

**EFFECT OF APPLYING WARM PERINEAL PACKS DURING THE
SECOND STAGE OF LABOR ON PERINEAL PAIN AMONG
PRIMIPAROUS WOMEN**

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ABSTRACT

Background: Perineal pain experienced during the second stage of labor can have an impact on how a woman views her birth experience and its severity is linked to that of the perineal trauma. The application of perineal warm packs or compresses is widely advocated by midwives to reduce perineal pain and improve comfort during the birth without women having to resort to potentially harmful pharmacological pain relief. **Design:** This study utilized an experimental research design. **Aim:** to explore the effect of applying warm perineal packs during the second stage of labor on perineal pains among primiparous women. **Setting:** The study was conducted at labor & delivery units of Qatif Central Hospital in Al- Qatif (Eastern Province), Kingdom Of Saudi Arabian. **Methodology:** A total sample of 100 primiparae admitted to previously mentioned setting was comprised the study sample after gaining their acceptance. They were equally divided and randomly assigned to two homogenous groups: Experimental group received warm perineal packs during the second stage of labor and control group received routine hospital care without application of warm perineal packs. Two tools were used for data collection namely: A structured interview questionnaire and Visual Analogue Scale. **Results:** The pain scores among the experimental group continued to decline significantly (P1& P2, P1&P3 and P2&P3) ($P = < 0.001$). However, no significant difference was apparent between pain scale measurements (P1&P2= 1.00, P1&P3= 0.3 & P2&P3= 0.3) among the control group. Furthermore, women in the experimental group requested pain relief less frequently than the control group. **Conclusion:** The application of warm perineal packs had potential benefits on decreasing the level of perineal pain immediately after birth and on day one following birth as well as decreasing the frequency of requiring pain relief.

Keywords: Warm perineal packs, second stage of labor, perineal pain, primiparous women

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INTRODUCTION

Perineal preservation and perineal comfort during the second stage of labor are important goals in the practice of most midwives, as midwives and obstetricians should be aware that perineal trauma is associated with significant short-and long-term morbidity for these findings the ways to improve women's comfort during the second stage would be beneficial ^[1]. It is noticed that much of researches on perineal pains has been focused on the first stage. In fact, the worst pain is often experienced late in the second stage of labor during the advancement of the fetal head and stretching of the perineum in the minutes before giving birth ^[1].

Methods of reducing pain and trauma during the second stage, without having to resort to potentially harmful pharmacological pain relief or major abdominal surgery, would be beneficial to women and indeed to society as a whole. It is curious to observe that much of the research on pain in labor has focused on the first stage, thus largely overlooking the pain associated with the actual birth ^[2].

Midwives and other health care providers use a variety of techniques in the second stage of labor to reduce genital tract trauma and pain ^[3]. A postal survey of 210 maternity units in the UK ^[2] found that midwives were using a variety of non-pharmacological analgesic methods to control pain at the end of the second stage of labor,

including: hot packs (33%); cold packs (21%); perineal massage (52%); and injectable local anesthetics (62%). Perineal warm packs are used in the belief that they reduce perineal trauma and increase comfort during the second stage of labor^[2]. It is considered as an effective method of reducing pain experienced in the late second stage of labor without women having to resort to potentially harmful pharmacological pain relief. Being able to 'soothe the ring of fire' using perineal warm packs is highly acceptable to women. It is also a very accessible and cost-effective method of pain relief^[4].

There is more substantial evidence to support the beneficial effect that heat has on the experience of pain. Heat increases local skin temperature, circulation, and tissue metabolism. It reduces muscle spasm and raises the pain threshold. Heat also reduces the fight or flight response (as evidenced by trembling and 'goose pimples'). Local heat to a warm blanket calms the woman, and also may increase her receptivity to a stroking type of massage which she cannot tolerate when her skin is sensitive or sore due to the fight or flight response^[5].

When a warm pack is applied, touch and temperature fibers are stimulated, creating a background of pleasurable sensations. The pain now has to compete for access to the spinal cord, thus leading to a reduced sensation of pain. The pain relief experienced with heat application can also be explained through the action of endorphins, which are released. Heat application is known to influence blood flow to the tissue^[6]. The warm packs somehow altered connective tissue on a superficial level, leading to less small splits and grazes, all of which may contribute to overall levels of pain, the presence of the warm pack on the perineum made midwives touch the perineum less, which led to less bruising and infection^[3].

