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Women's Awareness and Attitude toward Epidural Analgesia

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Abstract

Introduction: Women's awareness and attitudes toward Epidural Analgesia (EA) are not clearly identified. The benefits of EA in relieving labor pain are well recognized. However, women's preferences in using EA to relieve labor pain differ between cultures. The objective of this study was to assess women's awareness and attitudes toward EA.

Methods: A descriptive correlational cross-sectional design was used to collect data from a convenience sample of 550 women in childbearing age. Women were interviewed face-to-face after they agreed to participate in the study. Data were collected from shopping malls, women's cafeterias, beauty salons and outpatient clinics in Riyadh, KSA. Demographic profiles, knowledge and attitudes of EA questionnaires were used to collect data for the study.

Results: The majority of women were young, married, multigravids, lived in Riyadh, were well educated, unemployed, and had a significant monthly income. Women reported a good level of knowledge regarding most of the items on the EA questionnaire. 42% reported that they know about EA from family members/relatives and friends, 18% from the media or readings, 13% from previous delivery experience and 8% from brochures at antenatal clinics. Women's attitudes toward using EA in future labor were varied since similar percentages agreed, did not agree and weren't sure about using EA in their future labor. The reasons for the unclear attitudes were advice from relatives not to use EA, and a desire to experience natural labor pain. There was a significance moderate correlation between knowledge and parity (r = .40**, p = .000), income (r = .39**, p = .001), education (r = .31**, p = .000), and attitude (r = .31**, .000).

Conclusion and recommendations: Although women's awareness regarding EA was relatively high, their attitude toward using EA in future labor was not clear. Culturally sensitive educational programs are needed to improve women's perception and attitude toward using EA in their future labor and to have a satisfactory labor.

Keywords: Awareness, attitude, epidural**,** labor pain, women

1. Introduction

Natural labor pain is considered an imperative experience in women's life. Effective pain management during the labor process is associated with a safe birth experience for the mother and the baby (Caton, Frolich, &Euliano, 2002). Many labor analgesic strategies have been developed and are available to reduce labor pain and make this experience as pleasant as possible (Henry & Nand, 2004). Epidural Analgesia (EA) is one of the most effective strategies known to alleviate labor pain and it is also well recognized. Women's awareness toward EA is not clearly identified and women preferences to using EA to relief labor pain differ between cultures (Minhas, et al., 2005; Mugambe, et. al., 2007). Studies indicated that limited use of EA among women during labor could be related to many factors such as inadequate service provision, lack of public awareness about EA benefits, cultural issues (Lee, Chen, & Kee, 2003; Barakzai, et al., 2010), socioeconomic issues, obstetric factors and attitude (Mugambe, et al., 2007; Olayemi, Aimakhu & Udoh, 2003; Ochroch, et al. 2007; Minhas, 2005).

Previous research focused on knowledge and attitudes regarding all methods of labor pain relief, and anti-natal and post natal care with disregard to the process of labor itself. The present study was concerned mainly with women awareness and attitude regarding EA. Women have a misconception regarding EA and their attitude toward using EA is not well identified. In addition, there is no previous research concerning this phenomenon among Saudi women. The objective of this study was to evaluate awareness and attitudes toward EA among Saudi women in Riyadh, KSA.

2. Methods:

Design: A descriptive correlational cross-sectional design was used to answer 5 research questions (1) To what extant do women have knowledge regarding EA, (2) What are the sources of women's knowledge regarding EA,

(3) What are women's attitudes toward using EA in future labor, (4) Do women's knowledge and attitudes differ by demographic factors, and (5) Which factor among the study variables mostly predict attitude toward EA?
Sample: A convenience samples of 550 women in childbearing age who either have or do not have children.
Settings: Women were interviewed by the investigators face-to-face after agreeing to participate in the study. Data were collected from women at shopping malls, women's cafeterias, beauty salons, and outpatient clinics in Riyadh, KSA.
Questionnaires: The study questionnaire included the demographic profile of the women such as age, education, occupation, income, residence, parity, and past surgical experience using EA. Knowledge of EA questionnaire was developed by the investigators based on previous research that had similar objectives (James, et al., 2012; Barakazai, et al., 2010; Mugambe et al., 2007; Ibach, et al., 2005). The questionnaire consists of 12 items on 3-points Likert scale with (0) do not know (1) no, and (2) yes. The scores range from 1 to 24, the higher the score, the higher the women's knowledge regarding EA. The 12 items are: (1) EA is an injection of a local anesthesia through a catheter into the epidural space of the spine, (2) Any physician or nurse can administer the EA, (3) Contractions become weak or stop completely after administration of EA, (4) EA is the most frequently used ad most effective way of relieving labor pain, (5) EA increases the risk for having a cesarean section, (6) The EA insertion is more painful than the labor pain itself, (7) EA reduces labor pain and allows the mother to bush when needed, (8) Women should agree and provide a consent for having EA at labor, (9) EA is risky for the baby, (10) EA can cause headache, fever and lower blood pressure of the mother, (11) EA can cause muscle weakness in the lower limb of the mother, (12) and EA should be an available option for women at delivery.
Women were also asked about sources of their knowledge about EA. Responses for sources of women's knowledge were categorized as: media and/or reading, from family members/relatives and friends, from antenatal clinics, and from past experience. Attitudes toward EA were assessed using a single question: "In your future labor, are you planning to have the EA?" Responses for this question were (1) yes, (2) no, and (3) not sure. If a woman answered "no" for this question, she was asked to write reasons why. The study questionnaire was reviewed by a panel of 3 experts; one anesthesiologist, one PhD holder nursing faculties and one nursing specialist in pain management. The questionnaire was piloted on 20 women before starting the data collection and modifications were made. The 20 cases for the pilot were not included in the main study. The original knowledge of EA questionnaire response options were 5-points Likert scale: strongly agree, agree, neither agree nor disagree, disagree and strongly disagree. When data collection started, women's responses showed that it would be better if the response options changed to yes, no and do not know.

