

The research on employee care for hospitalization incidents

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Citation: Su HT, Lee YW. The research on employee care for hospitalization incidents. *Electron J Gen Med.* 2023;20(4):em489. <https://doi.org/10.29333/ejgm/13104>

ARTICLE INFO

Received: 26 Dec. 2022

Accepted: 05 Mar. 2023

ABSTRACT

Purpose: The purpose of this paper is to provide a basic view, which use the social learning theory and self-efficacy to explore the relationship between employee care, stress status, and work style inside healthcare organization.

Design/methodology/approach: This paper is a conceptual study on healthcare industrial workers recognize the commitment in workplace safety, making the importance of work adjustment, and maintenance in a safe environment. Hospitals have reduced costs and manpower, coupled with the implementation and promotion of various evaluations, which greatly increased the load on the staff of medical institutions, resulting in longer working hours, and worsening of the working conditions. Service-profit chain makes the same predictions about service users and the resulting effect on service worker satisfaction, error reduction, turnover, and other helpful employee outcomes. This research uses a survey tool as a structured questionnaire of Chi-square test for hospitalization incidents was taken in southern hospital center to analyze demographic changes and working conditions.

Findings: This paper's findings are 297 administered questionnaires; 205 questionnaires were returned, giving a returned rate of 69%. After deducting 11 invalid questionnaires, 194 valid questionnaires were procured with an effective response rate of 65.3%. This study finds the age of hospital employees and the stress of their children are related to the reason for their hospitalization. The stress, which comes from children is significantly related to the reason for the hospitalization of employees.

Originality/value: This paper is exploring the relevant factors of hospitalization, which will be a helpful improvement in the useful management of healthcare industrial. It is also helpful in human resource management of healthcare industrial organization in the future.

Keywords: healthcare industrial, commitment, safe environment, social learning theory, service-profit chain

INTRODUCTION

In the achievements of outstanding talents, job performance pressures is often resulting in stress at a top positions, organizations, and individuals are in a continuous nervous state [1]. Organizations try to appoint individuals who fit in with their values and goals [2]. Workplace stress often arises from the additional workload of individual performance abilities. Employees do not fit in with the organization's goals and core values prefer not to stay on for a longer period of time [2]. In view of management, internal customers have a significant effect on the external service provision [3]. The internal customers refer to any employee of the organization, each employee or group of employees constitutes a part of the supply loop to external customers. The work situations lead to risk of patient and workers injury are emotionally distressing for health care workers [4]. Support from the organization is imperative for individual closure. Safety in health care, employers need to develop strategies for management decision of risks, providing support after an injury to avoid injuries [4]. The health-oriented leader behavior improves follower well-being, and the health-oriented leader behavior is

related to a better relationship quality between leader and employee, especially among those employees [5].

If internal customers do not have the appropriate level of service to enable them to work with maximum efficiency, then the services received by external customers will be adversely affected, which will inevitably cause external customer dissatisfaction and even loss of external customer loyalty. If the organization does not pay enough attention to this issue, it will inevitably lead to a decline in customer loyalty and a higher rate of customer turnover, and ultimately lead to a decline in the organization's profitability. The career commitment and job involvement mediate the relationship between person-job fit and organizational commitment [2]. For the hospital, how to provide good medical quality and good administrative efficiency are the key to the sustainable operation of the hospital. However, with the implementation of the total health insurance payment system in recent years, hospitals have reduced costs and reduced manpower, coupled with the implementation and promotion of various evaluations, which have greatly increased the load on hospital staff, resulting in longer working hours and work overload. The hospital must provide a good working environment for staff in the hospital to maintain a good working enthusiasm and effectiveness.

