement primary data.

The questionnaire technique was used by author to collect data that explained and analysed the employee's risk of exposure toward COVID-19 and psychosocial risks of the employees of Jatisampurna Type D General Hospital and Bantar Gebang Type D General Hospital. Author uses COVID-19 Risk Assessment of Health Care Workers designed by WHO. The questionnaire includes health care worker information (sociodemographic data), community exposure risk, and clinical (occupational) exposure risk.

Author uses a list of questions in COPSOQ III taken from the COPSOQ International organization and then author translates into Bahasa Indonesia. The questionnaire consisted of 45 dimensions with 138 questions. Quantitative demands the dimensions include quantitative demand, work pace, cognitive demands, emotional demands, demands for hiding emotions, influence at work, possibilities for development, variation of work, control over working time, meaning of work, predictability, recognition, role clarity, role conflicts, illegitimate tasks, quality of leadership, social support from supervisor, social support from colleagues, sense of community at work, commitment to the workplace, work engagement, job insecurity, insecurity over working conditions, quality of work, job satisfaction, work life conflict, horizontal trust, vertical trust, organizational justice, gossip and slander, conflicts and quarrels, unpleasant teasing, cyber bullying, sexual harassment, threats of violence, physical violence, bullying, self rated health, sleeping troubles, burnout, stress, somatic stress, cognitive stress, depressive symptoms, and self-efficacy. Based on COPSOQ III guidelines, Likert scale is used in most answers. Likert scale show the attitudes, opinions, and perceptions of respondents.

3. 3 Measurement

In this research, COVID-19 risk assessment of health care workers is used to determine the exposure of healthcare workers to COVID-19 in the healthcare facility they are working in and Copenhagen Psychosocial Questionnaire used to assess the psychosocial dimension related with business issue. The results then tested its validity and reliability. Validity is tested using bivariate Pearson. Reliability is tested using Cronbach's analysis. Psychosocial condition is analysed by finding the gap between mean condition in this company and mean reference. The gap is used to determine which domain needs immediate intervention and further risk management based on three categories: good, fair, poor.

The COPSOQ III dimensions which are considered fair and poor are further analysed its significant association with clinical (occupational) exposure risks of healthcare workers. The data were analysed using Fisher's exact test. The questionnaire data and the interview results were further analysed using Fishbone diagram.

4. Result and Discussion

4. 1 Respondent Profile

Respondents of this research are the employees of Jatisampurna Type D General Hospital and Bantar Gebang Type D General Hospital, Bekasi, West Java. The data is taken during the month of May and June 2021. The overall population of this research is 338 employees. Based on inclusive and exclusive criteria set by author, 11 employees were disqualified as they were taking leaves during this month. These employees are unable to attend work due to sick leave, maternity leave, urgency leave, marriage leave, or annual leave in May and June 2021. However, the research only able to collect 157 respondents. The data collection needed to be halted due to the rise of COVID-19 cases in Indonesia in June 2021 due to higher population mobility after Eid holiday. The rise of COVID-19 cases and employees confirmed positive with COVID-19

oblige most of the employees to go through self isolation and work from home. Consequently, the attendance level of the employee is low.

Based on the sociodemographic data collected, the respondents are identified based on their gender, age group, and job type. The respondents are consisted of 92 female employees counting for 59% of the total respondents and 65 male employees counting 41% of the total respondents.

Based on the age group 83 employees fall into 20-29 years old group accounting for 53% of the total respondents, 45 employees fall into 30-39 years old group counting for 29% of the total respondents, 21 employees fall into 40-49 years old group counting for 13% of the total respondents, and 8 employees fall into more than equal to 50 years old group counting for 5% of the total respondents.

The respondents based on their job type distribution consisted of 13 medical doctors, 20 nurses, 16 midwife, 8 dentists, 2 dental assistants, 4 pharmacists, 6 pharmaceutical technicians, 2 physiotherapists, 11 laboratory analysts, 6 radiology technicians, 4 dietitians, 9 medical supports, 2 ambulance drivers, 17 cleaning services, 11 receptionists, 9 securities, and 17 management staffs.

4. 2 COVID-19 Exposure Risk

COVID-19 risk assessment of health care workers reveals the community and clinical (occupational) risk of health care workers. The respondents are initially categorized as medical and and allied health professions staffs; and other staffs. Medical and allied health professions staff include medical doctors, nurses, midwife, dentists, dental assistants, pharmacists, pharmaceutical technicians, physiotherapists, laboratory analysts, radiology technicians, medical supports, and dietitians. While other staff include ambulance drivers, cleaning services, receptionists, securities, and management staffs. Based on clinical (occupational) exposure, 88 employees were considered clinically exposed while 69 employees were not considered clinically exposed. The clinically exposed group consisted of 73 medical and allied health professions staffs (83%) and 15 other staffs (17%). The clinically not exposed group consisted of 43 other staffs (62%) and 26 medical and allied health professions staffs (38%).

