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Faktor-Faktor Yang Mempengaruhi Peran Sebagai Role Model Hidup Sehat Pada Mahasiswi Kedokteran Preklinik

Influencing Factors on Motivation To Be A Health Role Model Among Female Preclinical Medical Students

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Abstract

A positive assessment of self-esteem and self-efficacy will motivate, especially female students, to care about their body image, reduce the risk of eating disorders, and in turn aspire them to become health role-models. This study aimed to examine the influence of those variables on becoming healthy role-models. A cross-sectional study was conducted in 2021 to 189 female students at the Faculty of Medicine, Tanjungpura University. Data were analyzed using the Chi-Square test and multivariate logistic regression test. Self-esteem (p: 0.003; OR: 2.638) and self-efficacy (p: 0.000; OR: 5.752) had a significant correlation with body image, and body image had a significant correlation with the risk of eating disorders (p: 0.000; OR: 4,609). Regression analysis showed that self-esteem (p: 0.016) and self-efficacy (p: 0.024) are the variables that affected becoming of a role model. Moreover, it is found that self-efficacy had an indirect influence on eating disorders according to the body image with a coefficient of 2.45. Good self-acceptance (high self-esteem and self-efficacy) through positive self-compassion likely reduces the risk of eating disorders and improves the body image. The combination of these aspects will ultimately increase the students' motivation to promote healthy behavior to others and thus become health role-models.

Keywords: *Female Medical Student; Health Role Model; Motivation; Role As Health Role Models; Role Model.*

Introduction

The members of faculty of medicine is often seen as a good role model for healthy behaviors. Not only do students implement healthy behavior in their daily lives, but also aspire to become role models for a wider community. In this context, medical students often look at the physical, social, mental, and spiritual conditions of their lecturers as inspirations to develop their own confidence to become health role-models.(Leman et al., 2020; Tejoyuwono, 2020) When medical students are motivated to become role models, four conditions attention, retention, motor reproduction, and motivation are important to consider.(Leman et al., 2021)

Attention is related to the characteristics of role models and observers, the use of technology to promote the modeling of healthy behavior, and the use of peers as role models. Retention is related to types of information and adherence to a specific timeframe. Motor reproduction is related to the opportunity to practice a modeled healthy behavior within a timeframe to perform what has been observed. Motivation is related to self-efficacy, self-regulation, and support from significant others such as family, peers, and community members.(Leman et al., 2020, 2021)

As health role-models, medical students often seek for self-esteem, self-efficacy, and body image. Self-esteem encourages them to behave like their role models, especially when they have attachment to the same-sex role model.(Wohlford et al., 2004) Self-efficacy encourages them to achieve goals and reduce traits.(Morgenroth et al., 2015) Meanwhile, body image refers to the assessment of self-appearance, which is influenced by internal factors (biological and psychological) and external factors (cultural and social determinants).(Sachdeva et al., 2012)

This assessment is believed to have affected the psychology (self-esteem, self-confidence, anxiety, stress, depression), social life (inferiority, acceptance, insecurity), and behavior (healthy/unhealthy lifestyle) which result in a particular degree of life satisfaction (well-being).(Shang et al., 2021; Tort-Nasarre et al., 2021)

Those who experience body dissatisfaction will take various actions, even unhealthy ones, in order to achieve self-perfection. For example, they may choose to practice an extreme diet that potentially leads to clinical eating disorders such as anorexia nervosa and bulimia.(Goel et al., 2021; Mclean & Paxton, 2019) Moreover, body dissatisfaction can also lead to suicidal ideation, as a result of both physical and verbal social bullying.(Fitriyah & Rokhmawan, 2019) Anxiety due to negative perceptions of body image is more common in women than men, as women are believed to be more sensitive and vulnerable to fat stigma.(Gao et al., 2020) Women with positive body image are likely to possess high self-esteem, which results in high confidence due to high social acceptance and low anxiety.(Adetunji & Olusola, 2018)

Although this negative self-assessment is believed to have the potential to affect medical students' self-confidence as role aspirants, no specific study is done in this area. Therefore, this study aims to examine the influence of self-esteem, self-efficacy, and body image on becoming of healthy role-models among female medical students in the Faculty of Medicine, Universitas Tanjungpura. In line with this objective, the Faculty of Medicine, Universitas Tanjungpura also seek for producing professional graduates who have the quality to be good healthy role-models in a wider community.

