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Knowledge, Attitude and Practices of Kegel Exercise among Postnatal Women, in Al Madinah Al Munawarah, Saudi Arabia

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Abstract: Background: Kegel exercise role in strengthening the pelvic floor muscle in the treatment of prolapse and urinary incontinence and improve mobility and relieves pain. **Aim;** The study aims to assess the knowledge and attitude and practices of kegel exercise among postnatal women in Al Madinah Al Munawarah, Saudi Arabia. **Study design:** This study utilized descriptive quantitative cross-sectional study design. **Study Setting:** The study was conducted of the postnatal ward in Maternity and Children's Hospital in Al Madinah Al Munawarah, Saudi Arabia. From December 2018 to April 2019. **Sample:** the study carried out among 152 of postpartum mothers. **Tools that used in this study; Tool I:** An interviewer-administered questionnaire in Arabic language was used in this study, it composed of three parts targeting the research objectives. **Tool II:** was concerned with knowledge of women regarding kegel exercises. **Tool III:** - concerned two parts: Part one: This part related to women's attitude towards kegel exercises. Part two: This part related to women's practices about kegel exercises. **Results:** the study found that 44.7% of the sample was in the age group 26-31 years old, 75.0% were multigravida, 85.5% had no miscarriage, 67.1% had vaginal delivery, and 50.0% have 1-3 children. 25% of the sample reported media as their source for information on kegel exercise. 62.7% of the sample had satisfactory knowledge. 72.4% were categorised as having 'somewhat favourable' overall attitudes towards kegel exercises. 57% of the mothers have not performed kegel exercise. 38.5% of the participants were correctly practised kegel exercise in sitting or standing position. While 29.7% was correctly practised kegel exercise in lying down position. **Conclusion;** Women's knowledge concerning the kegel exercise in the postnatal period is reasonable and their attitude was favourable, but the mothers had the poor practice of kegel exercises. **Recommendation;** Mothers should be informed and trained to kegel exercises properly by educational courses.

Keywords: Kegel exercises, Pelvic floor exercises, postnatal mothers.

INTRODUCTION

Kegel exercise defined as frequent contractions of the muscles of the pelvis that contribute to controlling the flow in urination for strengthening these muscles, also to control or prevent incontinence (Johnson, 2017). Pregnancy and delivery may cause disorders in the pelvic floor including urinary incontinence, faecal incontinence, and prolapse of pelvic floor organs (Kahyaoglu & Balkanli, 2016). The pelvic floor muscle exercises effective in preventing and treating the dysfunction of the pelvic floor during pregnancy and the postpartum period. It can also improve psychological well-being, facilitate natural childbirth and reduce the requirement for caesarean section (Wang, et al., 2014).

A Kegel exercise play a role in strengthening the pelvic floor muscle in the treatment of prolapse and urinary incontinence and improve mobility and relieves pain (Shenot, 2016). The pelvic organs which are bladder, bowel and uterus in women are supported by the layer of muscles called Pelvic floor muscles (CFA, 2016). Furthermore, the pelvic floor muscles along with pelvic fascia play a significant role in maintaining the statics of the pelvis, abdominal cavity, and the lower urinary tract (Kozakiewicz,

et al., 2018). Exercises of pelvic floor muscles should be applied for the second half of pregnancy, and in postpartum from the second day of giving birth (Stadnicka & Iwanowicz-Palus, 2015).

Shenot, (2016) found that the women must contract the pelvic muscles rather than the thigh, abdominal, or buttock muscles. The muscles are contracted for 10 seconds, and then relaxed for 10 seconds within 10 to 15 times tide. Redirection is often necessary, and biofeedback is often helpful. In women older than 75-year-old the cure rate is 10 to 25%, and improvement occurs in an additional 40 to 50%, especially if patients are motivated.

Kegel exercise depends on repeatedly contraction and relaxation of the muscles that shape part of the pelvic floor. Furthermore, using of weighted vaginal cones, biofeedback devices and electrical stimulation can facilitate the performing of Kegel exercises (McNeeley, 2017). Also, kegel exercises are effective in treating vaginal prolapse and to prevent uterine prolapses (Khanam, 2015).

For decreasing the incidence of urinary incontinence in the postnatal period, kegel exercises are usually recommended. Also, they are recommended for women with stress, urge, or

mixed types of urinary incontinence. The choice of the appropriate method of treatment depends on the type of urinary incontinence and the degree of advance of the disorder (Kozakiewicz et al., 2018).

Kegel exercises are the mainstays of the conservative treatment and prevention of urinary incontinence. Recently, many publications indicate an improvement in the quality of life on the women who undergo conservative treatment and use the pelvic floor muscles training (Alfarra & Altawee, 2017).