It seems that the warm packs helped women deal with the stinging sensation experienced in the perineum at the end of the second stage, often described by midwives as the ‘ring of fire.’ Being able to get comfortable is a significant predictor of feeling in control during the labor and birth ^[7]. The Perineal Warm Pack Trial seeks to add to the emerging evidence on methods that may reduce perineal trauma and improve comfort for childbearing women in the second stage ^[1].

Women and midwives indicated that perineal warm packs were highly acceptable to both childbearing women and midwives as a method to relieve pain. A majority of the women and midwives felt the warm packs reduced perineal pain during the birth ^[8]. It is possible that the impressions of women receiving the warm packs were influenced by the fact they were getting additional attention from the midwife and therefore viewed the pain less negatively ^[8].

By conducting this study in delivery room in the selected hospital in Qatif Central Hospital at Qatif- Saudi Arabia; a light would be focus on this area of research which in turn would lead to the development of Evidence – Based second stage pain relief options available to women during childbirth. This also will form a base for future researches in this area.

Aim of the work:

The aim of this study is to explore the effect of applying warm packs to the perineum on perineal pain during the second stage of labor and 24 hours postpartum among primiparous women.

Hypothesis:

Primiparous women who receive warm perineal packs during the second stage of labor will have less perineal pain than those who receive routine hospital care during labor.

SUBJECTS AND METHOD

I. Design:

An experimental research design was carried out from Jan. 2010 to May. 2010.

II. Setting:

This study was conducted in delivery room at Qatif Central Hospital in Qatif, Eastern Province. Saudi Arabian. This hospital was chosen because it is a governmental hospital with high admission rate of parturient.

III. Subjects:

One hundred primiparous women from the previously mentioned setting were comprised the study subjects. They were divided equally and randomly into experimental and control groups. Experimental group was included 50 women who received warm perineal packs during the second stage of labor and the control group was included 50 women who were received the routine hospital care during the second stage of labor that was defined as any second-stage practice carried out by midwives that did not include the application of warm packs to the perineum.

They were selected according to the following criteria:

Inclusion criteria:

- Has a singleton pregnancy with cephalic presentation.
- Anticipated normal birth.
- 20 - < 35 years old. ¹⁹¹

Exclusion criteria:

- Having complicated labor.
- Booked for cesarean section.
- Having intrauterine fetal death.
- Coexistence of any medical or obstetrical risk factors.

IV. Tools: Two tool were used for data collection

Tool I: Assessment tool was entailed two parts:

- *Part I: Socio-demographic characteristics*, It was comprised women's name, age, level of education, occupation, place of residence, type of family & income.
- *Part II: Obstetrical data:* Antenatal and natal parameters: it contained weeks of gestation, accessibility of antenatal clinic, place and number of antenatal visits, timing of the first antenatal visit, duration of second stage of labor, duration of crowning, and weight of newborn.

Tool II: : A Visual Analogue Scale (VAS):

This scale was developed by Melzack and Torgerson. It is a self-reported scale used extensively to measure pain intensity ^[1]. The intensity of pain was assessed by measuring the millimeters from the left end of the scale to the woman's mark where 50 mm or less was categorized as having mild pain, the score 51 mm to <75 mm was categorized as moderate pain and the scores of ≥ 75 mm was categorized as having severe pain. This tool was translated into Arabic, and tested by the researcher.



Figure I: Illustration of modified visual analog scale used to measure pain. ⁽²⁾

METHOD

An experimental research design was utilized for 100 women who selected randomly from the Delivery room at Qatif Central Hospital (QCH) at Al- Qatif (Eastern Province), Saudi Arabian, the ethical permission for the study was obtained from research ethical committee at university of Dammam and permission from hospital administration and chairman of OB/Gyne Department was obtained. The tools of data collection were developed and used by the researcher after reviewing the related literature. The tool content validity was tested by 5 juries who are experts in the related field. The researcher explained the purpose of the study to every woman, and then take her consent to participate in the study. A pilot study was carried out on 10 women to evaluate the clarity, feasibility and applicability of the tools, these women were excluded from the study subjects.

The purposes of the pilot study were to:

- Test the validity and relevance of the questions.
- Test the clarity of questions and the order in which they are presented to maintain consistency.
- Estimate the time needed to complete the tool.

