



FACTOR ANALYSIS RELATED TO SELF *EFFICACY* OBESITY MANAGEMENT IN STUDENTS FACULTY OF NURSING SCIENCE

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ABSTRACT

Obesity management will give optimal results, if the person does diet, physical activity, and behavior therapy seriously. Therefore, a strong self-efficacy is needed to get maximum results. This study aims to analyze the factors related to obesity management self-efficacy in students of the Faculty of Nursing, University of Muhammadiyah Jakarta. This study used a large probability sampling, a sample of 83 students. This research uses the method analytical descriptively with cross-sectional design. Data was collected by means of interviews, surveys and distributing questionnaires. The data analysis technique used was logistic regression (logistic regression). This study shows the results of a obtained that Attitude with P value: 0.001 (< 0.05), Physical and Emotional Conditions with P value: 0.001 (< 0.05), and Gender with P value: 0.032 (< 0.05) has connection which is significant to the Self Efficacy of Obesity Management Students of the Faculty of Nursing, University of Muhammadiyah Jakarta. Efforts to increase obesity management self-efficacy are by improve body condition, decrease stress and readiness to go on a diet. This study recommends the need for to be used as a reference material, providing information and understanding to students about factors related to obesity self-efficacy.

Keywords: management of obesity; obesity; self efficacy

INTRODUCTION

Obesity is a condition where there is an accumulation of excess body fat so that a person's weight is far above normal and can endanger health. In general, overweight and obesity is an abnormal condition characterized by an excessive increase in body fat, generally arising in the skin tissue around the organs. (WHO, 2014). The BMI value is defined as follows: The World Health Organization (2020) classifies obesity based on BMI into pre obesity (25.0-29.9), level I obesity (30.0–34.9), obesity level II (35.0–39.9), and grade III obesity (≥ 40). Meanwhile, the National Nutrition Guidelines (2014) in the Indonesian Ministry of Health (2018) classifies obesity based on BMI into light fat (25.1-27.0) and heavy fat (> 27). A person is said to be obese, it can be seen from the measurement of BMI (Body Mass Index/BMI (kg/m^2)) with a value > 25 defined as overweight or obese (Ministry of Health, 2019). A person is classified as overweight if the BMI is 25 – 29.9, is said to be obese if the BMI is 30 – 39.9, and people with a BMI of 40 or more are said to be very obese (Health Assured 2019).

The World Health Organization (WHO) (2020) states that in 2016, more than 340 million children and adolescents with an age range of 5-19 years were overweight and obese. In addition, in 2016, more than 1.9 billion adults aged 18 years and over were overweight (39% men and 15% women), of which more than 650 million people were obese (11% men and 15% women). In Indonesia, the results of Riskesdas 2018 show an increase in the incidence of overweight and obesity in adults over 18 years of age. The incidence of overweight in 2007 (8.6%), 2013 (11.5%), 2018 (13.6%). Meanwhile, the incidence of obesity in 2007 (10.5%), 2013 (14.8%), 2018 (21.8%). In addition, the results of Riskesdas 2018 also show the incidence

of obesity in adults over the age of 18 years in DKI Jakarta. The psychosocial impact on obesity often suffers from social bias, prejudice and discrimination, not only by the general public but also by health professionals, and this may discourage them from seeking medical help. According to Roberts and Duong (2013) in their research, obesity is a greater risk for poor mental health.

Self efficacy Self-confidence (self-confidence) is an individual's belief about his ability to organize and behave to perform certain tasks and overcome the obstacles that arise during performing these tasks to get the desired results. Self-confidence is considered as one of the success factors in carrying out healthy behaviors that make individuals maintain positive behavioral changes (Bandura, 1997). When a person believes that he or she can lose weight as expected (Bandura, 1997). Self-efficacy factors include culture, gender, nature of the task at hand, external incentives, status or individual roles in the environment and information about themselves. Other self-efficacy factors are cultural factors, attitude factors, motivational factors, physical and emotional condition factors and verbal persuasion.

