ORIGINAL RESEARCH ARTICLE

The role of self-esteem and self-efficacy in women empowerment in the Kingdom of Saudi Arabia: A cross-sectional study

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Abstract

The study aimed to explore the role of self-esteem and self-efficacy in women empowerment among academic and administrative staff at Saudi universities. A cross-sectional design was carried out at 15 governmental universities. A multistage cluster sampling technique was used to select 5587 participants. Multiple linear regression was used to analyze the predictive relation. Data collection included socio-demographic variables, Rosenberg self-esteem scale, general self-efficacy scale, and women empowerment scale. The results indicated that study participants' self-esteem was equally distributed between moderate (49.8%) and high (50.2%). Also, 66.9% of the participants had high self-efficacy, and 86.8% had high total women's empowerment. Regression coefficient showed that self-esteem (B=0.521, b=0.127, t=13.785 and p<0.001) and self-efficacy (B=2.388, b=0.702, t=76.049 and p<0.001) are important predictors of the total women empowerment. However, self-efficacy was observed to be the most dominant predictor (t=76.049). The total model summary shows that 73.4% of the women empowerment level can be predicted through self-esteem and self-efficacy. The study results can be used as a base to build women empowerment programs in the Kingdom of Saudi Arabia (KSA) and help to achieve the 2030 KSA vision regarding women empowerment. *(Afr J Reprod Health 2021; 25[1s]: 69-78).*

Keywords: Self-esteem, self-efficacy, women empowerment, 2030 KSA vision

Résumé

L'étude visait à explorer le rôle de l'estime de soi et de l'efficacité personnelle dans l'autonomisation des femmes parmi le personnel académique et administratif des universités saoudiennes. Une conception transversale a été réalisée dans 15 universités gouvernementales. Une technique d'échantillonnage en grappes à plusieurs degrés a été utilisée pour sélectionner 5587 participants. Une régression linéaire multiple a été utilisée pour analyser la relation prédictive. La collecte de données comprenait des variables sociodémographiques, une échelle d'estime de soi de Rosenberg, une échelle d'auto-efficacité générale et une échelle d'autonomisation des femmes. Les résultats ont indiqué que l'estime de soi des participants à l'étude était également répartie entre modérée (49,8%) et élevée (50,2%). En outre, 66,9% des participants avaient une auto-efficacité élevée et 86,8% avaient une forte autonomisation totale des femmes. Le coefficient de régression a montré que l'estime de soi (B = 0,521, b = 0,127, t = 13,785 et p <0,001) et l'auto-efficacité (B = 2,388, b = 0,702, t = 76,049 et p <0,001) sont des prédicteurs importants du l'autonomisation totale des femmes. Cependant, l'auto-efficacité a été observée comme le prédicteur le plus dominant (t = 76,049). Le résumé total du modèle montre que 73,4% du niveau d'autonomisation des femmes peut être prédit grâce à l'estime de soi et à l'auto-efficacité. Les résultats de l'étude peuvent être utilisés comme base pour élaborer des programmes d'autonomisation des femmes dans le Royaume d'Arabie saoudite (KSA) et aider à réaliser la vision 2030 de la KSA concernant l'autonomisation des femmes. *(Afr J Reprod Health 2021; 25[1s]: 69-78).*

Mots-clés: Estime de soi, efficacité personnelle, autonomisation des femmes, vision 2030 KSA

Introduction

Self-efficacy is defined as an individual's judgment of capabilities to accomplish tasks based on previous life experiences[1]. The main concepts related to self-efficacy are internal empowerment and self-trust. In other word, self-efficacy is the degree to which a person believes that he can

accomplish requirements in specific tasks[2]. In the competitive environment of Saudi Universities, self-efficacy is a central concept related to the achievement of work and social functions. It reflects self-trust in applying control over one's reactions, motivation, behavior, and the social environment[3].