- Find out any problems that might interfere with the process of data collection.

The pilot study revealed that:

- Sentences were clear, but few words have been modified.
- The average time needed to complete the assessment tool ranged between 3-5 minutes, depending upon the degree of understanding and response of the interviewee.
- Following this pilot study, the assessment tool was modified and ready for use.

Tool I (part I & II) was filled by the researcher and used with the whole sample (100 parturient) to find out the socio-demographic characteristics and antenatal data that was collected during early first stage of labor and (obstetrical data) during the whole second stage of labor, **Tool II** was also filled by the researcher and used with the whole sample to find out the level of perineal pains during the second stage of labor and 24 hours postpartum. The women were randomly assigned to one of the following groups upon confirmation of full dilatation of the cervix by giving each laboring women a sealed piece of paper, contains the group allocation. The experimental group received perineal warm packs during the second stage and the control group received routine hospital care during labor without application of perineal warm packs. All women in the experimental and control group were assumed lithotomy position and used only one pushing technique (breath holding techniques) during labor. Warm perineal packs (same size and same material) were applied by the researcher to the women's perineum for experimental group only during the whole second stage of labor.

The applied warm perineal pack was carried out as follows:

- A sterile metal jug was filled with boiled tap water (45° C) and then perineal pack soaked on it. The warm perineal pack was squeezed & placed gently on the perineum during each uterine contraction for 10 minutes.
- The warm perineal packs were resoaked in the sterile metal jug in between uterine contractions then applied again when contractions starts to maintain warmth during uterine contractions.
- The water in the metal jug was kept warm by replacing it every 15 minutes until delivery of the fetal head.

The intensity of women's pain was assessed by the researcher for both groups, (experimental & control) three times, immediately before the application of perineal warm pack upon fully cervical dilatation at the beginning of the second stage of labor as a baseline data (pain scale 1), immediately after birth (pain scale 2) and on the first day (pain scale 3) after birth by using the visual analogue scale. The women were asked to numerate the severity of pain they experienced, the pain measured by the number of millimeter and the level of pain was determined by the researcher and categorized as severe, moderate and mild pain.

VI. Statistical analysis:

Statistical analysis was performed with the Statistical Package for Social Science SPSS version (17). Comparison between the experimental and control groups by using chi-square test for qualitative variable and t test for quantitative variables at 95% confidence interval. A p-value < 0.05 was considered as statistically significant and highly significant when p-value was ≤ 0.01 . Qualitative data and pain scale are tested for their distribution by the test of normality. It was observed that this test is statistically significant in relation to

pain scale i.e. the distribution is abnormal. Accordingly the mathematical presentation is by median and interquartile range. Moreover, the non-parametric test was utilized for statistical analysis.

RESULTS

A total of 100 women were recruited into the study, 50 each to warm perineal packs and routine hospital care groups. Their demographic data were presented in **Table 1**. shows that the two groups (experimental & control) were similar in age and the majority of them (86% & 98% respectively) were ranged between 20 - < 30 years old, however a statistical significant difference between the experimental and the control groups regards place of residency, level of education, occupation and adequacy of monthly income (P=0.041, P=0.028, P=0.017 & P=0.014 respectively) was observed.

Table (II) illustrates that all the study subjects in both groups (experimental and control) had adequate number of antenatal visits started at first trimester of pregnancy (≥ 4 antenatal visits). However a significant difference was observed regarding the place of antenatal care centers, (P= < 0.001). As regards current natal parameters of the study subjects, the median duration second stage of labor was significantly lower for experimental group compared to their counter parts (25 compared to 45) P= 0.038. Furthermore, the median duration of crowning was significantly lower for experimental group compared to their counter parts (3 compared to 2) P= < 0.001. The table also shows that the majority of the women's newborn weight in the experimental and control groups (94% & 92% respectively) their weight were ranged between 2.5 and < 4Kg with no statistical significant difference.

Table (III) & Fig. (I) clarify that the follow up measurements of pain scale in each studied groups separately portrayed that, the pain scores among the experimental group continued to decline (P1& P2, P1&P3 and P2&P3) with statistically significant difference ($P = < 0.001$). However, no significant difference was apparent between the three pain scale measurements (P1&P2= 1.00, P1&P3= 0.3 & P2&P3= 0.3) among the control group.

