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The Independence and the Quality of Life of Workers with Disabilities Caused by an Occupational Accident in Gresik and Sidoarjo, Indonesia

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Abstract

Introduction: An occupational accident causes a disability in workers. The disability condition will make the workers experience substantial limitations from every side of their life both in a social context and economic context 1, the dependence to their family 2, inability to live independently 3. The disability can also cause the workers to lose their job 4. The bad financial condition and the dependence give a negative impact on the quality of life of the workers with disabilities. The aim of this research was to analyze the influence of independence toward the quality of life.

Method: This research used a cross-sectional method. The population of this research was the workers with disabilities caused by an occupational accident in Sidoarjo Regency and Gresik Regency. The number of samples in this research was 182 participants. The sampling technique was done by using simple random sampling technique. The variables that were analyzed were the characteristic of the individual, the independence, and the quality of life. The measurement instrument for independence was done using Lawton-Browdy instrumental activities of daily living scale; the measuring instrument for the quality of life was done using WHOQol100 questionnaire (a standardized questionnaire). The data analysis was done using linear regression test with a significance level (α) of 0.05.

Results: Nearly 78% of participants had independence in the 'moderate' category with an average score of 81.51. The 78% of participants also had the quality of life in the 'moderate' category. Based on the regression test, it was obtained a result that the independence had a significant impact on the quality of life of workers with disabilities caused by occupational accident ($p < 0.05$).

Conclusion: The independence has a significant impact on the quality of life of workers with disabilities caused by an occupational accident. The better the worker's independence is, the better the quality of life of the worker with a disability caused by an occupational accident is.

Keywords: Independence, Quality of Life, Worker with disability, Occupational Accident.

Introduction

The occupational accident rate increased sharply in the last five years⁵. According to ILO, around 270

millions of work-related accident and 2 millions of fatality happen in the world every year⁶. The number of occupational accident cases in East Java was 20,488 cases⁷. The impacts of the occupational accident are as follows: functional disability, partial disability, total disability, and fatality. Based on the data of BPJS for employment in 2016, the 150 workers suffered from the functional disability and 135 workers suffered from the partial disability⁷.

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The workers with disabilities would experience

substantial limitations from every side of their life in the social and economic context¹. The socio-economic risk suffered by the workers with disabilities is losing a job. The condition judged to be relative to the standard of an individual or group that the workers with disabilities had previously caused a big possibility for them to lose their job. If they get a new job, they will be paid below the standard⁸. Such financial condition will give a bad impact on the quality of life of the workers with disabilities.

The quality of life is a life condition in the context of the system, value, and culture where they live based on the individual perception and related to the goal, expectation, standard, and the interest of each individual's life⁹. According to David Felce and Jonathan Perry in Brown, the quality of life covers five domains i.e. physical well-being, material well-being, social well-being, emotional well-being, and productivity well-being. There are many factors affecting the quality of life; they are the physical, spiritual, and health condition, level of independence, the relationship with the social environment and the like¹⁰. The decline in the quality of life is a consequence of the accident that results in disability condition¹¹. Meanwhile, the disability can result in the decline in the individual's independence to do daily activities.

An independence is an ability of someone for decision-making toward their life and the capacity to execute their tasks with full of responsibilities without relying on other people's help. The condition of workers with disabilities gives an impact on their independence level to do their basic daily activities such as bathing, eating, going to the toilet, preparing meals, shopping, and transferring/walking¹². The people with disabilities will feel uncomfortable if there is a person helping them to bathe, even in their own house. Sometimes, they will feel uncomfortable if they should wait for other people's helps to do their daily activities.

The research that has been conducted is generally about the influence of independence toward the quality of life of people with disabilities due to disease. However, the number of researches that select workers with disabilities as the research subject is less. The aim of this research was to analyze the influence of independence toward the quality of life of workers with disabilities caused by an occupational accident.

Method

1
This research was a descriptive research with a cross-sectional design. This research was conducted in Gresik and Sidoarjo. It was conducted from March to April 2018.

