

ORIGINAL RESEARCH ARTICLE

Predictors of women empowerment knowledge and attitude among Saudi academic and administrative staff: A cross-sectional study

DOI: 10.29063/ajrh2021/v25i1s.5

Awad M Al-Qahtani¹, Wafaa T Elgzar^{2,3}, Heba A Ibrahim^{2,4*}

Family Medicine Department, College of Medicine, Najran University, Najran, Kingdom of Saudi Arabia¹; Maternity and Childhood Nursing Department, Nursing College, Najran University, Najran, Kingdom of Saudi Arabia²; Department of Obstetrics and Gynecologic Nursing, Damanhour University, Damanhour, Egypt³; Department of Obstetrics and Woman Health Nursing, Benha University, Benha, Egypt⁴

*For Correspondence: Email: heba_esmael18@yahoo.com; Phone: 00201020087026

Abstract

The KSA 2030 vision makes special reference to women's empowerment as an important strategy for Saudi community transformation. Studies related to women's empowerment, especially in the Saudi context, are still not enough and unclear. The current study explored the predictors of women empowerment knowledge and attitudes among Saudi academic and administrative staff. A cross-sectional study was conducted at 15 Saudi government-owned universities. A multistage cluster sampling technique was used to select 5587 participants during the period April to September 2020. The study instrument consisting of three main parts; basic demographic data, questionnaire assessed the knowledge regarding women's empowerment, and women empowerment attitude scale. The results showed good knowledge of empowerment among the women with 75.5% of the participants demonstrating good knowledge. The total women empowerment attitude was positive among 65.9% of the participants. The association between demographic data and women empowerment knowledge and attitude showed a significant association with marital status, residence, education, and occupation ($p < 0.05$). Linear regression on marital status, education, residence, and occupation, are confirmed as significant predictors of women empowerment knowledge and attitude ($p < 0.05$). Mother's education level is shown as a predictor for women empowerment attitude ($p > 0.005$). Three-quarters of Saudi academic and administrative staff have a good women empowerment knowledge score, and more than two-thirds have a positive attitude. Demographic characteristics are important predictors for women empowerment knowledge and attitude. The results of this study will help decision-makers to design and implement goal-directed women empowerment programs. (*Afr J Reprod Health 2021; 25[1s]: 50-59*).

Keywords: Attitude, knowledge, predictors, Saudi, women empowerment

Résumé

La vision KSA 2030 fait une référence particulière à l'autonomisation des femmes en tant que stratégie importante pour la transformation de la communauté saoudienne. Les études liées à l'autonomisation des femmes, en particulier dans le contexte saoudien, sont encore insuffisantes et peu claires. L'étude actuelle a exploré les prédicteurs des connaissances et des attitudes de l'autonomisation des femmes parmi le personnel académique et administratif saoudien. Une étude transversale a été menée dans 15 universités appartenant au gouvernement saoudien. Une technique d'échantillonnage en grappes à plusieurs degrés a été utilisée pour sélectionner 5587 participants entre avril et septembre 2020. L'instrument d'étude se compose de trois parties principales; des données démographiques de base, un questionnaire évaluant les connaissances sur l'autonomisation des femmes et l'échelle d'attitude en matière d'autonomisation des femmes. Les résultats ont montré une bonne connaissance de l'autonomisation chez les femmes avec 75,5% des participants démontrant de bonnes connaissances. L'attitude totale d'autonomisation des femmes était positive chez 65,9% des participants. L'association entre les données démographiques et les connaissances et l'attitude de l'autonomisation des femmes a montré une association significative avec l'état matrimonial, la résidence, l'éducation et la profession ($p < 0,05$). La régression linéaire sur l'état matrimonial, l'éducation, la résidence et la profession est confirmée comme étant des prédicteurs significatifs des connaissances et de l'attitude de l'autonomisation des femmes ($p < 0,05$). Le niveau d'éducation de la mère est indiqué comme un prédicteur de l'autonomisation des femmes ($p > 0,005$). Les trois quarts du personnel académique et administratif saoudien ont un bon score de connaissances sur l'autonomisation des femmes, et plus des deux tiers ont une attitude positive. Les caractéristiques démographiques sont des prédicteurs importants des connaissances et de l'attitude de l'autonomisation des femmes. Les résultats de cette étude aideront les décideurs à concevoir et à mettre en œuvre des programmes d'autonomisation des femmes axés sur les objectifs. (*Afr J Reprod Health 2021; 25[1s]: 50-59*).

