

Depression Associated with Quality of Life

by Reonal Regen

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resilience scale. The result in this research were the patients within six months after SCI injury had higher rate of depression and higher overall level of depression. Also, patients with motor complete injury had affected significantly on depression, QOL and stress⁷.

Ataog 1u, et al (2013) studied about effects of chronic pain on quality of life and depression in patients with spinal cord injury⁸. A total of 140 patients (104M, 36F) with SCI who underwent inpatient rehabilitation treatment were examined. A questionnaire including clinical variables was applied. Motor score of Functional Independence Measure was used to assess daily- life activities, the 36-Item Medical Outcomes Short-Form Health (SF-36) for QoL and Beck Depression Inventory (BDI) for depression. Patients were then divided into those having chronic pain (Group I) and those without any pain (Group II), and groups were compared according to demographic and clinical variables. The result in this research SCI patients with chronic pain had higher depression ratings and their BDI score were correlated with some of the SF-36 domains (general health, vitality, social functioning and mental health)⁸.

To the knowledge of this study researchers there has been no research related to the association between depression and quality of life to people with paraplegia in Indonesia.

METHOD

This cross-sectional study was conducted in Bantul, Wonorejo and Gunungkidul districts using primary data with the Beck Depression Inventory (BDI), WHOQOL – BREF, Activity of Daily Living (ADL) questionnaire, and Instrumental Activity of Daily Living (IADL) in November 2017. Only results of BDI and WHO_QOL BREF were presented in this paper. This research was conducted in cooperation with Pusat Rehabilitasi YAKKUM (YAKKUM Rehabilitation Center). The respondents consisted of 30 persons with paraplegia who were clients of PRY. The sampling technique of this research was consecutive sampling with inclusion criteria of persons with paraplegia aged 18 - 64 years, and exclusion criteria of persons with communication problems such as deafness and severe psychiatric disorders that could not cooperate during data collection. Data obtained was processed in Clinical Epidemiology and Biostatistics Unit Faculty of Medicine, Gadjah Mada University Yogyakarta using Pearson correlation test to find out the correlation between depression and quality of life.

RESULTS AND DISCUSSIONS

A total of 30 respondents with paraplegia participated in this study. Eleven of them were men and the rest were women. The mean age was 44.77 years. Twenty-five of them (83.33%) had incomplete paraplegia and 5 of them (16.67%) had complete paraplegia. Twenty-two respondents (73.33%) were married, 2 (6.67%) were divorced, and 6 (20%) were single. The data were presented in Table 1.

Table 1: Characteristic of respondents (n = 30)

Variable	f	%
Sex		
Female	19	63.33
Male	11	36.67
Age		
25–35	7	23.33
36–45	8	26.67
46–55	10	33.33
56–65	5	16.67
Severity of Injury		
Incomplete	25	83.33
Complete	5	16.67
Marital Status		
Married	22	73.33
Divorced	2	6.67
Single	6	20.00

Screening on depression using BDI revealed that 18 respondents (60%) might not have depression, 5 respondents (16,66%) might have mild mood disorder, 3 respondents (10%) have clinical depression, 2 respondents (6,67%) have moderate depression, and 2 respondents (6,67%) were classified as having severe depression. Table 2 presented these results.

Table 2: Beck Depression Inventory (BDI)

Level depression	N (30)	Percent (%)
Reasonable	18	60
Mild mood disorder	5	16,66
Clinical depression	3	10
Moderate depression	2	6,67
Severe depression	2	6,67
Extreme depression	0	0
Total	30	100

The quality of life of the respondents assessed using WHOQOL-BREF was shown in Table 3. Among 30 respondents 22 respondents (73,33%) had good quality of life in physical domain and environmental domains, while 8 respondents (26,6%) had poor quality of life in those domains. In psychological domain there were 24 respondents (80%) who had good quality of life and 6 respondents (20%) did not. Meanwhile in social domain 20 respondents (66,67%) had good quality of life and 10 respondents (33,33%) had poor quality of life.

Table 3: WHO QOL-BREF

WHOQOL-BREF		N	Percent (%)
QOL Domain 1 (physical)	Good (≥ 50)	22	73,33
	Poor (< 50)	8	26,6
	Total	30	100
QOL Domain 2 (psychological)	Good (≥ 50)	24	80
	Poor (< 50)	6	20
	Total	30	100

Table 4: Correlation of Depression (BDI) and Quality of life (WHO QOL-BREF)

	QOL Domain 1 (physical)	QOL Domain 2 (psychological)	QOL Domain 3 (social)	QOL Domain 4 (environment)
Pearson Correlation	-.621**	-.608**	-.440*	-.574**
Sig. (2-tailed)	.000	.000	.015	.001
N	30	30	30	30

This research studied people with paraplegia, most of them (25 respondents) were 2006 Java earthquake victims. There were more female than male respondents in this study. Hu et al (2012) followed 26 people with spinal cord injuries due to an earthquake in China, there were 15 women and 11 men⁹. Earthquake caused houses to collapse that afflicted the respondents. It was mostly experienced by female respondents because they were housewives and tended to stay at home and escaped last⁹.

