

---

## EFFECT OF LISTENING TO HOLY QUR'AN VERSES ON LABOR PROGRESS, MATERNAL AND NEONATAL OUTCOMES

Safaa Soliman Ahmed Mohamed <sup>1</sup>, Momen Zakaria Mohamed Mohamed <sup>2</sup>

Sanaa Mahmoud Ahmed<sup>3</sup>, Hanan Fawzy Elsayed Ali <sup>4</sup>

*Assistant Professor of Maternal and Newborn Health Nursing Beni-sueif University, Egypt<sup>1</sup>*

*Lecturer of Obstetrics & Gynecology, Faculty of Medicine Beni-sueif University, Egypt <sup>2</sup>*

*Assistant professor Pediatric Nursing, Minia University, Egypt. <sup>3</sup>*

*Assistant professor Maternal and Newborn Health Nursing Helwan University, Egypt<sup>4</sup>*

---

### ABSTRACT

**Background:** Non-pharmacological interventions can affect maternal and neonatal outcomes in a positive way. Aim: To evaluate the effect of listening of holy Qur'an verses on labor progress, maternal and neonatal outcome. Subjects and method: Design: This quasi-experimental study was utilized. Setting: study was conducted in maternity Unit in Beni-suef university Hospital and Helwan General Hospital, Subjects: A purposive sample of 200 full term parturient Muslim women was classified into two groups, the study (n=100) and the control (n=100). Participants in the study group were listened to Quran recitation by a hand free-earphone through a women's phone while those in the control group used hospital routine care. Tools: Socio-demographic and obstetric data, Labor progress and outcome assessment, Visual analog pain severity scale, visual analog scale for anxiety and the Pain Coping Scale Apgar Score were used as research tools to assess newborn need for resuscitation. Results: study revealed that the mean age of both groups (Quran and control) were  $29.22 \pm 4.1$  and  $28.68 \pm 6.2$  respectively and duration of first stage of labor, mean score of anxiety was statistically significant difference  $p=0.004$ , meanwhile mean pain coping score, were significantly higher  $p=0.001$  in Quran group. Conclusion: Listening Quran had positive effects on progress of labor and maternal neonatal outcomes. Recommendations: Encourage women to listen to Quran during labor phases as one of the significant modalities to improve labor progress, manage pain, anxiety and attain more satisfactory birthing experience and neonatal outcome.

**Keywords:** *Holy Qur'an, Labor Progress, Maternal and Neonatal outcomes.*

## INTRODUCTION

Constructive maternal and neonatal outcomes are main goal of community health and midwifery practices all over the world. Vaginal delivery is a physiological process that is intended than cesarean section (Nasr, Omar, & Hegazy, 2021). Labor pain and anxiety; disrupt the autonomic maternal functions and cause catecholamine to be released which leads to premature labor and fetal distress. Pain management is one of the vital goal to meet human physiological needs (Adams et al, 2015).

Women's anxiety rises with the onset of delivery, this has a detrimental result on both mother and the newborn (Zijlmans et al., 2017). The occurrence of anxiety among pregnant women is higher compared to general population (27% vs. 5%) and levels of complications in anxious women were significantly higher (Lin et al., 2019; El-Sayed, Saadoon O,&Saadoon M., 2020). Health officials have paying attention on promoting both painless and less painful natural child birth methods (Eskandari et al,2012).

The pharmacological treatment methods of pain relief can affect both mother and fetus, as well as labor. The alternative modalities became common to resolution these obstacles of pharmacological pain relief treatments, labor pain management should be simple or easy reliable, and should keep fetal hemostasis. (Farih et al., 2017).Acupuncture and hypnosis to be useful for the management of pain during labor (Smith et al., 2011).

Also non pharmacological interventions such as aroma therapy, massage therapy, relaxation techniques, yoga, spiritual therapies and music therapy have been implemented to reduce anxiety (Mat-Nor et al, 2019).Relaxation techniques like massage, yoga and breathing exercises can reduce stress and anxiety during labor (Miquelutti et al., 2013).

Listening to Quran recitation is quick, convenient, suitable, non-invasive, rational, does not interfere with the care of routine patients during work, no additional fees to patients particularly in low-and middle-income countries compared to pain relievers. Numerous researchers have found that the sound of Quran could be an innocuous and effective intervention in psychological and physiological characteristics (YektaKooshali, Moladoust, &Pourrajabi, 2019).

The harmonious song of the Holy Quran and its pleasurable sound is a pleasant mystical music. As a general rule of thumb, the most wonderful, miraculous dimension of the Quran is its harmony with agreeable melodies and great songs (Bayrami& Ebrahimi Pour, 2014),that

results in the secretion of endorphins by motivating the brain and activating alpha waves. It thus reduces the anxiety level, reduces the negative emotions, creates a sense of calm and strengthens the immune system (Nasr, Omar, & Hegazy, 2021).