Kahyaoglu & Balkanli (2016) investigating the effects of pelvic floor muscle exercise during pregnancy and the postpartum period on pelvic floor muscle activity and voiding functions, the pregnancy and delivery affect pelvic floor muscle strength, urinary symptoms, quality of life, and voiding functions. Pelvic floor muscle exercises during pregnancy and the postpartum period could increase the strength of pelvic floor muscle and prevent deterioration of urinary symptoms and improve the quality of life in pregnancy.

However, the appropriate knowledge and attitude regarding kegel exercises during the postpartum period among mothers, have been shown to be vital in improving the practice, as well as an insight into appropriate attitude, in the context of socio-cultural, educational and economic background of the mothers is essential in providing an educational intervention to promote adherence to Kegel exercises (Wijesiriwardana & Gunawardena, 2016). Moreover, recognizing the factors that affect behaviours and beliefs would enhance a change in attitude. Therefore, identifying the knowledge and attitude about exercise among women may help to determine the women adherence to kegel exercise during pre and postnatal period (Mbada, 2014).

Nurses should distribute the knowledge regarding prevention of pelvic floor dysfunction to women, routinely include kegel exercises in antenatal education programmes, or carry out relevant training in the community so that women can begin actively practising kegel exercise in the early maternity period. These will improve the quality of women's lives during both pregnancy and the postpartum period (Wang, et al., 2014).

Prepare the women for performing kegel exercises should begin to explain the anatomy and function of the pelvic floor muscles. The next stage is learning to hold and relax the pelvic floor muscles. It is essential that the patient does not hold her breath during exercise, which may be increasing stress urinary incontinence symptoms (Stadnicka & Iwanowicz-Palus, 2015) and (Kozakiewicz et al., 2018). Therefore, the purpose of the current study is to assess the knowledge, attitudes and practices of kegel exercise among postnatal women in Madinah, Saudi Arabia.

Significant of the study:

Several studies have examined the effect of kegel exercises on urinary incontinence, quality of life, and effects of kegel exercises during pregnancy and the postpartum period on both the pelvic floor muscles strength and drain functions (Alfarra & Altawee, 2017) and (Kozakiewicz et al., 2018).

However, there were no recent studies had examined the women's knowledge and practice of kegel exercises during pregnancy or postpartum, in Saudi Arabia. In this study, we aimed to assess the knowledge, attitudes and practices of kegel exercise among postnatal women in Saudi Arabia.

Aim:

The study aims to assess the knowledge, attitude and practices of kegel exercise among postnatal women in Al Madinah Al Munawarh, Saudi Arabia.

Research Questions:

1. What is the knowledge of women toward kegel exercise?
2. What are the attitude and practices of women toward kegel exercise?

Subjects and Methods

Design: A descriptive cross-sectional study design will be used in the current study.

Setting: The study will be conducted in the postnatal ward in Maternity and Children's Hospital in Al Madinah Al Munawarh, Saudi Arabia.

Subjects: The study included a convenient sample of women who attended the postnatal ward from the beginning of December 2018 to April 2019, the total number of women interviewed by the researchers were 152 women. The subjects of this study were selected according to the following criteria:

Inclusion Criteria:

1. Age group ranged from 18 to 45 years.
2. Pregnant with a single fetus
3. Mothers who are in the first 24 hours after delivery
4. Those whose neonate will be less than 4kg in weight
5. Free from complications (cephalopelvic disproportion, malposition and malpresentation).

Exclusion criteria:

- Women who have urine incontinence;
- Women who get haemorrhoids
- Women have present history of uterine prolapse

Tools of data collection: - Three tools were used for data collection:

Tool I: structured interview schedule covered the following three parts:

Part one: It included the Socio-demographic characteristics of women such as: age, marital status, employment, education, monthly income, and background.

Part 2: previous pregnant history: gravidity, number of miscarriage, number of living children and type of delivery.

Part 3: source for information about kegel exercise

Tool II: was concerned with knowledge of women regarding kegel exercises, it included 9 items about definition, time of start the exercise, benefits for pelvic muscles, for healing & for incontinence and benefits for prevention of vaginal atrophy and uterine prolapse. **The scoring system regarding women's knowledge was as**

follow: Women who gave correct answers was given score 2. Women who gave Incorrect and didn't know answers was given score 1. **The total knowledge score level was categorized as follows:** 1- Good level of knowledge >75%. 2- Fair level of knowledge 50% - <75%. 3- Weak level of knowledge < 50%.

Tool III: - Covered the following two parts: - Part one: This part related to women's attitude towards kegel exercises. It includes six items, 5 Likert-scale scored as; (0 strongly agree to 4 strongly disagree). Responses to each attitudinal statement will be assigned a score with those with favourable attitudes being assigned a higher score. Considering the scores for all attitudinal statements the mothers will be categorized into having 'favourable'/somewhat 'favourable' and 'unfavourable' attitudes regarding Kegel exercises. Overall attitudes scoring;

- Unfavourable =1-8
- favourable'/somewhat = 9-16
- Favourable =17-24

Part two: This part related to women's practices about kegel exercises

It included questions about: 1. Practices that actually taken by women by using kegel exercises, reasons for kegel exercises were performed, the frequency of performing Kegel exercises and the effect of using kegel exercises.