3. Results:

Demographic profile of the participants in this study showed that 44.5% of women were young in the age group (18 to 24) years old, 32.5% were in the age group of (25 to 34) years old and 23% were in the age group (35 years and older). The mean age was 26.2 (SD 8.6). The majority lived in Riyadh and was unemployed. Regarding education, 43.4% graduated from high school and 38.9% held a bachelor degree. Fifty percent of the women in the current study were multigravida, and 35% were null gravida. Income showed that 39.5% have a monthly income between 5,000 and 10,000, and 14.5% have a monthly income between 10,000 and 15,000 Saudi Riyals. Demographic characteristics of the sample are shown in table 1.
Research question 1: To what extent do women have knowledge regarding EA? Descriptive statistics were used to answer this research question. Women reported a good level of knowledge on most of the items of the EA knowledge scale. Good scores were related to: EA definition (53%), who should administer the EA (82.4%), EA is more painful than the labor pain itself (55%), EA reduces labor pain and allows the mother to push when needed (59.8%), women should agree and consent for EA (89%), EA is risky for the baby (54.5%), EA should be an available option for women at delivery (54.9%), and EA can cause muscle weakness in the lower limb of the mother (60%). On the other hand, there was puzzling level of knowledge on the rest of the items on EA knowledge scale. Knowledge of EA among women is shown in table 2.
Research question 2: What are the sources of women's knowledge regarding EA? Descriptive statistics results showed that 42% of sources were from family members/relatives and friends, 18% from past experience (previous labor), 13% from media and reading and 8% from antenatal clinics. Data about sources of EA knowledge are presented in figure 1.
Research question 3: What are women's attitudes toward using EA? Descriptive statistics revealed almost similar responses as indicated by having 32% of women 'Agree" to use EA in their future labor", 34.9% 'Disagree" and 33.1% are 'not sure". When women were asked about reasons for disagreeing to use EA in their future labor, they responded that they were either advised from relatives and friends not to use it or they

wanted to experience natural labor pain. Women attitude toward EA is presented in figure 2.

Research question 4: Do women's knowledge and attitudes differ by demographic factors? Results of this study revealed a significant moderate correlation between knowledge and parity (r - .40** p = .000), women who experienced multiple labors had more knowledge about EA. Knowledge was also significantly and moderately correlated with income (r = .39**, p = .001); the higher the income, the more the options for women to acquire different kinds of knowledge. There was a significant moderate correlation between knowledge and education (r = .31**, p = .000) meaning that a higher level of education corresponds to an increase in knowledge. In addition, there was a significant moderate correlation between knowledge and attitude (r = .31**, p = .000), the higher the knowledge the more optimistic the attitude toward using EA in future labor. Correlation analysis is presented in table 3.

Research question 5: Which factor among the study correlated factors (knowledge, education, parity, and income) mostly predicted attitude toward EA? Regression analysis was used to answer this research question. Attitude was entered to the equation as the dependent variable and knowledge, education, parity, and income as independent variables. Results showed that all the variables together explained 34% of variance on attitude toward EA. The model was significant (F = 17.46, p = .000) and knowledge mostly predicted the attitude (β = .31, p = .000). Regression analysis is presented in table 4.

