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EFFECTIVENESS OF EDUCATIONAL AND AWARENESS SESSIONS ALONG WITH APPROPRIATE STRATEGIES IN ORDER TO DISCOURAGE AN ELECTIVE CAESARIAN SECTION (CS) IN PRIMIPARAS WOMEN TO REDUCE ASSOCIATED COMPLICATION IN MOTHERS AND NEWBORNS

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Abstract:

Objective: *Awareness and education was examined in order to measure the decision of pregnant women for natural mode of delivery to an elective caesarean section delivery in our research study.*

Methods: *Research design was quasi-experimental and research was completed in the time span of January – March, 2012. Population of the research was 3rd trimester pregnant women (200 women). All the patients were in the intention of caesarean section instead of normal delivery mode. We made three groups of the total sample population. Three groups were named as Group A, B and C and respectively treated with educational awareness, educational awareness including discussion and no intervention in the C group taken as controls. We also held a post-test after one-month delay and analyzed data through logistic regression and Kruskal Wallis tests.*

Results: *Group A, B and C were respectively representing controls 100 women (50%), educational package 40 women (20%) and 60 women (30%) educational package and groups discussion group. We observed a significant change in the overall behavior of the B group and C group with significant p-value of (<0.01); whereas, no change was observed in the controls of A group as they were not treated with any of the package. We observed the change of opinion in women as 25 women (42%) in group-B opted for natural delivery and only one women (2.5%) changed mode of delivery in B group. Four ladies of group A were (4%) emergency cases and normal delivery was carried out.*

Conclusion: *Scores of the model construct were increased through two educational techniques which include attitude, awareness, perceived control of behavior, behavioral intention and subjective norms. Nonetheless, Group discussion along with educational awareness package is an effective and influential for the selection of natural delivery mode for the child birth.*

Keyword: *Education, Package, Elective Caesarean, Controls, Behavior and Pregnant Women.*

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INTRODUCTION:

Caesarean section (CS), can save the baby and mother in emergency [1]. However, an opted CS without its need demands a justification in medical field [2].

In general, many complications are the result of CS for babies and mothers such as hemorrhage, mortality, infection, neonatal respiratory problems, premature birth etc. [3 – 8]. Moreover, huge financial burden is also born by the family [8].

Target of 10 – 15% of CS is set by WHO over the world [9], many countries represent very high ratio of CS. For instance, US reports CS incidence 32.9% (2009), Italy (39.8%) in 2007, Australia (30.6%) in 2007, Korea (35.3%) in 2008, Turkey (37.7%) in 2006 and Iran (41.9%) in 2008 [11].

Childbirth knowledge is a lapse in this regard, women follow their peer knowledge and awareness and never discuss matters in an effective way and decide CS as final resolute withour considering the complications and risks [12].
A research observed reduced CS ratio and also suggested reorganization and development of the primary healthcare system. There is a demand of information in the pregnant women about CS and its complications [13]. On the contrary, if the information is properly given the patients decide actively [14].

Planned behavior theory is among the models of education, useful for the adults [15]. It says that intent can predict the behavior because of three factors such as positive attitude, social pressure and ability to do it [1].
Educational intervention can play a part in the overall behavior pattern is the model of this research. Delivery pains can be reduced through spinal anesthesia and breastfeeding is also effective [16 – 18]. Therefore, our research was based on the examination of the effective educational program for the reduction of the planned CS in the target population.

SUBJECTS AND METHODS:

Research included 200 pregnant cases in 3rd trimester and we completed the research in the time span of January – March, 2012. Every woman was in the intention of CS. All the cases with history of pre-term labor, multiple pregnancies, diabetes, high BP and small pelvis were no included in the research.

We included forty cases at least in every group, the comparison was made through power as (0.80), significance criterion as (0.05) and expectations of P1 and P2 as 0.6 and 0.3 respectively. Accordingly, 100 women were made a part of the both groups with interventions and 100 in the non-interventional group considered as controls.

Random sampling technique was employed. Random clinic selection was made and selected four clinics and random women selection was made and sample population was divided in three groups as mentioned. Before classification consent was assured and made three groups as Group A, B and C respectively non-interventional as controls included 100 women, educational package group included 40 women and educational package and discussion in 60 women.

