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TABLE OF CONTENTS

ARTICLES

SOUTH EAST ASIA NURSING RESEARCH
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Original Article

Factors Related The Job Satisfaction Among Migrant Nurses In Qatar

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Job satisfaction; Nurse; Working time arrangements

Abstract

Indonesian nurses migrated out of the country with various motifs, for instance, to earn a better income, enhancing the experience, personal development, and improvement of nursing ability. The phenomenon where nurses turn over from their job can also be caused by job dissatisfaction. Nurses job's satisfaction needs serious attention since the nurses are spearheading the implementation of services. The objective of this study to get an idea of the level of job satisfaction and to identify factors affecting job satisfaction in Indonesian migrants nurse in Qatar. The research method is a descriptive analytic using cross-sectional approach. The research's sample represents a total sample of 39 Indonesian nurses who work in an outpatient clinic in Qatar in February 2012. The results showed that Indonesian migrant nurses working in Qatar are satisfied with the work of 51.3%. The results of the analysis showed no correlation between length of service and working time arrangements with job satisfaction, whereas there was no correlation between age, education degree and family status with job satisfaction. The recommendations can be given to health care management in Qatar are to further improve the promotion system and nurses self-development and to increase incentives for nurses who do shift duty. Nurses are advised to increase the level of education and improve the performance of work.

INTRODUCTION

Qatar is a rich country with high economic growth due to oil and natural gas. The rapid development and development that is taking place in Qatar will automatically provide extensive employment opportunities including the health sector. There are opportunities That is one reason that Indonesian nurses migrated to Qatar in hopes of getting a better life.

With the increasing number of Indonesian migrant nurses in Qatar, there is a phenomenon and dynamics of the lives of nurses abroad. Mingling with the international community with a variety of cultural backgrounds, customs, beliefs, and different languages gives rise to their own stories and impressions. Discrimination with native Qatari including work and salary amounts contribute to making Indonesian nurses satisfied or not at work, which also relates to feeling comfortable and at home abroad.

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Job satisfaction is an expression of one's feelings and expressions when he can or cannot fulfill the expectations of the work process and its performance. Job satisfaction is not a single dimension concept, but rather a multifaceted concept which means that job satisfaction is influenced by a number of factors. In addition to salary problems, many other factors influence nurse job satisfaction. The factors that can affect an employee's job satisfaction are the contents of work, appearance, actual work assignments and as control of work, supervision, organization and management, opportunities for advancement, salaries and other financial benefits such as incentives, work colleagues, and work conditions.[1] Whereas according to demographic characteristics also affect job satisfaction.[2]

Other research declares that there is no relationship between nurse job satisfaction and age, and there is no relationship between job satisfaction and the length of employment of nurses.[3] Meanwhile, Setiawan's (2007) study states that there is a relationship between age, and marital status with nurse job satisfaction and the absence of a relationship between sex, work period and level of education with nurse job satisfaction.[4]

An interview with several nurses working in Qatar showed data that most felt comfortable working in Qatar. Other data shows that for 4 years from 2007 to 2011, out of 53 nurses working in one health care institution, only 1 nurse (1.8%) resigned and returned to Indonesia, with a 0% turnover rate. In fact, the number is increasing with the arrival of new nurses and those who are still in the process of recruitment. This phenomenon is very different from the experience of working for 6 years in the UAE (United Arab Emirates), in the first 2 years almost half of the women who resigned. Hardy (2010) also stated that the resignation of Indonesian nurses significantly occurred in Kuwait, Saudi and UAE. In accordance with the other study that resignation can be related to job satisfaction.[1,5]

Nurse job satisfaction needs to get serious attention from the management and nurses themselves because nurses are the spearhead of implementing services and personnel who interact directly with patients and families of patients. The image of a health institution is influenced by the services provided by nurses. Besides for the institution, job satisfaction is also beneficial for the nurse's own health. The level of job satisfaction and health can be mutually reinforcing so that an increase from one can increase the other and vice versa a decline has a negative effect on the other.[6]

Job satisfaction problems can have a big impact on productivity, performance, service, absenteeism, turnover and so on. Achievement of nurse job satisfaction can provide many benefits for the nurse herself and the institution where she works, and of course the client or community at large recipient of nursing services.

For Indonesian migrant nurses in Qatar, job satisfaction gives a deeper meaning. Far from home and far from relatives, job satisfaction is expected to provide more benefits, such as increasing support for nurses to survive overseas. Conversely, a low level of job satisfaction will affect behavior and personal life that is less comfortable, which in turn can encourage high levels of resignation and turnover. Based on the above things, it is interesting to study and examine what factors are related to the job satisfaction of Indonesian migrant nurses in Qatar.

METHODS

The type of research used is descriptive analytic research to make a picture of the analysis of the relationship between two variables in a situation or group of subjects. The research design used is a Cross-

Sectional approach considering the assessment of a nurse's perception of feelings towards his work can only be done for a moment because a person's perception is likely to change at any time.

The sample in this study was taken by purposive sampling technique. The total sample of all Indonesian migrant nurses in Qatar amounted to 39 people who were in accordance with the criteria of inclusion and research exclusion. This research was conducted in Qatar in the span of time from 15 February 2012 to 29 February 2012. Tools for collecting data using questionnaires that have been tested for validity and reliability. The questionnaire consists of 2 sets, namely questionnaires to assess the characteristics of respondents and questionnaires to determine the level of job satisfaction of respondents.

Data were analyzed univariately to see the frequency and distribution of respondents based on demographic characteristics and job characteristics and to know the level of job satisfaction of respondents. Then bivariate analysis to see the relationship between the independent variable and the dependent variable using the Chi-Square correlation and Rank Spearman test.

RESULTS

The results of the study on 39 respondents showed that the age of the respondents was at an average age of 37.7 years with the age of the youngest 31 years and the oldest 46 years. Judging from other demographic characteristics, it can be seen that Indonesian nurses in Qatar are mostly male sex 87.2%. The working period is between 1 and 10 years. The majority of nurses live with families in Qatar and work in shifts. The education level of the majority of Indonesian migrant nurses in Qatar is diploma graduates which are equal to 56.4%, then Senior High School (SPK) as many as 12 people (30.8%) and those who hold nursing degrees both S1 and S2 are 5 (12%).

In general Indonesian nurses working in Qatar were satisfied with their work (51.3%). There is no relationship between age and job satisfaction of Indonesian migrant nurses in Qatar. There is a relationship between the tenure and the job satisfaction of Indonesian migrant nurses in Qatar. There is no relationship between the level of education and the job satisfaction of Indonesian migrant nurses in Qatar. There is no relationship between marital status and job satisfaction of Indonesian migrant nurses in Qatar. Job satisfaction factors for Indonesian migrant nurses in Qatar, which are statistically proven to be related to overall job satisfaction are work periods and work time arrangements.

Table 1
Distribution of Indonesian migrant nurses in Qatar based on the level of job satisfaction

Level of job satisfaction	f	%
Satisfied	20	51,3
Not satisfied	19	48,7
amount	39	100

Table 2
Distribution of Indonesian migrant nurses in Qatar based on age, employment rates and job satisfaction

Bivariate correlation	Variable	Coefficient Correlation	P-Value
Spearman's rho	age vs job satisfaction	.359*	0.025
	Working period vs. job satisfaction	.359*	0.025

Table 3
Distribution of Indonesian migrant nurses in Qatar based on education, family status level, and job satisfaction

Level of education	Job satisfaction				p
	Satisfied		Not Satisfied		
	f	%	f	%	
Senior High School	7	58,3	5	41,7	0,738
Diploma	10	45,5	12	54,5	
Bachelor and Master	3	60	2	40	
Marry (live with family)	14	48,3	15	51,7	0,522
Single (live alone)	6	60	4	40	

Table 4
Distribution of Indonesian migrant nurses in Qatar based on work time arrangements and job satisfaction

Working time settings	Job satisfaction				*OR (95% CI)*	p
	satisfied		Not satisfied			
	f	%	f	%		
Shift	11	39,3	17	60,7	0,144	0,017
Not Shift	9	81,8	2	18,2		

DISCUSSION

Based on the characteristics of the demographics of Indonesian nurses in Qatar, most of them are male, mature, live with family and are educated by the nursing academy. Whereas based on the characteristics of its work, most of the work period in Qatar is relatively long, namely 5 years and above and working shifts.

The age of Indonesian migrant nurses in Qatar is in the range of 31 to 46 years, showing a relatively long maturity and possible work experience. The age group that is mostly over 36 years is 25 people. Satisfaction in the aspect of work for Indonesian migrant nurses in Qatar seen from the age factor can be used as evidence because age over 35 years can lead to feelings of satisfaction with work.[6,7]

The results of this study also show that the working period of Indonesian migrant nurses working in Qatar is relatively long, namely 5 years and over as many as 27 people. Because the majority of the working period is longer than the new, the level of job satisfaction of Indonesian migrant nurses working in Qatar is high, this is consistent with the long working period will stimulate increased job satisfaction.[8]

The education level of Indonesian migrant nurses who work in Qatar is mostly nursing graduates with 56.4%. Although in this study the education level of Indonesian migrant nurses working in Qatar was not statistically related to job satisfaction, nurses were required to improve their abilities and education to face the era of globalization.

Most Indonesian migrant nurses working in Qatar live in Qatar together with their families (74.4%). because indeed most nurses get family status facilities from companies or hospitals where they take shelter so they can invite families to stay in Qatar. The tendency to feel satisfied with the work of nurses who live with family is higher than the nurse who lives single. This is based on the fact that nurses who live with spouses and children of wives will feel more calm and comfortable.

Indonesian migrant nurses who work in Qatar, mostly shift work. Nurses involved in the rotation shift system will change their working time which is usually morning, evening and evening, according to the specified rotation shift system. Besides having a positive aspect of maximizing existing resources, work shifts will have risks and affect workers socially, physically and psychologically such as dissatisfaction and irritation.

In general, job satisfaction assessments by Nurses of Indonesian migrant nurses in Qatar are balanced between those who value being satisfied with those who are dissatisfied. The number of satisfied nurses as many as 21 people against the dissatisfied there are 18 people. Job satisfaction is a condition felt by someone who is the result of comparing the appearance or outcome (product) that is felt in relation to one's expectations.[9]

Judging from the results of the research answers the questions with the highest percentage of satisfaction is in the questions about work facilities and infrastructure, environmental hygiene, information and support/assistance of superiors to nurses in completing nursing tasks. While the aspects that cause the highest dissatisfaction are opportunities

for promotion and self-development, as much as 30.8%.

Based on the results of the study it was found that there was no relationship between age and job satisfaction of Indonesian migrant nurses working in Qatar. Analysis of researchers, this result is supported by the fact that the age of most Indonesian migrant nurses in Qatar is included in the adult group and has worked in other places so that they have a comparison of the main factors of work.

The results of this study contradict the theory which states that age has an effect on job satisfaction and the older the employee, the higher the level of satisfaction.[5,6] This is supported by a number of reasons including the further age of a person, the more difficult it is to start a new career in a new place, an established lifestyle, and an inner bond and friendship between those who are friends in the organization, on the contrary easy to guess for employees who are more young, the desire to move is greater.[9]

The results of Rank Spearman analysis showed that p = 0.025 (p <0.05) or there was a relationship between years of service and job satisfaction of Indonesian migrant nurses in Qatar. Nurses whose work period is more than 5 years give a satisfied rating of 18 people (66.7%), while nurses who have a working period of 4 years and under there are 3 people or (25.0%) who claim to be satisfied with their work. This is in line with the statement that stated that the working period was consistently associated negatively with the entry and exit of employees and was stated as one of the best single forecasters for job satisfaction when viewed from the entry and exit of employees or nurses.[8]

The test results using Chi-Square showed that p = 0.738 (p> 0.05) or there was no relationship between the level of education and the job satisfaction of Indonesian migrant nurse nurses in Qatar. This is not in accordance with the statement of another study who concluded that employees with advanced education felt very satisfied with the work they did.[7] The absence of a statistical relationship between the level of education and the job satisfaction of Indonesian nurses in Qatar can be caused because there is no difference in the types of employment contracts, staffing, salaries/incentives and benefits between employees who have low or high levels of education

Family status or residence whether or not someone is with the family will affect a person's behavior in organizational life, including expectations and demands on work/company organization. The test results using Chi-Square show that there is no relationship between family status and Indonesian migrant nurse's job satisfaction in Qatar because the p-value obtained is 0.522 (p> 0.05). progress in the field of communication that makes it easy for people to connect long distances both through sound and image/video may be one of the factors that cause the absence of a relationship between nurses who live with family and those who live alone in Qatar. Another factor is for single nurses (alone) can take twice a year leave plus tickets.

The results showed that there was a relationship between setting work time and job satisfaction for Indonesian migrant nurses in Qatar. From the result, There is a significant (very large) difference between non-shift nurses and shift workers in answering job satisfaction in Qatar. Most non-shift nurses or 81.8% said they were satisfied with their work, while shift work nurses were only 42.9% who expressed satisfaction with their work.

The existence of a statistical relationship between the regulation of work time and job satisfaction, in line with the statement that shift work is related to social, physical and psychological problems including job satisfaction and stress.[1,6,7] Even so, the

rotation shift work system has a positive aspect, namely empowering existing resources optimally. Looking at the effects of shift work which affects many aspects including job satisfaction, it is appropriate for management to provide special incentives for nurses who carry out shift work.

CONCLUSION

The results of the study were conducted on Indonesian migrant nurses in Qatar with 39 respondents working in outpatient clinics. Variables studied included job satisfaction, age, years of service, education level, family status and division of work time. The results of the test of job satisfaction analysis for Indonesian migrant nurses in Qatar showed 51.3%. While the correlation between age, education level and family status with job satisfaction are not related. Conversely, there is a meaningful relationship between years of work and work time arrangements with job satisfaction.