Listening Qur'an recitation gives Muslims relaxation, concentration, and calm. The researchers will try to test the significance of using inexpensive non-invasive procedures that did not have any complications during research in managing pain and anxiety among women of Egyptian Muslims. It is also a way of civilizing midwife's pain release strategies (Abbas et al., 2016).

Nurses, who are vital members of a health care team, must recognize a patient's comfort-related requirements, implement plans for ensuring his or her physical well-being, and apply and evaluate the nursing practices designed to fulfill the patient's needs. These are only some of the basic roles of nurses in adopting a holistic approach to treating an individual. Nurses remain in constant and consistent contact with laboring women and therefore play a crucial role in understanding meaning and consequences of pain during labor. In labor, both non-pharmacological and pharmacological methods can be useful for pain control. (Bilgiç and Acaroğlu, 2017).

### **Significance of the study**

Childbirth is essential happening for human nature, has a huge impact on women's and family lives. Force of pain during labor leads to anxiety and fear, which leads to increased hormone levels including epinephrine in the blood. These will more exacerbate the discomfort, and possibly prolong the first and second phases of labor. (El Zanty., 2014; Nasr, Omar, & Hegazy, 2021) clarified Demographic and Health Surveys 2008, estimated that 27% of labor in Egypt was cesarean sections (CS), the number of CS has nearly doubled. Holy Qur'an listening recitation, non-invasive and non-pharmacological method for alleviating pain and anxiety. A small number of studies have been carried out on this issue, so this study was carried out to explore the effect of Quran on maternal and neonatal outcome.

### **AIM OF STUDY**

The aim of this study is to evaluate effectiveness of listening of holy Qur'an verses on labor progress, maternal as well as neonatal outcomes in the form of Apgar score & admission to neonatal intensive care, through:

1: Compare labor progress, pain intensity, anxiety, coping of pain, post-partum complications and satisfaction level of studied women of the study group & the control group

2: Compare of neonatal outcome in the form of Apgar score at one and five minute & neonatal complications of the study group& the control group.

## **HYPOTHESES**

The current study hypothesized that;

- Listening to Quran exhibits reduction in pain intensity, anxiety level during the labor among laboring women
- Listening to Quran recitation will improve maternal & neonatal outcomes

## **SUBJECTS AND METHOD**

### **Design:**

The present study is used a two quasi-experimental study, which comprised a study group (women were listened to Quran recitation by a hand free - earphone) and a control group (women did not listen to Quran).

### **Setting:**

The present study was conducted in maternity Unit in Beni – suef university Hospital, Beni – suef governorate and Helwan General Hospital.

### **Subjects:**

A purposive sample of 200 parturient Muslim women were invited to participate in the current study and to complete a written questionnaire and divided randomly into (100 parturient women study group& 100 parturient women control group).

### **Groups' Allocation:**

Using a closed envelope containing Quran Group or non-Quran Group cards, two hundred Muslim primiparous women who underwent normal delivery were randomly assigned to two different groups of one hundred. Laboring women in relation to intervention group were listened to the Holy Quran and received daily hospital care. The women laboring in the control group received only routine hospital care

### **Inclusion criteria included:**

1. Muslims women
2. Normal vaginal delivery
3. Laboring women being in first stage of labor ( active phase)
4. Cephalic presentation.

**Exclusion criteria included:**

1. Pregnant women being high risk pregnancy,
2. Having hearing impairment.
3. Using analgesia or antipsychotic medications.

**Tools of data Collection:**

**Sex tools were used in collecting the data needed for the present research.**

**Tool 1.A Structured Interview Questionnaire:** This was developed by the researchers after reviewing relevant literatures and before the beginning of the program at the first stage of labor, the participants answered a questionnaire about the demographic data and obstetric data such as (age, education level, occupation, residence, obstetrics history as; gestational age, parity, gravid, history of abortion and still birth).

**Tool II. Labor assessment sheet (partograph):** This consistent tool was adapted from (WHO 1994), through which the researchers used to measure labor development; labor increase, and labor duration.

**Tool III. Visual analog pain severity scale (VAS).** This is a standardized linear scale developed by McCaffery and Pasero (1999) which adopted and used to determine the pain force.

**Scoring system**

VAS is horizontal line from 0 to 10 cm and used as subjective measurement of pain intensity. All pregnant women at the study and the control groups were instructed to marked pain level at vigorous phase of labor, using the visual analog scale (VAS) which was scored as follow, (0-3) reflects mild pain,(4-6) shows moderate pain,(7-10) severe pain.