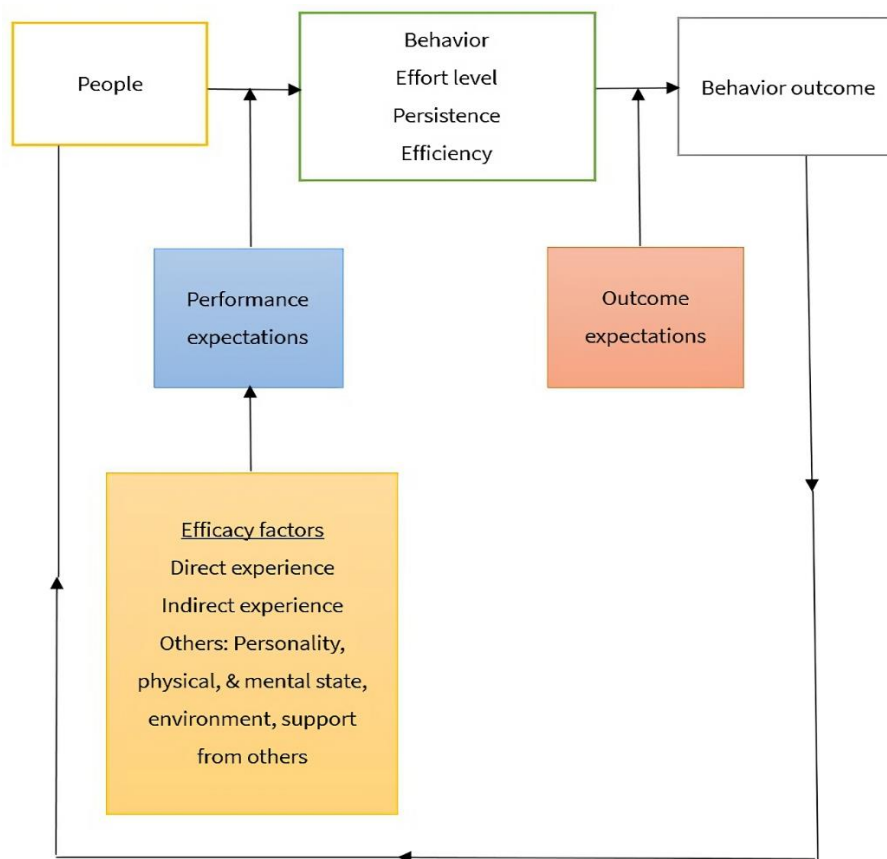


Figure 1. Self-efficacy function [10]

The workplace health promotion has been a subject for more than 40 years in a wide range of disciplines [6]. The workplace health promotion interventions are seen as an important means to increase health and prevent ill-being at work [7]. Even though the interest in and implementation of worksite health promotion has increased in recent years [8]. Healthcare workers are at high risk of occupational injuries and healthcare workers' experiences of workplace incidents that led to injury or posed a risk of patient and worker injury, with focus on healthcare workers' emotions and actions [4]. In recent years, the rise of consumer awareness has led to change in the medical-patient relationship, and the public has generally begun to pursue higher medical quality. Based on these conditions, hospital employees are bound to bear greater work pressure than before. Excessive pressure often leads to a decline in work efficiency, and even worse, it also affects the mental health and physical of employees.

The purpose of this research is to analyze the relationship among working conditions (service units, job titles, and job styles), average number of exercise times per week, daily commuter average time, stress status, the demographic variables characteristics (i.e., gender, age, marital status, and number of children), sleep time and the causes why employees care about hospitalization events. The above are this research gaps. This research questions are including: First, what are the characteristics (gender, age, marital status, and number of children) of employee care hospital notification events? Second, what is the relationship between employee working conditions (service unit, job title, and job type) and the cause of employee care hospitalization events? Third, the correlation between the number of weekly exercise and the cause of employee care hospitalization incidents? Fourth, commute

mode, the correlation between the average daily commute time and the cause of employee care hospitalization incidents? Fifth, the relationship between stress status and the cause of employee care hospitalization events? Association between sleep duration and cause of employee care hospitalization events?

LITERATURE REVIEW

Social Learning Theory and Self-Efficacy

Social learning theory is used different methods of treatment derive from a common cognitive mechanism to change in defensive behavior produced [9]. According to psychological procedures, they serve personal effectiveness of strengthening and creating expectations. Perceived self-efficacy affects people's behavioral settings and choice of activities, how long they will persist in the face of obstacles and aversive experiences, and how much effort they expend. The stronger perceived self-efficacy [10] and the coping efforts active (Figure 1). Empirical tests of this psychological procedures achieve changes in personal behavior by altering the level and strength of self-efficacy [11]. Those persist in subjectively threatening activities, will eventually eliminate their inhibitions through corrective experience, whereas those avoid what they fear, or who cease their coping efforts prematurely, will retain their defensive behavior and self-debilitating expectations [12]. Research indicates that self-efficacy positively affects self-regulation and revealed that self-regulation positively affects entrepreneurial intentions [11].