Based on community exposure, 58 employees were considered communally exposed while 99 employees were not considered communally exposed. The communally exposed group consisted of 52 medical and allied health professions staffs (90%) and 6 other staffs (10%). The communally not exposed group consisted of 52 other staffs (53%) and 47 medical and allied health professions staffs (47%).

4. 3 Instrument Test

Validity test is used to measure the validity or validity of a questionnaire. This research uses the Pearson product moment validity principle. Validity test of Pearson product moment uses the principle of correlating between each item questionnaire score with the total score of respondents' answers. The basis for taking the validity test of a person is comparing the r count with r table. If the value of r count > r table, the item is valid. If the calculated value < r table, the item is invalid. Seeing the value of significance. In validating the research instrument, the authors used SPSS for processing data with standard guidelines of 5% or 0.05 with Bivariate Pearson correlation. If the significance value is < 0.05 then the item is valid. If the significance value is > 0.05 then the item is invalid. Based on the results of the validity test, there are 7 items in this research that were not valid. These items fall under the demand for hiding emotion, variation of work, and bullying dimension. The rest of the items were greater than the r table and the significance value was less than 0.05.

The reliability test assess if an instrument when used several times to measure the same object, will produce the same data (Sugiyono, 2015). In this research, Cronbach alpha is used for

realibility test. The basis of taking alpha reliability testing, according to Sujerweni (2014), is a reliable questionnaire if the Cronbach alpha value is > 0.6. Therefore in this research, the authors used the alpha standard > 0.6. The reliability test results in 3 dimensions that have an alpha value of less than 0.6 and there are 9 dimensions that can not be measured for reliability because they only have 1 question item. The unreliable dimensions include demand for hiding emotion, variation of work, and bullying. The 9 dimensions include gossip and slander, conflicts and quarrels, unpleasant teasing, cyber bullying, sexual harassment, threats of violence, physical violence, and illegitimate task. While the dimensions that have an alpha value > 0.6 are quantitative demand, work pace, cognitive demands, emotional demands, influence at work, possibilities for development, meaning of work, predictability, recognition, role clarity, quality of leadership, social support from supervisor, social support from colleagues, sense of community at work, insecurity over employment, insecurity over working condition, quality of work, job satisfaction, work life conflicts, organizational justice, sleeping troubles, burnout, stress, somatic stress, cognitive stress, depressive symptoms, and self efficacy.

4. 4 Psychosocial Condition

According to WHO (1984), psychosocial factors in the workplace include interactions in the work environment, organizational capacity, work environment conditions, organizational culture, employee personality, employee performance, job satisfaction, and employee health. The author tries to see the psychosocial condition of Jatisampurna Type D General Hospital and Bantar Gebang Type D General Hospital indicates employees by analysing data obtained from 157 respondents, then calculating the average in each dimension. The average score will be compared with the average reference from the company and seen a gap (differential). The average score obtained is used to see the level of respondents' contribution to this aspect of the research. Then, the authors categorize psychosocial conditions based on the value of the gap (differential) among others as follows.

Table 1: Gap Categories

Range	Interpretation	Intervention
>0.5-1.5	Good	Maintenance
1.6-3.0	Fair	Improvement
3.1-4.5	Poor	Correction

Source: Author, 2021

Table 2: Psychosocial Condition

Dimension	Mean reference	Mean	Gap
Work pace	5	3.28	1.72
Influence at work	5	2.98	2.02
Control over working time	5	2.68	2.32
Role conflicts	1	3.31	2.31
Illegitimate tasks	1	2.93	1.93
Job insecurity	1	2.92	1.92
Insecurity over working conditions	1	2.92	1.92
Work life conflict	1	2.65	1.65

Source: Author, 2021

From the calculation of the average dimensions of COPSOQ III, it can be inferred that the hospitals' psychosocial condition is good because of an average difference of 1,08. However, there are several dimensions that need to be intervened because the gap (differential) that are considered fair, namely above the scale of 1.6. These dimensions are work pace, influence at

work, control over working time, role conflicts, illegitimate tasks, job insecurity, insecurity over working conditions, and work life conflict. The rest of dimensions categorized in good condition are quantitative demand, cognitive demands, emotional demands, influence at work, possibilities for development, meaning of work, predictability, recognition, role clarity, quality of leadership, social support from supervisor, social support from colleagues, sense of community at work, commitment to the workplace, work engagement, quality of work, job satisfaction, horizontal trust, vertical trust, organizational justice, gossip and slander, conflicts and quarrels, unpleasant teasing, cyber bullying, sexual harassment, threats of violence, physical violence, bullying, self rated health, sleeping troubles, burnout, stress, somatic stress, cognitive stress, depressive symptoms, and self-efficacy.