The scoring system regarding women's reported practices regarding kegel exercises were as follow: - Practices done were taken (2) score. - Practices not done or did not know were taken (1) score. The total score level will be as follows: - Satisfactory practices >60%. - Unsatisfactory practices < 60%.

Method

The study will be accomplished according to the following steps:

1. Official letters from the faculty of nursing will be directed to the responsible authorities at data collection settings to take permission to conduct the study after explaining its purpose.
2. Development of tool part 1 will be done by the researcher after reviewing relevant and current literature.
3. Tool part 2 and three will be adapted, modified and translated by the researcher to suit the research.

4. Subjects will be individually interviewed by the researcher.
5. After the completion of data collection, the necessary statistical analysis will be done.
6. The content validity of the questionnaire was assessed by a panel of five experts for clarity, validity, and comprehensiveness of the questionnaire items. A pilot study with 10 participants was conducted to determine the clarity and feasibility of the questionnaire and the time required from each women to complete the questionnaire.
7. The reliability of the tools was tested, and the internal consistency of the tools ranged from 0.79 to 0.92, indicating that the tool was reliable.
8. Women who agreed to participate in the study and who met the inclusion criteria were asked to sign a written
9. Informed consent form. After general examination by researcher, the data were collected through individualized interviews with women in the postnatal ward in Maternity and Children's Hospital

Ethical considerations will adhere to all stages of the study:

- The protocol will be approved by the ethical committee.
- Participants will be approached and informed about the purpose of the study before being asked to participate, and oral consent to participate in the study will be obtained from them.
- The assurance of anonymity will be addressed before the request for participation. Anonymity of participants will be provided in two ways:
The participants will be asked not to put their names on the questionnaire; this all information will be remained confidential. Also, they will be informed that their participation in the study is voluntary, and they could withdraw from the study at any time if they wish not to participate.
- Confidentiality and privacy will be maintained by data coding to eliminate identifying data with personal information.

Statistical Analysis:

Data will be coded and analysed in a personal computer using SPSS-version 20 software. The graphs will be constructed using Microsoft Excel Software 2010; Data will be described by summary tables and figures. Descriptive statistics; Numbers and percentages: Used for describing and summarizing qualitative data. Spearman correlation will be used to the correlation coefficients.

RESULTS

Table 1: Distribution of the participants regarding their socio-demographic characteristics.

Sociodemographic data		N	%
Age	20-25	20	13.2%
	26-31	68	44.7%
	32-37	36	23.7%
	38?	28	18.4%
	Total	152	100.0%
Marital Status	Married	133	87.5%
	Divorced	15	9.9%
	Widow	4	2.6%
	Total	152	100.0%
Education	Illiterate	0	0.0%
	Primary	3	2.0%
	Secondary	7	4.6%
	High School	35	23.0%
	Bachelor	96	63.2%
	Degree and above	11	7.2%
	Total	152	100.0%
Employment	Employed	75	49.3%
	Housewife	77	50.7%
	Total	152	100.0%
Monthly income	Enough	67	44.1%
	Average	58	38.2%
	Insufficient	27	17.8%
	Total	152	100.0%
Background	Rural	11	7.2%
	Urban	141	92.8%
	Total	152	100.0%

Table (1): Shows socio- demographic characteristics of the studied women. It was clear that more than one third (44.7%) of the sample was in the age group 26-31 years old. Most of the participants were married by

87.5%. Half (50.7%) of the sample was employed. More than two third (63.2%) of the studied women have a bachelor's degree, 44.1% have enough monthly income. The majority of the sample was from an urban area 92.8%.

Table 2: Distribution of the participants regarding their gestational history.

Gestational history		N	%
Gravida	Primigravida	38	25.0%
	Multigravida	114	75.0%
	Total	152	100.0%
Miscarriage	No Miscarriage	130	85.5%
	1-3 Miscarriage	19	12.5%
	>3 Miscarriage	3	2.0%
	Total	152	100.0%
Type of delivery	Virginal delivery	102	67.1%
	Caesarean Section	50	32.9%
	Interventional delivery	0	0.0%
	Total	152	100.0%
Number of children	No children	38	25.0%
	1-3 children	76	50.0%
	4-6 children	30	19.7%
	>7 children	8	5.3%
	Total	152	100.0%

Table (2): As the table shown that; Two-third (67.1%) of the studied women have virginal delivery, 75.0% were multigravida, the highest percent of the studied women

(85.5%) of the sample had no miscarriage, while, 12.5% of the women had 1-3 miscarriages. 50.0% of the sample have 1-3 children.