The self-efficacy of working women is crucial to identify their potential performance in stressful and ever-changing working conditions as in Universities. Self-update requirements, especially for teaching staff, are enhanced by high self-efficacy and self-esteem[4,5]. Working women with high self-efficacy will achieve positive adaptation to stressful work environments and be better empowered to achieve their professional goals[6,7]. In contrast, women with low self-efficacy will experience recurrent failures related to their job tasks. Therefore, they will be less able to innovate or even achieve the minimum requirements related to their job goals. Those women will also have low self-esteem and personal empowerment[8]. Therefore, self-esteem and self-efficacy appear to be two faces of the same coin as they are correlated. At the same time, the two concepts appear to be a central component of women's empowerment[9].

Self-esteem means self-worth; it can be generally defined as a person's overall self-evaluation from negativity to positivity[10]. Self-esteem is one of the most important elements that affect overall human behaviors and relationships. It affects a person's ability to accept responsibilities, to cooperate with others, communicate effectively, to deal with positive and negative emotions, accept challenges, and tolerate stressful life events[11,12]. The most common features of high self-esteem individuals include high personal empowerment, reflected in their self-efficacy. Self-esteem influences the perception about work conditions, decision-making in daily life, personal growth, and coping strategies that a person can choose in different situations. Persons with have high self-esteem and self-worth are more likely to recognize stress as an opportunity for personal growth[13-15].

Studies have shown a positive predictive relationship between self-efficacy and self-esteem, in which perceived self-efficacy enhances the sense of self-worth and increases personal empowerment[16,17]. According to Hajloo, there is a strong predictive relationship between self-efficacy and self-esteem, and consequently, self-efficacy can predict self-esteem and vice versa[18]. Furthermore, if the person has high personal empowerment, he will trust his abilities to exert enough effort to achieve certain tasks, which will enhance high self-esteem. Therefore, self-esteem and self-efficacy appear to be strongly correlated to women empowerment[19].

Women are essential and significant part of any society; however, they face several obstacles in obtaining their rights. Therefore, women must be empowered with and have rights of education, health, security, occupations, skills, decision-making power, and improved living standards and respect[20]. Women's empowerment is known as a change in a woman's life circumstances, enabling her to increase her ability to manage more strengthened and rewarding lives. Improving women's empowerment is a prominent issue for achieving the Sustainable Development Goals[21].

According to Al-Qahtani *et al*. women's empowerment in higher educational institutes includes three main dimensions: social/relational, environmental/workplace, and personal empowerment. The last one involves two main sub-dimensions - self-esteem and self-efficacy[9]. According to the 2030 vision of the Kingdom of Saudi Arabia (KSA), Saudi women's' empowerment is crucial for sustainable community development. The present study is the first that has investigated the role of self-esteem and self-efficacy in the overall women empowerment level. Furthermore, it explores the predictive power of the other women empowerment dimensions and sub-dimensions on self-esteem and self-efficacy. The study provides important data for subsequent research and decision making related to women empowerment in the KSA to handle this important topic. Therefore, this study aims to explore the role of self-esteem and self-efficacy in women empowerment among academic and administrative staff at Saudi universities.

Methods

Study design, setting and sample size calculation

A cross-sectional design was used to carry out this study at 15 Saudi governmental universities. A multistage cluster sampling technique was used to select 15 Universities which represent 50% of Saudi governmental universities. KSA was divided into five sectors: from each one, a cluster sampling technique was followed to select about three universities. A cluster sample was followed to select colleges from each university; then, a convenience sample was followed to select the participants.

The total sample size was calculated according to the following formula.

$$n = \frac{(df)(t^2)PxQ}{d^2} = \frac{(15)(1.96)^2 0.5x0.5}{(0.05)^2} = 5762$$

Where n = sample size, df= design effect of cluster sampling; t= the parameter related to the precision of getting the maximum sample; size (1.96 for an error risk of 5%) were the normal curve cut off an area at the tail (100 equals the desired confidence level of 95%); p= expected prevalence of having high women empowerment (estimated proportion of an attribute that is present in the population); q= 1-p the expected proportion of women who have moderate or low women empowerment; d= maximum tolerable error (the desired level of precision).