4. 5 Psychosocial Condition Related to COVID-19 Clinical Exposure Risk

Fisher's exact test of independence is used when there are two nominal variables and we want to see whether the proportions of one variable are different depending on the value of the other variable. The null hypothesis for the test is that there is no relationship between the rows and columns of the 2 x 2 table, such that a subject's likelihood of being in a specific row is unaffected by its position in a particular column. The null hypothesis can be viewed as the chance of a given outcome not being impacted by the research group. The test assesses whether the two research groups differ in proportions with each outcome (Siegel,1997; Freeman and Julious, 2007). In this research, the author predict that the fair quality of work pace, influence at work, control over working time, role conflicts, illegitimate tasks, job insecurity, insecurity over working conditions, and work life conflict dimension are dependent on the clinical exposure risk of health care workers. The hypothesis of Fisher's exact test to be tested are as follows:

H0: Both clinically exposed and not clinically exposed health care workers show similar proportion in regard to their fair quality of psychosocial dimension.

H1: A higher proportion of clinically exposed health care workers show fair and poor psychosocial dimensions compared to the not clinically exposed health care workers.

The basis of decision making of Fisher's exact test are as follows:

1. If the statistical significance < 0.05, the null hypothesis is rejected.
2. If the statistical significance > 0.05, the null hypothesis is accepted.

Table 3: Fisher's Exact Test Significance Level

Category	Dimension	p-Value	Association
Clinical exposure risk	Work pace	0.318	Independent
	Influence at work	0.022	Dependent
	Control over working time	0.014	Dependent
	Role conflicts	0.093	Independent
	Illegitimate tasks	0.026	Dependent
	Job insecurity	0.182	Independent
	Insecurity over working conditions	0.023	Dependent
	Work life conflict	0.111	Independent

Source: Author, 2021

Based on the Fisher's exact test performed above, only four dimensions show dependency to the COVID-19 clinical exposure risks. These dimensions consisted of influence at work, control over working time, illegitimate tasks, and insecurity over working conditions. Each dimension shows a level of statistical significance (p-value) lower than 0.05. Based on this measurement, we could

infer that a higher proportion of COVID-19 clinically exposed health care workers show fair and poor psychosocial condition on influence at work, control over working time, illegitimate tasks, and insecurity over working conditions dimension compared to the COVID-19 not clinically exposed health care workers.

4. 6 Discussion

Based on the Copenhagen psychosocial questionnaire III, the respondents from Jatisampurna Type D General Hospital and Bantar Gebang Type D General Hospital show an average total gap of 1.08. This result indicate a generally good psychosocial condition amongst the health care workers. However, amongst 45 dimensions measured in the questionnaire, 8 dimensions show a rather fair quality. The measurement results in gap higher than 1.6 which indicate fair quality of the dimension. The result infers that the following dimensions namely work pace, influence at work, control over working time, role conflicts, illegitimate tasks, job insecurity, insecurity over working conditions, and work life conflict need in-depth assessment in terms of their problem root causes as well as further intervention in order to improve its quality. Amongst these eight dimensions, the author further analyse the dependency of the current conditions with the COVID-19 clinical exposure risk of the health care workers. The Fisher's exact test found that four dimensions are dependent on the variable of clinical exposure risk of the health care workers. These dimensions include influence at work, control over working time, illegitimate tasks, and insecurity over working conditions. A higher proportion of clinically exposed health care workers show fair and poor influence at work, control over working time, illegitimate tasks, and insecurity over working conditions dimensions compared to the not clinically exposed health care workers. The research proven that, lack of regulation is shown in fair quality of influence at work, control over working time, and illegitimate tasks. While personality enhancement is shown in fair quality of insecurity over working conditions. If these variables are neglected, it might produce adverse effect such as work-related stress that might further influence productivity and the hospital goals.

The fair quality influence at work with gap of 2.02 at Jatisampurna Type D General Hospital and Bantar Gebang Type D General Hospital indicates the ability of individual to in affecting their co-workers to listen to them. Influence dimension is related to context of work such as organisational culture and function, role in organisation, career development, decision latitude, and interpersonal relationships (Cox, et al., 2000). In this research, health care workers Jatisampurna Type D General Hospital and Bantar Gebang Type D General Hospital are highly dependable on consensus amongst team members (peers) and Dokter Penanggungjawab Pelayanan (DPJP). Some health care workers like nurses and midwives complain that Dokter Penanggungjawab Pelayanan (DPJP) is hardly encountered. Hence, it required times for decision of treatment plans to be made. This problem also extends to diagnostic unit such as radiology unit and laboratory unit. Collaboration between clinical and diagnostic unit in order to make proper diagnosis also increase dependency. Moreover, COVID-19 examination would require a more holistic approach in order to make proper diagnosis as well as though out the patient treatment. Another reason being that the unit financing is highly dependable on the management level. As the hospitals are newly established, its daily operation greatly depend on the hospital management and local government funding as it hasn't been allowed to collect healthcare tariff. Consequently, employees have to consult with the local government through the management in terms of materials and equipment procurement. This procedure also extends to the human resource practice. Based on the action theoretical approach, increase on regulation and control (handlungsspielraum) are the crucial variables in psychosocial working environment (Semmer, 1984; Ulich, 1972). Thus, intervention is needed at organization level as well as at higher government level in terms of creating more degree of control and regulation upon day-to-day task.