Based on data obtained from the Faculty of Nursing, Muhammadiyah University, Jakarta, in 2020 there were 1,379 students consisting of 51 Diploma III Nursing students, 983 undergraduate students, 188 professional students, 117 master students and 40 specialist students. From 272 respondents consisting of regular diploma and undergraduate students, there were around 93 students (34.2%) who were obese. From the results of interviews with 5 students consisting of 1 specialist student and 4 undergraduate students, they said that they felt less confident with their obesity condition, they considered some of their friends to be people who like to make fun of them by making them the object of ridicule and assume Fat appearance is always ridiculed and considered a funny thing that can make other people laugh and is considered ugly. They say that obese people feel they are very different and strange from other people. They feel uncomfortable with themselves, feel that they experience changes in body image, feel annoyed because it is difficult to find suitable clothes, and they say they get tired easily in physical activities.

Efforts made by students to deal with these problems, namely diet and doing physical activity regularly. However, when given a choice, students tend to prefer to go on a diet rather than doing physical activity. This is because students feel they are too tired when they are at home, do not have free time, and feel that doing physical activity requires great motivation. However, students also stated that diet did not have a significant impact, because weight loss took a long time. Thus, students are not excited to go on a diet and return to their previous eating pattern. In other words, failure in diet is caused because students do not have high self-efficacy. Based on the data above, the incidence of obesity and low self-efficacy in obese students at the Faculty of Nursing, Muhammadiyah University, Jakarta is quite high. Therefore, researchers are interested in knowing about the Factors Associated with Obesity Management Self Efficacy in Students of the Faculty of Nursing, University of Muhammadiyah Jakarta.

METHOD

This research is a design using cross sectional approach the researcher looks for the relationship between the independent variable and the dependent variable by taking instantaneous measurements. Ethical review to the campus nomor 0855/F.9-UMJ/VII/2021. Data analysis using univariate technique, bivariate using Chi-Square test and multivariate using multiple logistic regression.

RESULTS

Characteristics of Respondents

Table 1.
Distribution of Respondents by Gender, Age, Education, and Student Religion Faculty of Nursing (n=83)

Variable		f	%
Gender	Man	16	19.3
	Woman	67	80.7
Age	19-25 years old	63	75.9
	26-30 years old	16	19.3
	31-35 years old	1	1.2
	36-40 years old	3	3.6
Last Education	D3 Kep	26	31.3
	S1 Kep	57	68.7
Religion	Islam	79	95.2
	Christian	4	4.8

In table 1 it can be concluded that the majority of students who became respondents were women as many as 67 people (80.7%). In general, there are 63 students who become respondents aged 15-25 years (75.9%). The majority of the level of education carried out by students who became respondents were 57 people (68.7%) with a bachelor's degree in Nursing. And the majority religion that is followed The students who became respondents were 79 Muslims (95.2%).

Table 2.
Frequency Distribution of Obesity Self Efficacy, Experience, Attitude, Psychic, and Verbal College Student Faculty of Nursing (n=83)

Variable	f	%
Self Efficacy Obesity		
Tall	33	39.8
Low	50	60.2
Experience		
Well	40	47.2
Not good	43	51.8
Attitude		
Well	39	47.0
Not good	44	53.0
Psychic		
Well	35	42.2
Not good	48	57.8
Verbal		
Tall	41	49.4
Low	42	50.6

Based on table 2, it shows that Self-Efficacy Obesity in the high category is 33 respondents with a percentage (39.8%), and the low category is 50 respondents with a percentage (60.3%). Experiences in the good category are 40 respondents with a percentage (47.3%), 2 %), and the unfavorable category was 43 respondents with a percentage (51.8%). The attitude in the good category was 39 respondents with a percentage (47.0 %), and the unfavorable category was 44

respondents with a percentage (53.0%). Psychic good category as many as 35 respondents with a percentage (42.2 %), and unfavorable category as many as 48 respondents with a percentage (57.8%). And verbal high category as many as 41 respondents with a percentage (49.4%), and the low category as many as 42 respondents with a percentage (50.6%).