The perceived self-efficacy affects the level of performance by persistence of effort and enhancing intensity [11]. Currently,

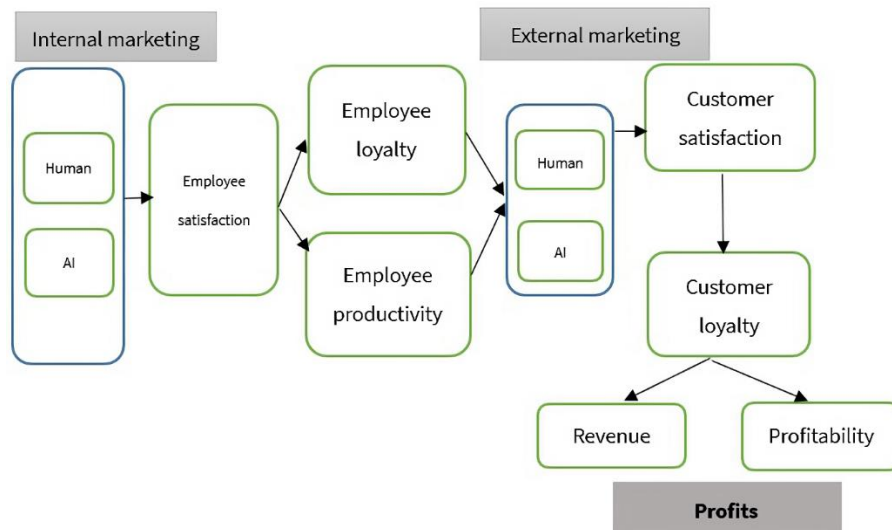


Figure 2. Revising and reimagining the service-profit chain [16]

the most of individual performances are experiencing stress, the technological advancement leads to easy tracking of job ability, the standard living asks for more salary, complicated family life. Finally, the workplace becomes a stressful place, which will have a direct impact on employee wellbeing. Organization become more complex, the potential stress also increases. The stress of exhilarating, creative successful work is beneficial, while that failure, infection or humiliation is detrimental [13]. Diverse work styles related stress that can occur to employees are task demands, role conflict (difficult expectations and inconsistent on the job), and interpersonal conflict [14]. The occupational safety and patient safety and health are considered concomitantly, and not separately in different processes as has been previously done in research and practice [15].

The Service-Profit Chain

Human resource is on high performance work systems, the service-profit chain is especially helpful to use. The service-profit chain [16], consists of five links: internal service quality, satisfied and productive service employees, greater service value, satisfied and loyal customers, healthy service profits and growth, which links service firm profits with employee and customer satisfaction (Figure 2). In a service business the customer and the front-line service employee interact to co-create the service. Effective interaction, in turn, depends on the skills of front-line service employees and on the support processes backing these employees. The service-profit chain makes the same predictions about service users and the resulting effect on service worker satisfaction, turnover, error reduction and other helpful employee outcomes. Thus, successful service businesses focus their attention on both their employees and customers.

Stress Status

Stress status has a great impact on economies and business whether it was experienced at home or work and affecting a growing numbers of people throughout the world [17]. Stress refers to the reaction shown by an individual's contact with different things, that is, the changes that an individual's physiology or psychology have made when facing the external environment, which is a subjective feeling [18]. Stress status would be very crucial since the overall

performances of employees depend on it, which in turn directly affects the organization [19-21]. It was designed a theoretical model of working stress and health and found that the sources of stress for work include dangerous exposure, job loading requirements, job quality requirements, job autonomy, social support, conflicts in interpersonal relationships, shift work, unstable work, remuneration for work, and management systems [22].

The theoretical defines stress status to have been classified into three types by researchers; response based, stimulus based, and transactional based concepts [23]. The effects of stress status on personal performances have been conducted over the course of the 20th century [24]. If these stress sources add personal factors (e.g., gender, and age), other stress sources (e.g., health status) or other social support (e.g., family support), they will produce some psychological (e.g., job dissatisfaction, depression, and anxiety), physical pain) or active status (e.g., stress symptoms such as smoking, drinking, sleeping time, etc.). These stress symptoms are not properly treated, some stress-related diseases may occur. A negative correlation research between working stress and job's satisfaction, a positive correlation with the willingness to leave [25].