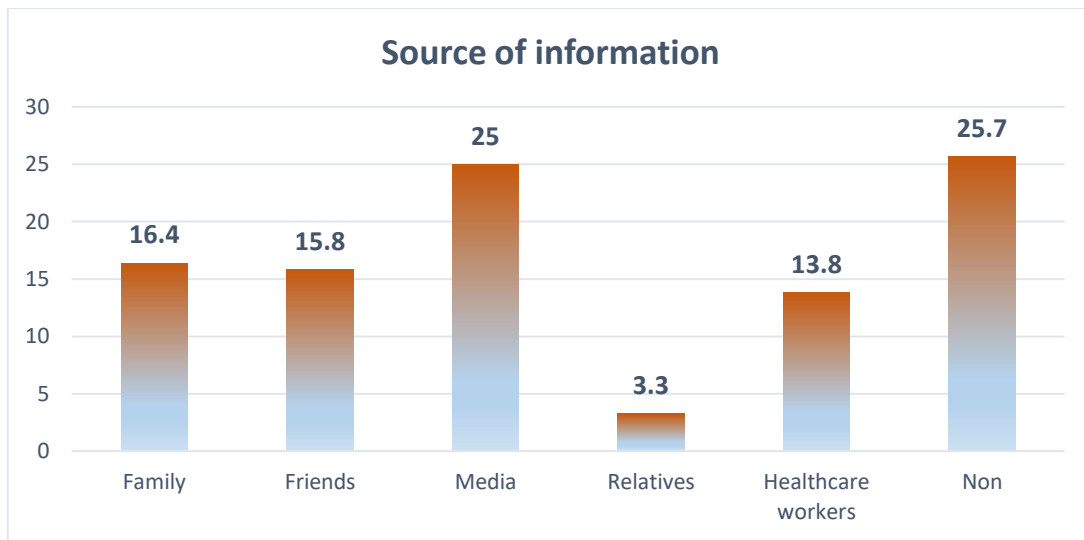


Figure 1: distribution of the sample regarding their source of information

Figure (1): Found that 25% of the studied women reported media as their source for information of Kegel exercise, followed by family, friends, and healthcare workers (16.4%, 15.8%, and 13.8% respectively).

Table 3: Correct answers regarding the knowledge of Kegel exercise

Knowledge	Correct Responses	
	N (152)	%
Definition of Kegel exercises	113	74.3%
Time to start the exercise	83	54.6%
Benefits for pelvic muscles.	101	66.4%
Benefits for healing	84	55.3%
Benefits for incontinence	100	65.8%
Benefits for intimacy.	87	57.2%
Benefits for prevention of vaginal atrophy and uterine prolapse	95	62.5%
Benefits for prevention pelvic organ prolapse	99	65.1%

Table 3 presents that (74.3%) of the studied women had correctly answered on the definition of kegel exercises. The table also exhibits that the 66.4% of the studied women had correctly answered on the

benefits of kegel exercises for pelvic muscles. 65.8% of the participants correctly answered on the benefits of kegel exercises for incontinence.

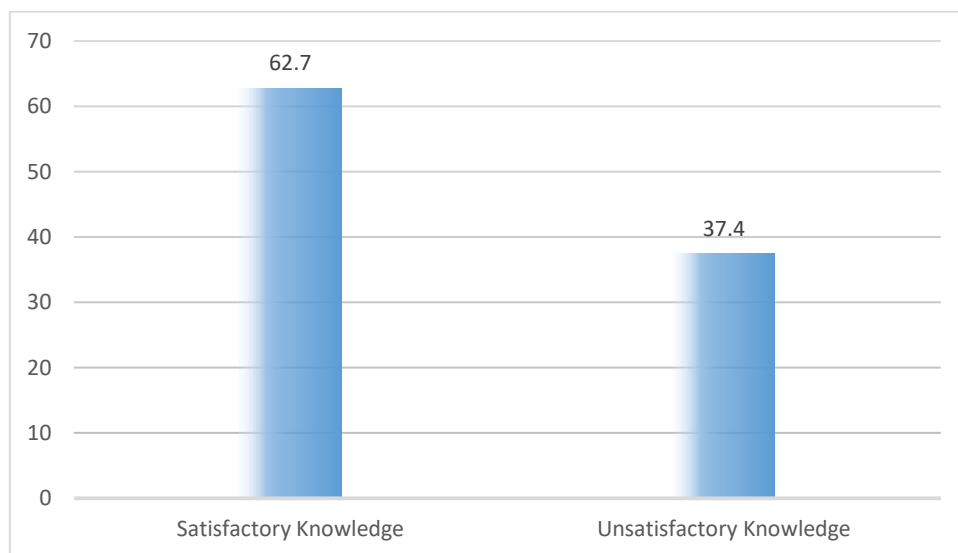


Figure 2: distribution of the responses regarding the total knowledge;

This figure presented that; more than two-thirds (62.7%) of the studied women's responses to the knowledge items were correct. While 37.4% of the studied women's responses were incorrect.