**Tool IV Visual analog scale for anxiety (VASA):** Used to appraise the level of anxiety that laboring women experience,

**Scoring system**

VASA was scored as subsequent (0) no anxiety, (1-3) reflects mild anxiety, (4-6) moderate anxiety,(7-10)severe anxiety.(Aitken, 1969).

**Tool V: The Pain Coping Scale:** This measure was formed to evaluate the ability of laboring women to cope labor pain

**Scoring system**

The Pain Coping Scale is a scale from 5-10 (cooped more easily) to 0-4(not completely cooped), where the researcher measures the behavior of the laboring woman by being able to calm and relax between the contractions or during the contraction of this score adapted from **(Wong and Whaley 1986)**. After labor the researchers asked studied groups about their opinion regard labor experience.

**Tool VI: Apgar score.** It was adopted from **(Apgar, 1953 & Casey et. al., 2001)**. It is used to assess the condition of newborns,

**Scoring system**

Apgar score is a 10-point assessment score typically recorded at 1 and 5 minutes after birth and consists of five items: Heart rate, respiratory effort, muscle tone, reflex irritability and color; each of which has a score of 0, 1, or 2. Total score= 10, normal = 7-10, mild asphyxia = 4-6, severe asphyxia = 0-3. Also question related to requirement of the neonate to be admitted to the intensive care unit, answered by (a) Yes = (1) and (b) No = (0).

**Validity of the tool:**

Content validity of the tools: The researchers guaranteed validity of the tools content by viewing them to 3 experts in Obstetric and Gynecological nursing and pediatric nursing. They didn't require any modifications to any of the items

**Reliability of the tool:**

Reliability of the tools: `aqa Reliability coefficient; of the tools was assessed by Cronbach's alpha test in SPSSV.20. They illustrate good level of reliability as follow: Visual analog pain severity scale ( $\alpha= 0.81$ ), visual analog scale for anxiety ( $\alpha=0.94$ ), The Pain Coping Scale ( $\alpha=0.93$ ), and indicate very high reliability.

**A pilot study:**

A pilot study was conducted on 10 % (20 laboring women) of total sample to assess feasibility, shape and applicability of tools. As well a suggest the needed time for data collection. These women were excluded from the main study sample.

**Field work:**

To attain the study aim, the researchers used a number of phases: interview, assessment, implementation, and evaluation. These phases were implemented from the beginning of March

2021 to the end of July 2021 for about four months. The researchers visited the designated hospital three days/week.

**Preparatory phase:**

- Official permission was obtained from the director of Beni – suef university Hospital, and Helwan General Hospital.
- During this phase the researchers started the interviews by welcoming the studying women, and then explained the study aim and gain an oral consent for participation.

**Assessment phase:**

- During this phase, the researchers interviewed the participant's women to collect the socio-demographic data and obstetric data by using tool I.
- Vital parameters; blood pressure, heart rate & respiratory rate were recorded

**Implementation phase:**

Each labored woman was met individually after screened for the inclusion criteria then designated to either study or control group:

1. **The intervention group:** enrolled laboring women were listened to Quran recitation by a hand free – earphone through a women's phone and give pregnant women chance to select El surah as she like by (sheikh Abdulrahman Alsudais) , during the first stage of labor, the Quran recited by sheikh Abdulrahman Alsudais was played twice and fixed sheikh Abdulrahman Alsudais in all phases of labor ; first time during 4-6 dilatation and second time during 7-10 dilatation, each time for 30 minutes, using a hand free - earphone. Laboring woman was requested to close her eyes while listening to decrease any visual interference. The researcher was present in the room to reduce the environmental interfering factors.
2. **The control group:** in which all the above mentioned actions were also performed for the control group, except playing the Quran sound as all women did not listen to Quran.

**Evaluation phase:**

The researchers follow and evaluated the labor progress (cervical dilation, descent of head, duration of first, second stage of labor and mode of delivery) of women in both groups every 1/2 hour by using the part graph (tool II). All labored women were instructed to marked labor pain level, using the visual analog scale (VAS) which was scored as (0 = no pain & 10 = worst pain imaginable), (Burckhardt & Jones, 2003). Moreover; the anxiety level was assessed through visual analog scale for anxiety (VASA) during the first stage of labor. Regarding the

scoring system, (VASA) is consisting of a 10 cm horizontal line (with 0 = no anxiety & 10 = worst possible anxiety) (Aitken, 1969). As well as Neonatal Apgar score at 1, 5 minutes & any transfer to neonatal intensive care unit (NICU) were also determined. Lastly at the fourth stage of labor the researchers used (tool V) to appraise participant pain coping and opinion or attitude.