Sleep Time

To adequate sleep time varies from the person to person. Research show out the different sleep patterns in population sub-groups of adolescents, which may be important in understanding pediatric health risk profiles [26]. Poor sleep affects the patients' quality of life and cognitive function, and also has an impact on the sleep and life quality of the caregivers [27]. According to a study by the University of California, San Diego, in controlling demographic variables, habits, health factors, and the use of several drugs, under this condition, those who sleep for seven hours a day have the best survival. The mortality rate of people who sleep for eight hours or more increases significantly, and the same is true for people who sleep for six hours or less. Those who sleep for more than 8.5 hours, or less than 4.5 hours have an additional risk of death by 15% [28].

In addition, Labor Safety and Health Institute of the Executive Yuan Labor Committee investigated the physical and mental health of medical staff in shift medical institutions and

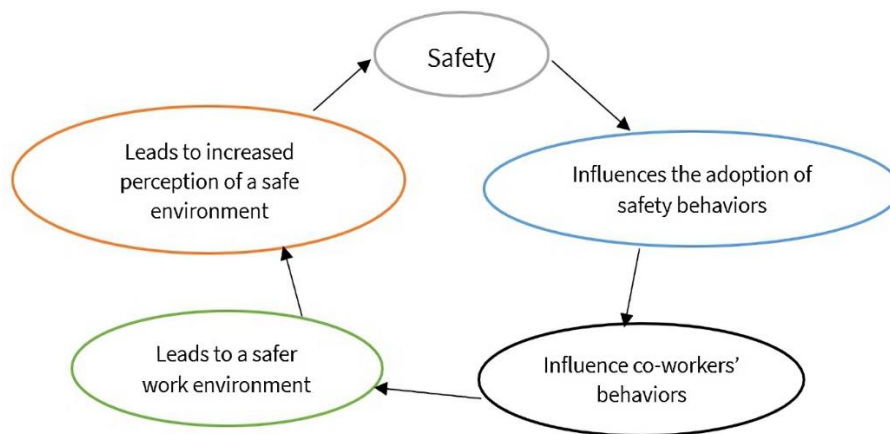


Figure 3. Influence of safety [40]

found that the nursing people's sleep quality is not good, and their oxidative stress index results are significantly higher than those of day shifts; the so called oxidative stress refers to the generation stress refers to the generation of free radicals when cells use oxygen to produce energy. These unstable molecules chemically react with other molecules and cause cell damage. It was even pointed out that nurses over the age of 40 may suffer from increased fatigue due to night shifts and insufficient sleepiness, which may cause health problems [29]. Most studies at home and abroad have pointed out that night shifts will affect the quality of sleep, physical exhaustion, fatigue and physical and mental health [26, 28, 29].

Working Conditions

The definition of shift work in a book "Plain language about shift work", health is as long as working hours are not between 7 AM to 6 PM, it is called shift work. The work types are divided into day shifts (working hours from 5 AM to 8 AM and 2 PM to 6 PM) and night shifts (from 2 PM to 6 PM and 10 PM to 2 PM midnight), night shifts (from 10 PM to 5~8 AM). The most direct effect of shift work patterns is sleeping problems. The main reason is that it disrupts the normal biological rhythm of sleep. Resulting in long-term external causes or internal causes that are out of order [30]. The research in [31] pointed out that due to the human body's biological clock, surrounding environment, social factors and work schedule restrictions, most employees on three shifts and permanent night shifts show that part of sleep deprivation is short and chronic. Deprivation includes insufficient sleep time and poor sleep quality.

The normal biological clock of human beings is full of energy during the day and tired at night, so most people work during the day and rest at night. However, nursing staff often work under the condition of disturbance of the biological clock [32]; although the biological clock will be adjusted naturally due to night shift work, it takes at least seven consecutive night shifts to show changes in the physiological system, even if experiments of 21 days of continuous work show that the body temperature is still not fully adjusted at night work [33]. Therefore, once the night shift is transferred back to the day shift or on holidays, the physiological clocks of these nursing staff must be adjusted in the opposite direction. Although the object will try to adjust to this contradiction, it has not been able to completely overcome this problem so far [30].