Methods

Using a cross-sectional design, this study was carried out from July to August 2021 to all female students at the Faculty of Medicine, Universitas Tanjungpura University (Classes of 2018-2020). A total of 189 female students from three different study programs (63 from the Medical Sciences Department, 56 from the Nursing Department, and 70 from the Pharmaceutical Department) were involved as the subjects of the study voluntarily. This study has granted ethical clearance from the Faculty of Medicine, Universitas Tanjungpura on June 14, 2021, with registration number of 4130/UN22.9/PG/2021.

Data collection was carried out using an online questionnaire that had previously been tested to 58 non-research respondents from the Faculty of Medicine, Universitas Tanjungpura. The validity test was carried out using product-moment correlation, where the questionnaire is considered valid if an r value counts greater than the r-table. Meanwhile, the reliability test was carried out using the Cronbach Alpha reliability coefficient.(Sharma, 2016) The followings are the list of questionnaires used in this study:

1. Assessment of self-esteem is based on the Rosenberg self-esteem scale (RSES),(Schmitt & Allik, 2005) consisting of 10 questions with four Likert scales. The higher the score, the higher the perception of self-esteem (n = 28). The result of the reliability test is 0.802, and all question items are considered valid.
2. Assessment of self-confidence is based on the Physical Self-Presentation Confidence (PSPC)(Motl & Conroy, 2000) in Physical Self-Efficacy Scale (PSES) made by Ryckman et al. (1982).(Ryckman et al., 1982). PSPC questionnaire through 12 questions that have been translated into Indonesian using a forward translation method. The higher the score, the higher the perception of self-esteem (n = 30). The result of the reliability test is 0.512, and all question items are considered valid to assess self-efficacy but weak (acceptable but poor) (Hoekstra et al., 2019)
3. Assessment of body image is based on the Indonesian version of Body Shape Questionnaire-34 (BSQ-34), which has been authorized to be used in research.(Aritonang et al., 2015; Sitepu et al., 2020) This questionnaire is measured using six Likert scales. The result of this questionnaire is divided into two categories: positive body image perception (<110) and negative body image perception (>110). The result of the reliability test is 0.974, and all question items are considered valid.
4. Assessment of eating disorders risk is based on the Eating Attitude Test (EAT).(Garner et al., 1982) consisting of 26 questions with five Likert scales. The result of this questionnaire is divided into two categories – risky (<20) and not risky (>20). The result of the reliability test is 0.922 and all question items are considered valid.
5. Assessment of healthy role model aspiration is based on the Roles as Healthy Model (RHM) section D which focuses on ideal physical appearance, consisting of 11 questions with five Likert scales (Tejoyuwono et al., 2019). The lower the score, the lower the aspiration for role models. On the contrary, the higher the score, the higher the aspiration for role models (n = 37). The result of the reliability test is 0.776, and all question items are valid.

Bivariate analysis was carried out using Pearson's Chi-Square Test to examined the impact of the correlation between self esteem, and self-efficacy to body image, body image to eating behavior and eating behavior, body image, self-esteem and self efficacy to health role model ($p < 0.05$) and showing adjusted odds ratio (OR) values. Meanwhile, multivariate testing was carried out in the logistic regression in coefficient β, confidence interval (CI), and p-values also included in the model to demonstrate the correlation between variables.