The fair quality control over working time with gap of 2.32 at Jatisampurna Type D General Hospital and Bantar Gebang Type D General Hospital indicates a considerably low flexibility to take rest, vacation, chat with co-workers, take leave permits, and overtime. Control over working time dimension is related to context of work such which is decision latitude and content of work such as workload, work pace, and work schedule (Cox, et al., 2000). The job demands–control model is the most influential stress model for now. The model was developed by Robert Karasek in 1979. The model defines two independent dimensions of stress risks: psychological demands and decision latitude. Decision latitude is also labelled as job control (Schabracq and Cooper, 2003). Based on demand-control theory, control over working time would be described by decision latitude as flexibility to take rest, vacation, chat with co-workers, take leave permits, and overtime while the psychological demands described by tension produced by job demand. A higher degree of balance between regular task, social engagement, and personal needs fulfilment might decrease the potential of stress and depression (Bernstein and Kornbluh, 2005). In this research, a increasing number of inpatient care units due to its specific (short term) focus goal as first referral for COVID-19 treatment and diagnostics at Jatisampurna Type D General Hospital and Bantar Gebang Type D General Hospital have been considered as the factors affecting the working schedule. Moreover, advance health care providers are not ready since there are still shortage of medical staffs such as nurses, general practitioners, as well as specialist practitioners. This condition in turn would increase the work amount of each allied-health professionals and other medical supporting units enhancing their work intensity. The prolong adverse effects would be that there would be lack of time to rest, take vacation, take leave, or even socialize with co-workers. The condition at Jatisampurna Type D General Hospital and Bantar Gebang Type D General Hospital proven by some medical staffs that are required to take double continuous shift a day (morning and afternoon or afternoon and evening). Moreover, sudden increase in burden and demand of work due to the COVID-19 pandemic would worsen the challenge ahead. Thus, there would be higher potential of burnout and psychological stress. During this pandemic, the government also imposed heavy sanctions for civil servants who travel for homecoming during Eid festivities. The sanctions range from reprimand, demotion, delayed salary, and even lay off.

The fair quality of illegitimate tasks with gap of 1.93 at Jatisampurna Type D General Hospital and Bantar Gebang Type D General Hospital indicates that employees are given tasks which are not related to their job-desk and role in the organization. Illegitimate task dimension is related to context of work such which is role in organisation and content of work which is task design (Cox, et al., 2000). Warr (1987) stated that some job characteristics affect mental well-being in a curvilinear way, similar to the way vitamin A and D may affect health. Increase opportunity for skill use, externally generated goals (job demands), and work variety as results of illegitimate tasks may encourage employees to hone their skills and knowledge in the other fields of work. This may in turn increase cognitive demand in terms of skill utilization which incur positive affects toward individual productivity. Subsequently, it will also boost organizational productivity amidst employee shortage. Nevertheless, too much demands on specifically jobs which are not in accordance with the initial requirements may burden the employees and add risk of stress and depression (Ginting et al., 2020). This situation may generate backlash such as diminished motivation and productivity. In this research, employees at Jatisampurna Type D General Hospital and Bantar Gebang Type D General Hospital are often given tasks which are not related to their initial job-desks. For example, midwife are given task to perform the outpatient treatment, cleaning services are often tasked for patient transportation, and dental assistant were seconded for COVID-19 vaccination program. This issue is the result of medical staff shortage due to the newly established status of the hospitals which are still in hiring process. The other reason being that there is significant increase of patient due to the pandemic. As of June 2021, numbers of nurses and doctors are still in high demand. The other being mortician. However, people are still hesitant to apply for a job. Moreover, since the hospitals are

state owned, people are required to follow complicated application bureaucracy. Thus, we could infer that the root cause of this problem stems out from the organizational and cultural aspect of state owned institution compared to private establishment in terms of job recruitment.

The fair quality of insecurity over working conditions with gap of 1.92 at Jatisampurna Type D General Hospital and Bantar Gebang Type D General Hospital indicates that high anxiety of employees in terms of their task, salary, position, work schedule, and future prospects. The German medical sociologist Johannes Siegrist and his colleagues were influenced by the concept of lack of reciprocity from equity theory. Effort-reward imbalance (ERI) model's founding point is that effort at work is spent as part of a socially organized exchange process, in which this effort is supposed to be compensated by equitable rewards (Schabracq and Cooper, 2003). Siegrist (1996) mentioned specific conditions resulting in effort-reward imbalance. These include no alternative choice in the labour market and strategic aspects such as expected future profits. Indonesia was able to maintain consistent economic growth up to the COVID-19 crisis, recently qualifying the country for upper middle income rank. However, the COVID-19 pandemic-induced economic crisis has effected the labour force in Indonesia. Several employees have been furloughed or perhaps laid off. Although, health care workers are in high demand, further change might happen regarding their salary and work schedule. In the research, most of new employees at Jatisampurna Type D General Hospital and Bantar Gebang Type D General Hospital fall under the category of contract employees (tenaga kerja kontrak), honorary employees, and tenaga APBD (regional revenue and expenditure budget employees). These types of employees are prone for mutation and lay off. Other complain that is prevalent amongst these types of employees is they often experience late payment of salary. Their salary often given approximately 1 to 3 weeks late. The other type employee being the candidate for civil servants (calon pegawai negeri sipil). Their problem is mostly the bureaucracy to obtain the employment registration. Amidst the government burden to pay the employees, holiday allowance for senior civil servants have been cancelled. Due to the high risk of new cases, medical staff often required to do double shift. Thus, worktime often bleeds to the next shift without any break. The shortage of staff also increase the likelihood of employees to go through job transfer which may not align with their competency and initial working environment. Most of employees are seconded to help the core medical staff in management of the pandemic such diagnostics, treatment, as well as government vaccination program. This requirement may rise to the insecurity over job transfer. Job transfer require efforts in terms of adaptability of the employees. Not only in terms of job requirements but also change in work schedule and shift rotation.