Employee Care

The satisfaction levels of interactions and task requirements are the different administration initiatives [34]. Employee care, occupational health and safety management system adoption have a positive impact on innovation [35]. The affects innovation of investigated whether such adoption can strengthen the impact of employee care on innovation, extending the extant employee care, and innovation relationship [359]. These administration initiatives of initial dissatisfaction was be noted. Because of the different administration initiatives (such as work redesign, shared governance, implementing case management, and total quality management) had been introduced to the healthcare organizations [36, 37]. Work situations leading to risk or injury of patient and worker injury are emotionally distressing for healthcare workers [4]. Strategies involve the employee care of qualitative, quantitative factors, and are receiving special attention with the information age coming soon. The employee's perspective of employee care is adopting a hybrid multiple attribute decision making showed there was still 35% room in the implementation policy of employee care improvement [38]. It helps to sustain and increase an organization's competitiveness in the business environment. Therefore, the implementation of employee care has become an important issue for corporations [38].

The organizations workplace has well-developed and effective safety programs, with strong safety have fewer employee injuries because the very existence of these programs sends "cues" to employees regarding the management's commitment of organization environment to safety. Safety in healthcare, employers need to develop strategies for active management of risks, avoiding injuries, and providing support after an injury. If the organization environment is serious about adherence to safe work practices, employees are more likely to comply (Figure 3). Safety refers to the perceptions that employees share the safety environment of their workplace [39]. It is very important for employees to perceive a safe work environment. Employees' safety-related is based on several factors, including organizational safety norms, management decision making, expectations, safety practices, policies, and procedures. The most factors all communicate the organization's commitment safety [40].

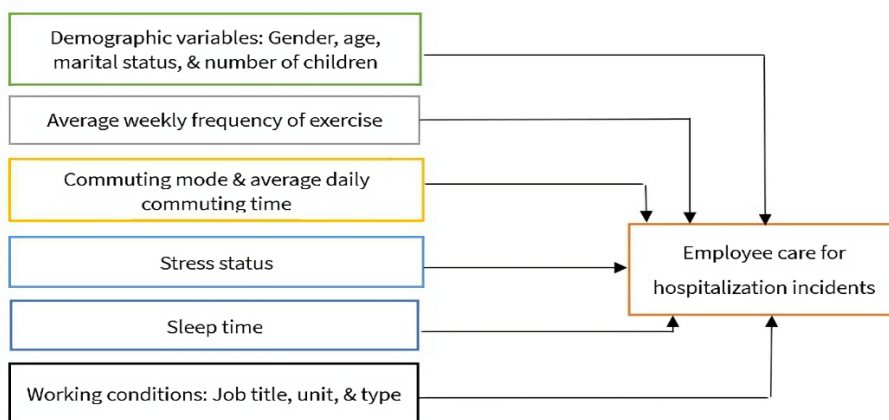


Figure 4. Research model (Source: Authors' own elaboration)

RESEARCH MODEL AND THE CONCEPTUAL DEVELOPMENT

The holistic medical education is centered on patients and is capable of fulfilling the body, mind, and soul of patients, meeting basic social needs, and providing considerate medical services [41]. Sources of stress come from personal physical and mental state accumulatively, psychological and behavioral reactions, even to psychosomatic disease. Stress status is a part of occupation, it acts as a motivator for the employees to strive for excellence, but excess stress may lead to lack of confidence, may lead to reduce job satisfaction and productivity, then to quit the job [42]. Occupational stress has a direct relationship with job satisfaction and predicted the certain demographic factors [43]. After observing the employee care notification system of a medical center in the south, this research found that the number of hospitalization incidents of employees increased significantly compared with other years in 2019. The conceptual framework of employee care for hospitalization incidents as **Figure 4** to explore the reasons for further drawing up the research process through the literature review.

RESEARCH METHODOLOGY

In this study, a total of 297 questionnaires were administered to hospitalized employees in southern hospital center. There are 205 questionnaires were returned, giving a returned rate of 69%. After deducting 11 invalid questionnaires (type was wrong, the skipping question was not answered, all answers were almost similar, and so on). 194 valid questionnaires were procured, with an effective response rate of 65.3%, 145 females (74.7%) and 49 males (25.3%). With regard to age, 194 respondents were all over 20 years old, 46 respondents were 20-30 years old (23.7%), 62 respondents were 31-40 years old (32%), 51 respondents were 41-50 years old (26.3%), 27 respondents were 51-60 years old (13.9%), and 8 respondents were over 60 years old (4.1%). This study is to protect participants for hospitalized employees who have notified the employee care team in 2019 but exclude those who are hospitalized for delivery. The survey items include demographic variables, average weekly frequency of exercise, commuting mode, average daily commuting time, sleep time, stress status, and working conditions. The basic data on samples collected from questionnaire is given in **Table 1**.