4. Discussion:

The present study showed a considerable level of knowledge among women regarding EA. This result was comparable to results of previous works (James, et al., 2012; Mugambue et al., 2007; Raynes-Greenow et al., 2007; Minhas et. 2005). The reasons why women in this study reported good knowledge can be attributed to the demographic characteristic of the current sample. First, 38.9% of women had a bachelor degree. Second, 28.7% were working, and 39.5% had a monthly income between 5,000 to 10,000 SR, and 14.5% had a monthly income of 10,000 to 15,000 SR. Education, work and good income provide more experience and opportunities for individuals to gain knowledge in different areas. Third, 64 % were married and 50% were multigravidas with 13% had experience of epidural anesthesia in their past delivery. These factors all together would raise women awareness regarding the current issue. The above mentioned factors were also supported by significant correlation between knowledge, education, income and parity in our study.

On the opposite direction, previous research reported poor women awareness regarding EA (Barakzai, et al., 2010; Oladokum, et al. 2009; Naithani, et al., 2012). Although, these previous works studied similar objectives, the demographic characteristics of their samples were different. They reported a low level of education, rural residence, inadequate resources, and low socioeconomic status as reasons for poor awareness in their studies.

Research evidence supported that pregnant women receive their information regarding EA and process of labor from antenatal clinics, textbooks and the media (Stamer et al., 1999; Stewart et al., 2003). Women in the current study reported that the main source of their knowledge was family members/relatives and friends, and from past experience. One reason behind this result could be the culture. Women in Eastern cultures are more likely to discuss personal issues with friends. This result was similar to those of Mugambe et al. (2007), Minhas et al. (2005) and Barakazi et al. (2010) whom studies carried out in a similar culture.

Although, women in the current study reported a good awareness regarding EA, their attitude toward using them in future labor was not clear. Proportions of women reported that they "agree', "disagree', or "are not sure" about using EA in their future labor were almost the same. This uncertain attitude affected the women's decision toward using EA. Previous researches provided similar results (Minhas et al., 2005; Naithani et al., 2011; Raynes-Greenow, et al., 2007; and Oladokun, et al. 2008). Having the source of knowledge mainly from friends and family members as shown in the current study would explain the uncertain attitude. Friends and family members are not professional and misconceptions or misunderstandings could happen and in turn affect attitudes among women. One more reason could be that the current study did not assess women's perception of EA. Perception could affect attitude among even those who are knowledgeable.

5. Conclusion

The current study aimed at examining women's awareness and attitude toward EA. A descriptive correlational cross-sectional design was used to answer the research questions. Women in the current study were young, educated, multigravids, had a considerable monthly income, and live in Riyadh. Results showed a fairly good level of knowledge among women regarding EA. Women reported that they gained their knowledge mainly from family members/relatives and friends, and from past experience. The antenatal clinic role was not as it should be in raising women awareness regarding EA. Instead of being well educated and having a good level of knowledge regarding EA, women's attitudes toward using EA in future were uncertain. The main reason for

this was advice from relatives and a desire to experience natural labor process. Results were congruent with previous research. Further research is needed to uncover associated factors behind the objectives of the current study.

6. Recommendations

Low percentage of participants in this study reported that they had their knowledge regarding EA from antenatal clinics and media. Those are the qualified sectors amenable for providing such information. Providing flyers and brochures at the antenatal visits, in accordance with developing a culturally sensitive and competent educational program through the media are needed to improve women awareness and attitudes regarding this issue. Intervention study would be great in examining the effect of educational campaign on increasing women's awareness, perception and attitudes and would add to the body of nursing knowledge concerning this regard.

7. Limitations

Women had a good level of knowledge regarding EA in the current study and reported uncertain attitudes toward using EA in their future labor. One limitation of this study is that we did not examine perceptions of women toward EA. Perception would have associated with such uncertain attitudes. The quantitative design employed in the current study may hinder more assessment. Qualitative analysis along with the current quantitative design would expand the base of understanding for the phenomenon under investigation.

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Figure 1: Sources of knowledge about EA