The population of this research was the workers with disabilities (diffabilities) due to an occupational accident in Gresik and Sidoarjo. The number of samples used in this research was 182 workers. It was determined using simple random sampling technique.

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The data that had been collected was in form of primary and secondary data. The primary data of this research was obtained from an interview with the workers with disabilities caused by an occupational accident in Gresik and Sidoarjo. Meanwhile, the secondary data was collected from the document of the BPJS for employment (Social Security Administration Body for Employment) in Gresik and Sidoarjo. Then, the data that had been collected were analyzed descriptively and it was presented in form of narration that illustrated the variables that had been investigated.

The independent variable of this research was independence while the dependent variable was the quality of life. The measuring instrument used in this research was the standard measuring instrument composed by WHO that had been tested on the validity and the reliability. The measuring instrument for independence was *Lawton-Browdy* instrumental activities of daily living scale. Meanwhile, the measuring instrument of the quality of life used WHOQoL-100 questionnaire (a standardized questionnaire). The data analysis was used for analyzing the regression between two variables using linear regression test.

Results

The result of this research was the sociodemographic characteristics, the independence level, the level of quality of life, and the influence of independence toward the quality of life.

Socio-demographic characteristics: The data of sociodemographic characteristics of the participants can be seen in table 1 below.

Table 1. The Socio-demographic characteristics of the Participants

Socio-demographic Characteristics	n (%)
Gender	
Men	134 (73.6)
Women	48 (26.4)
Age	
20-29 y/o	40(22)
30-39 y/o	47(25.8)
40-49 y/o	57(31.3)
50-59 y/o	37(20.3)
60-69 y/o	1(0.5)
Marital Status	
Single	20(11)
Married	154(84.6)
Widowed	8(4.4)
Employment Status	
Employed	157 (86.3)
Unemployed	25(13.7)
Types of disability	
Hands	25(13.7)
Fingers	112(61.5)
Arms	15(8.2)
Eyes	6(3.3)
Feet	18(9.9)
Body	4(2.2)
Head	2(1.1)
Kinds of disability	
Disability in anatomical structure	44(24.2)
Functional disability	138(75.85)

The research finding showed that 73.6% of the participants were men. Most of the participants (31.3%) aged around 40 years to 49 years and 84.6% of the participants were married. Most of the participants (86.3%) were still working after suffering from the disability. Nearly 75.8% of the participants suffered from a functional disability and the 61.5% of the participants suffered from disability in their fingers especially in their right fingers.

The Independence of the Participants: From the research finding, it was obtained that the maximum score for independence was 100 and the minimum score was 45.83. The independence covered the independence in self-care tasks (eating, bathing, dressing, and toileting) and independence in using the instruments (calling, washing, shopping, and using transportation), and vocational independence/managing finances. Almost all

participants had independence in self-care tasks. They could do the self-care tasks without other people's help. The average score of independence in self-care tasks was 99.9. The average score of instrument independence was 84.5. Meanwhile, the average score of vocational independence was 78.5. The independence was categorized into three categories i.e. low, moderate, and high. The 78% of the participants were categorized in 'moderate' category with an average score of 81.51. The complete data can be seen in table 2.

Table 2. The Categories of the Participant's Independence

Categories	n (%)
Low	24(13.2)
Moderate	142(78)
High	16(8.8)

The Quality of Life of the Participants: From the research finding, it was obtained the maximum score for the quality of life of 100 and the minimum score was 25. The quality of life comprised six domains i.e. physical domain, psychological domain, the domain of the level of independence and productivity, the social relations domain, the environmental domain, and spiritual domain. The average score of physical domain was 53.26; the average score of psychological domain was 53.43; the average score of the domain of the level of independence and productivity was 52.71; the average score of the social relation domain was 68.78; the average score of the environmental domain was 57.5; and the average score of spiritual domain was 66.2. The quality of life was categorized into three categories namely low, moderate, and high. Nearly 78% of the participants were categorized in 'moderate' category with the average score of 58.64. The complete data can be seen in table 3 below.