Table 1. Chi-square analysis of the reason for hospitalization

| Variable | ND | NO | PR | p |
|--------------------------------------|-----|----|------|---------|
| Gender | | | | 0.211 |
| Male | 49 | 0 | 25.3 | |
| Female | 130 | 15 | 74.7 | |
| Age (years) | | | | 0.028** |
| 20-30 | 41 | 5 | 23.7 | |
| 31-40 | 58 | 4 | 32.0 | |
| 41-50 | 46 | 5 | 26.3 | |
| 51-60 | 27 | 0 | 13.9 | |
| >60 | 8 | 0 | 4.1 | |
| Marital status | | | | 0.277 |
| Unmarried | 45 | 6 | 26.3 | |
| Married | 104 | 18 | 62.9 | |
| Other (divorce, separation, widowed) | 21 | 0 | 10.8 | |
| Number of children | | | | 0.121 |
| 0 | 50 | 5 | 28.4 | |
| 1-2 | 92 | 28 | 61.9 | |
| >3 | 19 | 0 | 9.7 | |
| Average weekly frequency of exercise | | | | 0.428 |
| 0 | 60 | 6 | 34.0 | |
| 1 | 42 | 7 | 25.3 | |
| 2 | 40 | 14 | 27.8 | |
| 3 | 9 | 0 | 4.6 | |
| ≥4 | 16 | 0 | 8.3 | |
| Service units | | | | 0.741 |
| Clinical medical unit | 48 | 4 | 26.8 | |
| Integrated medical center | 7 | 0 | 3.6 | |
| Medical unit | 77 | 10 | 44.9 | |
| Administrative unit | 37 | 5 | 21.6 | |
| Other | 6 | 0 | 3.1 | |
| Job title | | | | 0.237 |
| Doctor | 16 | 0 | 8.2 | |
| Nursing | 61 | 21 | 42.3 | |
| Medical | 15 | 0 | 7.7 | |
| Administration | 40 | 7 | 24.2 | |
| Other | 34 | 0 | 17.6 | |
| Average daily commuting time | | | | 0.812 |
| <15 minutes | 52 | 9 | 31.4 | |
| 15-30 minutes | 86 | 13 | 51.1 | |
| 30-60 minutes | 31 | 3 | 17.5 | |
| Job type | | | | 0.780 |
| Fixed day shift | 68 | 9 | 39.7 | |
| Fixed night shift | 21 | 3 | 12.4 | |
| Need to shift | 67 | 17 | 43.4 | |
| Other | 9 | 0 | 4.6 | |
| Stress status | | | | 0.186 |
| No stress | 67 | 3 | 36.1 | |
| Stress | 102 | 22 | 63.9 | |
| Sleep time | | | | 0.791 |

Table 1 (Continued). Chi-square analysis of the reason for hospitalization

| Variable | ND | NO | PR | p |
|---|-----|----|------|---------|
| <6 hours | 38 | 12 | 25.8 | |
| 6-8 hours | 110 | 19 | 66.5 | |
| >8 hours | 15 | 0 | 7.7 | |
| Stress of workload | | | | 0.088 |
| No | 72 | 8 | | |
| Yes | 98 | 16 | | |
| Stress of department environment | | | | 0.169 |
| No | 110 | 17 | | |
| Yes | 61 | 6 | | |
| Stress of boss | | | | 0.169 |
| No | 110 | 17 | | |
| Yes | 61 | 6 | | |
| Stress of colleagues | | | | 0.975 |
| No | 109 | 16 | | |
| Yes | 62 | 7 | | |
| Stress of husband and wife relationship | | | | 0.851 |
| No | 113 | 17 | | |
| Yes | 58 | 6 | | |
| Stress of children | | | | 0.033** |
| No | 114 | 13 | | |
| Yes | 58 | 9 | | |
| Stress of elder | | | | 0.488 |
| No | 113 | 17 | | |
| Yes | 57 | 7 | | |
| Stress of economic | | | | 0.761 |
| No | 109 | 15 | | |
| Yes | 62 | 8 | | |
| Stress of other | | | | 0.183 |
| No | 127 | 16 | | |
| Yes | 44 | 7 | | |