Relationship of Experience with Self-Efficacy of Obesity Management Students of the Faculty of Nursing

Table 3.
Relationship of Experience with Obesity Management Self Efficacy College Student Faculty of Nursing (n=83)

Experience	Self Efficacy Obesity				Total	P Value	OR CI-95%
	Tall		Low				
	f	%	f	%	f	%	0.000
Well	27	32.5%	13	15.7%	40	48.2%	(4,319-37,984)
Not good	6	7.2%	37	44.6%	43	51.8%	

Based on table 3, the results of the chi-square test obtained P value: 0.000 (< 0.05), which can be concluded that there is a relationship between experience and self-efficacy of obesity management by students of the Faculty of Nursing, Muhammadiyah University, Jakarta. The OR value of 12.8 can be analyzed in students who have good experience with a 12.8 times chance of having high Self Efficacy compared to respondents whose experience is not good.

Relationship between Attitude and Self-Efficacy of Obesity Management Students Faculty of Nursing

Table 4.
Relationship between Attitude and Self-Efficacy in Obesity Management College student Faculty of Nursing (n=83)

Attitude	Self Efficacy Obesity				Total	P Value	OR CI-95%
	Tall		Low				
	f	%	f	%	f	%	0.000
Well	25	30.1%	14	16.9%	39	27.0%	(2,934-22,006)
Not good	8	9.6%	36	43.4%	44	53.0%	

Based on table 4, the results of the chi-square test obtained P value: 0.000 (<0.05), which can be concluded that there is a relationship between attitudes and self-efficacy of obesity management by students of the Faculty of Nursing, Muhammadiyah University, Jakarta. The OR value of 8.03 can be analyzed in students who have a good attitude 8.03 times the chance to have a high Self Efficacy compared to respondents whose attitude is not good.

Psychic Relationship with Obesity Self Efficacy Students of the Faculty of Nursing

Table 5.
Psychic Relationship with Obesity Self Efficacy College Student Faculty of Nursing (n=83)

Psychic	Self Efficacy Obesity				Total	P Value	OR CI-95%
	Tall		Low				
	f	%	f	%	f	%	0.000
Well	24	28.9%	11	13.3%	35	42.2%	(3,419-26,145)
Not good	9	10.8%	39	47.0%	48	57.8%	

Based on table 5, the results of the chi-square test obtained P value: 0.000 (<0.05), which can be concluded that there is a Psychic Relationship with Obesity Management Self-Efficacy of

Students of the Faculty of Nursing, Muhammadiyah University, Jakarta. Judging from the OR value of 9.45, it can be analyzed that students who have a good psychic have a 9.45 times chance to have a high self-efficacy compared to respondents who have a poor psyche.

Verbal Relationship with Obesity Management Self Efficacy Student Faculty of Nursing

Table 6.

Relationship of Verbal Persuasion with Self Efficacy of Obesity Management College Student Faculty of Nursing(n=83)

Verbal	Self EfficacyObesity				Total		P Value	OR CI-95%
	Tall		Low		f	%		
	f	%	f	%				
Tall	24	28.9%	17	20.5%	41	49.4%	0.001	5,176 (1,974-13,573)
Low	9	20.8%	33	39.8%	42	50.6%		

Based on table 6, the results of the chi-square test obtained P value: 0.001 (< 0.05), which can be concluded that there is a verbal relationship with Self-Efficacy of Obesity Management Students of the Faculty of Nursing, Muhammadiyah University, Jakarta. Judging from the OR value of 5.17, it can be analyzed that students who have high Verbal have a 5.17 times chance to have high Self Efficacy compared to respondents with low Verbal.

