

## Feelings of Powerlessness in Critically Ill Patients with Cardiac Diseases

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### Abstract:

**Background:** Acutely ill patients, more than any other patients, are at increased risk of perceiving powerlessness because they lack control over their immediate situation and are uncertain regarding their prognoses. Despite the seriousness of the problem of powerlessness, it tends to be ignored. No studies were found in the literature assessing feelings of powerlessness in acutely ill patients. **The aim of the study:** was to assess feelings of powerlessness in critically ill patients with cardiac diseases. **Materials and Method: Research Design:** A descriptive exploratory research design was utilized to accomplish this study. **Setting:** This study was carried out in three ICUs at Damanhour Medical Institute. **Subjects:** A purposive sample of 125 adult, conscious cardiac patients was recruited for the current study. **Instrument:** A patient's powerlessness assessment questionnaire was used to collect data. It is composed of two parts. Part I: demographic and clinical characteristics of the patients. Part II was the adapted powerlessness assessment tool for adult patients. **Method:** Patients were interviewed individually, and the researchers recorded the patients' responses using the adapted powerlessness assessment tool for adult patients. **Results:** the total mean percent score of powerlessness in the studied patients was 58.83%. Only 15.2% of the studied patients did not have a perceived powerlessness. The highly statistically percent of the studied patients (46.4%) reported mild powerlessness. There were significant correlations between powerlessness domains; the mean percent scores of perceived capacity to perform behavior, the perception of decision making capacity, emotional response to the control of situations, the perception of decision making and emotional response to the control of situations and the total powerlessness score ( $p < 0.001$ ). **Conclusion:** the highest percentage of the studied patients admitted to the intensive care units experienced a varied level of powerlessness, and one fifth of them had a high level of powerlessness. Regular nursing assessment of perceived powerlessness for newly admitted critically ill patients is a must.

**Key words:** powerlessness, critically ill cardiac patients.

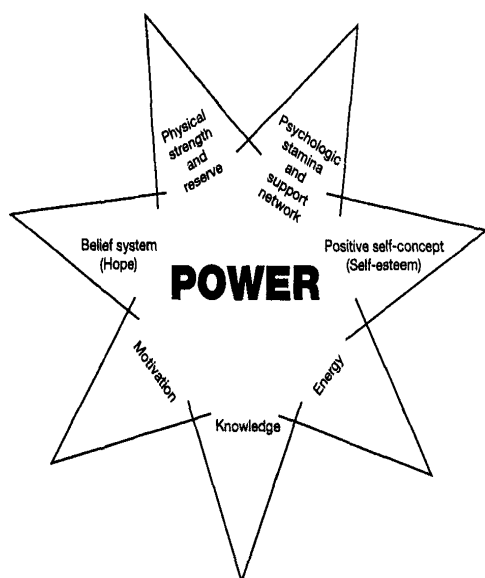
### Introduction:

Powerlessness is a condition that can strike all persons at some point in their lives. It may be experienced as a response to the illness or recovery process and/or an adjustment to stress or a traumatic experience (NANDA, 2007; Alves et al., 2017).

Powerlessness is the perceived lack of control over a present situation or imminent event, the belief that one's own activity will not materially alter an outcome or result. If the process of being sick results in losing control over the present situation, the sense of powerlessness could be viewed as a loss. (NANDA, 2007). If the patient feels that regardless to attempts nothing will change the events or the anticipated outcomes,

powerlessness is more appropriate diagnosis. The patient may go into mourning if the loss of control is the focus of failing attempts to change the patient's perceived self-concept. The diagnosis of grief either anticipatory or dysfunctional may be more appropriate (Braga & Cruz 2005).

Miller's concept of patients' power resources assumes that people have varying degrees of the seven power resources: physical strength and reserves, psychological stamina and support network, a positive self-concept (self-esteem), energy, knowledge, motivation, and belief system (hope) (Aujoulat et al., 2007).



**Figure 1: Patient's power resources (Aujoulat et al., 2007)**

According to Miller, individuals who have a deficiency in one or more of these resources will have self-perceived powerlessness. The greater the inadequacy of power resources, the greater the degree of perceived powerlessness. On the opposite side, the fully utilized power resources, the maximized perception of empowerment and it will improve the patient's experience with critical illness (Morton & Fontaine 2009).