This research is useful as information and evaluation of implementation and obstacles in achieving nurse job satisfaction abroad, especially in Qatar, so the authors expect nurses in Qatar and those who will go abroad to prepare themselves both physically and mentally, with additional training and increase their education level. Recognizing local customs and culture as well as work-related factors will also help nurses to better adapt to the workplace and work well so that they can achieve job satisfaction as expected.

CONFLICTS OF INTEREST

The author declares that none of him had any conflict of interests.

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Original Article

Analysis Relationship Family Support and Health Cadre with Elderly Hypertension Practice in Controlling Health at Primary Health Care Mranggen Demak

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Key words:
Practice; Elderly; Health Control; Hypertension

Abstract

Hypertension is a major risk factor for cardiovascular disease which is the leading cause of death in Indonesia. Data Research Department of Health in 2005, showed hypertension and cardiovascular disease is still quite high and even tends to increase with the lifestyle that much of the behavior of healthy and clean life, high cost of treatment of hypertension, erroneous perception of the public accompanied by a lack of safety facilities hypertension , Hypertension is actually a disease that can be prevented if the risk factors can be controlled and healthy behaviors (healthy behavior) which practices or activities related to efforts to maintain, control and improve health. Data from Demak district health department, the incidence of hypertension has increased within the last three years. The aim of this study was to determine the relationship of family support and cadres with elderly Hypertension practices in controlling health in Puskesmas Mranggen, Demak by using a cross-sectional study with a quantitative approach. The sample size for a quantitative approach is 285 respondents (total sampling). The data were analyzed using univariate, bivariate with chi-square. The results showed an association between family support for elderly people who suffer from hypertension with the practice of elderly hypertension in controlling health (p = 0.048), there is a relationship between support for health workers to the elderly who suffer from hypertension with Practice elderly hypertension in controlling health (p = 0.049). Advice to the puskesmas officers in order to improve the quality of health care, home visits, provide health education particularly on controlling health benefits for elderly hypertension and cross-sectoral cooperation in the implementation of an integrated program of coaching post (posbindu) elderly.

INTRODUCTION

Hypertension is a major risk factor for cardiovascular disease which is the leading cause of death in Indonesia. Data Research Department of Health in 2005, showed hypertension and cardiovascular disease is still quite high and even tends to increase with the lifestyle that is far from healthy and hygienic behavior, high cost of treatment of hypertension, accompanied by a lack of safety facilities hypertension. If

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left untreated hypertension, the blood pressure will continue to increase gradually, resulting in the excessive workload of the heart.[1] The excessive workload of the heart that will someday result in serious damage to the blood vessels and organs such as the heart, kidneys, eyes, and even rupture of capillaries in the brain, or better known by the name of a stroke.

Hypertension, also known as a heterogeneous group of diseases, which can affect anyone of various age groups, the elderly are the age group most susceptible to hypertension, as well as the social economy. The tendency of changing lifestyles as a result of urbanization, modernization, and globalization led to a number of risk factors that may increase morbidity hypertension.[2] 38.8% of the elderly who suffer from hypertension, only 50% were treated regularly (controlled hypertension) and only half of the control well. That is, of all people with hypertension in Indonesia that is well-controlled amount below 10%.[3,4] It is easy to understand because it does not give symptoms of hypertension. Such conditions appropriate to the nature of hypertension as the silent killer (silent killers), because many people do not pay attention to a disease that is sometimes taken lightly by them, without knowing if the disease is dangerous from a variety of disorders that more fatal for example, abnormal blood vessels, heart (cardiovascular) and kidney problems and many patients who come for treatment when already severe vascular damage.[5]

Hypertension is actually a disease that can be prevented if the risk factors can be controlled and healthy behaviors (healthy behavior) that the conduct or activities related to efforts to maintain and improve health. Those efforts include monitoring blood pressure regularly, healthy living programs without smoke, increased physical activity/exercise, a healthy diet with caloric balance through the consumption of high-fiber, low-fat and low-salt, it is a combination of independent efforts by individuals / communities and supported by the existing health care program and should be done as early as possible, in hypertensive patients require regular maintenance in order to know their blood pressure. Patients with hypertension should perform routine checks that hypertension in misery can be controlled well.[2]

Data from Demak district health offices, the incidence of hypertension has increased within the last three years, in 2011 was 889 cases (13.6%), the year 2012 amounted to 1 235 cases (16.5%) and the year 2013 by 2173 (17, 8%) and ranked first 10 elderly diseases. Data in Demak Mranggen health center in the last 3 years, in 2011 was 935 cases (12%), in 2012 as many as 1150 cases (14.5%) and in 2013 amounted to 1 325 cases (16.3%) and is the second highest after joint disease of 1570 cases (21%). Based on reporting records of Posyandu elderly Source Healthy Kale village, turns hypertension in the elderly was ranked first in the amount of 64% (130 people), joint disease 20% (41 people) of 203 elderly who are registered as members of Posyandu. Of hypertensive patients is only 32% (42 people) who carry out regular inspections of each month, the rest do not do on a regular basis.[1]

From the report the practice of nursing care performed S1 students of Nursing, the University of Muhammadiyah Semarang in Puskesmas Mranggen in January-March 2014, of 318 elderly with hypertension, 145 (46%) perform a routine check on health services, the rest do not conduct regular inspections, it is because the reason does not have money for treatment, felt bad for being a burden his family, no escort because they live alone, considers the disease is a mild disease that does not need to be checked regularly.

In a society often found misconceptions about the illness. Many members of the

public when they are already sick can not work or is not able to get out of bed. Communities affected by the disease but do not feel pain (disease but no illness) will not act anything against the disease, but if they are affected by the disease and also feel pain then there will be a business and kinds of behavior, ie no action (no action), acting treat yourself (self-treatment) and seek traditional treatment started (traditional remedy), up to modern medical facilities organized by practitioners (private modern medicine).[6] Someone will take preventive action is influenced by demographic variables (education, knowledge, age, and occupation) of individuals as well as for instructions to behave (cues to action) alleged right to start the process of behavior, which is derived from information or advice on the health problems of hypertension. Health behaviors someone starts that behavior is a function of one's intention to act (behavior intention), social support from family and the surrounding community (social support), lack of access to health services (accessibility of health care), personal autonomy of people concerned in terms of taking the actions or decisions (personal autonomy) as well as the situation allows it to act (action situation). [7]

METHODS

This type of research is explanatory research using a cross-sectional approach. The population in this study were all elderly with hypertension, aged ≥ 60 years or older and live in the region Puskesmas Mranggen Demak between the months of June to December 2014. The sample size in this study is total sampling that all the elderly who suffer from hypertension, aged ≥ 60 years or older and live in the region Puskesmas Mranggen Demak, as many as 285 people.

Measuring tool used to obtain quantitative data in this study is a questionnaire in the form of written questions to uncover the independent and dependent variables. To prove the validity of the questionnaire used in this study has been tested for validity and reliability, the trial questionnaires in Puskesmas Karangawen Demak with the number of respondents 30 elderly. Validity test conducted with product moment correlation test, while the reliability test using Cronbach alpha statistic test.

Independent variables: family support, and support health workers while the dependent variable was the practice in controlling hypertension elderly health. Once the data is collected, then processed by examining the questionnaire, editing, coding, scoring and tabulating the data analyzed. Data analysis aimed to determine the relationship between independent variables with the dependent variable. In addition, the analysis was also used to test the research hypothesis. Analysis techniques used include: univariate, is used to analyze the variables - variables that exist in descriptive by calculating the frequency distribution and proportion. The bivariate analysis consists of: (1) cross tabulation analysis is used to summarize, determine the distribution of data and can also be used to analyze descriptively. (2) The comparative analysis (correlation test) as the basis for testing the research hypothesis. This analysis using Chi-Square test with $\alpha = 0.05$.

RESULTS

Practice in controlling health Elderly

Average practices committed by the respondent in controlling health was 5.47 ± 1.721 with a minimum of 2 and a maximum value of 8. Practice elderly hypertension in controlling health have largely been good, that is 69.1% and less by 30.9 %, but there are about 59.6% do not exercise regularly, 44.2% were still smoking and a diet as recommended by 35.1% and 33.7% still consume alcoholic beverages.

Family Support

Average family support against the respondent was 9.04 ± 1.959 with a minimum of 2 and a maximum value of 11. The highest level of support from family is good support and the support of 88.1% less as much as 11.9%. Most of the respondents have the support of the family, but in practice control the health of the respondents did not receive full support from the family, it is pointed out there are still 26.3% of families do not take the time to the respondents, 24.9% of respondents did not want to deliver to check the health stewardship , 21.8% of families do not support all the activities of the respondents and 18.6% of families do not bear all the costs of treatment responders.

Support Health Cadre

Average support cadres of the respondents were 2.86 ± 2.152 with a minimum value of 1 and a maximum of 7. The level of support from most health cadres is good support at 51.2% and less support as much as 48.8%. Respondents who have the support of a cadre of good health and a lack of support is quite balanced, this is indicated approximately 58.2% health worker gives advice about the disease that affects the elderly, 55.1% of health volunteers reminded to conduct periodic examinations, 53 , 3% taught how to care and 52.3% were advised to rest, while support health volunteers demonstrated less than 87% volunteer health worker to deliver health services, 79.3% did not teach gymnastics, and 67.4% are not health workers organize Posyandu elderly.

From the analysis of the relationship between health workers to support the elderly who suffer from hypertension in the elderly hypertension Practice in controlling health showed that there were 98 (75.4%) of respondents who have less support health cadres to practice good health control.

While respondents who have the support of good health cadres there are 99 (63.9%) who practice good health control, and that there are as many as 32 (24.6%) of respondents who have less support health cadres to practice controlling ill health. While respondents who have the support of good health cadres there were 56 (36.1%) who practice controlling ill health. The results of the statistical test Chi-Square test obtained by value p = 0,049 with an error rate of 5%, it can be concluded that there is a relationship between health workers to support the elderly who suffer from hypertension in the elderly hypertension Practice in controlling health

DISCUSSION

The support given by the family of the elderly with hypertension who control practices in good health, is they have been warned to want to check, reminded to take his medication regularly, delivering check, help with the cost check, remind to reduce salt, adequate rest, quitting smoking, advise many worships and pray, while the family of advanced age is not doing well health control practices revealed that they have made efforts reminded to check, recommends to check, eat right, do a heavy work

The size of the support provided by the family is also closely linked to the family's understanding of the perception of vulnerability, perceived severity, perceived benefits, perceived barriers, and access to health services.

From the analysis of the relationship between family support for elderly people who suffer from hypertension in elderly hypertensive practices in controlling health showed that there were 18 (52.9%) of respondents who have less family support practices with good control of their health. While respondents who have good family support there were 179 (71.3%) who practice good health control, and that there are as many as 16 (47.1%) of respondents

who have less family support practice controlling ill health. While respondents who have good family support there were 72 (28.7%) who practice controlling ill health.

The results of the statistical test Chi-Square test obtained by value p = 0,048 with an error rate of 5%, it can be concluded that there is a relationship between family support for elderly people who suffer from hypertension in elderly hypertensive practices in controlling health.

Humans as social beings can not live alone without the help of others. Physical needs (clothing, food, housing), social needs (association, recognition, school, work) and psychological needs including curiosity, a sense of security, feelings of religiosity, not be fulfilled without the help of others.[8] Especially if the person is facing problems, whether mild or severe. At moments like that, someone would seek social support from the people around him, so he feels valued, cared for and loved.

Social support can be regarded as something beneficial situation, providing assistance for individuals obtained from another person who can be trusted and as the availability and willingness of those means, which can be trusted to assist, encourage, receive, and keep individual. From these circumstances, the individual will know that other people pay attention, respect, and love. The family is a source of social support for family relationships to create a relationship of mutual trust. The individual as a member of the family will make the family as a collection of hope, a story, ask, and issuing complaints when the individual is experiencing problems.[9] According to Green's theory that social support is one factor that strengthens a person to perform a specific behavior.[7]

Family support can include emotional support, instrumental, information, and assessments.[10] Emotional support involves the physical strength and the desire to believe in others so that the individuals concerned became convinced that others are able to provide love and affection to him, support Instrumental, such as the provision of means to facilitate or help others as an example is the equipment, supplies, and Other supporting facilities and including providing a timely opportunity. Informative support for the provision of information to resolve personal problems, namely the provision of advice, guidance, and other information required by the individuals concerned as well as support for assessment in the form of social roles that include feedback, social comparison, and affirmation (approval).

Giving support to the elderly requires an understanding of the family about the perception of vulnerability, perceived severity, perceived benefits, perceived barriers, access to health services and presence (availability) as well as the accuracy / appropriateness (adequacy) of such assistance for the elderly, so as not to cause social support given misunderstood and not well targeted. If the elderly (for various reasons) are no longer able to understand the significance of social support, it is necessary not only social support or maintenance service but socially (social care) completely.[11] Support has been done by the families in this study were mostly families have made efforts observing condition/disease state, suggesting to pray, remind to always obey the doctor's advice, suggesting to adequate rest, and provide information about the disease.

Results cross check with the family of respondents indicated that the majority of families of respondents have understood recurrence risk factors, complications may occur, along with the health benefits of exercise control obstacles that may occur as well as access gained in an effort to control the practice of health of elderly hypertensive. The support provided by the family tried to remind to want to check, reminded to take his medication regularly,

delivering the check, help with the cost check, remind to reduce salt, adequate rest, smoking cessation, suggesting to many worships and pray. This suggests that with good family support would encourage elderly hypertensive to practice good health control anyway.

Social support has an important role to prevent health threats,[10] high social support would make the elderly more optimistic in the face of today's life and future, more skilled in meeting the psychological needs and have a higher system, as well as lower levels of anxiety, enhance interpersonal skills, have the ability to achieve what they want and be able to guide the elderly to adapt to stress that health problems are being encountered can be resolved properly and is able to perform optimal health control practices.