In **table (IV) & Fig. (2)** women in the experimental group requested pain relief less frequently than the control group with statistical significant difference. Moreover, as regards receiving pain relief for more than three times, the control group tended to have around four fold (RR= 4.3) for pain relief requirement compared with the experimental one. Twenty six percent of pain relief requirement could be attributed for not using warm perineal packs (AR= 26). It may be concluded that about four deliveries needed to be treated with warm perineal packs to decrease the requirement of pain relief agents (NNT \approx 3.8).

Table (V) shows no significant difference was observed regarding socio-demographic characteristics and median pain score for the experimental and control groups with respect to age, residence and occupation. However, a significant difference was apparent regarding level of education and median pain score of the experimental group, women who had higher level of education had moderate median pain score (70%) compared to mild median pain score (50%) among those who had less than university level while no significant difference was observed among the control group. Furthermore, no significant difference was observed regarding pain score and antenatal parameters of both groups. However, a statistically significant negative mild correlation was observed between the 2nd pain scale and the duration of second stage of labor among the experimental group and no significant difference was observed regarding the control group. **Table (VI)** demonstrates distribution of the study subjects according to the socio-demographic characteristics and the requirement

for pain relief, it was observed that no significant difference among both groups regards to the age, place of residency and occupation. However, the pain relief requirement among the experimental group is significantly higher (3) for women who had higher level of education compared to those who had less than university educational level. Furthermore, no significant difference was apparent regarding obstetric profile (antenatal & natal parameters) and frequency of requiring pain relief among both groups.

Table (I) Distribution of the experimental and control groups according to their Sociodemographic characteristics

Sociodemographic characteristics	Experimental (n=50)	Control (n=50)	X ² P-value
	No (%)	No (%)	
-Age in years			
20-30-35	43 (86.0) 7 (14.0)	49 (98.0) 1 (2.0)	FET= 0.059
-Place of residency			
Rural Urban	25 (50.0) 25 (50.0)	35 (70.0) 15 (30.0)	4.167* 0.041
-Level of education			
Less than university University & more	31 (62.0) 19 (38.0)	20 (40.0) 30 (60.0)	4.842* 0.028
-Occupation			
Housewife Working	46 (92.0) 4 (8.0)	37 (74.0) 13 (26.0)	5.741* 0.017
-Adequacy of monthly income:			
More than enough Enough	2 (4.0) 48 (96.0)	10 (20.0) 40 (80.0)	6.061* 0.014

* *Significant (S) (P=<0.05) FET (Fisher's Exact Test)*

Table (II) Distribution of the experimental and control groups according to their current antenatal & natal parameters:

Current antenatal & natal parameters	Experimental (n= 50)		Control (n= 50)		X ² P-value
	N	%	N	%	
<u>Current antenatal parameter:</u>					
Place of antenatal centers					
- Governmental hospitals	10	20.0	10	20.0	17.324*
- Primary health care centers	24	48.0	6	12.0	≤ 0.001
- Private hospitals	16	32.0	34	68.0	
<u>Current natal parameters</u>					
-Duration of the second stage of labor/minutes					
Min-Max	10-145		10-180		Z= -
Mean ± SD	34.96 + 28.42		49.10 + 38.88		2.077*
Median (IQR)	25 (30.0)		45 (40.0)		P= 0.038
-Duration of rowning/min					
Min-Max	1-5		1-5		Z= -
Mean ± SD	2.42 + 0.88		3.34 + 1.21		4.029*
Median (IQR)	2 (1.0)		3 (2.25)		P= < 0.001
-Weight of newborn/Kg:	N (%)		N (%)		
<2.5 Kg	3 (6.0)		4 (8.0)		FET= 1
2.5- ≥ 4 Kg	47 (94.0)		46 (92.0)		

**Significant (S)*

Z= Mann Whitney Test

FET (Fisher's Exact Test)

Table (III): Distribution of experimental and control groups according to their pain scales