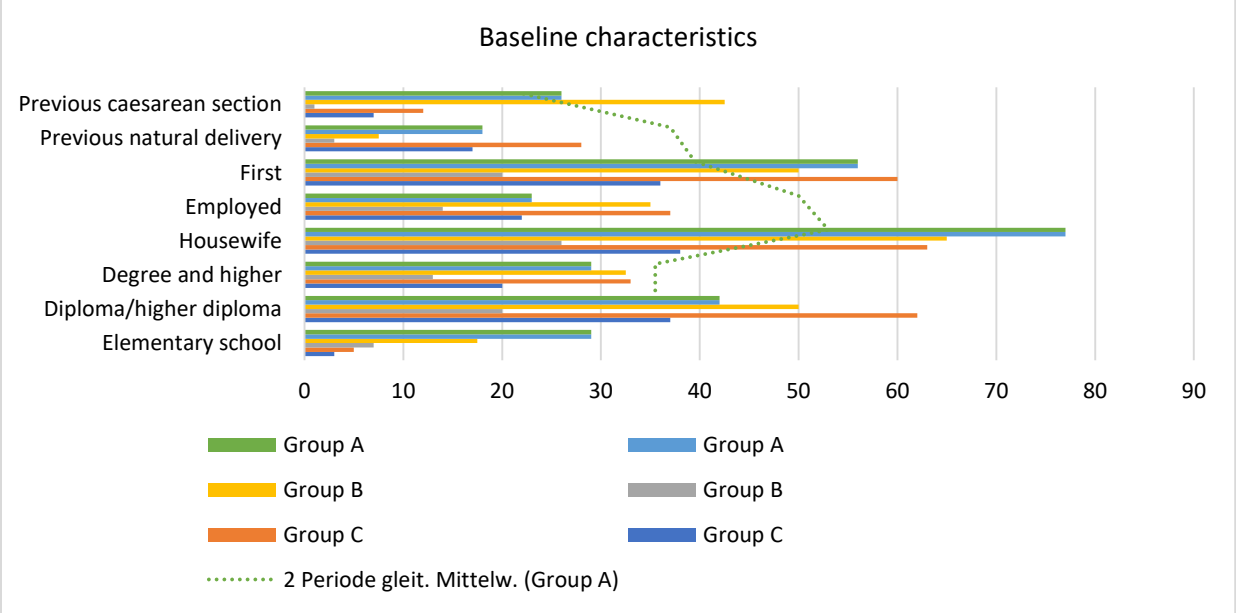
We designed a questionnaire on the planned behavior theory and used all available outcomes and significant statistical evidence on the basis of other authors [16, 19]. Various sections were included in the questionnaire: demographic about spouse and women; didactic knowledge about CS and natural delivery, 2 scores were allocated for every correct response, one number for not known and zero for invalid replies. Seven questions were asked about the natural delivery attitude on the basis of the Likert scale in the range of 1 – 5 scores. Seven questions with (agree / disagree) response were asked to measure the subjective norm and obedience motivation was assessed through one question. Result was shown in percentage. A specific question was also asked about intention with four possible replies including (probably CS, probably natural delivery, definitely CS and definitely natural delivery). Content validity ratio and index were included in the final questionnaire as (0.69) and 0.88 respectively. An average Cronbach's alpha score was in the range of (0.71 – 0.87). The range of the correlation coefficient was 0.77 – 0.87.
After necessary information questionnaire was completed by the participants, groups were made and data about the packages was also provided. We used three booklets for the package which included information for mothers, delivery modes, medical and psychological benefits including the related complication information. Women empowerment was included in second book including strategies, prenatal massage, wrong perceptions and relaxation techniques of natural delivery. In the 3rd book preparation of naturel delivery with its exercise and benefits was given. It also included method of pain reduction and facilitation in natural delivery. Booklets design was supporting knowledge enhancement, attitude shift and perceived behavior increment for natural delivery. A video disk was also a part of the educational package.

Additional discussion was carried out in C group in the groups of 5 – 8 women per group in forty-five minutes sessions focusing on the debate and questions. Video clips were shown to women about exercise and massage and practiced the position of delivery. Women shared their experiences with each other and also drawn conclusions. Every activity was allocated a suitable time duration.

Participants was visited in the post-test after one month and also communicated to be in touch. SPSS-15 was used for data entry and analysis through Kruskal Wallis test. Regression analysis was made for the analysis of the yes and no replies regarding natural delivery behavior change. Research was formally approved by the involved clinics and consent of the participants was also secured.