### **Ethical consideration**

This study was approved by ethics committee that affiliated to the Faculty of Nursing, Beni-Suef University and Helwan General Hospital. In addition; permissions were obtained from the authorities, of the Beni- Suef University hospital and Helwan General Hospital directorate to obtain approval for conducting the study at obstetric department. In addition, permissions were obtained from the authorities, of the healthcare under study. The researchers explained the aims and nature of the study, to the studied groups. In addition, they were informed about, participation and chance of study withdrawal at any time, they were also ensured of the confidentiality of the personal information. Furthermore, oral informed consent was obtained from each participant.

### **Statistical analysis**

All data were collected, tabulated and statistically analyzed using SPSS 20.0 for windows (SPSS Inc., Chicago, IL, and USA 2011). Quantitative data were expressed as the mean  $\pm$ SD& median (range), and qualitative data were expressed as absolute frequencies (number) & relative frequencies (percentage).Independent samples Student's-test was used to compare between two groups of normally distributed variables. While In dependent samples Mann–Whitneyu -test was used to compare between two groups of not normally distributed variables .Percent of categorical variables were compared using Chi-square test or Fisher's exact test when appropriate. All tests were two sided. P-value<0.05was considered statistically significant(S), and p-value  $\geq$ 0.05 was considered statistically insignificant (NS).

## **RESULTS:**

**Table (1):** displayed that there is no statistical significant difference between both groups regarding socio-demographic characteristics  $p>0.05$ , the mean  $\pm$ SD of age per years of participants in both groups were (29.22 $\pm$ 4.1 intervention group vs.28.68 $\pm$ 6.2 control group). Nearly more than one third(34%)of intervention group were had basic education vs. (30%) secondary education of those in the in control group, majority of the studied participants in both groups were house wives(78% in intervention group vs.80% in control group), also more



than half of participants in the intervention group were living in rural areas vs. 68% living in urban areas in the control group). According to life style listening to Quran question nearly half of participants in studied group were listened to Quran once a day vs 52% listened to Quran question nearly half of participants in studied group were listened to Quran once a day vs 52% listened to Quran few times a week with statistical significance differences  $p= 0.006$ .

**Table (2):** Revealed that there is no statistical significant difference between intervention group and the control group regarding obstetric history  $p>0.05$  including mean of gestational age, number of gravity and number of parity. The majority of participants in both groups were had no history of abortion and still birth (85 % vs 90% in both groups, and 96 vs. 92%) respectively but with no statistical significant difference  $p>0.05$ .

As regards present labor characteristics among participants in both groups **table 3.** cleared up that despite the mean duration of labor in second and third stage were shorter in intervention group than control group but not reach to statistical difference. But their duration of first stage of labor was significantly shorter among studied sample in intervention group.

**Table (4):** Confirmed that there was no statistical significant difference  $p>0.05$  regarding mean amount of estimated blood loss at delivery between participants in both groups ( $542\pm 212$  in intervention group vs.  $529\pm 257$  in the control group). Majority of participant's women in both groups were had no postpartum complications (90% in intervention group & 92% in control group) the difference statistically in significant  $p>0.05$ . The percent of complications in intervention group were 1(2%) had pyrexia, 4(4%) with third degree perineal tear, retained placenta. While in the control group 2 (2%) had ruptured uterus, 2 (2%) retained placenta, 2 (2%) need to admit to ICU.

**Table (5):** Showed that there is no statistical significance difference between both groups regarding neonatal outcome  $p>0.05$ . All over babies delivered in both groups were living. 100%. Mean birth weight were somewhat higher in the intervention group than the control group ( $2976\pm 438.8$  vs.  $2912\pm 410.2$ ) the difference statistically in significance  $p>0.05$ , also the mean scores of Apgar score at 1 minute was slightly higher in intervention group than control group ( $8\pm 2$  vs.  $7.96\pm 1.3$ ). As well as at 5 minutes ( $9\pm 2.4$  vs.  $9.42\pm 0.76$ ). Moreover, percentage of newborn complications in intervention group were slightly lesser than reported newborn complications in control group (32% vs. 40%). with statistically insignificant difference  $p>0.05$ .

Regarding; Mean score of anxiety, it was minor among participant in intervention group

than those in the control group ( $3.44 \pm 1.6$  vs.  $4.26 \pm 1.42$ ) with statistically significant difference  $p=0.004$ . Meanwhile mean pain coping score were superior among intervention group than the control group ( $6.24 \pm 1.52$  vs.  $4.77 \pm 1.65$ ) the difference statistically significant  $p=0.0001$ . Mean score of visual analogue scale for pain was slightly smaller in intervention group  $2.32 \pm 0.85$  compared to  $2.68 \pm 1.07$  in the control group. There was statistical insignificant difference  $p>0.05$  as reported in **table 6**.

