Breastfeeding and Occupational Stress and Fatigue of Female Workers in Garment Manufacturing Companies

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Abstract

Female workers have not been clearly defined in the legislation that supports breastfeeding. Moreover, a significant number of them experience occupational stress and fatigue, which may disturb productivity. The research aimed to reveal the stress and fatigue level of breastfeeding female workers from garment companies in Sobosukawonosraten area of Central Java. Using cross sectional approach, this analytical survey involved 210 female workers of six garment companies across six districts. Furthermore, cluster snowball sampling technique was used to sample the workers, and chi-square test was used to analyze the data. Research results indicated a significant correlation between breastfeeding and occupational stress ($X^2 = 15.307, p< 0.05$) with an effect of 26.1% (C= 26.1; OR= 3.124); and another significant correlation between breastfeeding and occupational fatigue ($X^2 = 15.307, p< 0.05$) with a 55.5% effect (C= 55.5; OR= 30.82). On the whole, breastfeeding female workers have special needs and require attention from the companies in order to continue supporting good breastfeeding for the babies, who will become the nation’s future generation.

Keywords: breastfeeding, occupational stress and fatigue

Introduction

The United Nations’ ILO Convention established one of its targets to enforce special protective effort for female workers. This is due to the fact that there are still companies that do not provide adequate attention to them such as garment manufacturers. Meanwhile, the potential of these women is greatly significant in Indonesia; hence, the supporting factor that accommodates their need to work comfortably is required. Government appeals in the provincial, district or municipal levels have encouraged the companies to continue the provision of supporting facility such as lactation or breastfeeding rooms for the mothers. However, in reality, most of the female workers that undergo this cycle are not free to breast-feed their babies during work hours, and there is still a lack of facility to support exclusive breastfeeding.
Exclusive breastfeeding is given to a new born baby until he or she is six months of age, and this complies with the Decision Letter of the Minister of Health No. 450/Menkes/SK/IV/2004. However, the legislation supporting this subject has not established a clear definition on the breastfeeding and working female workers even though bearing a child, giving birth and breastfeeding are undeniable nature of women. Early observations found that many of the workers were under occupational stress and fatigue, which may affect their productivity. Meanwhile, one of the reasons why working women stop breastfeeding is because they return from maternity leave. Only 10.6% of them continue to breastfeed after going back to work, and work place policies can significantly affect breastfeeding behaviors.

It was also found in the interview with 313 breastfeeding female workers that the pressure and conflict to balance work demands and breastfeeding affected their body and emotional health up to the point that some of them delivered negative work performance. Fatigue, lack of personal care and irregular meals are the physical problems that they faced. Psychological pressure due to the conflict between work demands and breastfeeding that they underwent after returning to work was also illustrated. Stress is an incapability of the workers to address work demands, which results in some sort of discomfort. This can affect occupational fatigue with symptoms of exhaustion and decline of alertness.

Subjective and objective description of fatigue are a) sluggishness, sleepiness and dizziness, b) inability or declined ability to concentrate, c) decrease of alertness, d) weakness and slowness of perception, e) lessening of passion at work or lack thereof and f) a drop in physical and spiritual performance. This research was aimed to reveal the level of work related stress and fatigue experienced by breastfeeding female workers in the garment companies at Sobosukawonosraten area of Central Java, which comprised of Surakarta, Boyolali, Sukoharjo, Karanganyar, Wonogiri, Sragen, and Klaten.