	Pain 1	Pain 2	Pain 3	X^2_b (P) Z_b (P)
Experimental				
Min-Max	50-100	30-95	20-85	80.074* (<0.001) P1&P2
Mean \pm SD	88.8 \pm 11.3	59.7 \pm 14.9	48.2 \pm 15.9	6.043*(<0.001) P1&P3
Median (IQR)	90(20)	60(20)	45(21)	6.027*(<0.001) P2&P3
				3.867*(<0.001)
Control				
Min-Max	45-100	45-100	30-100	6.545 (0.054) P1&P2 0.000 (1)
Mean \pm SD	78.9 \pm 19.1	78.9 \pm 19.1	75.8 \pm 15.7	P1&P3 1.107
Median (IQR)	80(31.3)	80(31.3)	75(20)	(0.3) P2&P3 1.107
				(0.3)
Z_a (P)	2.348* (0.02)	4.697* (<0.001)	6.636* (<0.001)	

Z_a Mann-Whitney test Z_b Wilcoxon test
 X^2_b Friedman test *Significant (S)

Table (IV) Distribution of experimental and control groups according to their pain relief requirement:

	Pain relief frequency N (%)				Test	Test for \geq 3 times
	No	Once	Twice	\geq 3		
Experimental	11 (22.0)	18 (36.0)	17 (34.0)	4 (8.0)	16.046* < 0.001	RR= 4.3 \approx 4 AR= 26% NNT= 3.8 \approx 4
Control	14 (28.0)	5 (10.0)	14 (28.0)	17 (34.0)		

*Significant (S) RR= Relative Risk AR= Attributed Risk
 NNT= Number Needed to Treat

Figure I : Distribution of experimental and control groups according to their median of pain scale

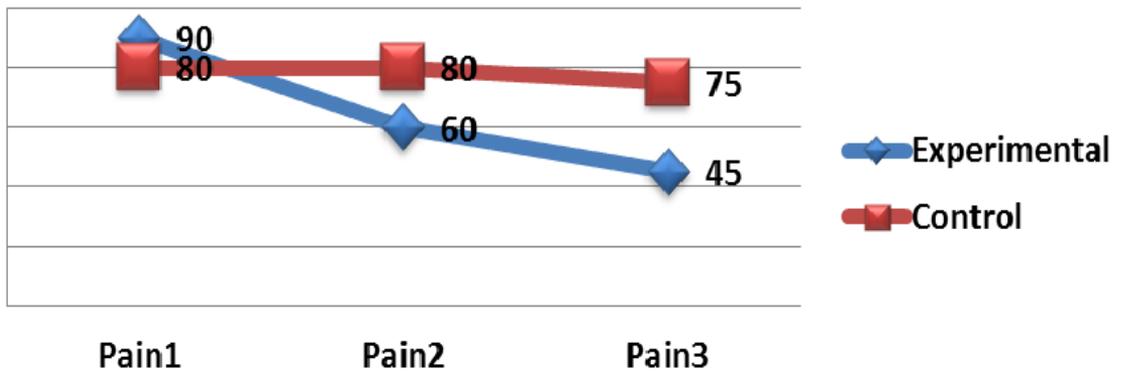


Figure II : Distribution of experimental and control groups according to their pain relief requirements

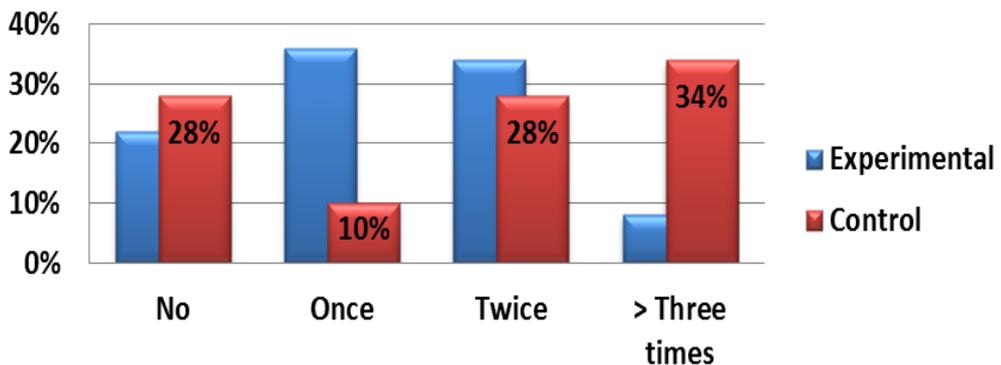


Table (V) Relationship between general characteristics of experimental and control groups & 2nd pain scale:

Characteristics	Experimental	Test	Control	Test
- Socio-demographic characteristics:				
Age in years:				
20-	60.0	Z= 0.171	85.0	Z= 1.331
30-35	70.0	P= 0.9	0.0	P= 0.2
Residence:				
Rural	60.0	Z= 0.257	90.0	Z= 1.755
Urban	60.0	P= 0.8	70.0	P= 0.08
Education:				
Less than university	50.0	Z= 2.055*	75.0	Z= 0.330
University & more	70.0	P= 0.04	90.0	P= 0.7
Occupation:				
House wives	55.0	Z= 1.766	75.0	Z= 1.420
Workers	77.50	P= 0.08	90.0	P= 0.2
- Obstetric profile:				
Current antenatal parameters:				
Place of antenatal care:				
- Governmental				
- Private	55.0	X ² = 0.097	82.50	X ² = 0.265
- PHC	50.0	P= 0.95	80.0	P= 0.9
	62.50		82.50	
Current natal parameters:				
- Duration of 2 nd stage in minutes:				
r		-0.294*		-0.055
P-value		0.04		0.7
- Crowning in minutes:				
r		-0.172		0.109
P-value		0.2		0.5

- Qualitative variables are analyzed in relation to the median 2nd pain scale
- Quantitative variables are analyzed by their correlation with the 2nd pain scale

r = correlation coefficient, *Z* = Mann Whitney Test

Table (VI) Relationship between general characteristics of experimental and control groups & requirement for pain relief:

	Experimental	Test	Control	Test
<u>1- Socio-demographic characters:</u>				
Age in years:				
20-	2.0	Z=0.338	3.0	Z=1.195
30-35	2.0	P= 0.7	0.0	P= 0.2
Residence:				
Rural	2.0	Z= 1.337	3.0	Z=1.526
Urban	3.0	P= 0.2	4.0	P= 0.13
Education:				
Less than university	2.0	Z= 2.261*	3.0	Z= 0.817
University & more	3.0	P= 0.02	3.0	P= 0.4
Occupation:				
House wives	2.0	Z= 0.414	3.0	Z= 0.196
Workers	2.50	P= 0.7	3.0	P= 0.8
<u>2- Obstetric profile:</u>				
Current antenatal parameters:				
Place of antenatal care:				
Governmental	2.0	Z=1.204	2.0	Z=1.401
Private	3.0	P= 0.3	3.0	P= 0.2
Current natal parameters:				
Duration of 2nd stage in minutes:				
r	0.108		0.001	
P-value	0.5		0.997	
Crowning in minutes:				
r	-0.080		-0.019	
P-value	0.6		0.9	

- *Qualitative variables are analyzed in relation to the median 2nd pain scale*
- *Quantitative variables are analyzed by their correlation with the 2nd pain scale*
- *r = correlation coefficient*
- *Z= Mann Whitney Test*

DISCUSSION

Studies that examined the degree of pain experienced in the different stages of labor, show that the most severe pain is experienced in the second stage of labor. Being able to soothe the 'ring of fire' using perineal warm packs is highly acceptable to women as well as it is considered as a positive option for birth experience. ^[10]

In the current study, the follow up measurements of pain scale in each studied groups separately portrayed that, the pain scores among the women in the warm perineal packs group continued to decline significantly for the three pain scale measurements (the 1st median pain scale, the 2nd median pain scale and the 3rd median pain scale) (P= 0.02, 0.001 & 0.001 respectively) compared with pain scale measurements among women in the control group, this finding explains the fact that applying warm packs on the perineum affects significantly on perception of perineal pain especially at 2nd & 3rd pain scale measurement while no difference was apparent in the control group **table (3)**. This may occurred because the possibility that the warm packs somehow altered connective tissue in a superficial level leading to fewer small splits and grazes, all of which may contribute to overall decreased levels of pain, it is also possible that the presence of warm packs on the perineum made midwives touch the perineum less and this lead to less bruises.

This finding was in line with **Dahlen** ^[1] who reported that women in the warm packs group were less likely to describe the pain of giving birth as 'bad pain' or 'the worst pain in my life' compared to women in the standard care group who received routine hospital care without application of the warm perineal packs. A significant reduction in pain reported at birth and at day one.