Inclusion criteria

Saudi female faculties and administrative staff in governmental Saudi Universities and who accepted to participate in the study.

Data collection instruments

This consisted four parts. The first part explored the socio-demographic questionnaire of the participants: age, marital status, educational level, residence, mother's education, and nationality. The second part fielded questions using the Rosenberg self-esteem scale. The scale was composed of ten items scored on a 4-point Likert scale ranging from strongly agree (4), agree (3), disagree (2), and strongly disagree (1), and consisted of five positive statements and five negative statements. Negative statements scoring were reversed. The participants were considered to have low, moderate, or high self-esteem if her score ranged from 10 to 20, 21 to 30, and 31 to 40, respectively[22]. The third part of the questionnaire was the general self-efficacy scale. Schwarzer and Jerusalem developed this scale to measure self-efficacy. Cronbach's alphas ranged between76 and 90. The tool was composed of ten items scored on a 4-point Likert scale. The overall score ranged from 10 to 40. The participants had to choose between four alternatives scored as exactly true =4, moderately true =3, hardly true=2, not all true=1. The participant was considered to have high, moderate, or low self-efficacy if her score ranged from 10 to 20, 21 to 30, and 31 to 40, respectively[23]. The fourth and final part of the questionnaire was women's empowerment scale Al-Qahtani *et al*. developed this scale to measure the extent of empowerment of women in higher educational institutes. It comprised three main dimensions: personal, social/relational, and environmental/workplace empowerment. The scale was found to be valid with high reliability (r=0.955). The tool comprised 43 items scored on a 5-point Likert scale. The overall score ranged from 43 to 215. The participant is considered to have high, moderate, or low empowerment if her score ranged from 43 to 100, 101 to 157, and 158 to215, respectively[9].

Data collection procedures

The study was one of several studies related to the project entitled "Based on 2030 vision: Evaluation of women empowerment at Saudi universities and designing needs-based training packages". This project was one of the funded projects through social sciences initiative affiliated to Deputyship for Research and Innovation, Ministry of Education in Saudi Arabia. The project number is SS-493.

The data collection began in April and ended September 2020. After obtaining necessary approvals, the principal investigator and co-investigators assigned data collectors in each

university to help with data collection. The data collectors thereafter collected and completed the self-administrated questionnaire. The responsibility of the data collector was to ascertain the completeness of the collected data. According to the sample size calculation, 5762 questionnaires were collected. After reviewing the collected questionnaires, 175 were excluded from data analysis due to incomplete or incongruent data. A total of 5587 questionnaires were analyzed.

Data analysis

Statistical analyses were performed using SPSS Version 23.0. The participants' demographic characteristics, overall self-esteem, self-efficacy, and women empowerment levels were presented using descriptive statistics. Multiple linear regression (Enter model) was used to examine the predictive relation between total women empowerment as a dependent variable and self-esteem and self-efficacy as independent variables.

Results

Table 1 shows that one-half of the study participants were aged from 30 to 40 years, with a mean (SD) age of 36.40±8.19 years. Up to two-thirds (65%) were married, and most of them (80.5%) were city residents. Two-fifths of the study participants were bachelor's degree holders, while one fifth were Ph.D. holders. Over 63% of the study participants were administrative staff, compared to 36.7% who were academic staff. Nearly an equal proportion of the mothers of the participants were illiterate (28%); 25.5% could read and write; 20.7% had middle education, while 25.8% had high education. Finally, most of the mothers of the participants were of Saudi nationality.

Table 2 demonstrates that the study participant' self-esteem was equally distributed between moderate and high categories. Also, 66.9% of the study participants had high self-efficacy, and 33.1% had moderate level of self-efficacy.