Mots-clés: Attitude, connaissances, prédicteurs, Arabie, autonomisation des femmes

Introduction

Women empowerment is a broad concept that has different definitions in different cultures and countries. All its definitions describe women empowerment as equipping women with internal independence and power to develop themselves, make decisions, and enjoy freedom in their lives life^{1,2}. The degree of liberty for women differ according to cultures, religion, societies, and women capabilities. *Kakati* believes that women empowerment is a multidimensional dynamic process that enables women to reach and benefit from their maximum potentials. He sees women empowerment as a central component of social mobilization³.

Huis *et al.* identified three main dimensions of women empowerment. These are micro, meso, and macro levels. The micro-level is concerned with individual internal power and personality characters. Meso level refers to beliefs and traditions related to dealing with social networks. In contrast, macro-level means power and influence in society and the community⁴. Al-Qahtani *et al.* assumed a similar approach when discussing women empowerment. They divided women empowerment as personal, social/ relational, and environmental /workplace empowerment. Personal empowerment deals with self-esteem and self-efficacy. Social/relational empowerment is concerned with economic freedom, decision making, experience of gender-based violence, freedom of mobility, and access to services. Environmental/workplace empowerment includes psychological empowerment at the workplace, organizational commitment, access to education, knowledge, resources/support, opportunities, and political participation. The model espoused by Al-Qahtani *et al.* is more suitable to the present study because the study deals with women employed in higher educational institutions⁵.

Women's empowerment has acquired momentum since its development in the second half of the twentieth century. This momentum has increased with the emergence of multiple developmental concerns affecting women in many countries. Yet, the theoretical discussions so far have not included the views of Saudi women.

Women empowerment has been widely discussed in the literature, as it is part of many developmental processes. However, the studies on empowering Saudi women are virtually nonexistent. The preceding research discussed some of Saudi women's issues, such as education, work, social issues, and religious concerns^{6,7}.

It is necessary to ensure female Saudi staff's participation in leading positions and facilitate their access to university laboratories and research centers in higher educational institutions. In nearly all Saudi Universities, there is a lack of women empowerment in high academic and administrative positions. This has necessitated the creation of suitable innovative solutions for the benefit of the new roles expected from the women in KSA 2030 vision. Saudi society customs and traditions limit women's decision-making power even if they are in high leadership positions in Saudi universities. Nearly all the important decisions related to the educational organizations come from the male sections⁸.

Custom, traditions, and culture are among the most important echelons in Saudi social life. These greatly influence peoples' attitudes and behaviors and Islamic values, which are sometimes misinterpreted by conservative religious scholars and some governmental sectors. Empowering women may not yet be an acceptable issue for discussion because empowerment may give women opportunities for more appearance and participation in the public and private sectors. Furthermore, male dominance is still deeply ingrained in Saudi society, as women are considered the weaker sex, unable to become self-reliant, especially outside the home. This male power considers it unacceptable to liberate women from male domination and control⁹. Indeed, women's issues are very sensitive in KSA culture, making many journalists, writers, and researchers, think carefully before starting a discussion about Saudi women⁶.

Moreover, despite including women's empowerment in KSA 2030 vision, there is still paucity of information and data relating to women's empowerment in Saudi Arabia. The current study was designed to explore the predictors of women empowerment knowledge and attitude among Saudi academic and administrative staff.

Methods

Study design and settings

A cross-sectional study was conducted at 15 Saudi governmental universities.