Results

The respondents involved in this study were between 18-22 years old, dominated by students from the class of 2018 (36%), followed by the class of 2019 (32.8%) and the class of 2020 (31.2%). Based on the univariate analysis, students from the Faculty of Medicine, Universitas Tanjungpura in general had high self-esteem (60.3%), self-efficacy (59.8%), motivation to be role models (50.8%), positive body image (72%), and no risk of eating disorders (68.3%).

Although students from Medical Sciences Department had the highest score for self-esteem (22.8%), their self-perception of negative body image was also the highest (11.6%). Students from Pharmacy Department have low self-esteem (17.5%), low self-efficacy (14.8%), risk of eating disorders (12.7%), and low motivation of being role models (19.6%). On the other hand, students from Pharmacy Department had the highest score for positive body image perceptions (27%) and high motivation for

Table 1. Analysis of the correlation between variables on motivation to be a health role-models

Independent Variables	N	%	n	%	*P*	OR	CI 95%
Self-Esteem	Negative Body Image		Positive Body Image				
Low	30	40	45	60	0.003*	2.638	1.377-5.053
High	23	20.2	91	79.8			
Self-Efficacy	Negative Body Image		Positive Body Image				
Low	37	48.7	39	51.3	0.000*	5.752	2.873-11.516
High	16	14.2	97	85.8			
Body Image	Risky Eating Disorder		Not Risky Eating Disorder				
Negative	30	56.6	23	43.4	0.000*	4.609	2.340-9.077
Positive	30	22.1	106	77.9			
Eating Disorder	Low Health Role-Model		High Health Role-Model				
Risky	24	40	36	60	0.084	0.580	0.311-1.079
Not Risky	69	53.5	60	46.5			
Body Image	Low Health Role-Model		High Health Role-Model				
Negative	21	39.6	32	60.4	0.100	0.583	0.306-1.112
Positive	72	52.9	64	47.1			
Self-Esteem	Low Health Role-Model		High Health Role-Model				
Low	43	57.3	32	42.7	0.070	1.720	0.955-3.098
High	50	43.9	40	56.1			
Self-Efficacy	Low Health Role-Model		High Health Role-Model				
Low	32	42.1	44	57.9	0.109	0.620	0.345-1.115
High	61	54	52	46			

OR: Odds ratio, CI 95%: Confidence interval

* Chi-square test significance $p < 0.05$,

Table 2. Influencing factors on motivation to be role models for healthy behavior among female medical students

Independent Variables	Dependent Variables	β	S.E	*P*	OR	CI
Self-esteem	Body Image	-0.556	0.362	0.124	0.574	0.282-1.165
Self-efficacy	Body Image	-1.601	0.366	0.000*	0.202	0.098-0.413
Body Image	Eating Disorder	-1.528	0.346	0.000*	0.217	0.110-0.427
Eating Disorder	Health Role-Model	0.545	0.317	0.086	1.725	0.926-3.212
Body Image	Health Role-Model	0.539	0.329	0.102	1.714	0.899-3.268
Self-esteem	Health Role-Model	-0.790	0.328	0.016*	0.454	0.239-0.863
Self-efficacy	Health Role-Model	0.741	0.327	0.024*	2.097	1.104-3.983

* Logistic regression test significance $p< 0.05$, β: Coeffisien beta, S.E: Standard error

being role models (17.5%) similar to students from Medical Sciences Department (17.5%).

Table 1 shows a positive correlation between variables and body image, indicated by the more positive body image in students with high self-esteem (79.8%), high self-efficacy (85.8%), and low risk of eating disorders (77.9%). Furthermore, the risk of eating disorders was more common among female students with a negative body image (56.6%). Interestingly, low self-esteem (60%) and low self-efficacy (51.3%) mostly occurred in students with positive body image. Based on the analysis of the Chi-Square test, self-esteem (p: 0.003; OR: 2.638) and self-efficacy (p: 0.000; OR: 5.752) had a significant correlation with body image, and body image had a significant correlation with risk of eating disorders (p: 0.000; OR: 4.609).