Table 4: Distribution of the sample’s responses on the attitudes regarding Kegel exercise.

Attitudes	SA		A		N		D		SD	
	N	%	N	%	N	%	N	%	N	%
Whether an antenatal woman does the recommended Kegel exercises or not, will not affect labour	21	13.9	52	34.4	35	23.2	31	20.5	12	7.9
Though the recommended exercises make the recovering easy, it may also harm to the pelvic muscles.	2	1.3	24	15.9	40	26.5	66	43.7	19	12.6
Postnatal mothers performing Kegel exercises does not suit our culture	19	12.6	16	10.6	37	24.5	40	26.5	39	25.8
Any postnatal mother can perform exercises without the advice and recommendations of healthcare professionals	16	10.6	52	34.4	30	19.9	35	23.2	18	11.9
During postpartum the priority should be improvement of nutrition and the rest and not exercises	13	8.6	39	25.8	31	20.5	50	33.1	18	11.9
Performing day to day household activities gives adequate physical exercises to postnatal women, and they do not have to perform recommended exercises	13	8.6	19	12.6	35	23.2	49	32.5	35	23.2

SA: Strongly agree, A: Agree, N: Neutral, D: Disagree, SD: Strongly Disagree,

Table(4) shows the attitudes of women regarding performing of kegel exercise. The statement “though the recommended exercises make the recovering easy, it may also harm to the pelvic muscles” was disagreed by 43.7% and strongly disagreed by 12.6% of the mothers. The statement “during postpartum the priority should be an improvement of nutrition and the rest and not exercises “

was disagreed by 33.1% and strongly disagreed by 11.9% of the mothers. Responses to the attitudinal statement “Performing day to day household activities gives adequate physical exercises to postnatal women, and they do not have to perform recommended exercises” was disagreed by 32.5% and strongly disagreed by 23.2%.

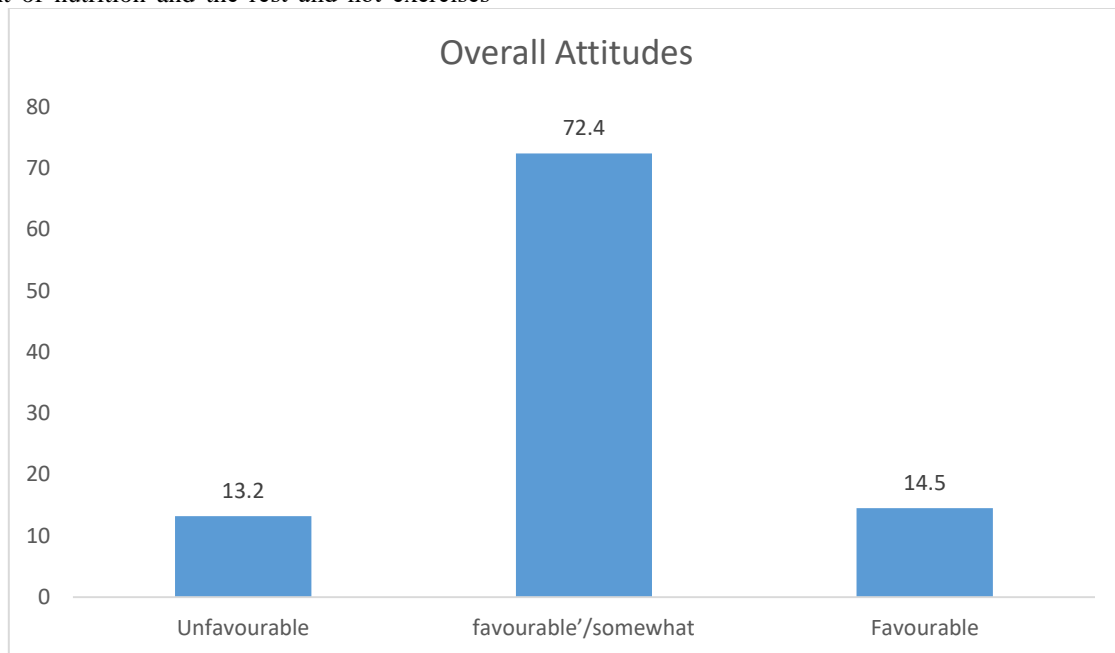


Figure 3: Distribution of mothers by the overall attitudes related to kegel exercise

Figure 3 found that most of the studied mothers (72.4%) were categorised as having ‘somewhat favourable’ overall attitudes towards kegel exercises while 14.5% of participants were having ‘favourable’ overall attitude.