The Relationship between Gender and Self-Efficacy of Obesity Management Students of the Faculty of Nursing

Table 7.

Relationship of Sex with Self Efficacy of Obesity Management College Student Faculty of Nursing (n=83)

Gender	Self EfficacyObesity				Total		P Value	OR CI-95%
	Tall		Low		f	%		
	f	%	f	%				
Man	11	13.3%	5	6.0%	16	19.3%	0.019	4,500 (1,392-14,552)
Woman	22	26.5%	45	54.2%	67	80.7%		

Based on table 7, the results of the chi-square test obtained P value: 0.019 (< 0.05), which can be concluded that there is a relationship between gender and self-efficacy of obesity management for students of the Faculty of Nursing, Muhammadiyah University, Jakarta. Seen from the OR value of 4.5 can be analyzed in female students having 4.5 times the chance to have high Self Efficacy compared to male respondents.

The Relationship between Verbal Education Level and Obesity Management Self Efficacy of Students of the Faculty of Nursing

Table 8.

Relationship between Education Level and Obesity Management Self Efficacy College Student Faculty of Nursing (n=83)

Level of education	Self EfficacyObesity				Total		P Value	OR CI-95%
	Tall		Low		f	%		
	f	%	f	%				
D3 Nursing	5	6.0%	21	25.3%	26	31.3%	0.019	0.247 (0.082-0.744)
S1 Nursing	28	233.7%	29	34.9 %	57	68.7%		

Based on table 8, the results of the chi-square test obtained P value: 0.019 (<0.05), which can be concluded that there is a relationship between education level and self-efficacy of obesity management for students of the Faculty of Nursing, Muhammadiyah University, Jakarta. Judging from the OR value of 0.24, it can be analyzed that students with a Bachelor of Nursing education level have 0.24 times the chance to have high Self Efficacy compared to respondents who have D3 Nursing.

AnalysisMultivariate

Table 9.

Relationship Logistics Regression Test ResultsAttitudes, Physical and Emotional Conditions, and Gender towards Self EfficacyManagement Obesity Student of the Faculty of Nursing (n=83)

		B	SE	Wald	df	Sig.	Exp(B)	95% CIfor EXP(B)	
								Lower	Upper
Ste 1a	Gender	1,612	,753	4,577	1	,032	5.011	1.145	21,934
	Attitude	-2,073	,646	10,298	1	,001	,126	0.035	,446
	Psychic	-2,029	,635	10,207	1	,001	,131	,038	,456
	Constant	,389	1,423	0.075	1	,785	1.475		

Based on table 9, it can be seen that Attitude, Psychological, and Gender haveconnectionwhich is significant to the Obesity Self Efficacy of Students of the Faculty of Nursing, University of Muhammadiyah Jakarta.Based on the results of the analysis, obtained the value of the coefficient of B and OR (Odds Ratio), whereGenderis a variable that has a B coefficient value (1,612) and OR (5.011) is the highest when compared to other variables. This result shows thatGenderis the most dominant variable relatedon Self-Efficacy of Obesity of Students of the Faculty of Nursing, University of Muhammadiyah Jakarta. OR (Odds Ratio) value onGenderwomen show they have opportunities5.011timehave low Obesity Self Efficacy in Students of the Faculty of Nursing, University of Muhammadiyah Jakarta.

DISCUSSION

Relationship of Experience with Self-Efficacy of Obesity Management Students of the Faculty of Nursing

From the results of the chi-square test, it was found that P value: 0.000 (<0.05), which can be concluded that there is a Relationship between Experience and Self-Efficacy of Obesity Management for Students of the Faculty of Nursing, Muhammadiyah University, Jakarta. In addition to personal experience, the second source of self-efficacy is the experience of others who can be used as learning how to manage disease and maintain adaptive coping (Widyawati, 2012). According to researchers, the experience during obesity can increase individual self-confidence in carrying out activities and fulfilling self-care needs. Individual experience can be used as a reference for further action so that the individual does not repeat inappropriate actions as in the past.