Participants and sample size

A multistage cluster sampling technique was followed to select about 50% of the Saudi governmental universities (15 University). KSA was divided into five sectors; from each one, a cluster sampling technique was followed to select 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 will be calculated according to the following formula:

$$n = \frac{(df)(t^2)Pq}{d^2} = \frac{(15)(1.96)^2 0.5 \times 0.5}{(0.05)^2} = 5762$$

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 cuts off an area at the tails (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)

The inclusion criteria include Saudi female academic and administrative staff in governmental Saudi Universities and accepted to participate in the study.

Data collection instrument

The study instrument consisting of three main parts was used for data collection. *Part I:* basic demographic data, was developed by the researchers to collect socio-demographic data as age, marital status, educational level, residence, years of experience, career, mother education, and nationality. *Part II:* Questionnaire assessed the knowledge regarding women's empowerment. The researchers developed the questionnaire after

reviewing the related literature. It included ten true or false questions to assess the participants' knowledge about women empowerment concepts, dimensions, benefits, and barriers. The participants' answers were scored as wrong answer or don't know = 0, and correct answer =1. The participant considered to have poor (0- <5) fair (5-<7.5) and good knowledge (7.5-10) according to the overall score. *Part III:* women empowerment attitude scale. The researchers developed the scale after reviewing related literature. It was composed of five items rated on a 5-points Likert scale. For each item, the women have to choose one of five alternatives as strongly agree (5), agree (4), indifference (3), disagree (2), and strongly disagree (1). The overall scale score ranged from 5-25. The participants considered to have a negative (5 -11.5), neutral (11.6 - 18) and positive attitude (18.1- 25) according to her overall score.

The instrument was tested for content validity by a jury of five experts in the field; then it was tested for reliability using the Cronbach alpha coefficient test ($r= 0.79$ and 0.82 for part II and III, respectively)

Data collection procedure and analysis

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

The data collection began from the beginning of April to the beginning of September 2020. After completing the necessary approvals, the principal investigators and co-investigators assigned data collectors in each university to help in data collection. The data collectors disseminated and collected the questionnaire. The responsibility of the data collector was to ascertain the completeness of the collected data. Based on the previous sample size calculation, 5762 questionnaires were collected: 175 were excluded from statistical analysis due to incomplete or incongruent data. Data analysis was conducted on 5587 responses.

Statistical analysis was performed using SPSS Version 23.0. The participant age was categorized into four: 20-<30, 30-<40, 40-<50, and 50 -60 years. The demographic profile of the participants was described using descriptive statistics. The participants' knowledge and attitude toward women empowerment were presented in terms of means, standard deviations, numbers, and percentages. One-way analysis of variance and independent t-test were performed to evaluate the associations between the participants' knowledge and attitude and their demographic profiles.

Moreover, multiple linear regression analysis was performed to identify independent variables (age, marital status, educational level, residence, occupation, and mother's education) that affected knowledge and attitude scores, predicting women empowerment's knowledge and attitude. All the multiple regression analysis assumptions were met, as The Central Limit Theorem assumes that a good representation of a normal distribution is given with large sample sizes as in the present study¹⁰.

Results

As shown in Table 1, the participants' age ranged between 20-60 years (mean = 36.40±8.19) years, 65.0% of them were married, and most were resident in cities (80.5%). Moreover, 42.1% held bachelor's degrees, and 63.3% worked as academic staff. Table 2 illustrates that the total knowledge scores regarding women empowerment was good among 75.5% of the participants and poor among 4.8%. Simultaneously, the total attitude scores regarding women empowerment were positive among 65.9%, neutral among 29.4%, and negative among 4.3% of the participants.