**Figure (1):** showed that there was statistical significant difference between both groups regarding participant's opinion.

**Table (1):** Socio-demographic characteristics among women in both groups.

Parameters	Studied groups		Control group		$\chi^2$	p-value
	Group N=(100)		N=(100)			
<b>Age</b>						
Mean $\pm$ SD	29.22 $\pm$ 4.1		28.68 $\pm$ 6.2		t=0.31	0.74
Range	18-40		27(19-40)			
<b>Education</b>						
Can't read and write	18	18.0	14	14.0		
Basic education	34	34	28	28	1.03	0.79
Secondary	26	26.0	30	30.0		
University	22	22.0	28	28.0		
<b>Occupation</b>						
Employer	22	22.0	20	20.0	0.07	0.81
Housewives	78	78.0	80	80.0		
<b>Residence</b>						
Rural	48	48.0	32	32.0	2.2	0.1
Urban	52	52.0	68	68.0		
<b>Listening to Quran</b>						
Once a day	52	52.0	24	24.0		
Few times a week	42	42.0	50	50.0	12.47	0.006
Once a week	4	4.0	8	8.0		(S)
Less than once a week (occasionally)	2	2.0	18	18.0		

$\chi^2$  Chisquare test (t)= student t test S=significant  $p<0.05$ .

**Table (2) : Obstetrics history among women in both groups.**

	Studied groups				Test of sig.	p-value
	Intervention group		Control group N=(100)			
	N=(100)					
<b>Gestation age/ week</b>					t=1.64u-0.78	
Mean± SD	38.58±1.22		37.97±2.7		u-1.54	0.105
Median(Range)	39(34-40)		38.5(25-40)			
<b>No .of Gravity</b>					$\chi^2$	
Mean± SD	2.20±1.3		2.27±1.26			0.42
Median(Range)	2(1-6)		2(1-7)			
<b>No. of Parity</b>						
Mean± SD	1.2±1.6		1.61±1.25			0.12
Range	0-6		0-5			
	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>		<b>P</b>
<b>History of abortion</b>						
No	85	85.0	90	90.0	0	1
Yes	15	15.0		10.0		
<b>Stillbirth</b>			92			
No	96	96.0	8	92.0	F	0.67
Yes	4	4.0		8.0		

**Table (3):** Comparison of labor outcome among both groups.

Parameters	Studied groups				Test of sig.	p-value
	Intervention Group N=(100)		Control group N=(100)			
<b>Duration of first stage per hour</b>						
mean± SD	8.16±4.8		12.52±8.3		u-2.37	0.017(S)
Median(Range)	9(0-18)		11(3-51)			
<b>Duration of second stage/minute</b>						
mean± SD	30.2±12.2		41.22±41.6		u-0.52	0.57
Median(Range)	30(10-90)		30(0-180)			
<b>Duration of third stage/minute</b>						
mean± SD	9.58±5.2		10.5 ±9.8		u-1.76	0.08
Median(Range)	10(3-20)		7.5(0-35)			
<b>Using of augmentation</b>	<b>no</b>	<b>%</b>	<b>no</b>	<b>%</b>	$\chi^2$	<b>P</b>
Yes	68	68.0	60	60.0	0.70	0.422
No	32	32.0	40	40.0		

**Table (4):** Comparison of post partum complications among participants in both groups.

Parameters					$\chi^2$	p-value
	Intervention group N=(100)		Control group N=(100)			
<b>Estimated blood loss</b>						
Mean± SD	542±212		529±257		U=0.46	0.64
Median(range)	500(150-1000)		500(150-1000)			
<b>Immediate post-partum complication</b>						
No	90	90.0	92	92.0	0.10	0.71
Yes	10	10.0	8	8.0		
<b>Types of complication</b>						
Ruptured uterus	0	0.0	2	2.0		
Post partum pyrexia	2	2.0	0	0.0		
3 <sup>rd</sup> degree perineal tears	4	4.0	0	0.0	6.1	0.27
Retained placenta	4	4.0	2	2.0		
Admission ICU	0	0.0	2	2.0		
Others	0	0.0	2	2.0		

U=Mann-Whitney U  $\chi^2$ =Chis quire test P<0.05 significant

**Table (5) :** Comparison of neonatal outcomes between both groups.

Test of sig. p-value						
Parameters	Intervention group		Control group			
	N=(100)		N=(100)			
	no	%	No	%		
<b>Baby condition</b>						
living	100	100	100	100	F	0.24
Dead	0	0.0	0	0.0		
<b>Birth weight/gram</b>						
Mean± SD	2976±438.8		2912±410.2		t=0.46	0.63
<b>Apgar score at one minute</b>						
Mean± SD	8±2		7.96±1.3		t=0.11	0.9
Median(Range)	8(0-10)		8(4-10)			
<b>Apgar score at five minute</b>						
Mean± SD	9±2.4		9.42±0.76		t=1.1	0.27
Median(Range)	10(9-10)		10(8-10)			
<b>New born Complication</b>	No	%	No	%	χ <sup>2</sup>	p-value
<b>(Admission to NICU)</b>						
No	68	68.0	60	60.0	0.68	0.402
Yes	32	32.0	40	40.0		