Relationship between Attitude and Self-Efficacy of Obesity Management Students Faculty of Nursing

From the results of the chi-square test, P value is obtained: 0.000 (<0.05), which can be concluded that there is a relationship between attitudes and self-efficacy of obesity management for students from the Faculty of Nursing, University of Muhammadiyah Jakarta. The results of this study are also in line with research conducted by Indriani, Septy Dwi (2014). The research

is about the relationship of knowledge and attitudes with the incidence of obesity in regional secretariat employees of Riau province. Statistical test results show that there is no relationship between knowledge and attitudes with the incidence of obesity. The study states that good and sufficient knowledge cannot be directly related to action and produce a positive output. Based on the researcher's assumption that a person's attitude does not always manifest in the form of actions or actions. This is due to several reasons, including attitudes that will manifest in an action depending on the current situation, attitudes will be followed or not followed by actions, referring to the experiences of others. , attitude is followed or not followed by an action based on a lot or little experience of a person, and values in society. In any society, there are always values that guide everyone in carrying out social life.

Psychic Relationship with Self-Efficacy of Obesity Management Students of the Faculty of Nursing

From the chi-square test results obtained P value: 0.000 (<0.05), which can be concluded that there is a Psychic Relationship with Obesity Management Self Efficacy of Students of the Faculty of Nursing, University of Muhammadiyah Jakarta. This study is not in line with research by Rahmawati, (2015) In Univariate analysis revealed that most of the students of the Public Health Study Program of UIN Syarif Hidayatullah Jakarta Class of 2012-2014 had normal emotional mental conditions. However, based on the results of the analysis, it is known that most of the students have symptoms of emotional mental disorders. The results of the analysis of the relationship between emotional mental conditions and central obesity showed that students who had emotionally disturbed mental conditions were more commonly found in students who did not experience central obesity.

Based on the researcher's assumption, the stress conditions experienced by students are an accumulation of various symptoms of emotional mental disorders caused by several factors such as a lot of campus assignments, the demands of students' parents to excel and personal problems to students. Students who experience stress will cause a response. on the pituitary gland to increase the production of cortisol which will then send a stimulus to the brain and then the brain sends signals to the body to increase appetite and students will find it difficult to control their eating patterns so they become obese.

Relationship of Verbal with Self Efficacy Management of Obesity Students Faculty of Nursing

From the results of the chi-square test obtained P value: 0.001 (<0.05), which can be concluded that there is a verbal relationship with Obesity Management Self Efficacy Students of the Faculty of Nursing, Muhammadiyah University, Jakarta. According to Bandura in Ghufron & Risnawati (2016), the influence of persuasion Verbal communication is not too large because it provides an experience that can be directly experienced or observed by individuals. Under conditions of stress and constant failure, the influence of suggestion will quickly wear off if you have an unpleasant experience. Basically, verbal persuasion is a communication skill that can persuade or direct others.

Based on the assumption of the researcher, basically verbal persuasion is a communication skill that can persuade or direct others. In persuasive communication there are components or elements so that it can be referred to as persuasive communication. In verbal persuasion, individuals are directed with advice, advice, motivation and support, especially with those closest to them so that they can increase their beliefs about their abilities that can help achieve the desired goals. Individuals who are verbally persuaded tend to be harder to achieve success

and maintain their quality of life. Students who are obese strengthen their belief that they have what it takes to succeed.