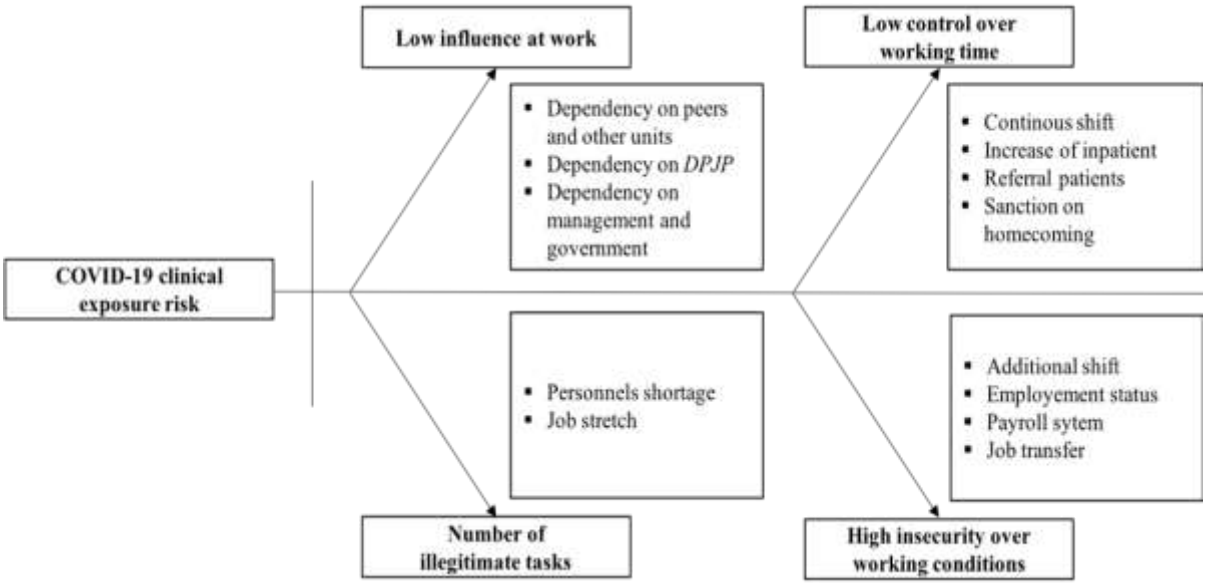

Figure 2: Reversed Fishbone Diagram

Source: Author, 2021

In conclusion, proportion of health care workers with clinical exposure risks to COVID-19 show fair influence at work, control over working time, illegitimate tasks, and insecurity over working conditions dimensions compared to the group of health care workers without clinical exposure risks to COVID-19. The open interview also reveals the full effects of the COVID-19 occupational exposure risks on the psychosocial factors. Increasing number of inpatient and referrals, additional and continuous shift, personnel shortage, employment benefits, dependency amongst healthcare worker, and extra tasks deemed as full effects of COVID-19 exposure risk on the quality of previously dissertated psychosocial dimensions.

5. Conclusion

For the COVID-19 exposure risks the results are as follows: clinically exposed group consisted of 73 medical and allied health professions staffs (83%) and 15 other staffs (17%); clinically not exposed group consisted of 43 other staffs (62%) and 26 medical and allied health professions staffs (38%); communally exposed group consisted of 51 medical and allied health professions staffs (90%) and 6 other staffs (10%); communally not exposed group consisted of 52 other staffs (53%) and 47 medical and allied health professions staffs (47%). Several dimensions need to be intervened because the gap (differential) that are considered fair, namely above the scale of 1.6. These dimensions are work pace, influence at work, control over working time, role conflicts, illegitimate tasks, job insecurity, insecurity over working conditions, and work life conflict. A higher proportion of COVID-19 clinically exposed health care workers show fair and poor psychosocial influence at work, control over working time, illegitimate tasks, and insecurity over working conditions dimension compared to the COVID-19 not clinically exposed health care workers (p-value < 0.05).