Social support for the elderly is very necessary for the elderly themselves are still able to understand the meaning of social support such as a supporter/sustainer of life, but the life of the elderly is often found that not all elderly people are able to understand the social support from others, so even though he had received social support but still Just indicate dissatisfaction, which is shown by way grumble, disappointed, upset and so forth. This can happen because of the support provided is not sufficient, the elderly feel no need to be assisted or worry too much emotionally that do not pay attention to the support provided, the support provided is not in accordance with what is required of elderly, a source of support for setting a bad example for the elderly, as do suggest unhealthy behaviors and to maintain or support the elderly in doing anything it wants. This situation can disrupt health control practices should be done by the elderly and causes the elderly to become dependent on others.

In this study support given by health workers include: remind the elderly to carry out checks at regular intervals, suggesting to many breaks, dropping to health services, provide advice about the disease, the elderly Posyandu organize, teach gymnastics elderly and teach how to care. There is some support for health cadres perceived by the respondents is not optimal they are escorted to health care, teaching gymnastics elderly and organizing Posyandu, this is due to the limited number of health volunteers are active in every village, most of the implementation of Posyandu still join the Posyandu toddler,

While the results of cross-checking with the families of the respondents about the support given to elderly hypertensive cadres showed the majority of respondents said that family health volunteers have held Posyandu, gymnastics, giving advice about the disease, and taught to live a healthy life. Meanwhile, in the opinion of its own health workers, they have been warned to check, suggesting to many breaks, advise, encourage and teach you how to care to posyandu.

Thus, the better support health volunteers to elderly hypertension will increase efforts to elderly hypertension to control their health and supported by a good understanding of the factors that are at risk of recurrence, complications may occur, the benefits to control health along with the obstacles that may occur and access gained in an effort to control the practice of health of elderly hypertension is the ability to provide support to elderly hypertensive to practice health control will also increase.

CONCLUSION

From the results of the study showed that 69.1% of respondents have good health control practices and the remaining 30.9% had less health control practices, among others: there are about 59.6% do not exercise regularly, 44.2% still smoke and not on a diet as recommended by 35.1% and 33.7% still consume alcoholic beverages. 88.1% of respondents get good

family support and the remaining 11.9% have less family support. 51.2% of respondents have the support of good health cadres and the remaining 48.8% less to get the support of the health cadres. 71.9% of respondents get access to good health services and 28.1% had less access to health services. There is a relationship between family support for elderly people who suffer from hypertension in elderly hypertensive practices in controlling health. Less family support, health management practices will be less as well. There is a relationship between health cadre support for elderly people who suffer from hypertension in elderly hypertension practices in controlling health. Support cadre ill health, health management practices will be less as well.

CONFLICTS OF INTEREST

The author declare that none of her had any conflict of interests.

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Original Article

Position of Fowler and Semi-fowler to Reduce of Shortness of Breath (Dyspnea) Level While Undergoing Nebulizer Therapy

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Abstract

Chronic obstruction pulmonary disease (COPD) is a lung disease that is caused due to an obstruction in a channel the airflow that much happening in Indonesia due to the high-risk factor exposure causes the onset of COPD as the habit of smoking and an unhealthy environment. Blockage in the airway that occurs in patients of COPD is usually characterized by shortness of breath. The various ways that can be done to overcome the shortness of breath are with nebulizer therapy. Nebulizer therapy action is undertaken in accordance with standard operating procedures (SPO) already determined, in the SPO mention the position at the time of the nebulizer therapy position fowler or semi fowler. This study aims to know the effectiveness of the grant the position of Fowler and semi fowler against the scale of the COPD patient shortness of breath while undergoing therapy nebulizer. Methode of this study is a quasy experiment in two groups using pre-test and post-test design. The study was conducted in General Hospital K.R.M. T Wongsonegoro Semarang with the total sample as many as 32 patients. The analysis using Mann Whitney with p-value 0.000 ($p < 0.05$) so that it can be concluded that there is a difference in the average scale of shortness of breath between fowler and semi fowler while undergoing group therapy nebulizer. The analysis showed that the position of semi fowler is more effective in lowering shortness of breath when compared to the position of fowler while undergoing therapy nebulizer. This study recommended giving the semi-fowler position to reduce dyspnea in COPD patients while undergoing Nebulizervtherapy.

INTRODUCTION

Chronic obstruction pulmonary disease (COPD) is a disease is not infectious to become a public health problem of the age of life expectancy and the increasing risk factor exposure against, such as unhealthy living habits, pollution the air especially in big cities, industrialization and the smoking habits of thought is closely connected with the incident COPD.[1] In this current era of not just in adults only even in the case of COPD, too many have encountered on the young age groups who are already familiar with the smoke. Smoking habit either active or passive smoker is the cause of most important causal and risk factors in associate as the main onset of COPD.[2]

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Figures for the incidence of COPD according to the Organisation World Health (WHO) in 2012, the number of COPD sufferers reach 274 million and in the estimate increased to 400 million people in 2020, including the country of Indonesia. Figures for the incidence of COPD in Indonesia ranks fifth highest in the world, namely 7.8 million people.[2] In a preliminary study conducted at the provincial RSUD K.R.M. T Wongsonegoro Semarang in 2016, there are 257 cases of COPD patients with the complaint of breathlessness, particularly in internal medicine. Although the signs and symptoms of COPD vary widely ranging from asymptomatic, symptoms of mild to severe symptoms but the main complaint of the patients perceived is shortness of breath due to a blockage of the airway.

Shortness of breath (dyspnea) is the subjective feeling of clients due to difficulty breathing. Shortness of breath occurs is not just a result of a blockage in the airway but also due to the influence of several factors, one of which is the skeletal muscle function decline. In addition, the COPD patient shortness of breath also occurs due to changes in the catalog is encounter on a large airway, small airway, pulmonary and pulmonary vascular. Inflammatory cell surface infiltrated the Central airway epithelium which resulted in the change of epithelial squamous metaplasia into which causes increased mucus and cells goblet so hypersecretion respiratory tract mucus, as a result, are experiencing clogging and shortness of breath.[3]

One of the nursing actions that can be done to overcome the obstruction of the respiratory tract such as shortness of breath can be done with nebulizer therapy. Nebulizer therapy is a drug generally sniffs into the respiratory tract. Nebulizer therapy done because with steam therapy drug particles that enter will be broken down first into small molecules shaped steam, so expect the drug ingested will enter into the respiratory tract to the maximum. In addition to this nebulizer therapy also provides faster onset compared to other therapies as well as giving effect to quickly restore the condition of the bronchi space.[4]

Standard operating procedures (SPO) mention that while undergoing therapy in a patient may position the nebulizer on the position of fowler or semi fowler, in the position of Fowler will eliminate pressure in the diaphragm that allows the exchange of the larger volume so launch an airway and breathe in the medication that will go to the maximum. As for the semi-fowler position, the position will be going on the withdrawal of the gravitational force of the earth so that the lungs are free to exhale and inhaled medication can enter the maximum respiratory kesaluran.[5]

The research that's been done before has the result that position semi fowler can stabilize a patient's breath pattern of pulmonary TB.[6] The study, entitled effective semi-fowler position against a decline in the scale of breathlessness in patients with asthma to have the result that the position semi fowler can lower a patient's asthma breathlessness.[5] Other studies also explained that after the client in the supine position, Fowler, and his third against influential tripod respiratory function.[7] From the explanation of the supine position indicates that Fowler, semi fowler, and the influence on respiration and tripod can decrease shortness of breath in many cases unless in combine with nebulizer while undergoing therapy. As for the purpose of the research is to find out the effectiveness of the grant the position of Fowler and semi fowler against a decline in the scale of the COPD patient shortness of breath while undergoing nebulizer therapy in RSUD K.R.M.T Wongsonegoro Semarang.

METHODS

This study is quasy experiment with the design of two group pre-test and post-test,

with intervention position fowler and semi fowler while undergoing therapy for COPD nebulizer in patients who experience shortness of breath. The sample in this research is a COPD patient complaining of shortness of breath and getting a nebulizer therapy in RSUD K.R.M. T Wongsonegoro Semarang with a total of 32 respondents, sampling techniques using purposive sampling, namely the respondent on select in accordance with the criteria of inclusion and exclusion that has researchers specify. Gauge asphyxiation using MBS (Modified Borg Scale). This research was already through the clearance ethical passed by the Commission of bioetik medical research/faculty of medicine sultan Agung Islamic University in Semarang with no. 178/III/2018 bioetik/Commission. The process of research taking place from 4th week of May until the 4th week of June 2018. The data analyzed in univariate, bivariate (test, Wilcoxon test, normalcy, and Mann Whitney test).

RESULTS

Table 1
Characteristics of COPD patient.

Indicators	Group	
	Fowler	Semi-fowler
Age (mean)	57,62	58,19
Gender		
1. Male	37,5%	68,8%
2. Female	62,5%	31,3%
Educational		
1. TS	50,0%	56,2%
2. SD	43,8%	43,8%
3. SMA	6,2%	0

Result fo the study obtained the majority of respondents who experienced shortness of breath in the category after the mid-according to WHO in the Group of fowler average age 57 years and 58 years old semi fowler group, the average gender group fowler more many experienced women amounted to 62.5% and semi fowler group of more experienced by men amounted to 68.8%, with an average education no school of 50% in the Group of Fowler and 56.2% of the Group semi fowler. The results showed the existence of a difference before and after the intervention did position at the time of nebulizer therapy can be seen in table 2

Table 2
Distribution scale of shortness of breath before and after Done Action Position Fowler And Semi fowler on when COPD Nebulizer Therapy on patients

	Min-Max	Median	SD	IQR
Pre fowler	2-7	3,00	1,365	2
Post fowler	0-3	1,00	0,834	3
Pre Semifowler	2-7	3,50	1,652	1
Post Semifowler	0-2	0,50	0,629	1

In table 2 it can be known that before a given position of Fowler inpergola mean 3.44 and after being given the position of Fowler when the nebulizer therapy mean 0.81 while in before given the position of the semi-fowler when the nebulizer therapy obtained the value of the mean 4.06 and after being given the position of the semi-fowler when the nebulizer therapy in acquired mean 0.56. The results of a test of the effectiveness of the average change in the scale of shortness of breath before and after given the position of Fowler and semi fowler when the nebulizer therapy can be seen in table 3

Table 3
Mann Whitney test with Delta Value the effectiveness of average change of scale of shortness of breath on a group of Fowler and Semi fowler while undergoing Therapy In COPD Nebulizer

Variable	*Mean rank*	*Sum range*	*p*
Fowler group	12,97	207,50	0,024
Semifowler group	20,03	320,50	

Mann Whitney test results showed a p-value 0.000 ($p < 0.05$) so that it can be concluded that there is a difference in the average scale of shortness of breath between fowler and semi-Fowler Group's position on the patient's COPD nebulizer therapy while undergoing the provincial RSUD in K.R.M. T Wongsonegoro Semarang. The analysis shows that semi fowler is more effective when compared with Fowler. This can be proved by the results of the mean rank each of the eight variables where average the biggest changes occurred in the Group of semi fowler i.e. of 20.03.

DISCUSSION

Characteristics of respondents

Of the results showed that respondents who experienced shortness of breath in the middle age category i.e. age 45 – 59 years. Research results can be concluded that patients who suffered shortness of breath are the middle age group. This happens because a person who is experiencing the aging will occur limitations of work on the chest wall caused due to liming rib joints and decreased elasticity of the lung resulting in not being able to work to the maximum.[8]

It is supported by a lot of statements stated that at the age of 55 years someone will > susceptible of developing various diseases, one of which is lung disease COPD, i.e. it is influenced by the declining immunological system when someone gets old.

Research results on 32 respondents who experienced shortness of breath in both groups noted that most gender is male 17 respondents, whereas the female gender only 15 respondents. It is associated with unhealthy living habits such as smoking which this habit more going in men compared to women.[9] In theory, the case of COPD is caused due to smoking occur due to dangerous particles or gases from smoking tobacco which triggered an abnormal inflammatory response in the lungs. Dialveoli inflammatory response causes damage to lung tissue. Exposure to cigarette smoke that is sustainable in a long period of time can cause the onset of COPD.

Research results showed the average education level end 32 respondents who were divided into 2 groups mentioned that most of the respondents 50% i.e. no school on the Group semi fowler group and fowler amounted to 56.2%. This associate that education influences the behavior of a person. In this case, someone will behave well will keep his health if the knowledge possessed is also good. It is supported by other research which explains that there is a relationship between knowledge of the behavior of healthy living.[6]

The difference in the scale of shortness of breath before and after done position fowler while undergoing therapy nebulizer

Results of research scale shortness of breath before the giving of the nebulizer therapy when fowler's position was 3.44 and after awarding the position of fowler while undergoing therapy nebulizer is 0.81. The results of the average position of Fowler when respondents undergo a nebulizer therapy showed decreased 2.63. Based on a test of Wilcoxon test obtained p-value 0.000 value ($p < 0.05$) which means that there is a difference of scale shortness of breath before and after the given position of the fowler while undergoing therapy in HOSPITALS K.R.M. nebulizer T Wongsonegoro Semarang. Fowler's position is a position where the head is elevated 900 that can be intervention to patients who suffered shortness of breath because at position fowler will help eliminate pressure in the diaphragm that allows the exchange of the larger volume from the air. What if the position is at the combine with a diaphragm pressure nebulizer therapy there is no particle inhaled medications will ease the most into the respiratory tract (Barbara, 2009).[10]

The difference in the scale of shortness of breath before and after done position while undergoing therapy semi fowler nebulizer

Results of research scale asphyxiation rat-rata prior position semi fowler nebulizer therapy moment are 4.06 and after position semi fowler nebulizer therapy moment is 0.56. The results of the average value of the position of the semi-fowler while undergoing therapy nebulizer demonstrating a decrease of 3.50.