Based on the descriptive correlation, students with negative body image and risk of eating disorders tend to have higher aspirations to be healthy role-models (60.4%). On the other hand, students with positive body image tend to have low motivation to be health role-models (52.9%). A similar result is also found in students with the risk of eating disorders (60%) and self-efficacy (57.9%) who tend to have a low interest in advocating health behavior. However, self-esteem seems to

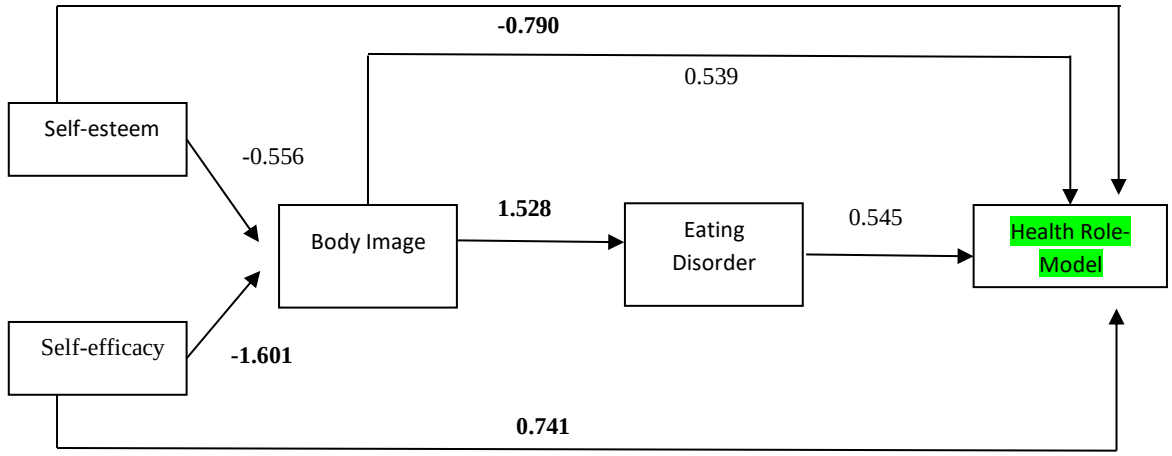

Figure 1. The correlation between variables affecting motivation to become a health role-model

have a positive influence on motivation to be role models; in other words, the lower self-esteem, the lower the motivation to be role models (57.3%). The result of the test between variables showed that no variable had a significant influence on motivation to become healthy role-models among the students ($p > 0.05$).

In Table 2, the result of the multivariate test shows that self-efficacy had a significant, direct and negative influence on body image (β: -1.601; 95% CI: 0.098-0.413; p: 0.000). In addition, body image also had a significant, direct and negative influence on the risk of eating disorders (β: -1.528; 95% CI: 0.110-0.427; p: 0.000). The direct and significant influence on self-esteem was negative (β: -0.790; 95% CI: 0.239-0.863; p: 0.016) while on self-efficacy were positive (β: 0.741; 95% CI: 1.104-3.983; p: 0.024).In Figure 1, it is found that there is a direct influence between self-esteem and self-efficacy with aspiration for role models. A direct influence is also found on the correlation between body image and eating disorders. However, there is an indirect influence between self-efficacy and eating disorders through body image (β: 2.45). Furthermore, there was neither a direct nor indirect correlation between body image, eating disorders, and motivation to be health role models.

Discussion

Medical students are aware that they are obligated to promote health and are committed to be health role-models living a healthy life continuously as part of their professional responsibility in the society(Leman et al., 2020), To achieve this goal, students are first required to have positive self-assessment of themselves. Self-acceptance is the key to unconditional self-love and self-efficacy. In addition, self-acceptance likely increases confidence to complete tasks such as doing exercise and consuming healthy meals as well as to achieve goals such as an ideal body.(Arli & Sutanto, 2018; Mclean & Paxton, 2019) The combination of these aspects will likely enhance body image and thus increase self-esteem and motivation to become health role models for others (Ku et al., 2019)