Methods

The research was an analytical survey with cross sectional approach and research population of the entire breastfeeding and non-breastfeeding female workers at garment companies in Sobosukawonosraten area of Central Java. The sample was 210 people, which comprised of 105 breastfeeding female workers working as operators in the garment companies and 105 non-breastfeeding workers. The research used cluster snowball technique for the sampling and chi-square test for the statistical analysis in identifying the correlation between research variables. To achieve this, the data was gathered through questionnaire. The scale of occupational stress was measured through occupational stress questionnaire, which comprised of 46 questions. However, after the conduct of validity and reliability test, there were only 32 valid and reliable question points (α > 0.7) that could be used for the research. Moreover, occupational stress level was defined by tallying valid answer points with the lowest score of 1 and highest of 4. Since there were only 32 valid question points, the lowest total score would be 32 and the highest would be 128. Furthermore, the data was categorized by totaling the lowest and highest scores divided by two, resulting in 80, which was then classified into the category of not stressed (score of 48-95) and stressed (score of 96-153). Meanwhile, the measurement of work fatigue used Reaction Timer L-77 Lakassidaya’s with two categories of not fatigued workers (score ≤410.0) and fatigued workers (score >410.0).

Results and Discussion

Research subjects of 210 people comprised of 105 breastfeeding workers (50 percent) and 105 non-breastfeeding workers for comparison purpose (50 percent). Based on the summary of research subject characteristics presented in Table 1, it was identified that most of the respondents aged 31-42 years old with the longest tenure of five years and above (≥5 years). Moreover, they were graduates of SMK (vocational upper secondary school) and SMU (upper secondary school); thus, they were categorized into the group of respondents with more than 10 years of education (≥10 years). Moreover, the majority of them had ideal BMI (Body Mass Index).

| Table 1. Summary of Research Subject Characteristics |
|-----------------------------------------------------|
| Characteristic                                      | Total (Person) | Percentage (%) |
| Condition of subject                                |                |                |
| Breastfeeding                                       | 105            | 50             |
| Non-breastfeeding                                   | 105            | 50             |
| Age (years old)                                     |                |                |
| 31-42                                               | 118            | 56.19          |
| 20-30                                               | 92             | 43.81          |
| Tenure undergone (Years)                            |                |                |
| ≥5                                                  | 120            | 57.14          |
| <5                                                  | 90             | 42.86          |
| Length of education (Years)                         |                |                |
| ≥10                                                 | 128            | 60.95          |
| <10                                                 | 82             | 39.05          |
| Body Mass Index (BMI)                               |                |                |
| Ideal                                               | 128            | 60.95          |
| Not ideal                                           | 82             | 39.05          |
From the analysis on the correlation between the effect of breastfeeding and work stress (as shown in Table 2), it was identified that most of the breastfeeding workers were under work stress, which were more in number than the compared non-breastfeeding workers. Based on the results of the statistical test, the values of $p < 0.05$ and $C = 26.1$ were found. Therefore, it can be concluded that there was a significant correlation between breastfeeding and work stress with an effect value of 26.1. The three factors of workload pressure, link between their household and career and their inability to understand the pressure of role and performance at work have direct and significant impacts on work stress. High total workload and the declined time for resting, recovering and sleeping are risk factors for women’s mental health with symptoms showing up 12 months after giving birth.

Psychological pressure that took form as a conflict between work and breastfeeding demands are also described by the breastfeeding female workers that returned to work. The women expressed a need for support from their surrounding and also a sense of guilt, stress and feeling that they are sacrificing themselves. The workers, especially operators in the garment companies, had high workload pressure due to production targets given by the companies. This incurred pressure on them, which then caused them to stress, and due to this, their emotion, thinking and physical condition were affected. The stressors can be found in the person’s work environment.

Moreover, the mothers were required to wake up at night to breast-feed. Added with the lack of support from their husbands during that time, another burden fell on the workers, who in the daytime still need to work eight hours in the companies without the freedom to breast-feed or pump their breast milk. Some of them were forced to conduct the pumping in an inappropriate place such as the toilet. Furthermore, they did not know where they should store the breast milk. This caused a waste of spoiled milk and a concern that they would lack the production of breast milk, which then added more burdens to them. One of the ways to overcome work stress is to motivate the self to keep calm, control feelings, face issues and resolve problems correctly.