Table 1: The participants' basic data (N= 5587)

Variable	No	%
Age		
- 20-<30 years	1437	25.7
- 30-<40 years	2796	50.0
- 40-<50 years	1084	19.4
- 50 -60 years	270	4.8
Mean (SD)	36.40 (8.19)	
Marital status		
- Single	1478	26.5
- Married	3630	65.0
- Widow	119	2.1
- Divorced	360	6.4
Residence		
- City	4497	80.5
- Governorate	900	16.1
- Village	190	3.4
Educational level		
- Bachelor	2354	42.1
- Master	1655	29.6
- PhD	1178	21.1
- Post-doctoral	400	7.2
Occupation		
- Academic staff	3535	63.3
- Administrative staff	2052	36.7
Mothers' education		
- Illiterate	1565	28.0
- Read and write	1426	25.5
- Middle education	1156	20.7
- High education	1440	25.8

Overall, 86.8% of the participants had high total women empowerment. Table 3 shows the regression coefficient between total women empowerment as a dependent variable with self-esteem and self-efficacy as independent trait variables. It is clear that both self-esteem (B=0.521, b=0.127, t=13.785 and p <0.001) and self-efficacy (B=2.388, b=0.702, t=76.049 and p <0.001) were important predictors of the total women empowerment.

However, self-efficacy is observed to be the most dominant predictor (t=76.049). The total model summary shows that 73.4% of the women empowerment level can be predicted through self-esteem and self-efficacy.

Table 2: Self-esteem, self-efficacy, and total women empowerment among study participants (N= 5587)

Total	Low		Moderate		High	
	No	%	No	%	No	%
Self esteem	0	0.0	2783	49.8	2804	50.2
Self-efficacy	0	0.0	1847	33.1	3740	66.9
Total women empowerment scale	20	0.4	720	12.9	4847	86.8

Table 3: Regression coefficient between total women empowerment score as a dependent variable with self-esteem and self-efficacy (N= 5587)

Total women empowerment	Unstandardized Coefficients		Standardized Coefficients	T	P value	95.0% Confidence Interval for b	
	B	SE	β			Lower Bound	Upper Bound
Constant	53.527	1.556	-	34.392	0.000**	50.476	56.578
Total self-esteem	0.521	0.038	0.127	13.785	0.000**	0.447	0.595
Total self-efficacy	2.388	0.031	0.702	76.049	0.000**	2.326	2.449
R^2			**0.734**				
F(p)			**3252.85.29(0.000**)**				

Discussion

Saudi Arabia's 2030 vision aimed to make major community transformations in several important dimensions. One of these major dimensions is how to invest in women through increasing the empowerment of women. Women empowerment aims to help the women to reach their maximum potentials. Especially in higher educational institutes, women empowerment has unaccountable benefits for women, their students, and the community[24]. It was within this context that this study investigated the role of self-esteem and self-efficacy in the overall woman empowerment level.

The results of the present study showed that Saudi women in higher educational institutes have either moderate or high self-esteem and self-efficacy. In addition, a high proportion of them have high total women empowerment. In this study, self-esteem and self-efficacy were considered important predictors of women empowerment, and therefore, if their scores are high, the total women empowerment also will be high. The study results may be explained by the hypothesis which states that highly educated working women have higher self-esteem, self-efficacy, and empowerment as compared to less educated women. In the current study, the study participants' minimum educational level was bachelor's degree, while one-fifth of them were Ph.D. holders. Several other studies support

this hypothesis. For example, education was strongly correlated with higher women empowerment in a study conducted by Kazi *et al*[25] that investigated the factors that correlated to self-esteem among Saudi students in Riyadh city KSA. Besides, Sundaram *et al*. made emphatic reference to the role of education in women. They posited that education has a major role to play in women's empowerment as it helps both self-esteem and economic independence[26].