Table 3 summarizes the association between participant demographic profiles and women empowerment knowledge and attitude. The single participants had significantly higher knowledge and attitude scores than married, divorced, and widow participants (F= 21.690, p = 0.000) and (F= 33.022, p = 0.000), respectively. Furthermore, those residing in villages had significantly lower knowledge and attitude scores

Table 1: Demographic characteristics of study participants (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

Table 2: Study Participants' Knowledge and Attitude regarding women empowerment of (N= 5587)

Variables	Score	No	%
Knowledge			
- Poor	(0-<5)	270	4.8
- Fair	(5-<7.5)	1098	19.7
- Good	(7.5-10)	4219	75.5
Attitude			
- Negative	(5-11.5)	240	4.3
- Neutral	(11.6- 18)	1664	29.8
- Positive	(18.1-25)	3683	65.9

than those residing in cities and governorates (F= 68.393, p = 0.000) and (F= 35.618, p= 0.000), respectively. Ph.D. holders had significantly higher knowledge and attitude scores than bachelor and master's degree holders (F= 38.373, p = 0.000) and (F=27.460, p = 0.000), respectively. Also, academic staff had significantly higher knowledge and attitude scores than administrative staff (t= 5.515, p = 0.000), and (t= 6.899, p= 0.000) respectively.

Table 3: Association between the participants' demographic characteristics and their total women empowerment knowledge and attitude score (N= 5587)

Variable	Knowledge			Attitude		
	Mean ±SD	t/F	p	Mean ±SD	t/F	p
Age		F= 2.941	.086		F= 3.320	0.068
- 20-<30 years	8.27±1.56			20.27±3.88		
- 30-<40 years	8.30±1.86			20.28±3.99		
- 40-<50 years	8.25±2.07			20.35±4.06		
- 50 -60 years	8.39±1.92			20.43±3.95		
Marital status		F= 21.690	0.000**		F= 33.022	0.000**
- Single	8.72±1.56			21.20±3.33		
- Married	8.26±1.97			20.07±4.16		
- Widowed	8.57±1.46			21.29±3.15		
- Divorced	8.47±2.00			20.94±3.95		
Residence		F= 68.393	0.000**		F= 35.618	0.000**
- City	8.51±1.63			20.51±3.92		
- Governorate	8.13±2.60			20.64±3.93		
- village	7.05±2.50			18.10±3.95		
Educational level		F= 38.373	0.000**		F=27.460	0.000**
- Bachelor	8.08±2.30			19.93±4.06		
- Master	8.19±1.81			20.12±4.22		
- PhD	8.57±1.78			21.00±3.55		
- Post-doctoral	8.68±1.64			20.20±4.32		
Occupation		t= 5.515	0.000**		t= 6.899	0.000**
- Teaching staff	8.58±1.82			20.93±3.59		
- Administrative staff	8.30±1.90			20.18±4.12		
Mothers' educational level		F= 0.088	0.767		F=22.466	0.000**
- Illiterate	8.47±1.92			19.98±3.90		
- Read and write	8.44±1.87			20.10±4.12		
- Middle education	8.55±1.98			20.50±3.79		
- High education	8.58±1.71			21.07±3.72		

** P significant at ≤ 0.001 , t= independent t t-test, F= One-way ANOVA

Table 4: Predictors of women empowerment knowledge among the study participants (N= 5587)

Variables	B	SE b	β	t	p	95% CI
Age	0.010	0.006	0.043	1.773	0.076	[0.001, 0.021]
Marital status	-0.108	-0.036	-0.042	-3.049	0.002*	[-0.178, -0.039]
Educational level	-0.102	-0.037	-0.052	-2.743	0.006*	[-0.175, -0.029]
Residence	-0.655	-0.051	-0.172	-12.903	0.000**	[-0.755, -0.556]
Occupation	0.275	0.068	0.070	4.058	0.000**	[0.142, 0.407]
Mother's educational level	0.010	0.022	0.006	0.453	0.651	[0.053, 0.033]
R²	0.036					
F(p)	35.085 (0.000**)					

** P significant at ≤ 0.001

Table 5: Predictors of women empowerment attitude among the study participants (N= 5587)