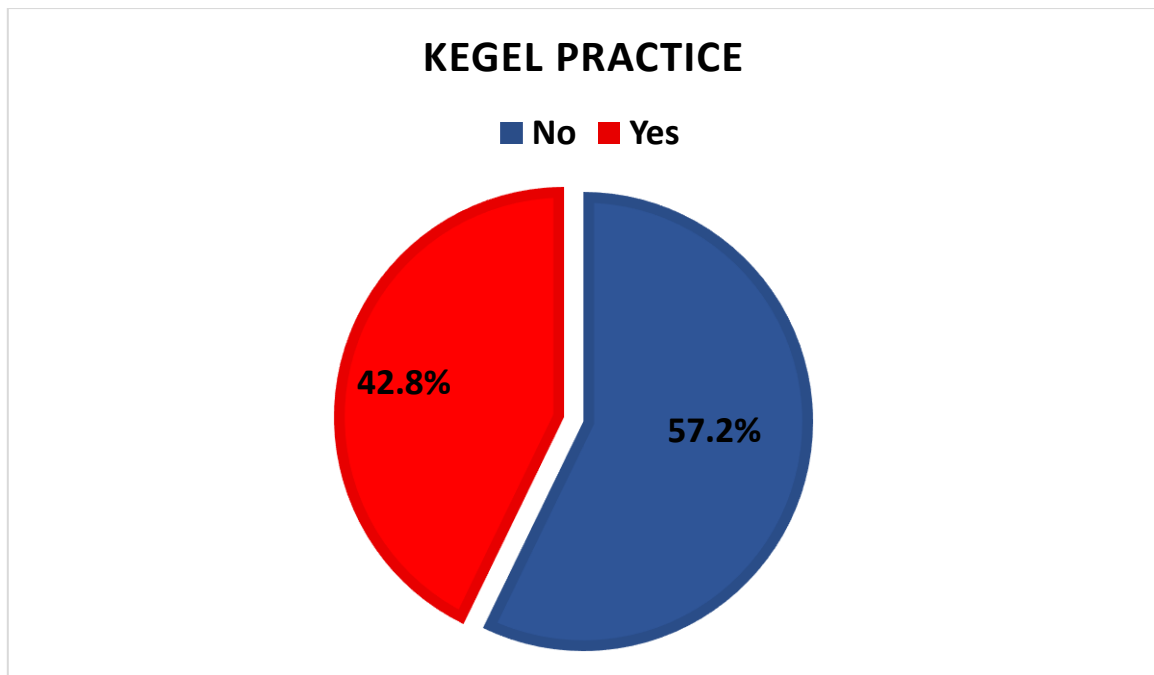


Figure 4: Sample’s responses on ‘Have you ever practised Kegel exercises?’

As the figure 4 presents that; 57% of the studied women have not performed kegel exercise. Whereas, 43% of the sample had performed Kegel.

Table 5: Distribution of the participants’ responses regarding their Kegel practices

Kegel Practice		Count	%
Have practised Kegel exercise	No	87	57.2%
	Yes	65	42.8%
	Total	152	100.0%
The reasons for practicing Kegel exercise	Having urinary incontinence	6	9.2%
	For preventive purposes (prevention of incontinence)	20	30.8%
	Recommendation from a friend	14	21.5%
	The recommendation of the doctor to practice Kegel after birth	25	38.5%
	Total	65	100.0%
The frequency of Kegel exercise	1-3 times a week	39	60.0%
	4-6 times a week	5	7.7%
	Daily	21	32.3%
	Total	65	100.0%

Table5: demonstrates that; The examined activity of women in the area of performing kegel exercises showed that 42.8% of the women perform the exercises. Among this group, the reasons that led the women to use kegel exercises were ‘‘The recommendation of the doctor to practice kegel after birth’’, ‘‘For preventive purposes (prevention of

incontinence) ’’, ‘‘ Recommendation from a friend ’’, and ‘‘ I have urinary incontinence ’’, (38.5%,30.8%,21.5%,9.2% respectively). The frequency of kegel exercises varied among women; 60.0% of the sample performed the exercise 1-3 times a week, while 32.3% of the studied women performed kegel exercise daily.

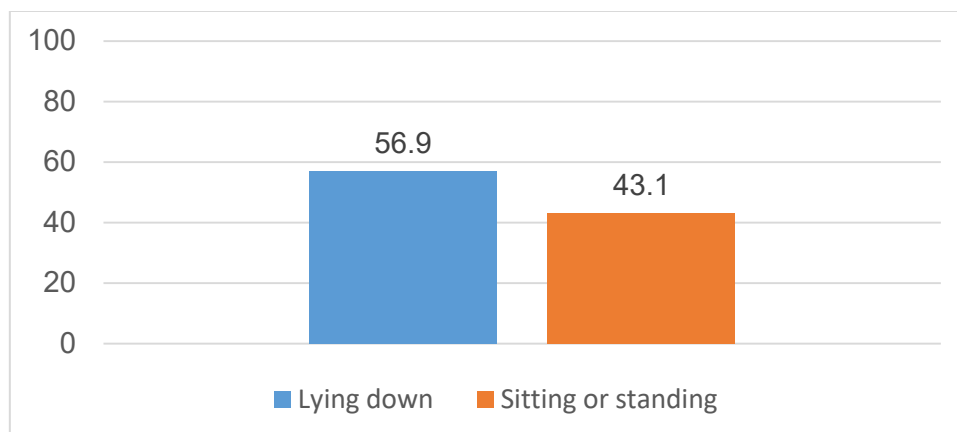


Figure 5: distribution of the sample regarding the positions of performing Kegel exercise.