Note. ND: Number of diseases; NO: Number of others; & PR: Percentage of respondents

The theoretical framework was analyzed using structural equation modeling (SEM) [44] by SPSS 20.0. Average weekly frequency of exercise, 128 respondents were those with exercise habits (66%), 49 respondents did exercise once a week (25.3%), 54 respondents did exercise twice a week (27.8%), 9 respondents did exercise three times a week (4.6%), 16 respondents did exercise more than four times a week (8.3%), and 66 respondents had no exercise habits (34%). Service unit that 87 respondents were medical units (44.9%), 52 respondents were followed by clinical medical units (26.8%), and 42 respondents were administrative units (21.6%). Average daily commuting time, the majority of this study 160 respondents have a commuting time of less than 30 minutes (82.5%).

DATA ANALYSIS AND RESULTS

SEM can simultaneously evaluate all paths with latent variables in one analysis. Chi-square analysis of the respondents background and the reason for hospitalization in this study (Table 1) showed that the age ($p < 0.05$) (Figure 5 and Figure 6) and stress of the children ($p < 0.05$) (Figure 7) of the research topic were significantly related to the reason for hospitalization. The results of stress status appear in personal workplace, in an era of hospitalization incidents, employees expect better performance at work successfully. Prolonged exposure may reduce a person's efficiency and may negatively affect a person's health or family and social life. The results of

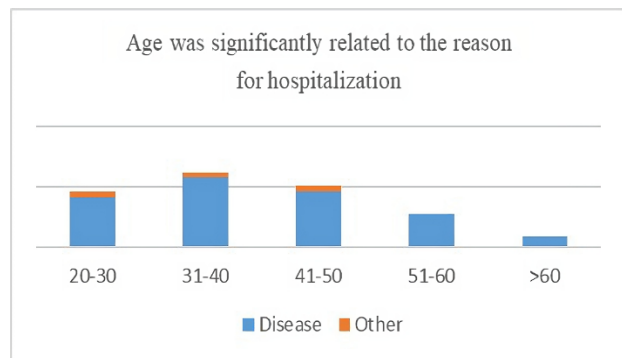


Figure 5. The effect of age on disease (Source: Authors' own elaboration)

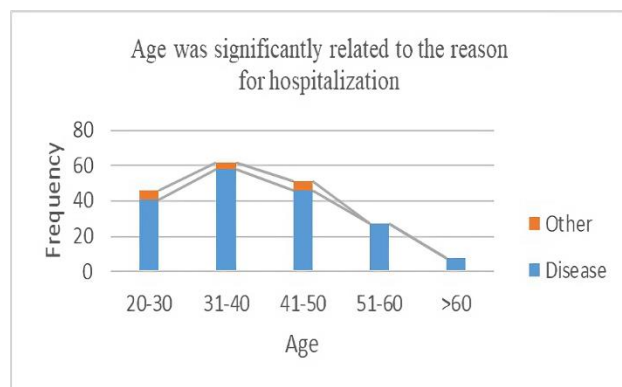


Figure 6. The relationship of frequency and age (Source: Authors' own elaboration)

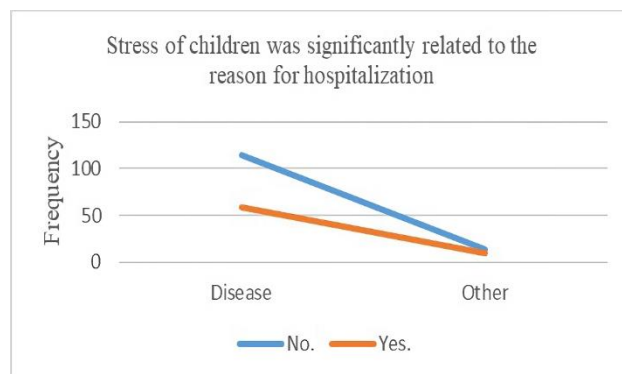


Figure 7. The effect of children stress on disease (Source: Authors' own elaboration)

the other variables were not significant. It is speculated that the study sample size was too small ($n=194$), which failed to truly reflect the correlation between the variables and the reason for hospitalization.