In a society that values autonomy, the dependence on others will contribute to the patient's experience of fear, perceived loss,

grief, and powerlessness, which may lead to emotional distress, conflict, doubts, and unexpected reactions (Salomé & Esposito 2009; Shah, 2012). Severity of patients' conditions, unanticipated course of illness, limited social support, impaired expression of own opinions and health related decisions are the most cited antecedents to powerlessness (Alves et al., 2017).

A critical illness often creates an insecure situation for the patients where there is an actual or potential life-threatening problem. Critically ill patients are specifically at a higher risk for perceived powerlessness than other patient groups because they lack control over their condition or situation and have uncertainty about their prognoses (Morton & Fontaine 2009). It is important for the nurses working in intensive care units and caring for patients who may experience powerlessness as a nursing diagnosis should recognize and intervene in it because patients experiencing it tend to become depressed and apathetic, lose motivation to start behavior improving actions, and lose interest in independence (Kubsch & Wichowski 1997; Salomé & Esposito, 2008).

A powerlessness assessment may provide important information to improve the delivery of care to these patients. In 2009, powerlessness objective assessment tool was developed in Brazil to measure the experienced powerlessness among adult patients. It has three domains: capacity to perform behavior or perceived behavioral control, self-perception of decision-making capacity; and emotional responses to perceived control (Braga & Cruz, 2009).

Patients may be admitted to the intensive care units suffering primary cardiac or cardiovascular problems or mixed general; non-cardiovascular comorbidities and cardiac problems. Patients are in need of advanced monitoring and interventions, including invasive hemodynamic assessment, intravenous vasoactive medications, and mechanical ventilation. These may interfere with self-care activities and mobility, resulting in a perceived loss of self-control and powerlessness (Bohula et al., 2019; Cook et al., 2022; Coelho et al.,

2022; Negarandeh et al., 2020). Nurses have been observed to misdiagnose powerlessness as anxiety, ineffective coping, or noncompliance and to list these diagnoses on patient care plans (Renan et al., 2017).

The significance of this study is based on the scarcity of studies on the powerlessness concept analysis and the need for diagnostic refinement studies in specific populations, such as critically ill patients. Also, studies that evaluate the defining characteristics and related factors contained in the North American Nursing Diagnosis Association (NANDA). Moreover, despite the significance of the problem of powerlessness, it tends to be under investigated. To the best of researchers' knowledge, limited studies were found in the literature from 1990 to 2022 assessing the feelings of powerlessness among cardiac intensive care patients', cardiac surgery patients, myocardial infarction (MI) patients, and patients in the ICU (Coelho et al., 2022; Braga & Cruz, 2003; Roberts & White, 1990 & Hofhuis et al., 2008). Thus, the aim of this study was to assess feeling of powerlessness in patients with cardiac diseases.

#### **Aim of the study:**

The aim of the study was to assess feelings of powerlessness in critically ill patients with cardiac diseases.

#### **The study questions:**

The study question was: did critically ill patients with cardiac diseases have feelings of powerlessness?

How severe were feelings of powerlessness in critically ill patients with cardiac diseases?

#### **Material and Method**

##### **Research design**

A simply descriptive exploratory research design was utilized to accomplish this study.

##### **Setting**

This study was carried out at 3 ICUs at Damanhour Medical Institute: the cardiac intensive care unit (CICU), the casualty care unit (unit I), and the general ICU (unit III). The CICU consists of 3 rooms with 8 beds for 2 rooms and the third room has 6 beds. The casualty care unit consists of two rooms with four beds each. The general ICU consists of two main halls with seven beds each. The casualty care unit and the general ICU receive patients who have multiple body system alterations/dysfunctions, including the cardiovascular system. The CICU receives patients who have or are at risk for life threatening conditions related to cardiovascular problems.

##### **Subjects**

A purposive sample of 125 adult, conscious cardiac patients was recruited in the current study based on the Epi-Info program according to the following parameters: confidence coefficient 95%, expected frequency 50%, margin of error 5%. Patients were included in the study after at least two days in the previously mentioned ICUs. Pediatric patients, patients under sedation or muscle relaxation, and patients who had an altered level of consciousness were excluded from the present study.