Table 3. The Categories of Quality of Life

Category	n (%)
Low	25(13.7)
Moderate	142(78)
High	15(8.2)

The Influence of Independence toward the Quality of Life of the Participants: The workers with disabilities had low independence and 72.9% of them had a low quality of life. The result from cross tabs can be seen in table 4.

Table 4. The Crosstabs of Independence toward Quality of Life

Independence	Quality of Life						Total	
	Low		Moderate		High			
	n	%	n	%	n	%	N	%
Low	19	79.2	5	20.8	0	0.0	24	100
Moderate	6	4.2	126	88.7	10	7.0	142	100
High	0	0.0	11	68.8	5	31.2	16	100
Total	25	13.7	142	78.0	15	8.2	182	100

Based on the linear regression test, it was shown that the independence of workers with disabilities caused by occupational accident had a significant impact on

the quality of life. The result of the test can be seen in table 5.

Table 5. The Regression Test of Independence toward Quality of Life

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Correlations		
	B	Std. Error	Beta			Zero-order	Partial	Part
Independent	0.525	0.45	0.655	11.620	0.000	0.655	0.655	0.655

The score for the influence of independence toward quality of life was $p < 0.05$. It means that the lower the independence level of workers with disabilities is, the lower the level of quality of life is.

Discussion

An independence is the ability of someone in decision-making and the capacity to execute the tasks for their life with full of responsibility without relying on other people. In a psychological dictionary, independence comes from a word “independent” that can be defined as a condition where someone does not rely on other people in making decisions and he or she has self-confidence character¹³. The independence of someone in living and working is strongly related to disability². Disability gives an impact on job, social life, and the ability to be independent¹⁴. Most of the participants suffered from disability in their right fingers/hand. Their disability condition enabled them to be independent (the independence in self-care tasks). Some of them were less independent in instrumental independence (using instruments) and in vocational independence (managing financial matters). Most of the participants had independence in the ‘moderate’ category.

The disability condition did not only give an impact on the physical condition but also on the psychological

condition. Someone will feel ‘little’, have no potency, and have no ability to live independently³, emotional, feel meaningless, feel useless, experience frustration, and depression⁶. The disability condition would result in the participation restriction in workers with disabilities in the world of work, and it would indicate an increase in financial burden. It caused the dependence to their family. The dependence on family (being dependent) gave a direct impact on the quality of life.

This research finding revealed that there was a significant impact on the quality of life of the workers with disabilities caused by an occupational accident. This showed that the higher the level of independence of the workers with disabilities was, the higher the quality of life they had and vice versa. Therefore, an attempt to form the independence in workers with disabilities caused by occupational accident was needed.

The quality of life of workers with disabilities caused by an occupational accident that was decreased at the beginning could be increased if they had a good support from their family and the company. The supports were to make them rise to the occasion, to increase their self-confidence for having a social relation, working, developing their potency, and forming their independence¹⁵. The workers who had suffered from disability caused by occupational accident would get

compensation/disability compensation from Indonesian Social Security Administration Body for Employment. The amount of compensation/disability compensation depends on the percentage of disability they suffer. The compensation/disability compensation received by the workers with disabilities caused by an occupational accident is very important. The compensation becomes the main requirement to live independently¹⁶.

To improve the socio-economic status in workers with disabilities, the strategy for eliminating the physical and social obstacles and promoting health and welfare/well-being/quality of life is needed. It can be inferred that the level of independence of someone gives an impact on the quality of life of the person. Delcourt, et.al stated that the domain of independence was the most influential domain in the quality of life in stroke survivor¹⁷.

Conclusion

The independence of workers with disabilities caused by occupational accident has a significant impact on the quality of life. The lower the level of independence of workers with disabilities is, the lower the level of quality life they will have. On the other hand, the higher the level of independence of workers with disabilities is, the higher the quality of life they have.

Conflict of Interest: Nil

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Ethical Clearance: Received from the Ethics Committee of Faculty of Public Health, Airlangga University, Indonesia.

Recommendation

- a. Creating an accessibility to eliminate the physical and social obstacles (being dependent) for the workers with disabilities caused by an occupational accident.
- b. Strengthen the regulation and the promotion for the workers with disabilities to be able to maintain their quality of life.

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