6. Limitation and Suggestions

6. 1 Limitation

This research certainly has limitations in its implementation. Some of these limitations are that the research is based on single self-report survey instrument, only examines employees of Jatisampurna Type D General Hospital and Bantar Gebang Type D General Hospital, utilizes risk assessment and management of exposure of health care workers in the context of COVID-19

as interim guidance to determine the clinical (occupational) and community exposure risk amongst healthcare workers to COVID-19, utilize Copenhagen Psychosocial Questionnaire (COPSOQ) to measure psychosocial condition, and utilizes open-ended interview on content of work and context of work to understand the immediate psychosocial hazards as potential full effects of current COVID-19 pandemic amongst health care workers.

6. 2 Suggestions

The next step in psychosocial risk assessment is deciding on the preventive measures. Psychosocial risk assessment aims not just to understand the possible hazardous factor but also constructing the suitable measures to prevent prolong exposure of these stressors and minimizing the adverse effects in the future to come. These measures are expected to eliminate the risks of any psychosocial factor in work environment to become possible stressors that could create further tension on the employees' physiological, emotional, cognitive, and behavioural states.

Focus group discussion is proposed to gather information about specific topics of interest amongst the employees. Focus groups are being used to help planners design and maintain effective programmes. This method is also used factors needed in intervention program (Dawson et al., 1992). Low control over working time and insecurity over working condition which specifically address the working time would require focus group discussion that focus on work schedule and staffing management. Insecurity over working condition in term of everchanging task and job transfer as well number of illegitimate tasks amidst the COVID-19 pandemic would require intervention in task design and staffing.

Policy maker is also recommended to update the working environment legislation to match the needs of current COVID-19 pandemic. The reduction of effort-reward imbalance resulting in insecurity overworking condition require intervention by granting adequate compensation and personal reward. Policy regarding benefits and compensation is expected to raise the productivity and motivation of health care workers working on the frontline battling against the pandemic. This will in turn eliminate the insecurity over working conditions in terms of payroll system and job prospects. The procurement of adequate personal protective equipment is also needed to ensure safety amongst the clinically exposed individuals that are mostly stationed to perform COVID-19 treatment related tasks. This measure would benefit the insecurity over working conditions in terms of everchanging task design and job transfer that will also require adaptation of physical working environment.