Variables	B	SE b	β	t	p	95% CI
Age	0.115	0.063	0.024	1.819	0.069	[0.009, 0.240]
Marital status	-0.278	-0.075	-0.051	-3.691	0.000**	[-0.426, -0.130]
Educational level	-0.370	-0.079	-0.090	-4.695	0.000**	[-0.525, -0.216]
Residence	-0.784	-0.108	-0.098	-7.279	0.000**	[-0.996, 0.573]
Occupation	0.424	0.144	0.052	2.953	0.003*	[0.143, 0.706]
Mother's education level	.167	.047	.048	3.562	0.000**	[0.258, 0.075]
R²	0.022					
F(p)	20.571 (0.000**)					

* P significant at ≤ 0.05 , ** P significant at ≤ 0.001

Thus, these results indicate that all surveyed demographic data, except age and mothers' educational level, were significantly related to women empowerment knowledge level. Moreover, all the surveyed demographic data, except age, were significantly associated with women empowerment attitude level.

Table 4 clarifies that after conducting linear regression on these six demographic variables, marital status ($\beta=-0.042$, $t=-3.049$, $p=0.002$), educational level ($\beta=-0.052$, $t=-2.743$, $p=0.006$), residence ($\beta=-0.172$, $t=-12.903$, $p=0.000$), and occupation ($\beta=0.070$, $t=4.058$, $p=0.000$), were confirmed as significant predictors of women empowerment knowledge. Table 5 shows that residence was the highest predictor of women empowerment attitude ($\beta=-0.098$, $t=-7.279$, $p=0.000$) followed by educational level ($\beta=-0.090$, $t=-4.695$, $p=0.000$), marital status ($\beta=-0.051$, $t=-3.691$, $p=0.000$), mother's education level ($\beta=0.048$, $t=3.562$, $p=0.000$), and occupation ($\beta=0.052$, $t=2.953$, $p=0.003$). However, the age was not confirmed as significant predictors of women empowerment attitude.

Discussion

Women's empowerment is an essential goal in accomplishing sustainable development worldwide. Saudi Arabia needs huge governmental effort in all life dimensions, such as increasing investment in women's education, activating their decision-making in different workplaces, enhancing access to resources and support, and increasing community awareness toward women empowerment. In addition, a positive attitude will encourage women to engage in self-development activities, which will positively impact the Saudi community as a whole¹¹. KSA 2030 vision gives great attention to women empowerment as an essential pillar of the intended Saudi community transformation. To get the maximum benefit from women empowerment, emphasis should be made on the academic and administrative staff at the universities because they are the role models for the young generations. Therefore, this study is one of the first attempts to explore the predictors of women empowerment knowledge and attitude among Saudi academic and administrative staff.

As observed, regarding total knowledge and attitude scores, our study revealed that more than three-quarters of participants had good knowledge regarding women empowerment, and more than two-thirds of them had a positive attitude. This positive attitude toward women empowerment can play an important role in the community gender transformation process in KSA. These findings were supported by Das's study, who assessed the women's attitude towards their empowerment in Bangalore's rural area. They found that more than two-thirds of their participants have positive attitudes toward women empowerment¹². Similarly, Mlowosa *et al.* investigated the role of economic empowerment through microfinance on women's decision-making and independence. They reported that although most of the women have positive attitudes toward financial empowerment through microfinance institutions, the social roles put constraints and roles on women compared to males in each institution¹³.

Furthermore, Josephat *et al.* tried to examine the predictors of women empowerment in the field of microfinance institutions. They elaborated that positive attitude toward women empowerment is one of the highest predictors of their microfinance participation. Surprisingly, they reported that women have a more positive attitude toward themselves in microfinance than males¹⁴. Josephat *et al.* give promises that women empowerment can help in the intended economic transformation in KSA. Changing the public knowledge and attitude is the most critical and difficult step toward women empowerment in KSA. A negative attitude may hinder any governmental efforts or social activities in such an area. Universities mainly plays a crucial role in the knowledge and positive attitude transformation to the next generation. Therefore, any women empowerment efforts should start from universities. AlQarala realized the importance of beginning women empowerment from the Universities, so she conducted a study to examine the role of Universities in developing the professional competencies to develop women empowerment in Saudi Universities in the light of KSA 2030 vision. They found that Saudi universities play the most significant role in developing their members' professional competencies and knowledge, which

would empower women in economic, cultural, and political activities¹⁵.