Researchers have argued that whilst thousands of studies have addressed the issue of analgesia provided to women in labor much of this work has overlooked the pain associated with the actual birth. Warm packs were able to significantly reduce the number of women who reported the pain of giving birth as severe. ^[1] As already discussed, strategies to help alleviate some of the intense sensations of the second stage are needed and perineal warm packs can contribute significantly to this. ^[2] On the basis of these findings, **Sanders et al** ^[2] found that warm packs were highly acceptable to both women and midwives as a mean to relieve pain during the late second stage of labor.

In spite of apparent significant difference regarding socio-demographic characteristics of the studied subjects in terms of educational level, occupation, place of residency and adequacy of monthly income ($P=0.028$, $P=0.017$ $P=0.041$ & $P=0.014$ respectively) **table (1)**. The correlation between the socio-demographic characteristics of the studied subjects & 2nd pain scale showed no significant difference was observed. **Table (5)**. This finding reflects that the significant difference regarding socio-demographic characteristics of the studied subjects had no effect on the perception of pain among women in the experimental group so low pain score was related to intervention with applying warm packs. However, as regards educational level, the present study showed that there was significant difference among highly educated women in the warm packs group (university & more) in respect to the level of pain score ($p= 0.04$), women who had higher level of education had moderate median pain score (70%) compared to mild median pain score (50%) among those who had less than university level while no significant difference was observed among the control group. This finding may reflect the cultural behavior among low educated women and feeling shamed to express their feeling. This finding was supported with **Lawrence et al** ^[11] who observed a statistical significant relation regarding higher educational level in relation to the perception of

perineal pain ($p < 0.001$). Furthermore, **Macarthur et al** ^[12] found that 36% of 96 women with episiotomy described their pain as distressing or worse after 24 hours postpartum.

In addition, the current study revealed that all studied subjects among both groups received adequate number of antenatal visits started at first trimester of pregnancy and in spite of a significant difference was observed regarding the place of receiving antenatal care, the relationship between pain score and antenatal parameters of both groups show no significant difference. However, as regards the natal parameters and pain score, a statistically significant negative mild correlation was observed between the 2nd pain scale and the duration of second stage of labor among the experimental group. While no significant difference was observed among the control group **Table (2)**. This finding may reflect the benefit of applying warm packs on the duration of 2nd stage of labor.

Furthermore, the median duration of crowning was significantly lower for experimental group compared to their counter parts (3 compared to 2) $P = < 0.001$. However, it was noticed that the women in the warm packs group had a statistically significant negative mild correlation was observed between the 2nd pain scale and the duration of second stage compared to the women in the control group ($p = 0.04$). This finding may add another benefit of applying warm packs on the perineum regarding shorting of crowning duration.

This finding was disagreed by **Lawrence et al** ^[11], who found that the length of the active part of the second stage labor had a positive relationship with the level of pain in women with minor or no trauma. In women with major trauma, the length of active second stage labor had no independent effect on the

level of pain at discharge beyond its effect on the incidence of major trauma. Moreover, **Andrews et al** ^[13] demonstrated that the majority of women experience perineal pain on the first day postpartum regardless of whether a perineal tear had occurred or not.

Lucila ^[14] reported that the treatment of pain can bring improvements due to the specific effects of the treatment; natural improvement over time; and side effects of treatment such as medical attention, invested interest and concern, or patient and doctor expectations regarding treatment.

Our finding indicates a greater than fourfold risk of pain relief requiring for more than three times frequency attributable to not using warm perineal packs which concluded that about four deliveries needed to be treated with warm perineal packs to decrease the requirement of pain relief agents. **table (IV)** In this respect **Hobbs** ^[15] emphasized that the perineal warm packs are used in the belief that they reduce perineal trauma but equally importantly that they increase comfort during the second stage which in turn reducing the requirement for pain relief after birth.

In this study, it was found that there was no significant relationship between the socio-demographic characteristics of both groups and the requirement for pain relief regards to the age, place of residency and occupation. **Table (6)** This finding may add another benefit from applying warm packs on the perineum as the requesting for pain relief reduced significantly among the experimental group compared with control group and the significant differences observed only among highly educated women of the experimental group may be attributed to that those women can express their feeling of pain in exaggerated manner and frequently requesting pain relief as 50 % of them came from urban area compared to only 30% among the control group.