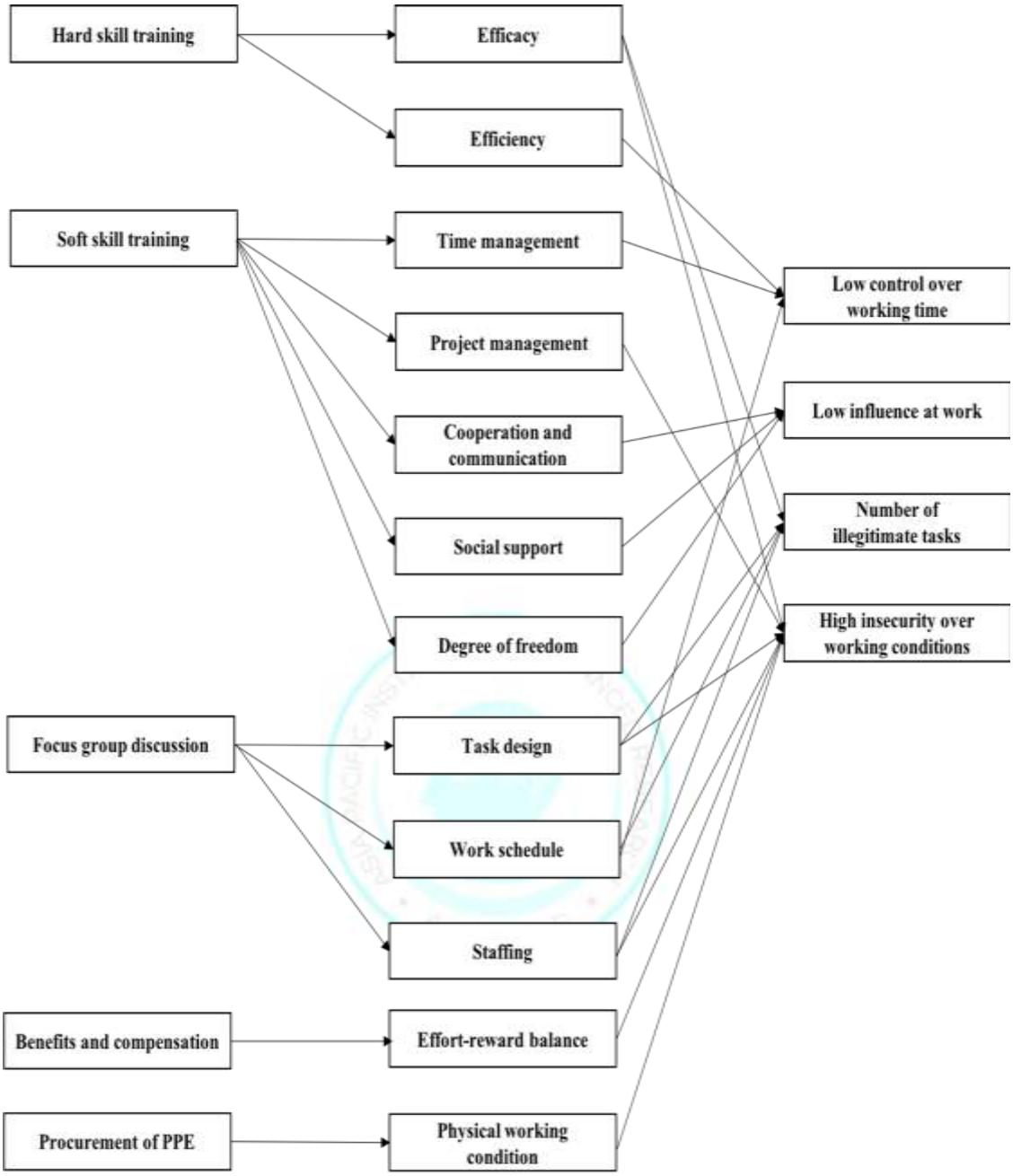

Figure 3: Proposed Business Solution

Source: Author, 2021

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Appendixes

Appendix A: Psychosocial Condition

Domain	Dimension	Mean	Gap	Mean reference	Inter-pretation	Standard deviation
Demand at work	Quantitative demands	2,02	1,02	1	Low	1,02
	Work pace	3,28	1,72	5	High	0,9
	Cognitive demands	3,64	1,36	5	High	1,15
	Emotional demands	2,31	1,31	1	Low	1,06
	Demands for hiding emotions	3,22	2,22	1	High	1,33
Work organization and Job contents	Influence at work	2,98	2,02	5	High	1,23
	Possibilities for development	4,32	0,68	5	High	0,6
	Variation of work	3,05	1,95	5	High	1,19
	Control over working time	2,68	2,32	5	High	1,28
	Meaning of work	4,35	0,65	5	High	0,58
	Predictability	3,94	1,06	5	High	0,73
	Recognition	3,91	1,09	5	High	0,62
	Role clarity	4,18	0,82	5	High	0,55
Interpersonal relations and leadership	Role conflicts	3,31	2,31	1	Low	0,84
	Illegitimate tasks	2,93	1,93	1	Low	0,87
	Quality of leadership	4,08	0,92	5	High	0,54
	Social support from supervisor	3,63	1,37	5	High	0,84
	Social support from colleagues	3,78	1,22	5	High	0,82
	Sense of Community at Work	4,15	0,85	5	High	0,87
	Commitment to the Workplace	3,93	1,07	5	High	0,81
	Work engagement	3,83	1,17	5	High	1,08
Work individual interface	Job insecurity	2,92	1,92	1	Low	1,09
	Insecurity over working conditions	2,92	1,92	1	Low	1,04
	Quality of work	4,05	0,95	5	High	0,49
	Job satisfaction	3,86	1,14	5	High	0,71
	Work life conflict	2,65	1,65	1	Low	0,94
Social capital	Horizontal trust	3,79	1,21	5	High	0,96
	Vertical trust	3,84	1,16	5	High	1,03
	Organizational justice	3,87	1,13	5	High	0,9
Conflict and offensive behaviour	Gossip and slander	1,25	0,25	1	Low	0,57
	Conflicts and quarrels	1,18	0,18	1	Low	0,48
	Unpleasant teasing	1,34	0,34	1	Low	0,47
	Cyber bullying	1,01	0,01	1	Low	0,08
	Sexual harassment	1	0	1	Low	0
	Threats of violence	1,01	0,01	1	Low	0,11
	Physical violence	1,01	0,01	1	Low	0,11
	Bullying	1,04	0,04	1	Low	0,28
Health and wellbeing	Self rated health	4,16	0,84	5	High	0,7
	Sleeping troubles	1,77	0,77	1	Low	0,82
	Burnout	2	1	1	Low	0,86
	Stress	1,81	0,81	1	Low	0,78
	Somatic stress	1,85	0,85	1	Low	0,75
	Cognitive stress	1,93	0,93	1	Low	0,74
	Depressive symptoms	1,81	0,81	1	Low	0,67
Personality	Self-efficacy	3,52	1,48	5	High	0,74

Index

	High gap
	Invalid and unreliable dimension

Appendix B: COPSOQ III Validity Test

Items	R Count	R Table	Results	Items	R Count	R Table	Results
QD1	0.539	0.1567	Valid	JI2	0.654	0.1567	Valid
QD2	0.682		Valid	JI3	0.672		Valid
QD3	0.449		Valid	IW1	0.812		Valid
QD4	0.449		Valid	IW2	0.810		Valid