Figure5: presents that 56.9% of the studied women was performing kegel exercise in lying down position, while 43.1% of the studied women were performing kegel exercise in sitting or standing position.

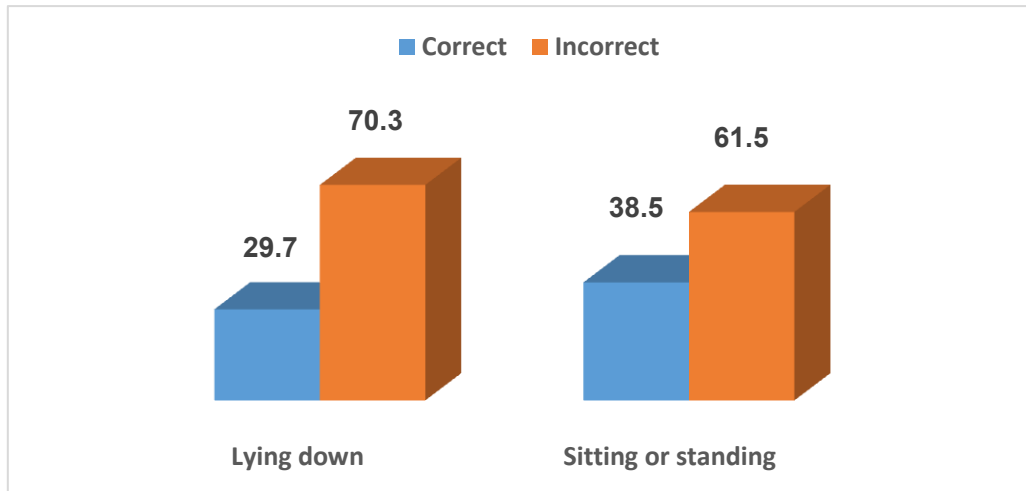


Figure 6: distribution of the samples' total score of practices towards the two Kegle exercise positions.

Figure 6:Displays the distribution of the studied women according to their total score of practices. It was found that 38.5% of the studied women had correctly practised of

kegelexercise in sitting or standing position. While, 29.7% of the women had correctly practised of kegel exercise in lying down position.

Table 6: Correlation between general characteristic and total score of knowledge and practice.

Sociodemographic data		Total Knowledge	Total Practice
Age	Pearson Correlation	.042	-.355**
	Sig. (2-tailed)	.604	.004
Marital Status	Pearson Correlation	-.073	.058
	Sig. (2-tailed)	.372	.648
Employment	Pearson Correlation	-.199*	-.204
	Sig. (2-tailed)	.014	.104
Education	Pearson Correlation	.230**	.077
	Sig. (2-tailed)	.004	.540
Type of delivery	Pearson Correlation	.049	.292*
	Sig. (2-tailed)	.548	.018
Gravida	Pearson Correlation	.012	-.179
	Sig. (2-tailed)	.884	.153
Miscarriage	Pearson Correlation	-.207*	.070
	Sig. (2-tailed)	.010	.582
Number of children	Pearson Correlation	-.026	-.194
	Sig. (2-tailed)	.748	.122
Monthly income	Pearson Correlation	.024	-.116
	Sig. (2-tailed)	.767	.356
Background	Pearson Correlation	.207*	.189
	Sig. (2-tailed)	.010	.132
Source of information	Pearson Correlation	-.005	.141
	Sig. (2-tailed)	.947	.262

As the table6 shown that; the employment and miscarriage were inversely correlated with the women's knowledge with correlation ($r = -.199^*$, $P = 0.01$), ($r = -.207^*$, $P = 0.01$) respectively. Whereas, the kegel exercise knowledge was positively correlated with women's education and their background with correlation ($r = .230^{**}$, $P = 0.004$), ($r = .207^*$, $P = 0.01$) respectively. Regarding the women's practice of kegelexercise; the practice was inversely correlated with age ($r = -.355^{**}$, $P = 0.004$) and positively correlated with type of delivery ($r = .292^*$, $P = 0.01$).

DISCUSSION

The appropriate knowledge and proper attitude regarding kegel exercise during the postpartum period among mothers are vital in improving the understanding of the excellent practice of kegel exercises which is essential in providing an educational intervention to promote adherence to

kegelexercises (Wijesiriwardana & Gunawardena, 2016). This study conducted to assess the knowledge, attitude and practices of kegel exercise among postnatal women.