Table – I: Baseline characteristics

Variable		Group C		Group B		Group A	
		N = 60	%	N = 40	%	N = 100	%
Education	Elementary school	3	5	7	17.5	29	29
	Diploma/higher diploma	37	62	20	50	42	42
	Degree and higher	20	33	13	32.5	29	29
Occupation	Housewife	38	63	26	65	77	77
	Employed	22	37	14	35	23	23
Childbirth type	First	36	60	20	50	56	56
	Previous natural delivery	17	28	3	7.5	18	18
	Previous caesarean section	7	12	1	42.5	26	26
Mean Age		28 ± 6 Years		27 ± 6 Years		27 ± 5 Years	



Confidentiality was highly maintained in this research as instead of names we used identification numbers.

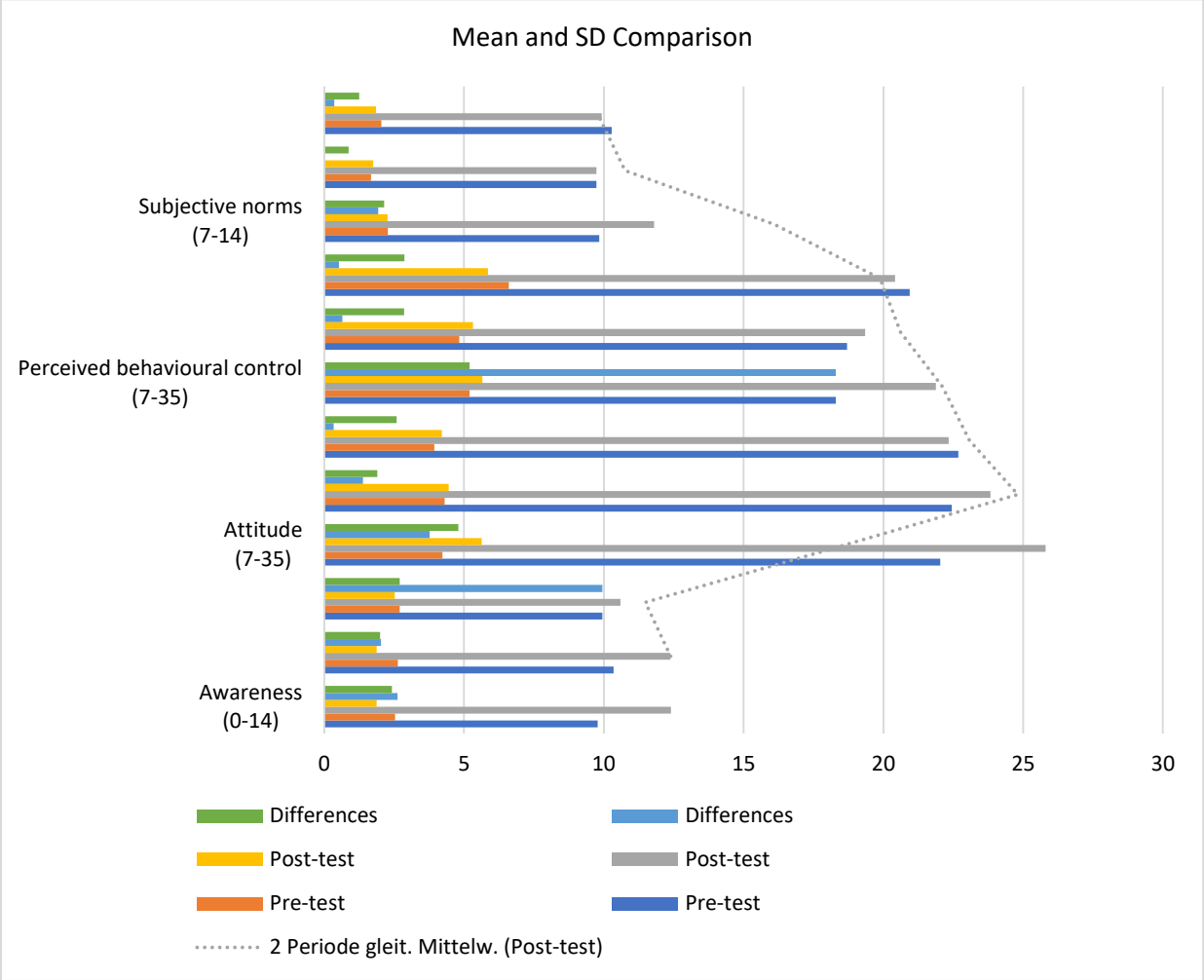
RESULTS:

Educational status in A group was as that 71 women (71%) having high school diploma or even higher. The corresponding information about Group B and C respectively had 33 cases (82.5%) and 57 cases (95%). Overall 141 housewives (70.5%) and 112 were experiencing delivery for the 1st time (56%) as shown in Table-I.