Table 2. Test Results of the Correlation between Breastfeeding Effect and Work Stress

| Workers         | Stress Level | Total | $\chi^2$ | p   |
|-----------------|--------------|-------|----------|-----|
|                 | Stressed n   | Not Stressed n |       |     |
| Breast-feeding  | 50           | 55    | 105      |     |
| Non-breast-feeding | 23           | 82    | 105      | 15.307 | 0.000 |
| Total           | 73           | 137   | 210      |     |
The analysis found 78 breastfeeding workers (74.3 percent) and 9 non-breastfeeding workers (8.6 percent) experiencing work fatigue. Furthermore, the statistical test results acquired the values of $p < 0.05$ and $C = 55.5$. Therefore, a significant correlation was identified between the effect of breastfeeding and work fatigue with an effect value of 55.5, which means that the female workers experienced the impact of breastfeeding on work fatigue (Table 4).

This is in line with the research conducted on 313 breastfeeding female workers regarding pressure and conflict of mothers in balancing work demands and breastfeeding, which has physical and emotional health impacts. The respondents even showed poor work performance due to physical problems including fatigue, lack of personal care and irregular meals. Furthermore, the women were burdened by double roles and 24 hour work than compared with men. The roles were to conduct household chores, manage the household, and provide care for their children.

One of the factors of work fatigue is workload. Breastfeeding female workers that work in garment manufacturers had double roles of working in the companies and tending the household as mentioned in the previous paragraph. These roles, added with workload from the companies, affect the setting in of fatigue. From the analysis on the correlation between age, tenure, BMI and length of education with work fatigue (as exhibited in Table 5), the statistical test result on age and work fatigue acquired the value of $p = 0.245$ ($p > 0.05$). It can be concluded that a significant correlation between the two was non-existent, and work fatigue can be suffered by workers aged 31-42 and 20-30 years old. Although, the peak of female muscle strength is when women are 25-35 years old, the workers can cope with this given condition by balancing it with work experience and mental maturity. Moreover, age also does not affect the symptoms of work fatigue. From the statistical test results of tenure and work fatigue (as presented in Table 5), the value of $p = 0.019$ ($p \leq 0.05$) was found, which leads to the conclusion that there is a significant correlation between the two. In this research, workers with tenures of $\geq 5$ had more work fatigue than the ones with tenures of $< 5$ years. This is due to their sense of responsibility and some psychological factors. Furthermore, the analysis on BMI and work fatigue with the value of $p = 0.780$ ($p > 0.05$) concluded that the two did not have any significant correlation. This showed that the fatigue can happen to workers with ideal or non-ideal BMI.

### Table 3. Test Results of the Correlation between Age, Tenure, BMI and Length of Education with Work Stress

| Workers Characteristic | Stress Level | Total | $\chi^2$ | p   |
|------------------------|--------------|-------|---------|-----|
|                        | Stressed     | Not Stressed |       |     |
|                        | n | %  | n | %  | n | %  |
| Age (years old)        |   |     |    |     |    |     |
| 31-42                  | 44 | 37.3 | 74 | 62.7 | 118 | 100 | 0.758 | 0.384 |
| 20-30                  | 29 | 31.5 | 63 | 68.5 | 92  | 100 |       |     |
| Tenure undergone (years)|   |     |    |     |    |     |
| $\geq 5$               | 47 | 39.2 | 73 | 60.8 | 120 | 100 | 2.396 | 0.122 |
| <5                     | 26 | 28.9 | 64 | 71.1 | 90  | 100 |       |     |
| BMI                    |   |     |    |     |    |     |
| Not ideal              | 30 | 36.6 | 52 | 63.4 | 82  | 100 | 0.197 | 0.657 |
| Ideal                  | 43 | 33.6 | 85 | 66.4 | 128 | 100 |       |     |
| Length of education (years) |   |     |    |     |    |     |
| <10                    | 33 | 40.2 | 49 | 59.8 | 82  | 100 | 1.783 | 0.182 |
| $\geq 10$              | 40 | 31.2 | 88 | 68.8 | 128 | 100 |       |     |