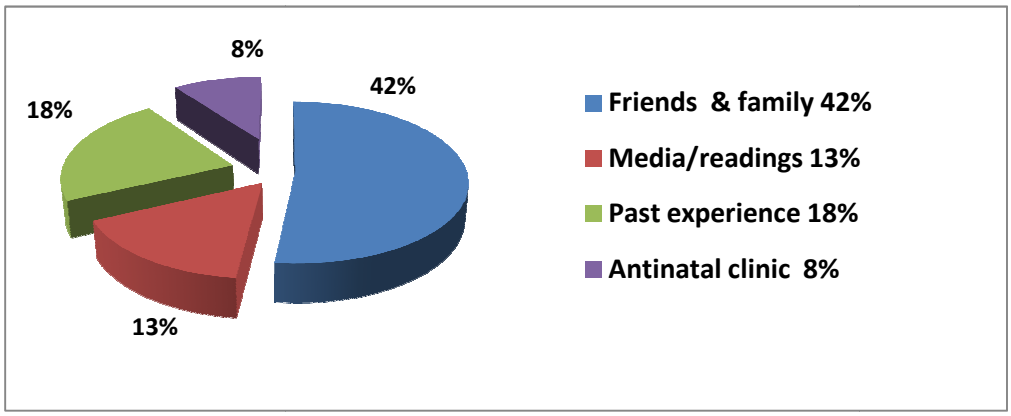

Figure 2: Women's attitude toward EA

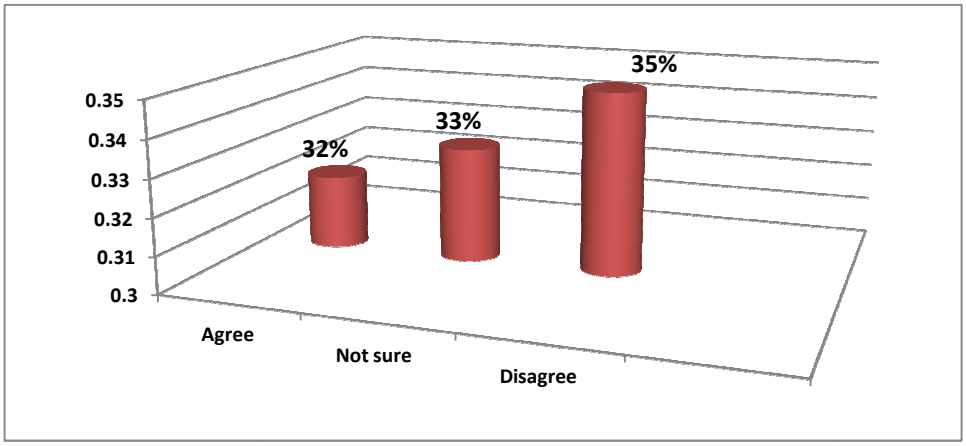

Table 1: Demographic characteristics of the sample

Item	Number (%) N = 550
Age	
18-24	245 (44.5)
25-34	179 (32.5)
35-45	126(23)
Marital Status	
Married	353 (64)
Single	165 (30)
Divorced	32 (5.8)
Education	
Illiterate	13 (2.4)
Read & write	6 (1)
Elementary/intermediate	70 (12.7)
High school	239 (43.4)
Bachelor	214 (38.9)
Post education	8 (1.4)
Occupation	
Employed	158 (28.7)
Not employed	392 (71.3)
Parity	
Null gravid	193 (35.1)
Primigravida	82 (14.9)
Multigravida	275 (50)
Income	
Less than 5,000 SR	39 (7.1)
1,000 to ≥5,000 SR	172 (31.3)
5,000 to ≥10,000 SR	217 (39.5)
10,000 to ≥15,000 SR	80 (14.5)
More than 15,000 SR	40 (7.3)
Residence	
Riyadh	509 (92.5)
Outside Riyadh	41 (7.5)
Past surgery with spinal anesthesia	
Yes	155 (28.2)
No	395 (71.8)
Past Labor with EA	
Yes	71 (13)
No	479 (87)

Table 2: Knowledge of EA

Items	Number (%)		
	Yes	No	DN
EA is an injection of a local anesthesia through a catheter into the epidural space of the spine	293(53.3%)	52 (9.4%)	205 (37.3%)
Any physician or nurse can administer the EA	29 (5.3%)	453(82.4%)	68 (12.3%)
Contractions become weak or stop completely after administration of EA	201(36.5%)	179 (32.5%)	170(30.9%)
EA is the most frequently used and most effective way of relieving labor pain	233 (42.3%)	114 (20.7%)	203(36.9%)
EA increase the risk for having C section	84 (15.3%)	213(38.7%)	253 (46%)
The EA insertion in more painful than the labor pain itself	54 (9.8%)	303 (55%)	193(35%)
EA reduce labor pain and allow the mother to bush when needed	329 (59.8%)	86(15.6%)	135(24.5%)
Women should agree and provide a consent for having EA at labor	490(89%)	11 (2%)	49(8.9%)
EA is risky for the baby	34 (6%)	299(54.5%)	217(39.5%)
EA can cause headache, fever, and lower blood pressure of the mother	135(24.5%)	139(25.3%)	276(50.2%)
EA can cause muscle weakness in the lower limbs of the mother	119(21.6%)	330(60%)	101(18.3%)
EA should be an available option for women at delivery	379 (68.9%)	57(10.4%)	114(20.7%)

Table 3: Correlation analysis among the study variables

Variables	Knowledge	
	R	p-value
Education	.31**	.000
Parity	.40**	.000
Income	.39**	.001
Attitude	.31**	.000

Table 4: Regression analysis

Variables	B	Standard error	β	Significance
Knowledge	.074	.010	.31	.000
Education	-.049	.023	-.09	.031
Parity	-.105	.037	-.18	.004
Income	.002	.032	.03	.951

R = .34, F = 17.46, p= .000