RE2	0.877		Valid	GH1			
RE3	0.849		Valid	SL1	0.678		Valid
CL1	0.832		Valid	SL2	0.805		Valid
CL2	0.815		Valid	SL3	0.856		Valid
CL3	0.707		Valid	SL4	0.882		Valid
CO2	0.657		Valid	BO1	0.721		Valid
CO3	0.657		Valid	BO2	0.833		Valid
IT1				BO3	0.793		Valid
QL1	0.767		Valid	BO4	0.725		Valid
QL2	0.789		Valid	ST1	0.696		Valid
QL3	0.878		Valid	ST2	0.899		Valid
QL4	0.749		Valid	ST3	0.883		Valid
SSX1	0.815		Valid	SO1	0.637		Valid
SSX2	0.902		Valid	SO2	0.681		Valid
SSX3	0.771		Valid	SO3	0.565		Valid
SCX1	0.801		Valid	SO4	0.576		Valid
SCX2	0.806		Valid	CS1	0.518		Valid
SCX3	0.726		Valid	CS2	0.861		Valid
SW1	0.894		Valid	CS3	0.889		Valid
SW2	0.856		Valid	CS4	0.803		Valid
SW3	0.795		Valid	DS1	0.721		Valid
CW1	0.627		Valid	DS2	0.823		Valid
CW2	0.696		Valid	DS3	0.844		Valid
CW3	0.827		Valid	DS4	0.609		Valid

Items	R Count	R Table	Results	Items	R Count	R Table	Results
WP1	0.561		Valid	IW3	0.664		Valid
WP2	0.695		Valid	IW4	0.561		Valid
WP3	0.767		Valid	IW5	0.673		Valid
CD1	0.55		Valid	QW1	0.668		Valid
CD2	0.525		Valid	QW2	0.668		Valid
CD3	0.375		Valid	JS1	0.816		Valid
CD4	0.338		Valid	JS2	0.799		Valid
ED1	0.777		Valid	JS3	0.756		Valid
ED2	0.63		Valid	JS4	0.819		Valid
ED3	0.763		Valid	JS5	0.488		Valid
HE1	0.110		Invalid	WF1	0.445		Valid
HE2	0.113		Invalid	WF2	0.831		Valid
HE3	0.279		Valid	WF3	0.726		Valid
HE4	-0.046		Invalid	WF4	0.732		Valid
I1	0.244		Valid	WF5	0.631		Valid
I2	0.591		Valid	TE1	0.74		Valid
I3	0.523		Valid	TE2	0.693		Valid
I4	0.582		Valid	TE3	0.45		Valid
I5	0.703		Valid	TM1	0.671		Valid
I6	0.715		Valid	TM2	0.725		Valid
PD2	0.722		Valid	TM3	0.198		Valid
PD3	0.818		Valid	TM4	0.25		Valid
PD4	0.743		Valid	JU1	0.861		Valid
VA1	-0.359		Invalid	JU2	0.895		Valid
VA2	-0.359		Invalid	JU3	0.913		Valid
CT1	0.374		Valid	JU4	0.883		Valid
CT2	0.384		Valid	GS			
CT3	0.568		Valid	CQ			
CT4	0.474		Valid	UT			
CT5	0.343		Valid	HSM1			
MW1	0.657		Valid	SH1			
MW2	0.657		Valid	TV1			
PR1	0.744		Valid	PV1			
PR2	0.744		Valid	BU1	0.14		Invalid
RE1	0.83		Valid	BU3	0.14		Invalid

Items	R Count	R Table	Results	Items	R Count	R Table	Results
CW4	0.754		Valid	SE1	0.728		Valid
CW5	0.747		Valid	SE2	0.576		Valid
WE1	0.502		Valid	SE3	0.799		Valid
WE2	0.645		Valid	SE4	0.821		Valid
WE3	0.284		Valid	SE5	0.731		Valid
JI1	0.486		Valid	SE6	0.744		Valid

Appendix C: COPSOQ III Reliability Test

Domain	Dimension	Cronbach Alpha	Result
Demand at work	Quantitative demands	0.731	Reliable
	Work pace	0.816	Reliable
	Cognitive demands	0.614	Reliable
	Emotional demands	0.851	Reliable
	Demands for hiding emotions	0.204	Unreliable
Work organization and Job contents	Influence at work	0.794	Reliable
	Possibilities for development	0.875	Reliable
	Variation of work	-1.085	Unreliable
	Control over working time	0.672	Reliable
	Meaning of work	0.78	Reliable
Interpersonal relations and leadership	Predictability	0.844	Reliable
	Recognition	0.921	Reliable
	Role clarity	0.887	Reliable
	Role conflicts	0.784	Reliable
	Illegitimate tasks		
	Quality of leadership	0.906	Reliable
	Social support from supervisor	0.914	Reliable
	Social support from colleagues	0.885	Reliable
	Sense of Community at Work	0.911	Reliable
Conflict and offensive behaviour	Commitment to the Workplace	0.883	Reliable
	Conflicts and quarrels		
	Unpleasant teasing		
	Cyber bullying		
	Sexual harassment		
	Threats of violence		
	Physical violence		
	Bullying	0.152	Unreliable
Health and wellbeing	Self rated health		
	Sleeping troubles	0.913	Reliable
	Burnout	0.894	Reliable
	Stress	0.911	Reliable
	Somatic stress	0.798	Reliable
	Cognitive stress	0.891	Reliable
	Depressive symptoms	0.882	Reliable
Personality	Self-efficacy	0.9	Reliable