The present study found that the total number of participants for our study was 152, more than one-third of the women were in the age group 26-31 years, the majority was married, half of the women was employed. The current study found that more than half of the participants have a bachelor's degree. This almost in line with the previous study done in Medinah by Ibrahim, (2015) who conducted a descriptive cross sectional research among 200 women, her study result showed that (54%) of women were aged from 25 years to less than 35 years, and 60 % of the participants were a high education woman.

Regarding gestational history demonstrated that; more than half of the studied women have vaginal delivery, most of them were multigravida, our finding similar to the result from the study of **Mbada (2014)** estimated that the majority of the respondents had vaginal delivery (57.6%) and were nulliparous (39.2%).

According to our results the standard source for information of kegel exercise among women was the media, this result was in context with (**Ibrahim, 2015; Alharqi & Albattawi, 2018**) confirmed that the media was the most frequently mentioned source of information among women towards pelvic floor muscle exercises including kegel exercises.

Regarding the knowledge of the women about the definitions and benefits of kegel exercises, more than half of women showed correct knowledge. This result in line with the finding of **Kozakiewicz et al., (2018)** who conducted a study in Poland among 400 women to examine the state of knowledge of women about kegel exercises, their study revealed that 79.3% of the studied women showed correct knowledge related to kegel exercises. Furthermore, the present study's findings similar to the results of **Alharqi & Albattawi (2018)** clarified that the kegel exercise is known by 65% of studied women. The explain why the percentage of good knowledge score in this study was high because the majority of the respondents came from good education level. In contrast with the previous results, **Wojno et al., (2014)** conducted among 280 women; found that 70% of women did not know what kegel exercises are.

In the presents study most of the subject shown good attitude towards kegel exercise; this was agreed with the previous study done in Medina by **Ibrahim (2015)** showed that most of the mothers had good attitude regarding pelvic floor muscle exercise. Similar to study conducted by **Rosediani et al., (2012)** found in their study that 96.4% had positive attitude score toward kegel exercises.

However, the fact that the vast majority of mothers had 'somewhat favourable' or 'favourable' attitudes towards kegel exercises. The kegel exercises are not performed by most respondents. Whereas, the examined activity of women in the area of performing kegel exercises showed that 42.8% of the subjects perform the exercises. The result of the current study similar than the finding of the study that conducted in Madinah by **Ibrahim (2015)** who found that (32%) did pelvic floor muscle exercise. These findings disagreed with the results of **Hill et al., (2017)** who conducted a cross-sectional survey to evaluate pregnant women's levels of awareness, knowledge and beliefs about the pelvic floor muscles exercises (PFME). They found that only 11% of respondents were practising PFME.

In the current study the most reported reason that led the subjects to perform kegel exercises was the recommendation of the doctor to practice kegel after birth. The frequency of kegel exercises varied among women; 60.0% of the sample performed the exercise 1-3 times a week, while 32.3% of the sample performed kegel exercise daily. Similar findings in the research of **Kozakiewicz et al., (2018)** who assessed the reason why women performed kegel exercises, their study found that (65.6%) of the sample performed them because

midwives and physiotherapists recommended them during their stay in a hospital or childbirth classes (32.2%), also their study reported that only 28% of the surveyed women from among 400 subjects exercised pelvic floor muscles daily, and 19.9% of the respondents exercised the least often - only once a week. On the same line (**Burkhard, 2017; Culbertson & Davis, 2017**) who found in their literature recommendations, the 3 to 4 times a week in three series of 8 to 12 repetitions was recommended in performing pelvic floor muscle exercises, whilst, contraction and relaxing of the muscles should last the same period of time - about 6-8 seconds.

The present study found a significant relation between the participant's knowledge and some of their socio-demographic characteristics, including employment, miscarriage, level of education, and their background. Regarding the women's practice of kegel exercise; the practice was inversely correlated with age and positively correlated with the type of delivery. A similar finding in the study of **Alharqi & Albattawi, (2018)** emphasized that there was appositive association between level of education and the total knowledge score. And the working mother had higher knowledge about kegel exercise which due to their high level of education. And the previous experience of miscarriage was negatively affected the mother's knowledge, which indicates that the women's fear of repeat the experience prevented them from improving their knowledge about kegel exercise because they thought that it would affect them negatively.

CONCLUSION

From the results of the current study, it can be indicated that the sample reported media as their source for information regarding kegel exercise. women's knowledge concerning the kegel exercise in the postnatal period is reasonable and their attitude was favourable, but the mothers had the poor practice of kegel exercises.

RECOMMENDATION

- The programmes for health awareness on kegel exercise should be conducted by the health workers to enhance the knowledge and practice, that will contribute positively to maintain the mothers' adherence to kegel exercise which improves their health status.
- Mothers should be informed and trained to kegel exercises properly by educational courses.
- Further studies similar to the current study can be replicated on a large sample that will contribute to drawing conclusions that are more definite and generalizable to a large population.

REFERANCES

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