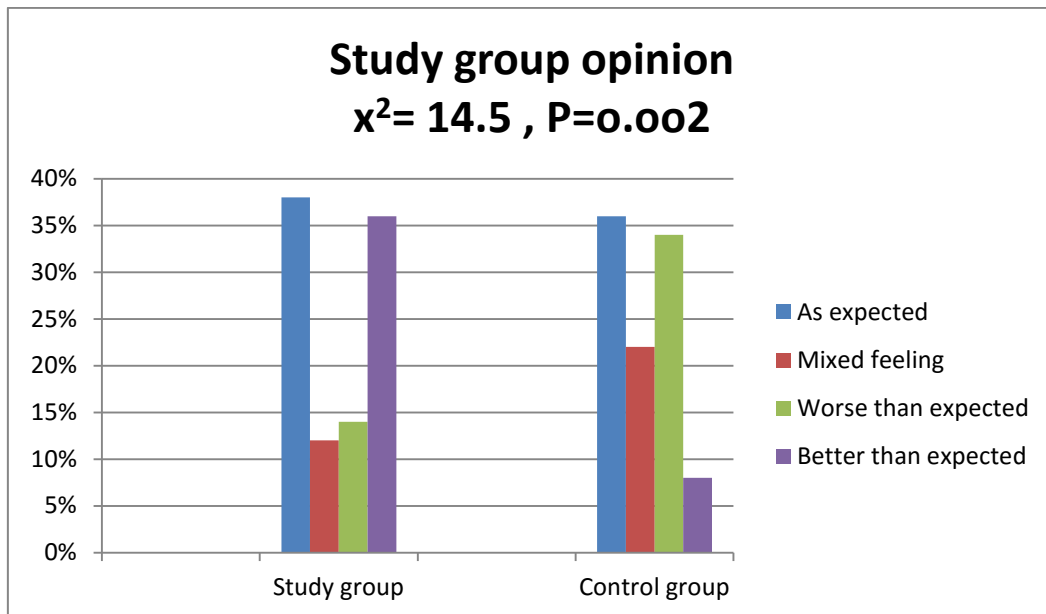
(t)=t test      χ<sup>2</sup>=Chi square test      f=Fisher Exact test      P<0.05significant

**Table (6):** Comparison of labor pain, anxiety score ,pain coping score and current labor experience among participants in the studied groups.

Parameters	Intervention		(U)	p-value
	Control group	N=(50)		
	Group N=(50) No.(%)	N=(50) No.(%)		
<b>Visual analog scale for anxiety no</b>	2(2)	2(2)		
Mild anxiety	42(42)	20(20)	2.9	0.004*
Moderate anxiety	56(56)	72(72)		
Severe anxiety	0	6(6)		
<b>Mean± SD</b>		4.26±1.42		
<b>Coping</b>	3.44±1.6			
Un able to cope	14(14)	58(58)	4.9	0.0001*
Able to cope	86(86)	42(42)		
<b>Mean± SD</b>	6.24±1.52	4.77±1.65		
<b>Visual analog scale for Pain</b>		32(32)		
Mild pain	48(48)	52(52)	1.5	0.13
Moderate pain	46(46)	16 (16)		
Severe pain	6(6)	2.68±1.07		
<b>Mean± SD</b>	2.32±0.85			

U=Mann-Whitney U

$\chi^2$ =Chi square test P<0.05 significant



**Figure (1):** Comparison of opinion among participants.

## DISCUSSION:

Labor produces state of pleasure and enjoyment for most women, but it's linked with marked by pain and stress. Furthermore, the invasive events or techniques used in labor and delivery intensify these traumatic and stressful events. So the role for midwives or nurse to promote the use of non-pharmacological pain relief for parturient mothers (Bayrami and Ebrahimipour, 2014; Abbas et al, 2016).