The semi-fowler position is a position by elevating the head 450, the position is usually given to patients who experience shortness of breath. On the position of the semi, Fowler will happen to Earth's gravitational force withdrawal draws the diaphragm downwards so that it can degrade O2 consumption and can maximize the pulmonary ekstasis.[10] Difragma muscles located at the position of 45 degrees will allow the muscles to contract the thoracic cavity volume enlarge by adding the length of its vertical bar. The thoracic cavity is enlarged will create pressure on the thoracic cavity expands and forces the lungs also expands. Process vents that increased carbon dioxide will increase spending and increase the oxygen into the alveoli, oxygen inhaled will help attract drug particle respiratory to entry so join the Croup can be reduced.[11]

The effectiveness of position of Fowler and semi fowler against the scale of the COPD patient shortness of breath while undergoing nebulizer therapy

The research shows there is a difference in scale shortness of breath before and after was given the position of the fowler and semi fowler COPD patients while undergoing therapy nebulizer. The results of such research give an overview that respondents are in the position the fowler and semi fowler nebulizer therapy can reduce the time scale of the COPD patient shortness of breath.

Nebulizer therapy is therapeutic steam by entering the drug directly into the respiratory tract so that it can reduce shortness of breath. Nebulizer therapy action there are two positions that are able to decrease shortness of breath that is the position of Fowler and the position of the semi-fowler.

The results of research conducted by Mann Whitney test with delta value retrieved results p-value 0.000 ($p < 0.05$) which means that there is a difference of position fowler and semi fowler against the scale of the COPD patient shortness of breath while undergoing nebulizer therapy in RSUD K.R.M. T Wongsonegoro Semarang. The analysis shows that the position of semi fowler decreases more effective in COPD patient shortness of breath while undergoing therapy nebulizer. This is evidenced by the value of the mean rank position semi fowler shows greater value i.e. 20.03.

The limitations of the research

There are limitations in this study i.e., researchers can not categorize the breathlessness of the respondents based on factors that affect the shortness of breath. Researchers simply choose the respondent in accordance with the criteria of inclusion of already defined and concentrates on the respondents who experienced shortness of breath and live the nebulizer therapy. Researchers cannot control its homogeneity the age at which respondents age is an important factor which contributed to the scale of shortness of breath.

CONCLUSION

Results of the study are expected to provide information for the hospital and can be intervention to the patients about the best position when giving nebulizer therapy to reduce shortness of breath, have a contribution for the researchers to add science knowledge and apply the knowledge obtained in the learning process, and can add insight and knowledge of the public about the best position can be done to reduce shortness of breath especially patients undergoing therapy nebulizer.

CONFLICTS OF INTEREST

The author declares that none of them had any conflict of interests.

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Literature Review

Factors That Related To Cancer Related Fatigue

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Abstract

About 40% to 100% of cancer patients complaint of fatigue. Cancer Related Fatigue is the most disturbing symptom compared to another symptom, like nausea and vomiting. Persistent cancer-related fatigue can impact on patient quality of life because the patient becoming too tired to involve in the activity. Need study to recognize factors that related to fatigue so that as a nurse we can choose accurate nursing intervention to overcome cancer-related fatigue. Objective: To identify factors related to cancer-related fatigue. Methods: Literature were searched via Google scholar and Google search with keyword: fatigue, cancer, and nursing. Literature were in full text and published by the year 1999-2016. Literature that was in inclusion criteria than be analyzed. Result: From 6 kinds of literature that were analyzed we found out factors that are related to cancer-related fatigue. That is characteristic (age, sex), sociodemography (economic status), stadium cancer, exercise, pain, depression, and sleep quality. But the factor that most related to cancer-related fatigue remains unclear. Conclusion: Age, sex, economic status, stadium, exercise, pain, depression and sleep quality are factors that can be used as predictor fatigue.

INTRODUCTION

Fatigue is a feeling of fatigue that includes physical, mental and emotional, described as feeling helpless or lacking in energy to do something we want or need we.[1] Fatigue in cancer-related fatigue is a very common symptom and sign occurs in cancer patients and is different from fatigue experienced by healthy individuals in daily life.[1,2] In normal individuals, fatigue will disappear with adequate rest and sleep, while fatigue in cancer patients is not.[2]

As many as 40% to 100% of cancer sufferers experience fatigue. Fatigue in cancer patients is a symptom and a sign that is most disturbing compared to other symptoms and signs, such as pain, nausea and vomiting.[3] Continuous fatigue conditions can affect quality client's life because the client becomes too tired to get involved in daily activities.[4] Given these conditions, there is a need for appropriate nursing intervention to overcome fatigue in cancer clients.

Nurses as scientists, in providing nursing care must be based on an evidence base. The nursing intervention carried out must focus on the factors that are the cause of fatigue itself, so that the nursing

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interventions provided are truly effective in overcoming fatigue.

Based on this background, the authors feel the need for a study to find out the factors that are related to fatigue to determine appropriate nursing interventions to overcome fatigue in cancer clients.

The objective of this review is writing this literature study aims to identify what factors are associated with fatigue in cancer clients.

METHODS

Design of article tracking in this literature study through Google scholar and Google search, with keywords fatigue, cancer, nursing. The literature used was dated 1999–2016, full-text form and design used Observational study, prospective controlled study, 1-year longitudinal study, longitudinal study with repeated measures and systematic review. Articles that have met the criteria then analyzed narratively.

RESULTS

1. The study was conducted on 374 respondents namely gastric cancer survivor. Kuisener was in the form of a Brief Fatigue Inventory, a Beck Depression Inventory, a European Organization for Research, a QLQ-C30 Treatment of Cancer and a QLQ-STO22 gastric module that was sent by mail. It also contains questionnaires about sociodemography and characteristics of symptoms and signs. Then the data is analyzed by regression logistic model to find out the relationship between independent and dependent variables. The results showed that nearly half of gastric cancer survivors who experienced fatigue were associated with female sex, poor economic status, living in rural areas, active smokers, early-stage tumors, being depressed, and poorly performing. Depression and strong poor appearance are associated with fatigue. While the tumor stage (initial) and type of surgery contribute to worsening fatigue conditions.

2. Meta-analysis with search methods through electronic databases including PubMed, CINAHL, PsychINFO, ProQuest, and Sports Discus on journals and articles that are in accordance with the research subjects. A total of 16 results were obtained which represented 1426 respondents (exercise, 759; control, 667). Furthermore, a meta-analysis was prepared using the fixed-effects model. The results of the analysis found that aerobic exercise and musculoskeletal strength exercises were known to provide significant development to overcome fatigue in cancer patients.

3. Observational analytic research design with a cross-sectional approach. The survey was conducted, 1933 respondents filled out questionnaires sent by letter consisting of questionnaires about Brief Fatigue Inventory, Beck Depression Inventory, European Organization for Research and Treatment of Cancer QLQ-C30, and QLQ-BR23. Also includes data on socio-demography, clinics, and characteristics of symptoms. Data analysis using multivariate logistic regression. The results showed that 66.1% of mammary ca survivors had moderate to severe fatigue and 24.9% had moderate to severe depression. Both fatigue and depression are both more influenced by sociodemographic factors, comorbidity, and characteristics of symptoms and signs, than cancer and cancer treatment itself.

4. Study design Prospective controlled Cross-sectional study. The study was conducted by means of advanced cancer patients treated in 3 palliative care units included as respondents. The exclusion criteria were: Patients underwent radiotherapy or chemotherapy in the last 4 weeks,

experienced clinical anxiety, lack of English language skills, helplessness, non-dominant hand pain, and prognosis of patients who died less than 2 weeks. The working procedure is that the researcher visits the 3 treatment units each week and approaches the identified patients can be used as research respondents. Recruitment was stopped when researchers were on vacation, or sick. Controls were subjects of the same age and sex as respondents but did not suffer from cancer, with the inclusion criteria and exclusions being the same as patients. After informed consent, patients and controls were given the same assessment, except for blood tests not performed on controls. After 2 weeks, the assessment was repeated both for the patient and the controls. The research tool consisted of Fatigue Severity Scale (FSS) to measure fatigue levels, the European Organization for Research and Treatment of Cancer Quality of Life Questionnaire (EORTC QLQ core 30) to measure quality of life, Hospital Anxiety and Depression Scale (HADS) to measure anxiety levels and depression, Three visual analog scales (VAS) to measure fatigue and weakness and ability to concentrate, The Body Mass Index (BMI) and the Mid Arm Muscle Circumference (MAMC) to measure nutritional status. Patients (not done in the control), blood cell count, routine biochemistry, and prostate cancer patients were tested for testosterone, luteinizing hormone (LH) and hormone sex binding globulin (SHBG). Spearman Rank Correlation Coefficient was used to determine the relationship of each variable. Mann-Whitney U-test was used to compare each group and Multiple regression analysis was used to identify factors that independently predicted fatigue. The results showed that fatigue was not related to age, sex, diagnosis, the metastatic process, anemia, nutritional status, muscle function, or emotional condition. Fatigue is significantly associated with pain and dyspnea in patients and is associated with anxiety and depression in controls.

5. The study design was a 1-year longitudinal study, with the sampling technique of 107 women newly diagnosed with stage I-III mammary cesarean and scheduled to get at least 4 cycles of chemotherapy then selected according to the specified inclusion criteria. From the selection process, 68 people were included in the study. Control was women who did not have cancer included in the study as a comparison. Furthermore, each respondent (cancer sufferer) was asked to choose one of their friends to be controlled, if the respondent did not have friends, volunteers would be chosen to become control. Each friend (control) must be the same as the cancer patient in terms of age (± 5 years), ethnicity, and education. From the selection process, there were 60 people as "normal" controls. Exclusion criteria (cancer patients) are: pregnant, in a spinal cord transplant, undergoing radiotherapy, metastatic cesarean section, suffering from other diseases, anemia, and experiencing physical and psychological deterioration. While the exclusion criteria for normal controls are ever diagnosed with cancer (all types). The data collection procedure was: after respondents filled out informed consent, respondents and controls were asked to fill out questionnaires to measure the quality of sleep, fatigue, depression, and QOL. Data collection was done 3 times: before chemotherapy, at the end of 4 cycles of chemotherapy, and 1 year after chemotherapy. The time of data collection varies depending on when the patient starts chemotherapy, but always at least 3 days before chemotherapy. Descriptive analysis (mean, standard deviation, and error standard) was carried out on all

outcomes from the 3 measurements. T-tests and Chi-square or Fisher's exact tests were used to measure differences in demographic characteristics between the two groups. Chi-square tests or Fisher's exact tests were used to examine possible differences in medical comorbidities and average dropout. The Pearson correlation is applied between variables and age and body mass index. The results showed that compared to the control group, cancer patients had longer napping times, worse sleep quality, more fatigue, more depression, more disturbed routine ratification and worse QOL (p-value <0.05). When administering 4 cycles of therapy: cancer patients showed sleep quality, fatigue, depression, and routine activity were worse than the group at the baseline level and in those without cancer (control) (p values <0.05). After 1 year, fatigue, depression, and QOL in cancer patients returned to baseline levels but remained worse than the control group. While for naping time and routine activities it is no different from the control group.

6. The design of the study is longitudinal design with repeated measures, with the sampling technique of ca mammary patients visiting the medical-surgical oncology clinic selected to be used as the study sample. The inclusion criteria of this study included women diagnosed with mammary cancer (0-8 weeks), being in stage 0-III, aged> 18 years, able to provide informed consent, being able to fill out questionnaires every 3-6 months up to 4 years after treatment active ends, can read and write, can speak English, and has no mental disorders. From the selection process, a sample of 150 people was obtained. The research tool used is the Distress thermometer problem list, used for self-reporting about stress conditions around cancer he suffered and the psychological status of the respondent. The Brief Pain Inventory is used to measure the incidence, location, and intensity of pain. The Brief Fatigue Inventory is used to measure the level of fatigue of respondents. The Patient Health Questionnaire (PHQ9), is used to independently measure client depressive conditions. Generalized Anxiety Disorder (GAD7), is used to measure the respondents' anxiety level. Data analysis using univariate, bivariate and multivariate analysis. The results of the analysis showed that desperation, pain, and sleep disorders were significant predictors individually and collectively on fatigue (P <0.00). Sleep disturbance was the most significant predictor of fatigue in the first year of patients with cesarean section.