For awareness, perceived behavior and attitude in control and subjective norms before interventions and after intervention was very much significant in comparison to the post-intervention in B and C Groups with p-value as (< 0.001), we observed no change in A group as shown in Table-II

Table – II: Comparison of mean and SD in scores of attitude, awareness, subjective norms and perceived behavior control

Construct (Min and Max of scores)	Group	Pre-test		Post-test		Differences		P value
		Mean	SD	Mean	SD	Mean	SD	
Awareness (0-14)	C	9.78	2.53	12.4	1.87	2.62	2.42	P < 0.001
	B	10.35	2.63	12.38	1.87	2.03	2	
	A	9.95	2.7	10.59	2.52	9.95	2.7	
Attitude (7-35)	C	22.03	4.23	25.8	5.63	3.77	4.8	P < 0.001
	B	22.45	4.3	23.83	4.45	1.38	1.9	
	A	22.68	3.94	22.34	4.2	0.34	2.59	
Perceived behavioral control (7-35)	C	18.3	5.2	21.88	5.65	18.3	5.2	P < 0.001
	B	18.7	4.83	19.35	5.32	0.65	2.86	
	A	20.94	6.6	20.42	5.85	0.52	2.87	
Subjective norms (7-14)	C	9.83	2.28	11.8	2.27	1.93	2.14	P < 0.001
	B	9.73	1.67	9.73	1.75	0	0.87	
	A	10.28	2.04	9.92	1.85	0.36	1.25	

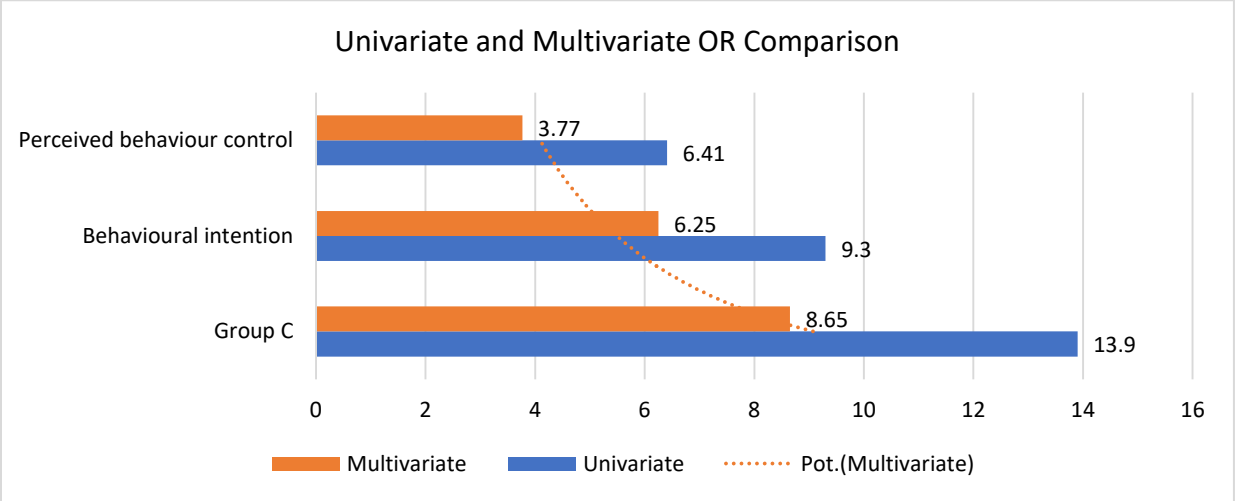


In comparison to the delivery method opinion before and after selected interventional program women were considering themselves and spouses as physicians.

Significant p-value of (<0.001) was observed in intentional behavior about natural delivery in C group but not in the other groups. We observed the change of opinion in women as 25 women (42%) in group-B opted for natural delivery and only one women (2.5%) changed mode of delivery in B group. Four ladies of group A were (4%) emergency cases and normal delivery was carried out.