Similarly, a recent study conducted in Saudi Arabia by ALAjaji *et al*.[27] to investigate the relation between Body Mass Index (BMI) and self-esteem among college girls found that 93.9% of their participants have moderate to high self-esteem. The study of ALAjaji *et al*.[27] was conducted in the same culture and sitting of the present study. It is worth mentioning that the two studies participants share most of the demographic characteristics, education, gender, religion, and others. The similarities between the two studies suggest that most of the Saudi educated women have high self-esteem. This high self-esteem may be attributed to women's opportunities provided for by the 2030 vision. Highly educated women have more chances for work and economic independence, reinforcing higher self-esteem, self-efficacy, and empowerment. In addition, Kazi *et al*. found that 83% of their participants have moderate to high self-esteem. They further added that

education played an important role in raising the women's self-esteem[25]. In the current study, the regression coefficient showed that self-esteem and self-efficacy are important predictors of the total women empowerment. However, self-efficacy is observed to be the most dominant predictor (t=76.049). The total model summary shows that 73.4% of the women empowerment level can be predicted through self-esteem and self-efficacy.

To our knowledge, this is the first study that investigates the predictive relationship between self-esteem, self-efficacy, and women empowerment. To date, there has been a lack of studies that investigate this relationship, which is critical to understanding the social context of women empowerment. However, some researchers have dealt with the issue in different ways. Trus *et al.*[28] conducted a systematic review to investigate the relationship between work-related empowerment and several independent variables among nurses' managers. They found that nurse managers' work-related empowerment is high or moderately high. They further added that nurses' empowerment at the workplace related positively with administrative self-efficacy, job satisfaction, and administrative support, and related negatively with psychological exhaustion and own health status. In the current study, self-efficacy was the most important predictor of women empowerment. Self-efficacy refers to women's personal trust in their own capabilities to overcome obstacles and attain high personal achievement. The high positive relationship between self-efficacy and women empowerment seems logical because empowerment begins from the internal self-confidence and power. Therefore, in order to increase Saudi women's empowerment, educational interventions should be directed to raise their self-efficacy. In the same context, Kärner Köhler *et al.* studied the predictive relationship between self-efficacy and empowerment level among patients complaining from coronary heart disease. They found that the total empowerment level and self-efficacy were correlated in general linear model regression[29]. Moreover, Azizifar *et al.* 2020 investigated the relationship between self-efficacy and empowerment among Iranian teachers.

They reported that self-efficacy had a highly significant impact on the teachers' creativity and empowerment level[30].

Self-esteem is an internal subjective evaluation of the person's own worth. It greatly influences the person's attitude and coping strategies throughout life. In the current study, self-esteem was a positive predictor for women empowerment in the second position after self-efficacy. In this regard, Unroe *et al.* study examined the relationship between self-esteem and women's empowerment among 71 young African American women. They found a positive correlation between self-esteem and women's empowerment. They recommended implementing self-efficacy enforcement programs to increase youths' empowerment level[31]. Besides, Nizam and Nirmala highlighted the importance of self-esteem in working women empowerment. They elaborated that working women had financial independence, which positively reflected their self-esteem and life satisfaction. They further added that high self-esteem is highly correlated with women's empowerment at the workplace. They finally recommended that the beginning of women's empowerment start from home at the time of early childhood[32]. A parent must build the girls' self-esteem by offering education, eliminating gender inequity, and offering different life chances. This is because education functions as the first step to raise self-esteem, self-efficacy and consequently lead to the empowerment of women.

The new Saudi Arabia 2030 vision strongly supports girls' education and empowerment. The current study participants are highly educated and employed; therefore, they are economically empowered. All of them have high or moderate self-esteem; consequently, 99.6% of them have moderate to high women empowerment. This point of view is also confirmed by Wagner *et al.* who investigated the extent to which the availability of resources, opportunities, and education can influence self-esteem. They illustrated that self-esteem is strongly correlated to gains loss ratio in resources, education, and information[33]. The relationship between women empowerment and self-esteem may have a two-way direction. An

experimental study conducted by Bahadir-Yilmaz and Öz confirmed such a relationship. They evaluated women empowerment programs' effect on enhancing self-esteem and coping strategies in domestic violence risk women. Their results suggested that the women empowerment program was an efficient practice for enhancing the participants' self-esteem and coping strategies in the intervention group[34].