Table 1.
Characteristics of articles (N = 6)

No	Title	Author (year)	Method	Results
1	Factors related to clinically relevant fatigue in disease-free stomach cancer survivors and expectation-outcome consistency.[5]	Hwang IC et.al (2014)	Observational, Cross-sectional	Fatigue in cancer clients is related to the female sex, poor economic status, living in rural areas, active smokers, early stages, and depression, strong depression is associated with fatigue, compounded if the client is in the early stages.
2	Exercise is an effective treatment modality for reducing cancer-related fatigue and improving physical capacity in cancer patients and survivors.[6]	Elliott M. McMillan and Ian J. Newhouse, (2011)	Meta-analysis.	Exercise is related to fatigue in cancer clients. Exercise (aerobic and musculoskeletal strength) is effective in overcoming fatigue in cancer clients.
3	Fatigue and depression in disease-free breast cancer survivors: prevalence, correlates, and association with quality of life.[7]	Kim, S.H; Son, B.H; Hwang, S.Y; Han, W; Yang, J.H; Lee, S; Yun, Y.H. (2008)	The survey, Cross-Sectional	Fatigue and depression are more influenced by sociodemographic factors, comorbidity, and characteristics of respondents.
4	Fatigue in advanced cancer: a prospective controlled cross-sectional study.[8]	P Stone, J Hardy, K Broadley, AJ Tookman, A Kurowska and R A'Hern (1999)	Prospective controlled Cross-sectional study.	Fatigue is not related to age, sex, diagnosis, the process of metastasis, anemia, nutritional status, muscle function, or emotional condition. Fatigue is significantly associated with pain and dyspnea in patients and is associated with anxiety and depression in controls.
5	Sleep, fatigue, depression, and circadian activity rhythms in women with breast cancer before and after treatment: a 1-year longitudinal study.[9]	Israel, S.A ; Liu L ; Rissling, M ; Loki Natarajan, L ; Neikrug, A.B ; Palmer, B.W ; Paul J; Mills, P.J ; Barbara A. Parker, B.A ; Georgia Robins Sadler, G.R ; and Maglione, J. (2014)	a 1-year longitudinal study	Compared to the control group, cancer patients have longer napping times, worse sleep quality, more fatigue, more depression, more disturbed routine ratification and worse QOL (p values <0.05) When administering 4 cycles of therapy: cancer patients showed sleep quality, fatigue, depression, and routine activity were worse than the group at the baseline level and in those without cancer (control) (p values <0.05) After 1 year, fatigue, depression, and QOL in cancer patients returned to baseline levels but remained worse than the control group. While for naping time and routine activities it is no different from the control group.

No	Title	Author (year)	Method	Results
6	Factors That Affect Fatigue In Breast Cancer Survivors.[10]	Ingham, Jaclyn (2015)	A longitudinal design with repeated measures	Depression, pain and sleep disturbance were significant predictors of individual and collective fatigue (P <0.00). Sleep disturbance was the most significant predictor of fatigue in the first year of patients with cesarean section.

DISCUSSION

Based on the search results it was found that there were several factors that could be used as predictors of fatigue in cancer clients, namely characteristics (age, sex), sociodemography (economic status), stage of the disease, exercise, pain, depression, and sleep quality. The first study found that strong depression was associated with the onset of fatigue, and the condition was exacerbated if the client was in the early stages of cancer. The results of the first study were strengthened by fifth research which can be concluded that the more depressed the client, the more fatigued he will be. Depression is an emotional reaction in response to a sense of loss that is indicated by losing interest, difficulty concentrating and feeling hopeless to feel useless and interesting again. This condition is referred to as negative cognitive tread, this belief is seen as a basic symptom of depression, wherein it also includes somatic disorders (such as sleep disorders), motivational disorders, and affective disorders which will ultimately affect the physical condition and manifest as fatigue.

The results of the second study (systematic review) found that exercise (aerobic and muscle strengthening exercises) can reduce fatigue levels in cancer clients. This condition reinforces the notion that with increased physical activity it will provide great benefits psychologically and increase physical abilities so as to reduce the level of fatigue.

The third study was found that both fatigue and depression were both more influenced by sociodemographic factors, comorbidity, and characteristics of symptoms and signs, than cancer and cancer treatment itself. This is not in accordance with the fourth study which states that fatigue is not related to characteristics (age, sex) but is more related to pain. Pain is actually common in cancer patients, but this factor is not alone causing fatigue but is interrelated with one another. Complaints of pain that are felt continuously can cause patients to become less active, not appetite, sleep disorders, and cause patients to be depressed and depressed, all of which can cause fatigue. This can be seen in the seventh study where the results state that desperation, pain, and sleep disorders are significant predictors both alone and collectively towards fatigue.

CONCLUSION

By looking at the 6 literature we have not been able to deduce what is actually the main factor that causes fatigue in cancer clients because the results of the research are different and there are mutually reinforcing studies between one another. The main causes of fatigue in cancer clients are still unclear. However, based on these studies we know what factors might be predictors of fatigue in cancer clients, so we as nurses can focus on these factors to determine appropriate nursing interventions to overcome fatigue in cancer clients.

CONFLICTS OF INTEREST

The author declares that none of him had any conflict of interests.

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Original Article

Factors Related Work Load Stress Among Migrant Semi-Skilled Workers in Messaieed Qatar

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Abstract

Stress is a condition arising from the gap between the demands generated by the transaction between individual and environment with resources of the biological, psychological, or social system. This study aims to determine factors that led to the stress of Indonesian semi-skill migrant workers in Messaieed Qatar. Method using descriptive analytical study with cross-sectional design. The study sample was 70 respondents of semi skill Indonesia migrant workers in Messaieed Qatar. The results showed a relationship between physical condition with the level of stress (p value=0.000 with r=0.407), the better of physical condition the milder levels of stress. There is a relationship between psychological burden with the level of stress (p value=0.01 with r=0.305), the lighter of psychological burden the milder level of stress. There is no relationship between extreme weather with the level of stress (p value=0.252 with r=0.139). There is a relationship between workload with the level of stress (p value=0.001 with r=0.379), the lighter workload the milder level of stress. There was a relationship between neighborhood conditions with stress level (p value=0.000 with r=0.541), the better condition of the neighborhood the milder level of stress. Recommendations of this study are Messaieed Medical Center to provide counseling and education about stress, how to reduce the stress on their own and social support. Companies where the respondents worked need to make some modifications of the environment such as conducted sport activities, a regular of spiritual tutorial activities, and other positive activities.

INTRODUCTION

Stress is a very popular terminology and is an inevitable thing in human life. Every person has experienced and will experience it with different levels depending on the physical and psychological resistance of the individual. This is the influence of fast-changing social changes as a consequence of modernization, industrialization, advancement of science, and technology that has influenced moral, ethical, and lifestyle values, where not everyone is able to adapt, depending on personality owned by each individual.[1]

Stress arises due to the gap between the demands generated by transactions between individuals and the environment

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with biological, psychological or social systems possessed by these individuals that will affect their cognition, emotions, and social behavior.[2] Stress caused by environmental and social physical conditions in the form of situations, events, or objects that cause demands in the body and cause psychological reactions called stressors.[3]

The State of Qatar is a small country in the Middle East region, in the form of a peninsula which consists mainly of deserts and beaches with a length of about 60 km. Compared to Indonesia in the tropics, Qatar has many differences including: Geographical conditions that are mostly composed of barren deserts and beaches, extreme climates where temperatures will reach 50 ° C during summer and 5 ° C in winter , the use of English as a second language and language in the world of work and academics, cultural social life is diverse because this country is one of the countries in the Middle East (Middle East) which is used as a destination country to find work by migrant workers (migrant workers destination country) from various countries in the world, physical and psychological conditions of competitive work, and enforcement of state regulations and laws based on Islamic teachings, and other differences. The differences above can lead to stress on migrants or workers in this country.

The Indonesian population in Messaaieed, one of the provinces in Qatar is divided into two, most of which are in the housing complex of oil and gas companies, and the others are in camps for workers (labor camp). Indonesian residents who work in the professional sector at Messaieed are working for various oil and gas companies, while those who work as semi-skilled workers work for contracting companies that support and support the operations of oil and gas companies.

Workers in the semi skill and unskill sectors, they only get work visa facilities with a bachelor contract status, which means they do not get family visa facilities. In addition, they also have to live in "labor camp" together with thousands of other semi-skill and non-skill workers. This condition at least raises a variety of problems both in terms of health, social interaction relationships, and certainly has the potential to create interpersonal relationship conflicts between those who can cause stress.

Stress on Indonesian semi-skilled migrant workers in Qatar occurs a lot and can cause anxiety. Stress that is felt can interfere with the role and function of the worker both in his work or in his daily life. The stress felt by Indonesian semi-skilled migrant workers in Messaieed Qatar can come from oneself (internal) or from outside (external). The stressors need to be identified so that they can be controlled or minimized and modifications to the condition are made to reduce them.

Based on interviews conducted by the author of 5 Indonesian migrant semi-skill workers who work and live in Messaieed Qatar, found factors that have the potential to trigger stress and depression if prevention is not carried out and modification of existing conditions properly and correctly. The results of the interview stated that all respondents stated that they did not feel comfortable living in Qatar, all respondents mentioned internal factors (far from families in Indonesia) as stressors, 4 people (80%) mentioned occupational factors as stressors, 4 people (80%) mentioned extreme temperatures as a stressor, and 3 people (60%) mentioned a factor in their lack of ability to adapt to people other than Indonesia due to a lack of ability to speak English. Based on the description above, both from the results of interviews or the facts and phenomena of differences that exist in Qatar, it is necessary to examine whether the factors behind the stress of migrant semi skill workers at Messaieed Qatar. For this reason, researchers are interested in

conducting research to find out and identify what factors are related to stress on Indonesian migrant semi-skilled workers in the Qatar Messaieed region.

METHODS

This type of research uses descriptive analytical study methods, this study aims to determine stress-related factors in Indonesian semi-skilled migrant workers in the Qatar Messaieed region. The research design used is a cross-sectional study where observations of research samples are only done once in a certain period or period. The method used in this study is a survey by conducting interviews and distributing questionnaires to respondents. The population in this study were all Indonesian semi-skilled migrant workers who were in the Qatar Messaieed region with around 80 people. Sampling in this study was carried out by the total sampling method, namely taking all the population with the inclusion criteria, respondents who were between 20 and 50 years old, willing to be respondents, were at the location when the study was conducted. Data collection tool using a questionnaire that has been tested before.

The collected data were analyzed univariate with the aim to explain or describe the characteristics of each research variable, and bivariate which aims to determine the relationship between the dependent variables namely stress level with each independent variable namely physical condition, psychological burden, extreme weather, workload, and environmental conditions of residence. The test used is the Pearson Correlation because the data is normally distributed.

RESULTS

This research was conducted in December 2011 to April 2012, located in the Indonesian community in the Qatar Messaieed region. The number of respondents in this study was 70 people with all respondents being male. Of all 70 questionnaires distributed to respondents, all were filled out because the researchers accompanied the respondents at the time of filling out the questionnaire.

The distribution of respondents based on age found the youngest age of respondents was 21 years, and the oldest age was 55 years with an average age of respondents was 34.5 years, while the highest number was in the age group 31-40 years as many as 26 people (37.14%). Based on the level of education shows that the majority of respondents as many as 29 people (41.45%) have a high school education, and at least are elementary school educated as many as 12 people (17.1%). Based on the type of work obtained, most of the respondents, as many as 36 people (51.45%) worked as drivers, while the others worked as laborers (labor/rigger) as many as 17 people (24.3%) and other jobs (welder, pipe fitter, foreman). Based on marital status most of the respondents were married as many as 55 people (78.6%), and the rest were still single, 15 people (21.4%). Meanwhile, based on the tenure of respondents in Qatar, the average working period of respondents in Qatar was 2.36 years with the latest working period <1 year, while the longest working period was 7 years, with the highest working period of 1-3 years, which was 34 people (48.6%).

The results of the study showed that most experienced severe stress as many as 36 people (51.4%), while the rest experienced mild stress as many as 34 people (48.6%). Most of the respondents' perceptions of their physical condition are in good condition as many as 40 people (57.1%), the rest are in a bad condition as many as 30 people (42.9%). Most of the respondents felt psychological burden stressors in the weight level as many as 38 people (54.3%), while the rest were in the light level as many as 32 people (45.7%). Most of the respondents felt that extreme weather stressors were in bad condition as

many as 49 people (70%), and only a small percentage felt it was good, 21 people (30%). The results showed that the majority of respondents felt the condition of heavy workload as many as 36 people (51.4%), and the rest felt it in mild conditions as many as 34 people (48.6%). The results of the study also showed that the majority of respondents felt that the conditions of living conditions were in good condition as many as 43 people (61.4%), and only a small proportion of those who perceived them in a bad condition were 27 people (39.6%).

The results showed that there was a relationship between physical conditions and stress levels of respondents (p-value of 0.000 (<0.05) and the value of r = 0.407). Graph 1.1 illustrates the direction of the relationship between the variables of physical conditions and stress levels. The direction of a positive linear pattern relationship means that the better the physical condition of the respondent the lighter the stress level. The determinant coefficient of 16.6% means that the physical condition affects stress by 16.6%, the remaining 73.4% is determined by other factors.

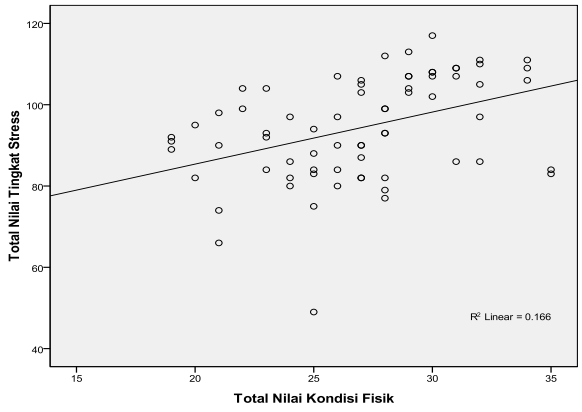

Figure 1
Correlation of stressors of physical conditions with stress levels in Indonesian migrant semi skill workers at Qatar Messaieed

The results of the study on the correlation of psychological burden stressors with stress levels on semi-skilled migrant workers are described in Figure 2.

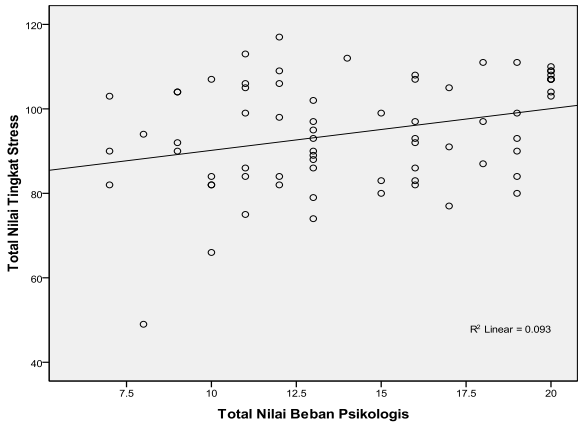

Figure 2
Scatter plot the correlation of psychological stress with stress levels in Indonesian migrant semi skill workers at Qatar Messaieed

Figure 2 shows that there is a significant relationship between psychological burden and stress level of respondents (p-value of 0.010 (<0.05) and r = 0.305). The direction of the relationship has a positive linear pattern means that the lighter the psychological burden of the respondent the lighter the stress level. The determinant coefficient of 9.3% means that the psychological burden affects stress by 9.3%, the remaining 90.7% is determined by other factors.