Relationship between Gender and Self Efficacy of Obesity Management Student Faculty of Nursing

From the results of the chi-square test, it was found that P value: 0.019 (<0.05), where it can be concluded that there is a relationship between Gender and Self-Efficacy of Obesity Management for Students of the Faculty of Nursing, Muhammadiyah University, Jakarta. This study is in line with research by Rahmawati, (2015) in statistical tests obtained p value = 0.030, where there is a relationship between gender and central obesity in students of the Public Health Study Program of UIN Syarif Hidayatullah Jakarta Class of 2012-2014. In addition, the analysis also obtained an OR value = 0.119, where men have a 0.119 times risk of experiencing central obesity compared to women. Men and women have different fat distributions. The proportion of fat in men is more in the upper part of the body, such as the abdomen or abdomen, while the proportion of fat in women is more in the lower part of the body, such as the waist and pelvis (Pujiati, 2010).

According to the researcher's assumptions, the role of women is greater than that of men. Women have many roles, both as housewives and career women. Under these conditions, women must be able to manage and complete their responsibilities as much as possible. Whereas for men, they have the responsibility as the head of the household who is only in charge of earning a living. From this role, the researcher argues that women have high self-efficacy compared to men.

The Relationship between Education Level and Obesity Management Self Efficacy of Students of the Faculty of Nursing

From the results of the chi-square test, it was found that P value: 0.019 (<0.05), where it can be concluded that there is a relationship between the level of education and Self-Efficacy of Obesity Management for Students of the Faculty of Nursing, Muhammadiyah University, Jakarta. This research is not in line with Latifah's research (2016). In his research, it was found that the respondent's education was not related to self-efficacy ($p>0.05$), where in this study almost all respondents had low education, education is a very important component for an individual, education is an indicator that a person has taken formal education, a person's education can influence patients to obtain information related to their disease, so that if the patient has a high education, the patient's self-efficacy will also be better (Latifah, 2016).

Based on the researcher's assumption that education is one of the important indicators for a person in solving problems. From these results the researcher argues that someone who has taken formal education has the ability to process information well. Acceptance of good information on individuals will be implemented optimally in accordance with the information provided.

AnalysisMultivariate

Based on researchIt is known that Attitude, Physical and Emotional Condition, and Gender haveconnectionwhich is significant to Self Efficacy*ManagementObesity*Student of the Faculty of Nursing, Muhammadiyah University, Jakarta. Based on the results of the analysis, the B and OR (Odds Ratio) coefficients are obtained, whereGenderis a variable that has a B coefficient value (1,612) and OR (5.011) is the highest when compared to other variables. This result shows thatGenderis the most dominant variable relatedon Self-Efficacy of Obesity of Students of the Faculty of Nursing, University of Muhammadiyah Jakarta. Changes in body condition and mood

can affect Self Efficacy, a person quickly concludes fatigue and mood swings as clues about Self Efficacy. In relation to physiological conditions and moods, Self Efficacy can increase if: body condition increases, stress decreases, negative emotions decrease, there is a correction to the body condition (Bandura in Ghufron & Risnawati, 2016).

Based on the 2013 Basic Health Research data, there was an increase in the prevalence of obesity in terms of gender. The prevalence of obesity in women is at 32.9 percent, much higher than men at 19.7 percent. (Goddess L, 2018). According to the researcher's assumption that the problem of obesity in adolescents will affect obesity in adulthood, because if there is obesity in adolescents it will be difficult to reduce obesity in the adult phase. There needs to be prevention efforts carried out by all parties, both the central government, regional governments, academics in the campus environment and the private sector through Corporate Social Responsibility (CSR) as a form of social responsibility to the community. Interventions on obesity problems can be pursued through health promotion, restriction of space for food and beverages that cause obesity, maximizing the function of public facilities such as sports parks and others as well as policies regarding support for public facilities for physical activity.

CONCLUSION

Based on the research, it is known that Attitude, Physical and Emotional Conditions, and Gender have a significant relationship to Self-Efficacy of Obesity Management Students of the Faculty of Nursing, Muhammadiyah University, Jakarta. Based on the results of the analysis, the coefficient values of B and OR (Odds Ratio) are obtained, where Gender is the variable that has the highest coefficient B (1.612) and OR (5.011) when compared to other variables.

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