The current study results' central meaning is that self-esteem and self-efficacy enhance women empowerment and vice versa. Permwonguswa[35] investigated the extent to which emotional empowerment, self-esteem, and self-efficacy can influence knowledge sharing in health infomediary. They emphasized the mutual, two-way relationship between self-efficacy and self-esteem. Simultaneously, self-efficacy alone is not enough in empowering patients to share their information via infomediary. Furthermore, they highlighted the importance of self-esteem, self-efficacy in the overall patient empowerment level[35]. Moreover, Kato and Kratzer[36] studied the effect of microfinance institutions membership on Tanzania's women empowerment level. They illustrated that women who were members of microfinance institutes have higher self-esteem, self-efficacy, and total empowerment scores. They further added that economic independence makes the women stronger and more respected by their families and community. In addition, they showed a positive impact of self-esteem and self-efficacy on the level of women's' empowerment.

Nowadays, women's empowerment is a hot topic in KSA. Although KSA 2030 vision opens the way for women's creation in all fields, women's self-esteem and self-efficacy should be raised first. Self-esteem and self-efficacy appear to have a crucial role in women's empowerment. KSA community is well prepared now to accept the concept of women's empowerment and their participation in political life and high administrative positions. Therefore, numerous governmental efforts are directed to raise women's empowerment through enhancing self-efficacy and self-esteem.

Strengths and Limitations of the Study

The study includes a large representative sample of Saudi females from the academic and administrative staff affiliated to various Saudi universities in all KSA region. Also, this study used data collection tools that are well-validated and standardized. However, there are some limitations. First, this cross-sectional study cannot indicate causal relationships between self-esteem, self-efficacy, and women's empowerment. Second, most of the study participants were residents in an urban area, and all were from highly educated groups. Thus, the findings of this study may not be generalized to other places or segments of the Saudi population, such as unemployed women, illiterate or low-educated women, and those who live in rural areas.

Ethical Considerations

Ethical approval was obtained from the deanship of research ethics at Najran university before its submission to the ministry of education. Also, the project was approved by the ministry of education. Formal approvals from included universities were obtained through formal lines of authority. Informed consent was taken from each participant. All data was confidential and was used for the research purpose only.

Conclusion

Based on the study results, it can be concluded that the study participants' have moderate to high self-esteem and self-efficacy. Also, more than three-quarters of them have high total women empowerment. The regression coefficient showed self-esteem and self-efficacy are significant predictors of the total women empowerment; however, self-efficacy is the most dominant predictor (t=76.049). The total model summary shows that 73.4% of the women empowerment level can be predicted through self-esteem and self-efficacy.

Implication

The present study is the first one that investigated the role of self-esteem and self-efficacy in the overall woman empowerment level. The current study results can be used a abase to build women empowerment program in Saudi Arabia and thus help in the achievement of 2030 KSA vision regarding women empowerment.

Acknowledgment

Consent for Publications

The authors have read and approve the publication of the manuscript in its current form.

Competing Interests

The authors declare they have no conflict of interest.

Contribution of Authors

Al-Qahtani conceived the initial idea, wrote the initial stage of the manuscript, and discussed findings. *Ibrahim* reviewed literature and contributed intellectually. *Elgzar* participated in data collection and contributed to the scientific background. *El Sayed* collected data, make statistical analysis, and wrote the initial draft, and *Essa* contributed to the scientific background and discussed the findings. All authors agree on the current version of the manuscript. *Abdelghaffar* contributed intellectually and participated in data collection.

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