##### **Data collection tools**

Data were collected using one instrument, the "powerlessness assessment questionnaire", which included two parts. Part I included demographic and clinical characteristics of the patients: age, gender, the patient's diagnosis, and length of stay. Part II was concerned with assessing powerlessness in cardiac patients. This assessment tool was developed by Braga & Cruz 2009. The tool consisted of a 12-item measuring scale of powerlessness. The items on the powerlessness scale were grouped into three domains: "capacity to perform behavior," "self-perception of decision-making capacity," and "emotional responses to perceived control." Responses were measured on a 5-point Likert scale ranging from 1- 5. While 1 for never 5 for always answers. The ability to act items was reversed. While, (5) never, (4) rarely, (3)

sometimes, (2) often, and (1) always answers. The high score indicated more intense powerlessness. The total score ranged from 12 to 60. A score of 51-60 indicated the presence of advanced powerlessness, a score of 41-50 indicated moderate powerlessness, a score of 31-40 indicated mild powerlessness, and scores  $\leq 30$  indicated little to no powerlessness. The higher scores correspond to a higher feeling of powerlessness.

### **Method**

#### **Procedure:**

Part I of the data collection tool was developed by researchers after reviewing the related literature (Braga & Cruz, 2009; Coelho et al., 2022; Braga & Cruz, 2003; Roberts & White, 1990; & Hofhuis et al., 2008).

Part II of the data collection tool; powerlessness assessment tool for adult patients, was adapted according to Egyptian culture. The adapted powerlessness scale was translated into colloquial Arabic. The accuracy and relevancy of the translated Arabic tool had been established since the tool was submitted to a jury of five experts in critical care nursing to assess clarity and content validity. All necessary modifications were made accordingly.

A pilot study was done on 13 patients (10% of the study sample) to test the clarity and applicability of the research tool. Patients were excluded from the study sample. The pilot study revealed that further modifications were needed.

The reliability of the adapted powerlessness assessment tool for adult patients was tested using Cronbach's alpha test, and the result was 0.93%.

### **Ethical consideration**

The study was approved by the research ethics committee of the faculty of nursing at Damanhour University.

An official letter from the college of nursing was delivered to the hospital authorities

in the ICUs. Permission for data collection from the ICUs was obtained from their hospital directors after providing an explanation of the aim of the study. An official permission to carry out the study was taken from the manager of the hospital and managers of intensive care units to proceed with the study.

Before conducting the study, informed consent was obtained from the included patients individually after explanation of the purpose of the study and the patients' right to withdraw from the study at any time was emphasized. Patients' anonymity, confidentiality, and privacy were assured throughout the study.

### **Data collection**

Data mainly were collected at evening shift during the day (2pm-8pm) because it is calmer, fewer routine tasks and doctor's round. these time. The researcher made a tour of the 3 units involved in the study daily for 6 months (started in January and ended in July 2022) to determine if any patients met the needed inclusion criteria. If there was and after obtaining the patient's consent, the patients demographic and clinical characteristics were obtained from the patients' health records for an assessment of the powerlessness in the studied patients.

Patients were interviewed individually, and the researchers recorded the patients' responses using the adapted powerlessness assessment tool for adult patients.

The individual interview required 30 to 45 minutes to obtain answers from the interviewee.

### **Statistical analysis of the data**

Data were fed to the computer and analyzed using IBM SPSS software package version 20.

Quantitative data were described using range (minimum and maximum), mean, and standard deviation.

**The tests were used:** Student t-test and ANOVA test. Significance of the obtained results was judged at the 5% level.

### Results:-

Table I illustrates that 52% of the studied patients were males, and 37% of the studied patients were of the age group older than 60 years. An 82.4% was married, 34.4% read and write and more than half of them 62.4% did not work. A total of 77.6% of the studied patients had previous hospitalization, and 40.2% of them were admitted to the hospital three times or more. Concerning patients' diagnoses, 52.8% of them had acute coronary syndrome (ACS).

Table 2 depicts that, the mean percent score of patients' perceived behavior performance ability, ability to make decisions, and situations handling emotional response were 55.97%, 56.27%, and 67.13 % respectively.