The knowledge and attitude toward women empowerment among academic and administrative staff in this study were related and predicted by several demographic variables. It was noted that marital status, educational level, residence, and occupation were confirmed as significant predictors of women empowerment knowledge and attitude. These results are consistent with the previously mentioned Josephat *et al.* They examined eight predictive factors for women empowerment; only four were positively associated out of these factors. These factors were education, microfinance membership, marital status, and residence, which were positively associated with women empowerment knowledge and attitude¹⁴. Another study conducted by Shettar, documented that educational level significantly contributed to empowering women, as educated women were more empowered than illiterate ones¹⁶. Women's education can make a difference in an individual's life and the broader community. Woman education increase the awareness about her rights, self-confidence, and reliance to live a better life. Considering the importance of education in women empowerment. Akram showed a positive impact of education in women empowerment¹⁷. Also, Bhat stated that women's education is the most influential tool to change society's future¹⁸. It also gets a decrease in inequalities and acts to improve their status within the family. Furthermore, Ahmed & Risk, found that as education was increased as the intrinsic level of empowerment was increased¹⁹. It is worth noting that the Saudi government has paid particular attention to empowering women by focusing on women's education.

As expected, the present study results showed that the participants in villages and rural areas had significantly lower overall knowledge and attitude scores toward women empowerment than those living in cities. Several women's empowerment indicators may differ between urban and rural areas, such as woman mobility, decision-making power, access to education, and support. Consequently, their knowledge and attitude are also greatly affected. In addition, rural areas residence has a rigid mind and lower flexibility concerning cultural values and beliefs. These results are in the

same line with a study done by Tembhe. He emphasized that the women's empowerment indicators, including mobility, decision-making power, and security, have significantly decreased for rural and low educated women²⁰. Besides, Qanbari and Ansari studied the factors affecting rural women's empowerment in Rostam, Iran. They demonstrated that social and demographic factors as participation in the collective gainful activities and independence in saving affect rural women empowerment²¹.

It is striking that the current study reveals that the single participants had significantly higher knowledge and attitude scores than married, divorced, and widowed. This may be attributed to unmarried women's freedom to make their own decisions, economic independence, freedom of mobility, and freedom from marital restraint. Both Rehman *et al.* & Noreen found that marital status influenced the women's attitude toward empowerment, but unluckily, both studies don't explain how marital status affected women's empowerment^{22,23}. On the contrary, the previously mentioned Josephat *et al.* study indicated that the majority of married women have a positive attitude toward women empowerment. They further clarified that most married women engaged in different economic activities to support their families with basic needs¹⁴. Consequently, working and economically independent women are less born to domestic violence and have more mobility freedom.

Additionally, the present study found no significant association between age and women empowerment attitude and knowledge. In the same line, the previously mentioned Josephat *et al.* study reported no significant association between women's empowerment attitude and knowledge and age¹⁴. The absence of such association may be due to older participants' strong cultural beliefs and rigid minds compared to younger ones. Women represent more than half of the Saudi community; therefore, they are a great force that shouldn't be neglected. Women empowerment should be maintained at all levels to reach a bright future expected from the 2030 vision. The first and most important step to initiate and sustain women's empowerment is to increase community awareness. In addition, increasing awareness will have a positive impact on

the Saudi population toward women empowerment. High knowledge and a positive attitude will decrease the waste in governmental efforts to empower Saudi women.

Ethical Considerations

Ethical approval was obtained from the deanship of scientific research ethics at Najran University before the project 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 written on the first page of the questionnaire, and the participants have to sign on it before data collection. All data was confidential and was used for the research purpose only.