The results showed that there was no relationship between extreme weather and stress levels of respondents (p-value of 0.252 (> 0.05) and r = 0.139). The results showed that there was a significant relationship between workload and stress level of respondents (p-value of 0.001 (<0.05) and r = 0.379). The direction of the relationship has a positive linear pattern, which means that the lighter the workload of respondents, the lighter the stress level. The determinant coefficient of 14.4% means that the workload affects stress by 14.4%, the remaining 85.6% is determined by other factors.

The results of other studies on environmental conditions with stress

levels of respondents are described in figure 3. The results showed that there was a significant relationship between living conditions and stress levels of respondents (p-value of 0.000 (<0.05) and r = 0.541). The direction of the relationship has a positive linear pattern, which means that the better the environmental conditions of respondent living, the lighter the stress level will be.

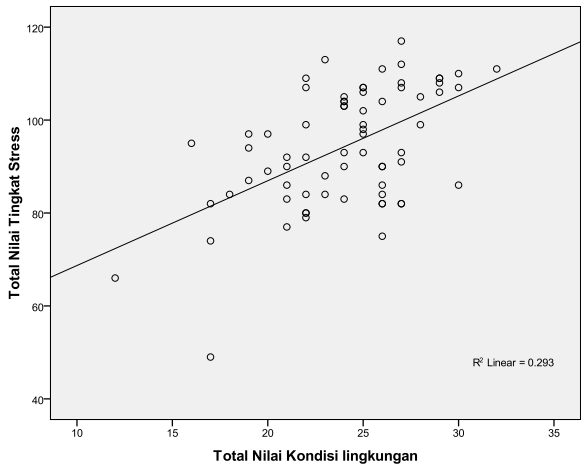

Figure 3
Scatter plot the correlation of environmental conditions with stress levels in Indonesian migrant semi skill workers in Qatar Messiah

The results of the study on figure 3 show the large determinant coefficient of 29.3%, which means that the living conditions of the environment affect stress by 29.3%, the remaining 70.7% is determined by other factors.

DISCUSSION

Based on the results of the study showed that the average age of the respondents was 34.5 years, the youngest age was 21 years while the oldest was 55 years. This is in accordance with the regulations of the Qatari government regarding the age limit for workers ranging from 20 to 60 years.

The results of the study also showed that the majority of respondents' education was high school as many as 29 people (41.45%), junior high school educated as many as 29 people (41.45%) and the rest had elementary education, 12 people (17.1%). The company regulations that employ them require a minimum education of High School or Middle / High School, but in reality, there are 12 workers with elementary education who can pass the selection to work in Qatar. The level of education of a person is very influential on the ability and performance of his work, especially it will have an effect on his ability to manage the stress he finds when working.

Based on the type of work, the results showed that the majority of respondents worked as drivers (drivers for large vehicles, such as: employee buses, dump trucks, and long haul trucks / tronton) as many as 36 people (51.4%), who worked as laborers (labor / rigger spread in various divisions such as canteen, construction, oil and gas project, and bridge / road construction) as many as 17 people (24.3%), and worked in other sectors (Pipe fitter, welder, foreman) as many as 17 people (24.3%) . Determination of semi-skilled workers is in accordance with the criteria set another study which divides the type of worker into three, consisting of Non-Skilled workers, Semi-skilled workers, and Skilled / Professional workers.

Most of the respondents were married to 55 people (78.6%), meaning that the respondents had a greater risk of being exposed to stress because they were separated from their families. Their biological needs certainly get a nuisance because the leave provided by the company is given at least annually. According to the hierarchy of needs established by Abraham Maslow biological and physiological needs are the most basic in the pyramid. one of the basic needs can influence other needs, including influencing the psychological condition and work.[3]

The results of the study also showed that the majority of respondents had a working period of 1-3 years, namely 34 people

(48.6%). However, there are 28 respondents (40%) who have a working period of <1 year, this means that they are still adapting to the environment and the new work they are currently living. Even some people have just come to Qatar in less than 2 months. States that the source of stress can be in the form of bioecology such as drastic weather changes, extreme temperatures that can make individuals experience physical and psychological stress, and sources of psychosocial stress such as new jobs, and environment and community atmosphere the new one.[4]

Based on the results of the study showed that the majority of respondents as many as 36 people (51.4%) had stress at a severe level. This can be seen from the frequency distribution of questionnaires which showed that as many as 50 people (71.43%) answered sometimes feeling stiff when hanging out with coworkers and their environment, 46 people (65.71%) answered sometimes losing their appetite, 45 people (64.29%) answer sometimes disagree with colleagues / supervisors, and 42 people (60%) answer sometimes feel bored/bored with their jobs. In fact, there were 19 people (27.4%) who answered always and often thumped when communicating with superiors and 21 people (30%) who answered always and often felt disappointed with the treatment of superiors.

The results of this study are in line with the other research, the results of his research show this result is influenced by the company's target that is too high, limited time in completing work, lack of adequate responsibility from the company, heavy workload, and ambiguity role in work. The high level of stress experienced by respondents can occur because the education level of respondents on average is still lacking. The level of education of a person is very influential on the ability and performance in work, especially in managing the stress he finds when working. The severe stress experienced by respondents needs to be given serious attention and needs to be addressed because if it does not interfere.[5,6]

The results showed that as many as 30 people (42.9%) stated that their physical condition was in bad condition. There were 36 people (51.42%) who said that since coming to Qatar their sexual needs were often and always disturbed. This is understandable because most of the respondents were 55 people (78.6%) who were married and lived far from their wives and families. In addition, as many as 18 people (25.52%) consumption of smoking has increased, and as many as 17 people (24.29%) have disturbed sleep patterns.

Stress has an impact on physical, psychological, health, cognition and organization including being easily saturated and bored, having difficulty resting, and experiencing sleep disorders. This is also in accordance with the other study which states that the body will give a physical reaction to various challenges encountered in life by trying to harmonize it or that the individual will recover quickly enough with the influence of the experience of stress experienced before.[7]

The results showed that the majority of respondents as many as 38 people (54.3%) stated that their psychological burden was severe. It is seen that as many as 38 people (54.28%) often and always feel anxious/worried about the development of their children, 36 people (51.43%) answered frequently and always felt anxious about their children's education, and as many as 22 people (31.43%) say often and always feel anxious/worried about the loyalty of his wife. This is consistent with another statement that family conditions that are not good can cause a person's condition to become stressed with the burden, the condition of respondents who are far apart from their families shows that their family is in a bad condition.[7] The above opinion is also

supported by the opinion of Gottlieb which states that close and positive attachment to others, especially with family and friends, is consistently found as a good defense against stress.[8]

The results showed that most of the respondents were 49 people (70%) stated that extreme weather conditions in Qatar were in bad condition. This can be seen from the frequency distribution of the questionnaire, of which from 5 questions / statements about extreme weather, where as many as 43 people (61.43%) answered frequently and always felt uncomfortable with dust storms that often occur in Qatar, 39 people (55.72%) answered often and always feel insecure when traveling in the midst of dust storms, as many as 39 people (55.72%) answered frequently and always felt the summer weather in Qatar was too hot for them, and 37 people (52.86%) answered always and often felt the temperature of the season the cold in Qatar is too cold for them.

The results showed that the majority of respondents, 36 people (51.4%) stated that the workload was in heavy condition. This can be seen from the frequency distribution of the questionnaire, where out of 8 questions / statements about workload, where as many as 51 people (72.86%) have to answer frequently and always be extra careful in doing their work, 32 people (45.72%) answer frequently and always felt that the work was full of danger/risk, and as many as 29 people (41.43%) answered frequently and always felt their superiors asked for work to be completed on time.

Work stress is caused by too many tasks, limited time, lack of responsibility, role ambiguity, value differences, frustration, changes in work types, and changes or role conflicts.[9,10] The presence of too many tasks is not always a cause of stress, but it will be a source of stress if the number of tasks is not proportional to the ability both physically and skillfully and the time available to individuals. While the limited time in doing work can trigger stress because if someone who usually has the ability to complete the tasks assigned to him. Ability is related to expertise, experience, and time owned. Under certain conditions, employers often provide assignments with limited time. As a result, individuals are pursued time to complete tasks according to the time set by superiors.

Based on the results of the study showed that the majority of respondents as many as 36 people (51.4%) had stress at a severe level. This can be seen from the frequency distribution of the questionnaire which shows that 25 respondents (35.72%) answered frequently and always with questions I felt uncomfortable / did not match the housing facilities provided by the company, and as many as 14 people (20%) answered frequently and always with questions I feel uncomfortable with the camp environment that is too many people.

According to other research, the absence of social support means that stress will tend to appear in individuals who do not get support from their social environment. Social support can be in the form of support from the work environment or family environment. Many cases show that individuals who experience work stress are those who do not receive support (especially morale) from their families, such as parents, in-laws, children, friends and the like. Likewise, when someone does not get support from their peers, they tend to be more susceptible to stress. This is caused by the absence of social support which causes inconvenience in carrying out their work and duties.[11,12]

Based on the results of the study it was found that there was a significant relationship between physical conditions and stress levels, where (p-value = 0.000 (<0.05) with r = 0.407). This study shows that the better the physical condition of the

respondents, the lighter the stress level. This is in accordance with the opinion of Potter and Perry (2005) which states that one of the factors in the emergence of stress comes from within a person such as physical conditions, psychological conditions or emotional states. The extent to which the level of stress experienced by an individual on his illness is influenced by age and physical conditions and the severity of the disease he experiences.[3]

The results showed that there was a significant relationship between psychological burden and stress level (p-value = 0.010 (<0.05) and r = 0.305). This research shows that the lighter the psychological burden of the respondent, the lighter the stress level. This is in accordance with the opinion of others that a person's stress level is shown by one of the symptoms is psychological symptoms which include: anxiety, tension, confusion, anger, sensitivity, feelings, ineffective communication, boredom, job dissatisfaction, mental fatigue, loss of concentration.

The condition of respondents who are far apart from their families causes the burden of thought and psychological conflict in themselves to increase, family conditions that are not good can cause a person's condition to become stressed with the burden. This is shown by the psychological symptoms shown by the respondent, namely the results of research stating that the respondents feel anxious about the development of their children (54.28%, 51.43% of their children's education), and the loyalty of their wives left in Indonesia (31.43%)

The results of the calculation of the Pearson correlation test show that there is no relationship between extreme weather and stress levels (p-value = 0.252 (<0.05) and r = 0.139). Actually, based on the distribution of extreme weather questionnaires, it was found that 61.43% of respondents answered frequently and always felt uncomfortable with dust storms that often occur in Qatar, 55.72% of respondents answered often and always felt insecure when traveling amid dust storms, 55.72% of respondents answered frequently and always felt the summer weather in Qatar was too hot for them, and 52.86% of respondents answered always and often felt the winter temperatures in Qatar were too cold for them. It could be that for extreme weather, respondents have adapted and are getting used to the temperature and climate in Qatar, so this extreme weather factor does not cause and cause stress for the respondents.

Based on the results of the study it was found that there was a significant relationship between workload conditions and stress levels, where (p-value = 0.001 (<0.05) with r = 0.379). This research shows that the lighter the workload of respondents, the lighter the stress level. The results of this study indicate 72.86% of respondents answered frequently and always extra carefully in doing their jobs, 45.72% of respondents answered often and always felt the work they were doing was full of danger/risk, and 41.43% of respondents answered often and always felt their superiors asked for work to be completed on time .

This result is in line with the research conducted by other research, the results of his research said that much of respondents experienced severe stress because of having a heavy workload, including distance from home to work, large responsibilities, and limitations and predetermined time targets trigger job stress on the office.[13]

Based on the results of the study it was found that there was a significant relationship between workload conditions and stress levels, where (p-value = 0.000 (<0.05) with r = 0.541). This research shows that the better the condition of the environment where the respondent lives, the lighter the stress level. The results of

this study were based on noisy living conditions because the respondent's camp was inhabited by thousands of other workers, with a capacity of 8 workers from various ethnic groups placed in one room. In addition, psychological conditions are also very susceptible to misunderstandings among camp residents, and even fights and fights are reported often occurring in the respondent's neighborhood. This result is in accordance with the research conducted by others, the results of his research say that several of respondents said that the conditions of their work environment were stressful for their work. Lighting conditions that are lacking, there is noise in the work environment, and a high psychological work environment is the factors that trigger the stress of their work.

CONCLUSION

Based on the results of the above research with existing limitations, it is necessary to give advice to various parties. For health services Messaieed Medical Center Qatar is expected to provide counseling services about stress and stress work, how to understand the level of stress experienced, and how to deal with or reduce stress independently. Health services, especially nurses, are also expected to provide interactive health education and counseling about stress, how to seek help when dealing with stress, and how to modify conditions to reduce the risk of stress. The education provided is mainly about stress, handling, and prevention for every worker who shows symptoms of stress when visiting health services where he works. For companies that employ migrant semi skill workers to modify conditions that have the potential to cause stress. For Indonesian people in Messaieed Qatar to increase their knowledge about stress, handling and prevention, and to know where to look for help when there are community members or friends who show stress symptoms in their place. Suggestions for the Indonesian government to pay more attention to the education level of workers who will be sent abroad. Because a person's education level is very influential on a person's ability to deal with and manage the stress they experience. The recommendations for further researchers should be able to examine the respondent characteristic variables, especially added characteristics of ethnicity or citizenship other than Indonesia, where the results can be used as a comparison, whether there are significant differences regarding the level of stress experienced by semi-skilled migrant workers by citizens other than Indonesia.