As regards labor staging duration; present study revealed that mean duration per hours of the first stage of labor was significantly shorter in the Quran group  $p=0.017$  ( $8.16 \pm 4.8$  vs.  $12.52 \pm 8.3$  in the control group), agreed with (Bayrami and Ebrahimipour, 2014), who reported that significant shorter duration of first stage of labor  $3.3 \pm 0.66$  in Quran group than.  $4.2 \pm 0.55$  in control group  $p=0.001$ . Moreover, (Nasr, Omar, & Hegazy, 2021) who found that mean duration per hours of the first stage of labor was significantly shorter in the Quran group  $p=0.019$  ( $8.22 \pm 5.8$  vs.  $12.44 \pm 8$  in the control group). Although mean duration of labor in the second and third stage were shorter in the Quran group than in the control group, the difference statistically in significant. This results supported by (ElSayed, Saadon O, & Saadon M., 2020) who stated that listening to Qur'an is non-pharmacological effective measure for reducing labor pain, anxiety level, hemodynamic parameters of mothers also affected positively on neonatal outcomes

Investigating the effect of listening to Quran on anxiety score among studied women; the present study defined that mean score of anxiety was somewhat less in Quran group than in control group ( $3.44 \pm 1.6$  vs.  $4.26 \pm 1.42$ ) but difference statistically insignificant. Similar to (Abbas et al., 2016; Hamidiyanti, and Pratiwi, 2019) who established that listening to Quran was effective in reducing anxiety in the interventional community. On the same line, various results showed that the sound of the Quran can significantly play a role in reducing the amount of anxiety, mental health, pain intensity, improvement of patients' health, signs and physiological function of different tissues of the body, immune system, and patients' levels of satisfaction (YektaKooshali, Moladoust, & Pourrajabi, 2019), (Abd-alrazaq et al., 2021) who confirmed that listening to the Quran has the potential to improve mental disorders and psychological wellbeing. Until high-quality studies approve its effect. This further support the researcher study hypothesis.

The current study estimated mean pain coping score was higher among Quran group than control group ( $6.24 \pm 1.52$  vs.  $4.77 \pm 1.65$ ) the difference statistically significant  $p = 0.0001$ . Also the current study determined that mean score of visual analog scale for pain was somewhat lesser in Quran group  $2.32 \pm 0.85$  compared to  $2.68 \pm 1.07$  in control group put with no statistical difference  $p > 0.05$ . Parallel to Desmawati & Chat cha wet (2019) showed that there were significant differences between the control and experimental group in the perception of labor pain  $p < 0.001$  and pain behavior  $p < 0.001$ . Also Bayrami and Ebrahimipour, (2014).

Confirmed that listening to the Quran sound minimize the intensity of pain in the first stage of labor in nulliparous mothers. (Nayak et al., 2014) also indicated that non-invasive methods of pain reduction, such as music, can be effective in relieving labor pain, especially in the first and third phases of nulliparous women. (Esmaeil et al., 2019) who investigated effect of Quranic verses on the intensity of labor pain. They reported frequency of pain was significantly different in the study group and women felt less pain during the 1<sup>st</sup>, 2<sup>nd</sup> & 3<sup>rd</sup> hours of active phase after listening Quran there were statistically significant differences in labor pain, anxiety and hemodynamic parameters for the Quran group than the Non Quran group.

Moreover, (Abbas et al., 2016) found that pain score was lower significantly among women listening to Quran during CS compared to control group either directly after surgery



or during recovery. From the researcher point of view this may be due to mothers' relaxation caused by Quran recitation this may be due to the Holy Quran' sharmonious sound being a form of spiritual music, which leads to endorphin production by influencing the brain and inducing alpha waves. It consequently improves the stress threshold, eliminates negative emotions, creates sense of relaxation and improves the immune system (Bayrami and Ebrahimipour,2014;Nasr,Omar,&Hegazy, 2021),who conducted their research to determine the impact of Quran sound on labor pain &other maternal & neonatal outcome and reports positive effects of Quran sound on neonatal outcomes.

The explanation of these findings may be due to the relaxation of them others activated by recitation from the Quran. Thus Quran likening can be used as a calming method as anew alternative therapy, which is even better than other audio treatments because the Quran can man u facture delta wave which gives comfort, reassure and causes relief pain. This audio therapy also constitutes a cheap treat (Mirghafourvand etal,2016).Additionally, this result due to the importance of Holy Quran in Muslims' lives(Ghiasi&Keramat , 2018).Moreover, regarding the neonatal outcomes in both groups, the present study discovered that the Mean Apgar score at (1 st& 5th minutes) after birth were higher among newborns whose mothers had listened to the Holy Quran. Furthermore, decreased number of neonates that were admitted to NICU in the Quran group compared to the Non- Quran group.

The previous result agreed with the study of (ElSayed, Saadoon O,&Saadoon M., 2020;Nasr,Omar,&Hegazy, 2021),reported higher Apgar score in the intervention to the control one. The researcher can be interpreted that as listening to Quran affects not only on adults but also on fetuses as Allah Almighty says, who listen to speech and follow the best of it. Those are the ones Allāh has guided, and those are people of understanding. In addition to the result of Abbas et al., (2016) who found that in the Quran community, the dose of post-operative analgesic use was also significantly lesser.