Table 3 demonstrates that, the highest percent of the studied patients (46.4%) reported mild powerlessness, and 20.8% of them had a high level of perceived powerlessness.

Table 4 demonstrates a significant correlation between the mean percent scores of patients' perceived behavior performance ability, ability to make decisions, and situations handling emotional response and the total powerlessness score ( $p= 0.001$ ).

Table 5 reveals a relationship between the domains of powerlessness and patients' demographic data. The highest powerlessness total mean scores ( $60.83 \pm 22.75$ ) was reported in the age group from 30 to less than 40 years. The highest powerlessness mean total scores ( $58.1 \pm 22.1$ ) was reported in male patients. The highest powerlessness total mean scores ( $64.42 \pm 23.93$ ) was reported in the widows in comparison to that in married, single and divorced. The highest powerlessness total mean scores ( $61.02 \pm 23.24$ ) was reported in the illiterate patients.

The highest powerlessness total mean scores ( $60.19 \pm 25.64$ ) was reported in patients who had no work. The highest powerlessness total mean scores ( $60.19 \pm 25.64$ ) was reported in patients admitted to hospital for the first time in comparison to patients who had previous hospitalization. The highest powerlessness total mean scores ( $58.85 \pm 14.48$ ) was in patients who had history of previous hospitalization three times or more. There was no relationship between the powerlessness total mean scores and patients' age, marital status, education, presence of an occupation, and previous hospitalization ( $p > 0.05$ ).

There was a significant relationship between the mean score of ability to make decisions and patients' marital status and frequency of hospitalization ( $p \leq 0.05$ ). In addition, there was a significant relationship between the mean score of behavior performance ability and the patients' occupation.

Table 1: Frequency &amp; percentile distribution of the studied patients according to their demographic data.

Demographic data	studied patients	
	No.	%
<b>Sex</b>		
Male	65	52
Female	60	48
<b>Age (years)</b>		
18-30	5	4
30 - <40	10	8
40 - <50	24	19.2
50-<60	39	31.2
>60	47	37.6
<b>Marital status</b>		
Married	103	82.4
Single	9	7.2
Widow	13	10.4
<b>Education</b>		
Illiterate	38	30.4
Read and Write	43	34.4
Secondary level	37	29.6
Highly educated	7	5.6
<b>Occupation</b>		
Don't work	78	62.4
Technical Work	26	20.8
Office Work	15	12
Free business	6	4.8
<b>Admission Diagnosis</b>		
Acute coronary syndrome	66	52.8
Heart failure	29	23.2
Other cardiac problems( cardiac dysrhythmias, cardiogenic shock, etc)	30	24
<b>Previous hospitalization</b>		
No	28	22.4
Yes	97	77.6
<b>Frequency of hospitalization</b>		
1 time	24	24.7
2 times	34	35.1
3 or more	39	40.2

Table 2: The mean and mean percent scores of patients' reported powerlessness domains:

Domains of powerlessness	Studied patients	
	Mean $\pm$ SD.	%
Perceived behavior performance ability	19.43 $\pm$ 5.53	55.97
Ability to make decisions	9.75 $\pm$ 3.19	56.27
Situations handling emotional response	11.06 $\pm$ 2.68	67.13
Total powerlessness score	40.24 $\pm$ 10.18	58.83

Table 3: Frequency &amp; percentile distribution of patients' reported perceived powerlessness levels:

Level of perceived powerlessness	Studied patients (n=125)	
	No.	%
- Little/No	19	15.2
- Mild	58	46.4
- Moderate	22	17.6
- High	26	20.8

Table 4: Correlation between domains of perceived powerlessness in the studied patients:

Domains of perceived powerlessness	Test significance	of	Domains of perceived powerlessness			
			Behavior performance ability	Ability to make decisions	Situations handling emotional response	Total of powerlessness
Behavior performance ability	r			0.674*	0.749*	0.952*
	p			0.001*	0.001*	0.001*
Ability to make decisions	r				0.558*	0.827*
	p				0.001*	0.001*
Situations handling emotional response	r					0.846*
	p					0.001*

r Pearson coefficient \* p Statistically significant at  $p \leq 0.05$

Table 5: Relationship between domains of total mean scores of powerlessness domains and patients' demographic data:

Demographic data	Behavior performance ability	Ability to make decisions	Situations handling emotional response	Total powerlessness
	Mean ± SD.	Mean ± SD.	Mean ± SD.	Mean ± SD.
<b>Age (years)</b>				
18-30	40.0 ± 33.67	45.0 ± 38.46	58.33 ± 28.26	45.83 ± 31.28
30 - <40	57.50 ± 22.55	57.50 ± 30.79	70.83 ± 23.32	60.83 ± 22.75
40 - <50	51.74 ± 19.11	50.0 ± 22.79	67.36 ± 16.65	55.21 ± 16.84
50-<60	56.52 ± 23.64	61.97 ± 24.32	67.09 ± 21.37	60.52 ± 20.67
>60	59.04 ± 23.29	55.67 ± 27.97	67.20 ± 25.38	60.24 ± 22.37
<b>F (p)</b>	1.029 (0.395)	1.017 (0.402)	0.257 (0.905)	0.775 (0.543)
<b>Gender</b>				
Male	55.7 ± 23.9	54.1 ± 29.6	66.9 ± 22.5	58.1 ± 22.1
Female	56.3 ± 22.3	58.6 ± 22.9	67.4 ± 22.4	59.6 ± 20.3
<b>t (p)</b>	0.13(0.69)	0.96(0.91)	0.11(0.34)	0.40(0.90)
<b>Marital status</b>				
Married	55.91 ± 23.07	55.66 ± 26.02	66.42 ± 22.22	58.47 ± 20.83
Single	25.0 ± 0.0	8.33 ± 0.0	41.67 ± 0.0	25.0 ± 0.0
Divorced	54.17 ± 19.09	75.0 ± 16.67	70.24 ± 17.91	63.39 ± 17.30
Widow	62.18 ± 24.08	58.33 ± 28.67	75.0 ± 25.0	64.42 ± 23.93
<b>F(p)</b>	1.553 (0.204)	3.576*(0.016*)	1.499 (0.218)	2.176 (0.094)
<b>Education</b>				
Illiterate	57.13 ± 25.44	58.77 ± 28.86	71.05 ± 23.47	61.02 ± 23.24
Read and Write	57.17 ± 21.98	51.74 ± 23.75	66.09 ± 22.30	58.04 ± 20.22
Secondary level	54.84 ± 21.55	60.81 ± 25.97	65.77 ± 18.82	59.07 ± 18.91
Highly educated	48.21 ± 26.88	46.43 ± 32.58	59.52 ± 33.83	50.60 ± 28.99
<b>F(p)</b>	0.359 (0.783)	1.212 (0.308)	0.732 (0.535)	0.502 (0.682)
<b>Occupation</b>				
No	59.88 ± 22.59	57.91 ± 25.23	68.48 ± 22.18	61.54 ± 20.84
Yes	49.47 ± 22.55	53.55 ± 28.80	64.89 ± 22.72	54.34 ± 21.27
<b>t (p)</b>	2.498* (0.014*)	0.887 (0.377)	0.869 (0.387)	1.855 (0.066)
<b>Previous hospitalization</b>				
No	56.25 ± 27.93	61.90 ± 28.0	66.37 ± 25.71	60.19 ± 25.64
Yes	55.88 ± 21.61	54.64 ± 26.10	67.35 ± 21.44	58.44 ± 19.88
<b>t (p)</b>	0.064 (0.949)	1.276 (0.204)	0.205 (0.838)	0.334 (0.740)
<b>Frequency of hospitalization</b>				
1	57.29 ± 18.48	51.74 ± 22.92	69.10 ± 19.11	58.85 ± 14.48
2	58.09 ± 24.57	58.58 ± 26.47	69.85 ± 22.47	61.15 ± 22.94
3+	57.89 ± 23.32	66.67 ± 22.74	70.61 ± 21.76	63.27 ± 20.60
<b>F(p)</b>	0.976 (0.408)	4.175*(0.008*)	1.680 (0.177)	2.257 (0.087)

t: Student t-test F: F for ANOVA test SD: Standard deviation

\*: Statistically significant at  $p \leq 0.05$



## Discussion

This study aimed to assess feelings of powerlessness in critically ill patients with cardiac diseases. Findings of this study indicated that nearly half of the included patients reported mild powerlessness, and one fifth of them have advanced powerlessness. These results may be attributed to the limited involvement of patients in the decision-making process in the included settings. Moreover, cardiac patients in the ICU may have restricted mobility and activities for several days at a time. They find themselves reliant on ICU staff to meet their needs, which results in a perceived powerlessness. (Bohula et al., 2019; Cook et al., 2022; Coelho et al., 2022; & Negarandeh et al., 2020).