CONFLICTS OF INTEREST

The author declares that none of him had any conflict of interests.

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Original Article

MgSO4 And Slow Stroke Back Massage Therapy On Blood Pressure of Severe Pre Eclampsia Pregnant Women

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Abstract

Preeclampsia is a dangerous complication for pregnant women and their fetuses, this can cause damage to body organs namely heart failure, kidney failure, liver dysfunction, blood clotting disorders, death for the mother and fetus, if not immediately addressed well and correctly. Management of severe preeclampsia by administering MgSO4 intravenously to mothers as prevention of seizures, one of the nursing actions to overcome preeclampsia patients is the provision of relaxation techniques Slow stroke back massage. The objective of this research to determine the effectiveness of MgSO4 Therapy and Slow Stroke Back Massage on Blood Pressure Response In Severe Preeclampsia Pregnant Women at Roemani Hospital Muhammadiyah Semarang. This research uses the quasi-experimental design with the pre and post test perspective. This research measured 32 the pregnant women with severe preeclampsia at Roemani Muhammadiyah Hospital Semarang from purposive sampling technique. The result of this research was shown the effect of blood pressure reduction in all preeclampsia pregnant women given MgSO4 therapy and slow stroke back massage. There is a significant influence on the provision of MgSO4 therapy and slow stroke back massage on the blood pressure response of severe preeclampsia pregnant women.

INTRODUCTION

The number of pregnant women at Roemani Muhammadiyah Hospital Semarang in 2017 was 1,589 people, of which 94 were pregnant women with pre-eclampsia, if at an average of 7.33% or as many as 7 pregnant women with preeclampsia each month. Whereas in 2018, in 8 months from January to August 2018 there were 1048 pregnant women, in which pregnant women with preeclampsia reached 82 people, not even 12 months there had been an increase in pregnant women with preeclampsia, if on average every month pregnant women with preeclampsia as much as 10.25% or as many as 10 people every month.

Preeclampsia (Toxemia Gravidarum) is a condition that occurs in pregnant women, maternity and childbirth usually occurs in the second trimester until the first week after labor with symptoms of hypertension,

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edema and proteinuria.[1] Preeclampsia is a dangerous complication for pregnant women and their fetuses, this can cause damage to body organs such as heart failure, kidney failure, liver function disorders, blood clotting disorders, HELLP syndrome, death for the mother and fetus, if not treated immediately properly and correctly.[1,2]

General management of severe preeclampsia by paying attention to the airway, breathing, and circulation if there is a seizure. Then administer MgSO4 intravenously to mothers as prevention of seizures.[3] The mechanism of action of MgSO4 is not fully understood but, it is thought to cause dilatation of the cerebral arteries so as to reduce cerebral ischemic (ischemia in the brain). Magnesium blocks calcium receptors by inhibiting N-Methyl-D-aspartate receptors in the brain. Magnesium also produces peripheral (especially arterioles) vasodilation which reduces blood pressure. MgSO4 plays a role in blocking calcium entry to the synaptic end so that it will change the neuro muscular transmission. This transmission is influenced by the presynaptic greater as well as the post synaptic effect. Presynaptic acetylcholine release is also reduced so that it will alter neuromuscular transmission. The precise mechanism of action for the tocolytic effects of MgSO4 is not clearly defined, but may be related to the action of magnesium as a calcium inhibitor which inhibits muscle contraction so that no seizures occur.[3,4]

Side effects of administration of MgSO4 in pregnant women with pre-eclampsia are usually associated with hypermagnesemia (excess magnesium levels), such as nausea, vomiting, thirst, flushing the skin, sleepiness, confusion, loss of tendon reflexes, muscle weakness, hypotension, arrhythmia, respiratory depression, and coma. The observation was carried out after the administration of MgSO4 by examining blood pressure, frequency of pulse and respiration, patellar reflexes and urine count. This aims to determine the progress of the administration of MgSO4 and if the results of the examination are less than normal, MgSO4 will be stopped.

How to reduce the risk that occurs in pregnant women with severe preeclampsia should be given independent therapy to help decrease blood pressure during pregnancy in a natural way and can be done easily. One care that can reduce high blood pressure is to give a gentle massage to the mother's back called slow stroke back massage. One factor that makes the occurrence of preeclampsia in pregnant women is a change in blood pressure during pregnancy that has increased so that one intervention that is non-pharmacological to help reduce pressure easily and cheaply is by slow stroke back massage.[5,6]

Slow stroke back massage is a manipulation therapy with gentle massage on the tissue that aims to provide effects on physiology, especially in the vascular, muscular and nervous systems of the body. Slow stroke back massage not only provides overall relaxation but also benefits health such as smoothing blood circulation, lowering blood pressure, reducing pain response and improving sleep quality.[7]

From the results of a brief interview with nurses in the Ayyub 1 room, Roemani Muhammadiyah Hospital, Semarang, information was obtained that a nurse must specifically monitor the physiological response of pregnant women after administration of MgSO4. Because it turns out the effects of MgSO4 on pregnant women can cause hypotension, also decrease contractions to arrhythmias, respiratory depression to the more severe, namely coma. Whereas in the fetus the effects of MgSO4 can cause a decrease in FHR so that it can cause death in the fetus. Effects on giving birth after giving MgSO4 can cause postpartum bleeding. And still, according to one nurse in theAyyub 1

room, a massage performed on pregnant women with severe preeclampsia can help mothers relax so that it affects the decrease in blood pressure. Based on these descriptions, researchers are interested in conducting research with the title "The Effect of MgSO4 Therapy and Slow Stroke Back Massage on Blood Pressure in Pregnant Women With Severe Preeclampsia".

METHODS

The type of research used was quasi-experimental or quasi-experimental using a form of pre-post treatment planning divided into two groups (two-group pre-test - post-test design). This study aims to compare the blood pressure of pregnant women with severe preeclampsia before and after MgSO4 therapy and compare the blood pressure of pregnant women before and after slow stroke back massage.

In this study, the population is pregnant women with severe preeclampsia at Roemani Muhammadiyah Hospital Semarang from January to August 2018, namely 82 pregnant women with severe preeclampsia. The sampling technique used in this study is Purposive Sampling so that the number of samples is 32 respondents, the sample is divided into two different groups. The research was conducted at Roemani Muhammadiyah Hospital Semarang in January - March 2019 data collection tools with observation sheets, data were analyzed by univariate and bivariate (Wilcoxon Match Pairet Test).

RESULTS

The characteristics of the respondents were 32 years old, the majority of respondents were 50% private workers (8 respondents in the group given MgSO4 and SSBM), the average gestational age of the respondents was 37 weeks, the respondents' gravida status as much as the second pregnancy was 15 respondent (46.9%).

Table 1
Characteristics of respondents

Indicators	MgSO4	MgSO4 +SSBM
Age, mean (SD)	31,87 (4,334)	33,69 (4,813)
Gestational Age, mean (SD)	36,938 (1,8062)	37,562 (2,3656)

Based on table 1, it can be seen that the youngest age in the group of pregnant women with severe preeclampsia who received MgSO4 therapy was 24 years, and the oldest was 39 years. The average age is 31.87, with a standard deviation of ± 4.334. The youngest age in the group of pregnant women treated with MgSO4 and Slow Stroke back Massage was 26 years, and the oldest was 41 years. The average age is 33.69 with a standard deviation of ± 4.813. Based on this table can be seen that gestational age in the group that received the lowest MgSO4 therapy was 33 weeks and the highest was 39 weeks. The average age is 36.938 with a standard deviation of 1.8062. The gestational age in the group treated with MgSO4 and the lowest stroke back massage was 31 weeks and the highest was 40 weeks. The average age is 37.562 with a standard deviation of 2.3656.

Table 2
The systole and diastolic blood pressure before and after receiving the therapy

Indicators	MgSO4	MgSO4 +SSBM
Systolic blood pressure before receiving MgSO4 therapy, mean (SD)	168,63 (11,865)	151,94 (6,082)
Systolic blood pressure after receiving MgSO4 therapy, mean (SD)	153,75 (16,619)	141,87 (3,862)
p	0,005	0,003
Diastolic blood pressure before getting MgSO4 therapy, mean (SD)	104,44 (16,496)	94,81 (6,901)
Diastole blood pressure after receiving MgSO4 therapy, mean (SD)	91,88 (8,326)	87,00 (6,633)
p	0,001	0,001

Based on table 2, It can be seen that the systole blood pressure before the lowest MgSO4 value is 160 mmHg and the highest

value is 200 mmHg. The mean systole blood pressure before getting MgSO4 therapy was 168.63 with a standard deviation of 11.865. Diastole blood pressure before getting MgSO4 therapy the lowest value is 90 mmHg and the highest value is 150 mmHg. The mean diastolic blood pressure before getting MgSO4 therapy was 104.44 with a standard deviation of 16.496. Based on the table, it can be seen that the systole blood pressure after getting MgSO4 therapy the lowest value is 139 mmHg and the highest value is 190 mmHg. The mean systole blood pressure after getting MgSO4 therapy was 153.75 with a standard deviation of 16.619. Diastole blood pressure after getting MgSO4 therapy the lowest value is 80 mmHg and the highest value is 110 mmHg. The mean diastolic blood pressure after obtaining MgSO4 therapy was 91.88 with a standard deviation of 8.326. Result of the research was shown that systolic blood pressure in pregnant women with severe preeclampsia before and after MgSO4 therapy is p-value 0.005 (<0.05), so it is normally distributed ie there is influence of changes in systole in pregnant women with severe preeclampsia before and after MgSO4 and there is an effect of changes in diastolic blood pressure in pregnant women with severe preeclampsia before and after MgSO4 therapy (p-value 0.001).

Based on table 4.4 It can be seen that the systole blood pressure before getting MgSO4 therapy and slow stroke back massage the lowest value is 140 mmHg and the highest value is 161 mmHg. The mean systole blood pressure before getting MgSO4 therapy was 151.94 with a standard deviation of 6.082. Diastole blood pressure before getting MgSO4 therapy the lowest value was 88 mmHg and the highest value was 110 mmHg. The mean diastolic blood pressure before getting MgSO4 therapy was 94.81 with a standard deviation of 6.901.

Based on table 2, It can be seen that systole blood pressure after getting MgSO4 therapy and slow stroke back massage the lowest value is 137 mmHg and the highest value is 150 mmHg. The mean systole blood pressure after receiving MgSO4 therapy was 141.87 with a standard deviation of 3.862. Diastole blood pressure after getting MgSO4 therapy the lowest value was 74 mmHg and the highest value was 100 mmHg. The mean diastole blood pressure after getting MgSO4 therapy was 87.00 with a standard deviation of 6.633.

Based on Table 4.4, it can be seen that P-value = 0.001, this shows that there is a change in the physiological response of systolic blood pressure in pregnant women with severe preeclampsia before and after MgSO4 therapy and slow stroke back massage and there is a change in the physiological response of systolic blood pressure in pregnant women with severe preeclampsia before and after MgSO4 therapy and slow stroke back massage (p-value 0.001).

DISCUSSION

Research conducted on 32 respondents after therapy either given MgSO4 or given MgSO4 and Slow stroke Back Massage showed a significant change in blood pressure reduction in both systole and diastole. The effect of therapy can be proven by Wilcoxon bivariate analysis. P value is less than 0.005.

The mechanism of slow stroke back massage is in the form of a long and soft swab that produces a relaxing effect in the body which causes a decrease in heart rate and blood pressure. Relaxation is beneficial in reducing stress levels and vasodilation of blood vessels. The mechanism of slow stroke back massage increases relaxation by decreasing sympathetic nerve activity and increasing parasympathetic nerves which causes the release of endorphins which make blood vessels vasodilatory.[8,9] The mechanism of therapy for MgSO4 and slow stroke back massage both work as vasodilators to help reduce blood pressure

in pregnant women with severe preeclampsia.[10]

MgSO4 is an important mineral in the human body that is mostly in the bone. Metabolism and distribution of other minerals in the body such as calcium and potassium are often associated with magnesium levels. MgSO4 used as a vasodilator in preeclampsia and eclampsia is also indicated for replacement therapy in magnesium deficiency with signs of muscle spasms. The mechanism of action for the tocolytic effect of MgSO4 is not clearly known but is used to reduce PE and SE development where after administration of MgSO4 intravenously in women with severe preeclampsia shows a strong potential to prevent the onset of eclampsia.[11]

This research was supported by another research, where the results showed that blood pressure decreased after slow stroke back massage, with the results that there was a decrease in systolic blood pressure decrease in diastolic blood pressure.[5]

CONCLUSION

Besides primigravida who is at risk for severe preeclampsia also in pregnancies with grand multipara, as many as 3 respondents (18.8%) pregnant women with severe preeclampsia who received MgSO4 therapy and slow stroke back massage because pregnancy more than 3 times will cause excessive uterine stretching so that cause excessive ischemia and affect the occurrence of severe preeclampsia.

The influence of blood pressure on pregnant women with severe preeclampsia obtained the results of the study which showed P-value = 0.001 where p-value <0.05, so this shows that there are differences in the physiological response of blood pressure in pregnant women with severe preeclampsia before and after received MgSO4 therapy. While the physical response of blood pressure in pregnant women with severe preeclampsia was obtained by the results of the study which showed that P-value = 0.001, this indicates that there are differences in the physiological response of systolic blood pressure in pregnant women with severe preeclampsia before and after MgSO4 therapy and slow stroke back massage.

CONFLICTS OF INTEREST

The author declares that none of them had any conflict of interests.