However, it is still common that female medical students experience mild body dissatisfaction that causes them to have an extreme diet resulting in eating disorders. This condition is further exacerbated if they experience social pressure (familiar, cultural) and low internal judgment (individual and inter-personal) due to the thin-ideal concept, which will seriously encourage them to commit suicide due to painful emotional states(Goel et al., 2021; Mclean & Paxton, 2019). Today, social media have a very strong influence on beauty standards (the athletic-ideal and thin-ideal) among teenagers and adults. The thin-ideal concept has the potential to cause worse body image perception, mental illness (depression leading to suicide), unhealthy behavior (restricted diet, over physical activity, unsafety alimentary products/drugs/dietary supplements) that may motivate to undergo plastic surgery.(Aparicio-Martinez et al., 2019) The desire to get a thin-ideal body, especially for women, is caused by body dissatisfaction and low self-esteem.(Babic et al., 2014) In many cases, they are determined to change their appearance by doing diet, fasting, and doing particular exercises in order to be accepted in the society. High self-confidence and self-esteem are crucial to improving happiness and self-efficacy in becoming health role-models.(Tort-Nasarre et al., 2021)

This study found that self-esteem is positively related to body image contributing to the occurrence of eating disorders. The higher the self-esteem, the lower the risk of eating disorders. This study also found that self-esteem and self-efficacy affect the desire to have an ideal body image concerning the aspiration to become a healthy role-model. Body image is subjective, emotional self-esteem toward the shape of the body which greatly affects self-confidence and self-satisfaction. High self-esteem is useful to prevent mental problems in individuals with Body Mass Index/BMI (obesity/overweight) problems and encourage them to advocate others about healthy behavior. Individuals, especially women, with low self-esteem tend to have low perception of body image that may lead to mental stress (fear of social anxiousness) and suffer from negative comments.(Ahadzadeh et al., 2018; Rubinsky et al., 2019) Positive body image includes body area satisfaction, positive appearance and fitness evaluation, positive appearance and fitness orientation, as well as positive subjective weight associated with lifestyle weight efficacy.(Soheila et al., 2018)

Furthermore, this study found that self-efficacy is positively related to body image. Individuals with high self-confidence about their body or about their ideal body progress are likely to have a better implementation of healthy behavior, especially

those that relate to physical activities.(Fernández-Bustos et al., 2019; Khorshidi & Aghdam, 2018) A self-compassion approach is useful to encourage individuals to improve their self-acceptance, self-confidence, self-satisfaction, happiness, social relationships, and optimism about themselves and the environment. High self-compassion along with high self-efficacy and self-esteem seem to be strong protective factors against the development of poor body image and eating disorder.(Moffitt et al., 2018) Furthermore, in the context of students as healthy role-models, self-compassion is one of the indirect factors that will affect their personal quality. Positive self-acceptance (appearance and body shape), decreased risk of eating disorders, and a positive perception of self-quality may increase motivation to promote healthy behavior to others.(Leman et al., 2021; Rizal et al., 2021).

Physical activities, food consumptions, and nutritional status are the others variables that affected the body image and being health role-models. These variables are prospectives to conduct in further research. This research could be developed in other health professions schools, considered other characteristic in each school, such as midwifery, nutrisionist, and other health-profession schools.

Conclusion

Self-esteem and self-efficacy seem to be directly affect the students motivation to be a health role-models . Meanwhile, self-efficacy also seems to indirectly influence eating disorders through body image. The reciprocal correlation between positive self-assessment and positive self-acceptance will ultimately reduce the risk of eating disorders. Finally, a positive body image will increase self-compassion and self-confidence and improve motivation to be a health role-models for others.

Conflict of Interest

The authors declare that there is no potential competing interest.

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Author contribution

AATT and IT was contributed for the whole process of this research. AATT developed the conception, design and IT is responsible for the data collection. Both authors are performed the analysis until conceived the manuscript draft.

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