CONCLUSION:

Based on the findings of the present study, it was concluded that:

The application of warm perineal packs had potential benefits on decreasing the level of perineal pain immediately after birth and on day one following birth as well as decreasing the frequency of requiring pain relief also it add another benefit of shortening the duration of second stage of labor and crowning.

RECOMMENDATIONS RELATED TO FURTHER STUDIES:

In the light of the study findings, the following recommendations can be suggested:

1. More researches are required into whether multiparous women would receive the same benefits in terms of improved comfort and requiring of less pain relief during and following birth that the primiparous women reported in this study.
2. Further studies should be done in a multicenter with a large number of parturient to produce generalization of these study findings.
3. Further studies needed to assess the effect of applying warm packs on perineal integrity among primiparous women.
4. Any practice that reduces pain and improves comfort during the second stage of labour should be encouraged and made widely available, especially when it is so accessible and involves minimal financial cost.

Recommendations related to education and training:

1. A simplified guideline for maternity nurses should be designed and made available in Arabic and English which contains information about the proper use of warm perineal packs and its advantages.

2. Obstetrics and gynecologic nursing curriculum must entailed portion about uses and importance of applying warm packs on the perineum during the second stage of labor.
3. In services training program, seminars and conferences should be periodically monitored to maternity nurses to upgrade their knowledge and skills about uses and importance of using warm packs on the perineum during second stage of labor to help them perform their educational role effectively.
4. Attitude of birth attendants and parturient towards the application of warm perineal packs during second stage of labor must be examined before suggesting any change.

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أثر وضع الكمادات الدافئة على منطقة العجان أثناء المرحلة الثانية من الولادة على

الآلام العجانية لدى السيدات البكرات

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المقدمة: تعتبر الآلام العجانية أثناء المرحلة الثانية من الولادة تجربة تؤثر على مدى رؤية السيدات للولادة وتزيد شدتها إذا ارتبطت بوجود رضوض عجانیه. لذا تستخدم الكمادات العجانية الدافئة بشكل واسع وتوصى بها القابلات للاعتقاد بأنها تقلل من الآلام وتزيد من راحة السيدات أثناء الولادة بدون اللجوء إلى العقاقير الضارة التي تخفف الألم.

التصميم: تعد هذه الدراسة واحدة من البحوث التجريبية

الهدف من الدراسة: تهدف هذه الدراسة التجريبية الضابطة لاستكشاف أثر وضع الكمادات الدافئة على العجان أثناء المرحلة الثانية من الولادة على الآلام العجانية لدى السيدات البكرات.

مكان إجراء البحث: أجريت هذه الدراسة في قسم الولادة بمستشفى القطيف المركزي بمرکز القطيف بالمنطقة الشرقية - المملكة العربية السعودية.

طرق البحث: وتتكون عينه البحث من الحوامل البكرات (100 سيدة) بعد الحصول على موافقتهن. وقسمت العينة بالتساوي وبشكل عشوائي إلى مجموعتين متجانستين، المجموعة التجريبية استخدمت الكمادات الدافئة على العجان أثناء المرحلة الثانية من الولادة بينما مجموعة التحكم تلقت الرعاية الاعتيادية بدون وضع الكمادات الدافئة. تم استخدام أداتين لجمع البيانات الخاصة بهذه الدراسة أولاً استمارة استبيان لجمع البيانات الخاصة بالألم ثانياً المقياس المتناظر للتعب.

نتائج الدراسة: وقد أوضحت نتائج هذه الدراسة أن درجة الألم قد استمر في التناقص بدلالة إحصائية

(P= < 0.001) (P1& P2, P1&P3 P2&P3) لدى سيدات المجموعة التجريبية بينما لم تظهر

نتائج المجموعة القابضة فروق ذات دلالة إحصائية بالنسبة لدرجة الألم (P1&P2= 1.00,

P1&P3= 0.3 & P2&P3= 0.3) كما أظهرت الدراسة احتياج سيدات المجموعة التجريبية بنسبة

قليلة لمسكن الألم بالمقارنة بمثيلاتها من المجموعة القابضة.

الخلاصة: وقد استخلصت الدراسة أن وضع الكمادات له منافع عدة، وهي نقص مستوى الألم العجاني

فوراً بعد الولادة وفي يوم ولادة تالية بالإضافة إلى نقص تردد طلب خافض الألم.