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Original Article

Symptom and Disability One Year After Traumatic Brain Injury

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Abstract

TBI is a leading cause of death and disability worldwide. The effects of TBI can significantly disrupt the lives of those who are injured and survive. TBI can affect patients in the physical, cognitive, behavioral and emotional domains which appear from the acute phase and can remain long-term. This cross sectional survey aimed to examine the disability after TBI by the components of ICF and also to describe the symptom present in one year after TBI. TBI patients were recruited from the medical record data of patients admitted to the neurosurgery unit who at least 12 month after discharge from hospital and able to be followed up. The DRS was used for measured disability. Total 56 TBI patients were recruited in this study, 58.9% of the subjects were classified as mild TBI, while 37.5% and 3.6% of them were classified as moderate and severe TBI respectively. More than half of subjects (62.5%) reported of current symptoms with headache as a most common reported. Based on DRS was found that 83.9% of the subjects have no disability, whereas 3.6% had a mild disability, 5.45 had a partial disability, and 7.2% had a moderate disability. The results demonstrated that a TBI survivors face substantial disability and symptom 1 year after injury. To optimise health and well-being outcomes, clinicians need to identified the needs of patients with less severe TBI and treated during the post-acute period.

INTRODUCTION

TBI is a leading cause of death and disability worldwide. The majority of TBI cases are due to road traffic injuries, which account for nearly 60% of all cases of TBI[1] The increase in road traffic injuries is also projected to become the third leading cause of global disease and the second leading cause of disease for low- and middle-income countries by 2020. The burden of TBI is manifested in all regions of the world, and is especially prominent in low-and middle-income countries.[1] In Indonesia, based on the Indonesia Health Profile by the Ministry of health Republic of Indonesia, TBI is currently included in the top ten diseases in hospitalized patients. The number of TBI patients in 2010 was 25,281.[2]

The effects of TBI can significantly disrupt the lives of those who are injured and survive. TBI can affect patients in the physical, cognitive, behavioral and

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emotional domains which appear from the acute phase and can remain long-term.[3–6]

The WHO developed the International Classification of Functioning, Disability, and Health (ICF) framework for describing health and health-related states. The ICF development went through multiple revisions, including the original International Classification of Impairments, Disabilities, and handicaps (ICIDH) and the intermediate working draft, International Classification of Functioning and Disability (ICIDH-2) before reaching its current form.[7] In the ICF, "disability" was replaced with the simpler and more general term "activity". Handicap has been replaced with "participation restriction". Handicap and participation are different words for similar constructs, the latter designed to have a more positive slant.[8] In the ICF framework, a person's functioning is conceived as a dynamic interaction between health condition (disease, disorder, injuries, and trauma) and contextual factor using bio-psycho-social approach. The ICF consists of two parts including (1) functioning and disability and (2) contextual factor. Functioning and disability has two components; (1) body structure and (2) activity and participation. It can be used to indicate problems with a three components outcome; (1) impairment, (2) activity limitation, and (3) participation restriction.

The purpose of this study was to examine the disability after TBI by the components of ICF and also describe the symptom present in one year after TBI.

METHODS

Patients fulfilling the following criteria were enrolled in this study: (1) diagnosed with mild to severe TBI, but oriented with respect to time, place and person at the time approached, (2) age 18-65 years, (3) at least 12 month after discharge from hospital and able to be followed up, (4) have no spinal cord injury, history or current psychiatric disease, terminal illness, or comorbidity such as MI, COPD, and gout. Subjects were recruited from the medical record data of patients admitted to the neurosurgery unit at Kariadi Hospital. Total of 56 subjects were used in this study.

Disability was measured by Disability Rating Scale (DRS).[9] It consists of 8 items with a 29-point measure. The DRS was designed to measure changes in recovery levels of adults with TBI, where the total scores are meant to reflect the level of disability. The various items of DRS address all three WHO categories: impairment, activity limitation, and participation restriction. The first three items of the DRS ("Eye Opening", "Communication ability", and "Motor Response") are a slight modification of the GCS and reflect impairment ratings. Cognitive ability for "Feeding", "Toileting", and "Grooming" reflect the level of activity limitation. The "Level of Functioning" and "Employability" reflects participation restriction.[10] A score of zero meant the person had no disabling impairments detected by the scale, while the maximum score of 29 indicated vegetative death.[11] Total scores have been used to describe different clinical levels of disability as follows: none (0), mild (1), partial (2-3), moderate (4-6), moderately severe (7-11), severe (12-16), extremely severe (17-21), vegetative state (22-24), and extreme vegetative state (25-29) (Bellon et al.). The inter-rater reliability of in-person assessments with the DRS has been established (r = .97-.98) and the test-retest reliability of the DRS has also been established (Spearmen ρ = .95).[11]

Demographic and health status data were collected and reviewed from each patient's medical record. This included age, gender, religion, marital status, educational level, occupation, average income, family status, time after injury, access to rehabilitation, and current symptom. In addition, the GCS was assessed on admission for classifying

the severity of TBI using the criteria (1) mild TBI with GCS 13-15, (2) moderate TBI with GCS 9-12, and severe TBI with GCS ≤8.

RESULTS

The characteristics of 56 subjects are shown in Table 1.The mean age of subjects was 33.84 (SD 12.56) years old with range from 18-59 years old. The majority of subjects were male (75%) with an average time after injury of 19.24 (SD 2.98) months, range from 13-24 months. About half (60.7%) of subjects was married and 17.9% had educational levels lower than junior high school. Although more than half of the subjects worked as labors (73.2% before injury and 64.3% after injury), the number of jobless was increasing after injury from 5.4% to 10.8%. Majority of the subjects were Moslem who most (93%) of them living with the family with the number of family range from 0 to 9. Majority of the subjects diagnosed with TBI were caused by traffic accident.

Based on GCS, it was found that 58.9% of the subjects were classified as mild TBI, while 37.5% and 3.6% of them were classified as moderate and severe TBI respectively.

Table 1
Characteristic of Subjects (N=53)

Variables	f	%	Mean (SD)
Age (year)			33.84 (12.57)
(Minimum-Maximum=18-59)			
Gender			
Male	42	75	
Female	14	25	
Religion			
Muslim	56	100	
Marital status			
Single	20	35.7	
Married	34	60.7	
Widow/Widower	2	3.6	
Level of education			
No schooling	1	1.8	
Elementary school	9	16.1	
Junior high school	12	21.4	
Senior high school	28	50	
Diploma	3	5.4	
Bachelor	3	5.4	
Occupation before injury			
Student	9	16.1	
Government employee	3	5.4	
Labors	41	73.1	
No occupation	3	5.4	
Occupation after injury			
Student	8	14.2	
Government employee	3	5.4	
Labors	39	69.6	
No occupation	6	10.8	
Time after injury (months)			19.27 (2.98)
(Minimum-Maximum= 13-24)			

Variables	f	%	Mean (SD)
Living together with family			
Yes	52	92.9	
No	4	7.2	
Number of families living together (Minimum-Maximum=0-8 persons)			3.7 (1.7)
Access to rehabilitation			
No	47	83.9	
Yes	9	16.1	
Use complementary therapy			
No	48	85.7	
Yes	8	14.3	
GCS on admission			12.83 (2.21)
Mild TBI (13-15)	33	58.9	
Moderate TBI (9-12)	21	37.5	
Severe TBI (< or equal to 8)	2	3.6	
Cause of injury			
Motorcycle accident	38	67.9	
Traffic accident	14	25	
Falling	3	5.4	
Violence	1	1.8	

Table 2
The number and percentage of symptom of the subjects)

Variables	f	%
Current symptom present		
No	21	37.5
Yes	35	62.5
Headache*	30	53.5
Memory problem*	6	10.7
Fatique*	3	5.3
Emotional problem*	2	3.5
Vision problem*	1	1.8
Cognitive problem*	1	1.8
Pain*	1	1.8
Stiff face*	1	1.8
Nose problem*	1	1.8

*= each patient can have more than one symptom

The number and percentage of symptom of the subjects are shown in table 2. More than half of subjects (62.5%) reported of current symptoms as follows: headache (53.5%), problems with memory (10.7%), fatigue (5.3%), emotional problem (3.5%), visual problems (1.8%), cognitive problem (1.8%) , pain (1.8%), stiff face (1.8%), and nose problem (1.8%).

Table 3
The number and percentage of DRS of the subjects categorized by level of disability

Level of Disability	f	%
None (0)	47	83.9
Mild (1)	2	3.6
Partial (2-3)	3	5.4
Moderate (4-6)	4	7.2

The disability of the subjects based on DRS was found that 83.9% of the subjects have no disability, whereas 3.6% had a mild disability, 5.45 had a partial disability, and 7.2% had a moderate disability (Table 3).

DISCUSSION

The majority of the TBI subjects in this study were male, which was similar to previous studies.[12–18] The WHO report (2004) on road traffic injury prevention reported that males account for 73% of deaths and 70% of all disability-adjusted life years (DALYs) lost because of road traffic injuries.

According to the cause of TBI, it was found that the majority of the subjects diagnosed with TBI sustained their injuries in road traffic accidents. This result was consistent with the second global status report on road safety by the WHO (2012) in that 90% of road traffic injuries occur in low- and middle-income countries, such as Indonesia. Similarly, it was also reported that in low- and middle-income countries, motorcycle riders account for a large portions of road traffic injuries.

Most of the subjects in this study were young adults (M = 33.84, SD = 12.5) with the median age of 32 years old. This finding was consistent with a previous study which reported that young adults accounted for the majority of TBI subjects.[19,20] Moreover, a report on the incidence of TBI showed that there was bimodal age distribution in adult populations.[21,22] The first peak occurs in young adults with motor vehicle crashes being the major cause of TBI. The second peak occurs within the elderly population with falls being the predominant cause of TBI.[21,22]

Regarding the employment status of TBI patients, it was found that the number of unemployed subjects increased from 5.4% before injury to 10.8% after injury. This finding may reflect that some TBI patients could not return to normal life after their injury. The TBI results in physical and functioning limitations which need long-term care. As reported in previous studies, more than a half of TBI patients had changed their vocational status after they encountered problems with employment.[23] Consistent with those results, role limitations at work and school was confronted by TBI patients.[20]

More than a half of the subjects in this study reported having current symptoms such as headaches, memory problems, fatigue, the vision problems, emotional problem, cognitive problem, pain, stiff face, and nose problem. Some of patient reported having more than one symptom. This finding was consistent with previous studies which reported the physical impact of TBI on patients.[3,5] After three months, approximately half of the mild TBI subjects reported at least one persistent symptom, and the persistence of symptoms continued at one year after injury even though they received early active rehabilitation.[5] Among those symptoms reported in this study, headaches were the most common among the TBI subjects, which was consistent with a previous study.[24]

In this study only a lesser amount required access to rehabilitation. It was noted that only a small number of subjects joined a rehabilitation program in this study (n=9). This reflects the situation of Indonesia, where access to rehabilitation units is limited. It is estimated that although over 80% of the world's people with disabilities live in low and middle income countries only 2% have access to rehabilitation services.[11] The TBI person who is admitted in a post acute rehabilitation program may have a better outcome. The outcome of TBI persons admitted to a post rehabilitation program at early admission (less than 1 year post injury) versus late admission.[25] It was found that all groups showed improvements between admission and discharge on measures of overall disability, independence, home competency, and productivity, and these gains were maintained at follow-up. In addition, the greatest gains were obtained in persons entering a post rehabilitation program within 6 months post injury.[25] Post acute neuropsychological rehabilitation can have long-term beneficial effects.[26] The

rehabilitation group showed significantly lower levels of brain injury symptoms and higher levels of competency. They also rated internal locus of control and general self-efficacy as significantly higher, anxiety and depression levels significantly lower, and QoL significantly higher in the rehabilitation group.[26] Moreover, a systematic review of the effectiveness of multidisciplinary rehabilitation following acquired brain injury in adults of working age showed strong evidence that more intensive programs were associated with more rapid functional gains.[27] The impact of multifaceted rehabilitation services on functional outcomes after TBI for individuals with significant physical and cognitive difficulties, as well as those with added behavioral complications. The result showed that the rehabilitation treatment model achieved significant functional gains for neuropsychologically-impaired adults with and without associated behavioral and substance problems.[28]

Moreover, In Indonesia, besides modern medicine, there are traditional treatments that have been lasted a long time and are entered in the community. TBI patients after discharge from hospital are less likely to follow up in a hospital. More commonly they prefer traditional treatments such as herbs or massages or visiting spiritual healer. Even though in the community, TBI patients can access services from community health center. However, community health center only provide primary care for simple disease or symptom. Caring for TBI patients after the acute phase, like other disabled groups, is mostly done at home with family. Because traditional medicine has become part of Indonesian culture and is also more available, it is more likely to be used for curing patients. As reported in WHO-South East Asia regional (Chaudhury & Rafei, 2001), traditional medicine and traditional practitioners in Indonesia, who have developed in line with community needs, are to provide the alternative health services. These practitioners are very popular and familiar in the community, because they are easily accessible and valuable, and have been proved empirically safe.[29]

Those symptom and disability which persist 1 year after injury would be affecting the Quality of Life (QoL) of patients with TBI. It is evidence that a lesser degree of disability was related to higher QoL.[30] Cognitive dysfunction, the activity of daily living (ADL) dysfunction, and GOS at the time of hospital discharge for TBI patients related significantly to QoL.[31] Congruent with previous studies, patients with lower functional independence have significantly more decreased rates of life satisfaction than patients with greater functional independence.[32]

CONCLUSION

TBI survivors after 1 year post injury demonstrated face substantial disability and symptom. To optimize health and well-being outcomes, clinicians need to identify the needs of patients with less severe TBI and treated during the post-acute period.

CONFLICTS OF INTEREST

The author declares that none of her had any conflict of interests.

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