*BMI= Body Mass Index

### Table 4. Test Results of the Correlation between Breastfeeding Effect and Work Fatigue

| Workers | Work Fatigue | Total | $\chi^2$ | p   |
|---------|--------------|-------|---------|-----|
|         | Stressed     | Not Stressed |       |     |
|         | n  | %  | n  | %  | n  | %  |
| Breast-feeding  | 78 | 74.3 | 27  | 25.7 | 105 | 100 | 15.307 | 0.000 |
| Non-breast-feeding | 9  | 8.6  | 96  | 91.4 | 105 | 100 |       |     |
| Total   | 87 | 41.4 | 123 | 58.6 | 210 | 100 |       |     |
Breastfeeding and Occupational Stress and Fatigue of Female

Table 5. Test Results of the Correlation between Age, Tenure, BMI and Length of Education with Work Fatigue

| Workers Characteristic | Fatigu ed | Not Fatigu ed | Total | \( \chi^2 \) | p |
|------------------------|-----------|---------------|-------|-------------|---|
| **Age (years old)**    |           |               |       |             |   |
| 31-42                  | 53        | 44.9          | 65    | 55.1        | 118| 100 | 1.349 | 0.245 |
| 20-30                  | 34        | 37.0          | 58    | 63.0        | 92 | 100 |       |       |
| Tenure undergone (years)|          |               |       |             |   |
| >5                     | 58        | 48.3          | 62    | 51.7        | 120| 100 | 5.501 | 0.019 |
| <5                     | 29        | 32.2          | 61    | 67.8        | 90 | 100 |       |       |
| **BMI**                |           |               |       |             |   |
| Not ideal              | 33        | 40.2          | 49    | 59.8        | 82 | 100 | 0.078 | 0.780 |
| Ideal                  | 54        | 42.2          | 74    | 57.8        | 128| 100 |       |       |
| Length of education (Years)|       |               |       |             |   |
| <10                    | 35        | 42.7          | 47    | 57.3        | 82 | 100 | 0.087 | 0.768 |
| ≥10                    | 52        | 40.6          | 76    | 59.4        | 128| 100 |       |       |

*BMI= Body Mass Index

The problem of work fatigue cannot be separated with how the companies organize the work, in which biographical characteristics comprising of workers’ age, number of dependent family members and tenure have clear impact on the organization. Meanwhile, analysis on the length of education and work fatigue acquired the value of \( p = 0.768 \) (\( p > 0.05 \)), which can be concluded that there is no significant correlation between them. Generally, education is aimed to develop and broaden a person’s knowledge, experience and understanding so that the higher a person’s education is, the broader they think, the stronger their initiative power is, and the more ease they gain in appropriately finishing their tasks. However, if the work does not suit the workers’ preference, it will be harder for them to feel satisfied and it will be easier for them to feel bored, be arrogant and pose higher demands on the companies.

Conclusions

Breastfeeding exerted impact on occupational stress and fatigue in the female workers of garment manufacturing companies at the Sobosukawonosraten area of Central Java. Several points to be considered are: (1) The Government has to be consistent in its implementation of Article 2 of the Joint Regulation of the Minister of Women Empowerment, Minister of Labor and Transmigration and Minister of Health Number 48/MEN/PP/XII/2008 on the Intensification of Breastfeeding during Work Hours in Work Places. It is expected that this regulation should no longer be considered by companies as a suggestion, and provision of facilities are fully deliberated in order to support the workers’ breastfeeding; (2) Companies should facilitate the breastfeeding that the workers are going through by providing them the right to breastfeed with the opportunity and facility to pump their breast milk or breastfeed during work hours, as well as setting up storage for the breast milk; (3) The workers should actively implement healthy lifestyle in order to reduce occupational stress and fatigue; hence, they can continue to produce breast milk and support their breastfeeding for the babies, who are the nation’s future generation; (5) Further research in the form of in-depth interview should be conducted to identify more causes of the breastfeeding workers’ occupational stress and fatigue.

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