Conclusion

Three-quarters of Saudi academic and administrative staff have a good women empowerment knowledge score, and more than two-thirds have a positive attitude. The association between demographic data and women empowerment knowledge and attitude showed a significant association with marital status, residence, education, and occupation ($p < 0.05$). Linear regression indicated that marital status, education, residence, and occupation, were confirmed as significant predictors of women empowerment knowledge and attitude ($p < 0.05$). Mother's education level is shown as a predictor for women empowerment attitude ($p > 0.005$).

Study Strengths and Limitations

Studies in Saudi women empowerment among academic and administrative staff at Saudi University staff are limited to the international database. This study was carried out on a relatively high sample size selected through a multistage cluster random sampling technique from the five main Saudi discrete. But inside each college, randomization was too hard to apply; therefore, a convenience sample was adapted to capture the participants. All the study participants were from highly educated groups. So, the findings of this

study may not be generalized to other segments of the Saudi population, such as unemployed women, illiterate or low-educated women.

Implication of the Results

The current study will enrich the scientific database about predictors of women empowerment knowledge and attitude among Saudi academic and administrative staff. The availability of such data will direct future research to deeply investigate each women's empowerment predictor and how it can be handled to increase the women's contribution to community transformation. Furthermore, this study's data will help decision-makers determine the predictors for women empowerment knowledge and attitude in Saudi Arabia. Therefore, they can build goal-directed women empowerment programs. Furthermore, they can direct more effort to improve rural women's knowledge and attitude toward women empowerment.

Acknowledgment

The authors extend their appreciation to the Deputyship for Research & Innovation, Ministry of Education in Saudi Arabia, for funding this research work through project number SS-493 (through the initiative of social sciences number of the contract "4600000111")

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. *Elgzar* participated in data collection and contributed to the scientific background. *Ibrahim* reviewed literature, contributed intellectually, and discussed findings. All authors agree on the current version of the manuscript.