1. **Table – III:** Vaginal Delivery Predictive Variables

Construct	Univariate			Multivariate		
	OR	CI (95%)	p	OR	CI (95%)	p
Group C	13.9	4.500 - 42.990	0.001	8.65	2.250 - 23.160	0.002
Behavioral intention	9.3	2.700 - 32.030	0.001	6.25	1.660 - 23.560	0.007
Perceived behavior control	6.41	2.320 - 17.740	0.001	3.77	1.009 - 13.020	0.036



Intentions were six times higher after interventions about natural delivery as observed through regression test outcomes with OR (6.25), confidence interval as (95%) and range as 1.66 – 23.6. Moreover, women having perceived behavior increased scores in natural delivery as four times higher for natural delivery in comparison to the no change in behavior with OR as (3.77), CI as (95%) and range as 1.01 – 13.02. Eight times higher probability for natural delivery was observed in Group C in comparison to the B groups as OR (8.65), CI (95%) and interval range as 2.25 – 23.16 as shown in Table-III.

DISCUSSION:

Norms were changed and awareness was increased to have better outcomes through planned model of behavior change and developed positive attitude, subjective norms and awareness level. Awareness and discussion increased the incidence of normal and natural delivery. However, the second method more reliable and effective in comparison to first model as it changed the delivery mode and behavior through exercise, delivery positions and complication awareness in the women.

An Iranian research shows low level to medium levels of attitude and awareness in women [19 – 21]. Initial outcomes also describe the same good to better outcomes with fifty percent having a positive attitude towards natural mode of delivery. It is necessary to educate women as still many have perceived misconceptions. Numerous research studies have shown effectiveness of educational and awareness programs in this regard.

Self-management of children issues such as asthma was managed in the educational CD and booklet [22]. Exercise at home and educational training is effective (Sweeny's et al.) [23]. According to Fender, educational package leads to limited steroid use in people facing bleeding of uterine [24].

A research held in Iran indicates behavior about delivery in terms of education, it emphasis the healthcare staff training and training of mothers to reduce incidence of CS [25]. In a research fifteen percent decreased was observed in CS incidence through education [26].

Natural delivery choice was increased in the primiparas women when subjected to booklets and films [27]. According to Alavijeh, the women participating in educational methods, classes, individual training, films, educational books, phone consultation and peer discussion was effective in reducing CS decisions. Women also preferred training session through physicians [1].

Similarly, our research also observed educational packages effective for the decision of natural delivery about 40% of the participants were willing to switch to natural delivery from CS decision because of motivation, decision ability and training being extended to them.

Behavior based studies among prim-parous women, awareness, behavioral intention of natural delivery and attitude was better after interventional methods of awareness and education in comparison to the control group. Ultimately a sixteen percent less cases were observed with CS decision [9, 28, 29].

Planned behavior theories indicate that exercise and attitude relation in the course of pregnancy and during delivery has a relation to the norms of spouse and mothers. There was a significant association between pregnancy and exercise behavior before and after pregnancy [17]. Same has been presented by numerous authors in their research studies. Breastfeeding was studies in one of the research and it displayed enhanced model constructs training and difference in the interventional groups and controls [18].

Additionally, outcomes reflect that an elective CS was observed (27.8%) less after the intervention in comparison to the controls [33]. We observed planned training-based theory as an enhanced woman constructs for the two interventional groups and the controls. In addition, women also shared about their physicians as their source of obedience and motivation. In terms of delivery mode 4 /10 women received awareness package and had natural delivery in A group and in B group small number was observed.

Research also had several limitations that indicate few considerations in terms of results interpretation. Firstly, collaboration was not positive by few of the private obstetricians and gynecologists with investigators as the research started. Similarly, difficult part was the sampling because of the specialist's disagreement regarding this field. Moreover, few barriers were also restricting in the post-test follow-up of women. However, through various approaches such as gifts, money, meeting and time adjustment persuaded gynecologists, related persons, obstetricians and pregnant women to participate in the research study on regular basis.

Conclusion

A sixty minutes duration direct discussion is very effective for the motivation of natural delivery to pregnant women. Thus, we recommend this technique to increase the level of awareness in the pregnant women including attitudes shifts, decision making and skill management of the pregnant women. Most of the cases were motivated through advice of their physician. We need to plan the dissemination of appropriate guidelines to pregnant women. In addition, it is also suggested that large sample size is to be dealt in formal training specially in the prim-parous women and specially in the women having first experience of delivery and opt for the CS.

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