These results are supported by other studies. The results of **Braga and Cruz, study (2003)** revealed that nearly one third of post-cardiac surgery patients had powerlessness. Roberts and White's study (1990) showed that, the cardiac patients can experience powerlessness through loss of person own control which resulted in reduced the patient's understanding of their diagnosis, interventions or care decisions essential to improve health status.

**Hofhuis and associates' study (2008)** depicted that, powerlessness is one of the feelings experienced by patients during their stay in the ICU. **Lykkegaard and Delmar, study (2013)** revealed that ICU study participants clearly expressed feelings of powerlessness. They reported that reliance on others is associated with very intense feelings of powerlessness.

**Ruehl (1988)** studied patients' perceived privacy, powerlessness, sleep characteristics, and the relationships among them in the coronary care unit. Patients reported some feelings of powerlessness. They mentioned their tendency to have little power during hospitalization. Moreover, **Berglund's et al. study (2015)** of the Swedish hospitalized patients' experiences in relation to care induced suffering revealed that the essential meaning of

suffering resulting from healthcare experiences had four constituents; one of which is a feeling of powerlessness.

The present study findings showed that there was a significant correlation between the mean percent scores of behavior performance ability, the ability to make decisions, situations handling emotional response, and the total powerlessness scores. These findings may be attributed to the fact that critically ill patients may not be given the chance to select or share in decisions related to their own management during hospitalization. They may also neither have the chance to define their problems nor actively participate in the problem-solving process. In addition, patients feel that they cannot control the outcomes; personal or social, through their own behavior and that the control is given to them by external forces or others (Earle, 2003; Hammell, 2006).

These current study findings demonstrated that the highest powerlessness total mean scores were reported among the age group from 30 to less than 40 years, male patients, widows, illiterate patients, patients who had no work, patients admitted to the hospital for the first time, and patients hospitalized three times or more. There was a significant relation between the mean score of ability to make decisions and patients' marital status and frequency of hospitalization, and there was also a significant relation between the mean score of behavior performance ability and the patients' occupation. These findings may be attributed to that, during adults age there is a varied roles and responsibilities. Extra-burdens and stressors are experienced in addition to the stress experienced due to ICU admission (Chen et al., 2018; Anderson et al., 2018).

Illiteracy can negatively affect a person's sense of self-control, confidence, and self-esteem, and thus their empowerment (Say et al., 2011). Unemployment may increase the perceived lack of control; in addition, admission to the ICU may maximize the negative feelings experienced by those patients (Blustein & Guarino, 2020). Past experiences and the common culture related to ICU admission in Egypt lead patients to perceive their first or

frequent repeated admission to the ICU as a sign of impending death and an indicator of a threat to their life and well-being. **Roehl's study (1988)** findings also revealed a positive correlation between age and powerlessness and a negative correlation between the number of hospitalizations and the experience of powerlessness.

### **Conclusion and recommendations**

The highest percentage of the studied patients admitted to the intensive care units experienced a varied level of powerlessness, and one fifth of them had a high level of powerlessness. So, regular nursing assessment of perceived powerlessness for newly admitted critically ill patients is a must.

Implementing interventions that augment patients' sense of control and capacity to perform behavior in addition to involving patients in the decision - making process during their stay in the ICU is also essential for minimizing their perceived powerlessness.

Further studies comparing powerlessness in patients with and without cardiac complications and other critically ill patient groups with a large sample size and non-purposive selection are necessary for a better understanding of the perceived powerlessness.

### **Limitation of the study:**

The small sample size, purposive selection of the included patients, and lack of data about the severity of patients' illnesses were limitations of this study.

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