References

1. Moser C. Gender planning in the third world: Meeting practical and strategic gender needs". *Worlds development* 1989;17(11): 1799-1825. Available at: https://www.academia.edu/28265102/Gender_planning_in_the_third_world_Meeting_practical_and_strategic_gender_needs. Accessed on: 15/10/2020.
2. Agnihotri RR and Malipatil KS. A Study on Importance of Women Empowerment in India'. *International Journal of Current Advanced Research* 2017;06(06): 4337-4340. DOI: <http://dx.doi.org/10.24327/ijcar.2017.4340.0495>
3. Kakati BK. Women Empowerment through Social Mobilization. *Research Journal of MDKG* 2013; 2(2): 21-26. https://www.researchgate.net/publication/331872462_Women_Empowerment_through_Social_Mobilization
4. Huis MA, Hansen N, Otten S and Lensink R. A Three-Dimensional Model of Women's Empowerment: Implications in the Field of Microfinance and Future Directions. *Front Psychol* 2017;8(1):1678. doi:10.3389/fpsyg.2017.01678
5. Al-Qahtani AM, Elgzar WT, Ibrahim HA and Sayed HA. Developing valid and reliable women empowerment scale for Saudi women in higher education institutes. *SYLWAN* 2020;164(7): 79-95.
6. Alghamdi F. Saudisation and Women's Empowerment through Employment in the Health Care Sector, A Master thesis, School of Geography, Environment and Earth Sciences, *Victoria University of Wellington*. 2014. Available at: <https://www.semanticscholar.org/paper/Saudisation-and-Women%E2%80%99s-Empowerment-through-in-theAlghamdi/43de933866fe9970bd1d2163d19330fd a22d6d79>
7. House KE. For Saudi women, A Whiff of Change. *The Wall Street Journal* 2007. Available at: <http://online.wsj.com/articles/SB117587220984462217>
8. AlMunajjed M. Women's employment in Saudi Arabia: A major challenge. *New York: Booz & Company* 2010. Available at: <http://www.strategyand.pwc.com/reports/womensemloyment-saudi-arabia-major>
9. Deif F. Perpetual Minors: Human rights abuses stemming from male guardianship and Sex Segregation in Saudi Arabia. Saudi Arabia: *Human Rights Watch*. 2008. Available at: <http://www.hrw.org/legacy/arabic/reports/2008/saudi-arabia0408/saudi-arabia0408arweb>
10. Field A. *Discovering statistics using IBM SPSS statistics*. 4th ed. ed. *Los Angeles. Sage*; 2013.
11. Al Alhareth Y, Al Dighrir I and Al Alhareth Y. Review of Women's Higher Education in Saudi Arabia. *American Journal of Educational Research*, 2015;3(1): 447-65. Doi: 10.12691/education-3-1-3.
12. Das G. Descriptive study to assess the attitude of woman on their empowerment in a selected rural community, Bangalore, Master of science in nursing. *Gandhi university of health science*, 2007; PP.92-99.
13. Mlowosa TP, Kalimang'asi N and Mathias BD. The Role of Microfinance Institutions in Improving the Economic Status of Women in Tanzania: The Case Study of Pride Tanzania (Arusha Branch). *International Journal of Scientific and Research Publications* 2014;4(11): 2250-3153. Available at: <https://www.semanticscholar.org/paper/The-role-of-Microfinance-Institutions-in-Improving-Mlowosa-Kalimang%E2%80%99asi/25256584b2c105b0f6abc85690a9aac3b8ef83c5>
14. Josephat PK, Fulment AK and Matunga B. Determinants and Attitudes of Women on Empowerment through MFIs. *Business and Economic Research* 2018;8(4): 1-20. DOI: 10.5296/ber.v8i4.13521 Available at: https://www.researchgate.net/publication/328999311_Determinants_and_Attitudes_of_Women_on_Empowerment_through_MFIs
15. AlQarala Z. The role of Saudi universities in developing the professional competencies necessary to empower women in the vision of 2030. *Journal of the College of Arts* 2018;1(8): 1-20. <http://repository.psau.edu.sa:80/jspui/handle/123456789/844>
16. Shettar RM. A study on issues and challenges of women empowerment in India. *IOSR Journal of Business and Management* 2015;17(4): 13-19.
17. Akram N. Women's Empowerment in Pakistan: Its Dimensions and Determinants. *Soc Indic Res* 2018; 140:755-775. <https://doi.org/10.1007/s11205-017-1793-z>
18. Bhat RA. Role of Education in the Empowerment of Women in India. *Journal of Education and Practice*. 2015; 6(10): 188-192.
19. Ahmed R and Rizk NH. The higher education paradox: towards improving women's empowerment, agency development and labor force participation in Bangladesh. *Gender and Education* 2020; 32(4): 1-9. DOI: 10.1080/09540253.2018.1471452
20. Tembhe M. Challenges and Prospects of Women Empowerment in India. Women Science Congress, 105th Indian Science Congress: 16-20 March 2018. *Imphal, India*. 2020;(1-9)
21. Qanbari Y and Ansari R. Identify and Explaining the Social and Economic Factors Affecting Rural Women Empowerment. *Journal of Research & Rural Planning*, 2015;4(3): 1-10
22. Rehman H, Moazzam A and Ansari N. Role of Microfinance Institutions in Women Empowerment:

Al-Qahtani et al.

A Case Study of Akhuwat, Pakistan. *A Research Journal of South Asian Studies* 2015;30(1):107-125. Available at: https://www.researchgate.net/publication/313972602_Role_of_Microfinance_Institutions_in_Women_Empowerment_A_Case_Study_of_Akhuwat_Pakistan

Women empowerment knowledge and attitude

23. Noreen S. Role of Microfinance in Empowerment of Female Population. *International Conference on Economics and Finance Research*. IPEDR. 2011; 4(1):318-324.