This research was participated by the respondents aged between 25 - 65 with the mean age 44.77 years. Abbudi et al (2017) studied 193 respondents with paraplegia aged 18 - 65 years¹⁰. Most respondents of this study had incomplete paraplegia. Hu et al (2012) reported most of the respondents in their study had incomplete paraplegia with the level of injured at T₇ - L₂⁹.

As presented in Table 2 more than half respondents (60%) might not have depression. They became paraplegia about 5 - 18 years ago. Most of them had been able to accept their condition, while few of them were

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QOL Domain 3 (social)	Good (≥ 50)	20	66,67
	Poor (< 50)	10	33,33
	Total	30	100
QOL Domain 4 (environment)	Good (≥ 50)	22	73,33
	Poor (< 50)	8	26,6
	Total	30	100

A statistical analysis of correlation between BDI scores and 4 domains of WHOQOL-BREF revealed that there were significant correlations between depression and quality of life in physical domain (r=-0.621, p<0.001), psychological domain (r=-0.608, p<0.001), social domain (r=-0.440, p=0.015), and environmental domain (r=-0.574, p=0.001). The results of statistical analysis were presented in Table 4.

still in the process. Several factors have affected like social supports and physical health. Respondents with complete paraplegia mostly have severe of depression level than incomplete paraplegia. As well as respondents with lack of social support. Almeida et al (2013) reported most individuals with spinal cord injuries and pressure ulcers had depression, and their main symptoms included body image issues, self-deprecation, social withdrawal, and suicidal thoughts¹¹.

Table 3 showed that most respondents had good quality of life in physical domain, psychological domain, social domain, and environment domain. This might be related to the fact that they had been through the process of self-acceptance and able to adjust their life to their current condition. However, some respondent still had poor quality of life due to health complication such as decubitus. Dalete et al (2016) reported high prevalence of pressure ulcer in spinal cord injury patient showed a significant dissatisfaction in quality of life especially regarding the physical domain¹².

Based on statistical analysis of BDI with WHOQOL-BREF, it can be concluded that there is a significant correlation between depression and quality of life in physical, psychological, social and environmental domains. Respondents with higher level of depression tend to have lower quality of life in all domains. This is consistent with the results of the study of Aman, et al (2012) examining the prevalence of psychological problems and quality of life in 50 people with spinal cord injuries in Pakistan¹³. The study reported that the higher the depression scale measured by HAD (Hospital Anxiety and Depression Scale), the lower the quality of life of patients with spinal cord injury as measured by WHOQOL-BREF¹³. Ataoglu, et al (2013) examined the quality of life using SF-36 scores and depression using BDI scores of people with spinal cord injuries who had chronic pain. The study reported that the more severe the physical condition experienced by people with paraplegia such as chronic pain the higher the level of depression. The study also showed a negative pattern of correlation between BDI scores with SF-36 scores of general health, vitality, social functioning, and mental health domains aligned with the results of this study⁸.

The study of Shin, et al (2012) reported people with complete paraplegia who had higher level of depression (BDI) also had poorer quality of life (WHOQOL-BREF) than people with incomplete paraplegia⁷. The study suggested that poor quality of physical health can affect mental health as well. In anticipation of these conditions people who suffer from spinal cord injuries need to go through the stage of self acceptance and adjustment. Most of the respondents of this study had gone through the stage of self-acceptance and adjustment because the injury took place more than 5 years before the data collection, but some were still experiencing difficulties due to health problems such as urinary tract infections and decubitus. According to Dezarnaulds & Ilchef (2014), someone who experiences spinal cord injury has the character and how to accept themselves differently, the time required can be short or long¹⁴.

Several studies suggested psychological dimensions such as personality, behavior, and perception have a role how people accept themselves with spinal cord injury¹⁴. Loss of interest/passion, guilt, loneliness, suicidal intent and feeling helpless are some examples of depressive symptoms that spinal cord injury sufferers often suffer. If rapid depression symptoms are addressed the prognosis

will be better. In addressing the psychological problems of spinal cord injury sufferers it is important to know that there are other factors that may affect the adjustment stage, namely chronic pain, health complications (decubitus, urinary tract infection, etc.) and long-term drug use. Some external factors such as family support and social environment, as well as socioeconomic and financial status can also affect the process of acceptance and adjustment of spinal cord injury sufferers¹⁴. In this study the respondents had overcome most factors and reached self-acceptance and adjustment with the support of family and social environment. In Bantul District, there were quite a lot of people with paraplegia due to the earthquake, so there were Disabled People Organizations formed for people with disability to gain peer support and self-advocacy. In Kulonprogo District 2 respondents had supportive families while 1 respondent lacked attention from the family. The differences between these two groups were evident from BDI scores and physical health. Respondents who received family support showed good BDI scores as well as no complications such as decubitus. While respondents who received less family attention showed a poor BDI score and had severe decubitus. In Gunungkidul District, 1 respondent had gained self-acceptance and adjustment while 1 respondent had not. The respondent in Gunungkidul District who had self-acceptance and adjustment was active in disability organizations while the one who had not, was more isolated inside the house. According to Skevington, Lofty and O'Connell (2004) depression keeps people away from the community because someone who is depressed is more melancholy and loves to be alone so the more severe the depression becomes, the further the person is from his social activities¹⁵.

CONCLUSIONS

There is a relationship between depression and quality of life in people with paraplegia. Depression reduces the quality of life of people who are paralyzed because of spinal cord injuries.

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