DISCUSSION

The age of employee is significantly related to the reason for their hospitalization. The reason may be due to the fact that the hospital provides employee with physical examinations and regularly organizes some health promotion activities. In addition, the employees in the hospital have certain medical and health-related knowledge, so when they find their own body is healthy, it is easier and more willing to go to the

hospital for medical treatment. Employees are better able to get timely treatment in the hospitalization at the initial stage of the disease, reducing the possibility of disease deterioration. Most employees still maintain good physical conditions.

Theoretical Implications

The holistic medical education is centered on patients and is capable of fulfilling the mind, body, and soul of patients, providing considerate medical services, and meeting basic social needs. This research focuses on employee care, hoping to understand the relationship between the hospital staff's demographic structure and the types of hospitalized diseases by exploring the hospitalization notification events of employee care, so as to facilitate the management of the hospital's employee care system in the future, and ultimately enable employees to have a healthy life and safe working environment.

Practical Implications

According to the results of the questionnaire survey, most of the hospitalized employees exercise low frequency in the standard three times (87%), the amount of exercise is generally insufficient. This situation has a certain impact on the health of employees. Although the research results are not significantly related, this phenomenon is still worthy of hospitals as a reference. Healthcare workers are at high risk of occupational injuries and approximately 10%~15% of patients are affected by an adverse event during their hospital stay [4]. Poor sleep affects the patients' quality of life and cognitive function and has an impact on the sleep and life quality of the caregivers.

Limitations and Future Work

This case study only focuses on a single year in a medical center, the results of the study can only be inferred to this parent group and cannot comprehensively explore the hospitalizations in Taiwan. The variables and issues discussed in this study are limited to the scope of research tools, and individual influencing factors other than variables cannot be analyzed. The healthcare workers' research will focus on more individual influencing issues related to medical workers in the future.

CONCLUSIONS

Employees are an organization's asset and can turn around an organization's profitability. Employee must be careful when dealing with human resources to save huge recruitment and training costs. This study that the age of hospital employees and the stress of their children are related to the reason for their hospitalization. With age, diseases slowly appear as their body age. The recommended exercise volume for people is based on exercise 333, which means to exercise at least three times a week (87%), 30 minutes each time, and let the number of heart beats per minute jump to 130 beats per minute. In the investigation of stress sources, the stress of children is significantly related to the reason for the hospitalization of employees. It is speculated that the reason is that the population structure of the employees in the hospital is mostly female. The situation of women is very common. At the same time, they must take care of their children and work. It may cause a heavy stress load and increase the risk of hospitalization.

The results of the questionnaires show that hospital employees generally do not exercise enough. Many studies have pointed out that moderate exercise can reduce the risk of illness and death. In order to promote the health of employees, it is recommended that the hospital should try to increase the frequency of employees' exercise. Work situations leading to injury of worker injury is emotionally distressing for healthcare workers. Team interplay may facilitate dynamic practices, safe, and help healthcare workers overcome negative emotions. Organizational support is imperative for individual closure. Since the most of the women are working and obviously feel the stress of having children, it is suggested that the hospital organization can improve the staff welfare related to childcare, reduce the stress of children felt by healthcare worker. For safety in healthcare, employers need to develop strategies for active management of risks, providing support after an injury and avoiding injuries.

A satisfied employee can prove to be doing an excellent job compared to others. Therefore, avoiding stress in an organization and developing human beings helps the organization to sustain long-term in a competitive world and reach the pinnacle of success. Human resource is on high performance work systems, to apply the service-profit chain is especially helpful to use. Thus, successful service businesses focus their attention on both their customers and their employees. The management of the employee care system in the organization, and ultimately enable employees to have a healthy life, and safe working environment are worthy of attention and trust.

Author contributions: All authors have sufficiently contributed to the study and agreed with the results and conclusions.

Funding: No funding source is reported for this study.

Ethical statement: Authors stated that the study did not require ethics committee approval. When the questionnaire survey was distributed in this study, it was stated that the academic survey was conducted in an anonymous manner. Authors further stated that informed consents were obtained from the participants. All materials were kept confidential.

Declaration of interest: No conflict of interest is declared by authors.

Data sharing statement: Data supporting the findings and conclusions are available upon request from the corresponding author.

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