Anxiety score was significantly higher in the control group. in addition all Muslims believe in God, believes in the wards of Allah (Quran), it was also written in the Holy Quran to transport good psychological condition, stability, comfort and pain management; thus decrease the level of adrenaline and then reduce pulse rate, blood pressure and respiratory rate. In same line (Frih et al., 2017) showed that listening to a recitation of the Holy Qur'an in combination with inter dialytic endurance–resistance training induced an

improvement in physical condition and quality of life and a large reduction in anxiety among patients undergoing hemodialysis .This further support the study hypothesis .So that both maternal and neonatal out comes can be improved. Hearing pathways show counter-effects, activation of the auditory pathway can play an essential role in confronting

## **CONCLUSION**

Listening Quran as non pharmacological modalities during labor, especially in women who are much more familiar with the Quran had positive effects on both maternal and neonatal out comes.

## **RECOMMENDATIONS**

- Listening to the Holy Quran as non-pharmacological methods as a way to manage pain and anxiety, it can become a chief issue of complementary.
- Encourage women to listen to Quran during labor phases as one of the significant modalities to improve labor progress ,manage pain ,anxiety and attain more satisfactory birthing experience and neonatal out-come.
- Religious beliefs and healing practices must be integrated in undergraduate nursing curriculum.
- Further studies needed with larges ample and with another religious women

### **Conflicts of Interest Disclosure:**

-The authors declare that there are no Conflicts of Interest

### **Acknowledgment**

-Researchers provide sincere appreciation and profound gratitude to all Muslim women for participating in this research to complete this work. Also we acknowledge all persons who helped us in conduction of this study.

### **Funding Sources**

- No funding was received.

**REFERENCES:**

Abbas, A.M., El-Houfey, A.A., Abdelbadee, A. Y., Ali, M. K., Ali, S.S., Abdelrahman, R.M., and Tolba, S. M. (2016): Effects of listening to Qur'an on maternal & neonatal outcomes among mothers undergoing cesarean section. *International Journal of Nursing, Midwife and Health Related Cases*, 2(2), 39-50.

Abd-alrazaq A, Malkawi AA, Maabreh AH, Alam T, Bewick BM, Zaheya LA, Househ M., (2021). The effectiveness of listening to the Holy Quran to improve mental disorders and psychological wellbeing: Systematic review and meta-analysis. DOI: <https://doi.org/10.21203/rs.3.rs-44376/v1>.

Adams, J., Frawley, J., Steel, A., Broom, A., and Sibbritt, D. (2015): Use of pharmacological and non-pharmacological labour pain management techniques and their relationship to maternal and infant birth outcomes: examination of a nationally representative sample of 1835 pregnant women. *Midwifery*, 31(4), 458-463.

Aitken, R. C. B. (1969): Measurement of feelings using visual analogue scales. *Proc. R. Soc. Med.* 62, 989.

Apgar V. (1953): A Proposal for a New Method of Evaluation of the Newborn Infant. *Current Researches in Anesthesia & Analgesia*, 32, 260-267. <https://doi.org/10.1213/00000539-195301000-00041>

Bayrami R, Ebrahimi Pour H. (2014). Effect of the Quran sound on labor pain and other maternal and neonatal factors in nulliparous women. *Journal of research and Health*. 2014;4(4):898-902.

Bilgiç S and Acaroğlu R., (2017) Effects of Listening to Music on the Comfort of Chemotherapy Patients *Western Journal of Nursing Research* 2017, Vol. 39(6) 745–762 © The Author(s) 2016 Reprints and permissions: [sagepub.com/journalsPermissions.nav](http://sagepub.com/journalsPermissions.nav). DOI: 10.1177/0193945916660527.

Burckhardt, C.S., & Jones, K.D. (2003). Adult measures of pain: The McGill Pain Questionnaire (MPQ), Rheumatoid Arthritis Pain Scale (RAPS), Short-Form McGill Pain Questionnaire (SF-MPQ), Verbal Descriptive Scale (VDS), Visual Analog Scale (VAS),

and West Haven-Yale Multidisciplinary Pain Inventory (WHYMPI). *Arthritis Rheum*;49:S96–104.

Casey B., M., McIntire D., D. & Leveno K., J. (2001): The continuing value of the Apgar score for the assessment of newborn infants. *N Engl J Med* 344(7):467–471 3.

Desmawati, W. K., and Chatchawet, W.(2019): Effect of nursing intervention integrating an Islamic praying program on labor pain and pain behaviors in prime parous Muslim women. *Iranian journal of nursing and midwifery research*, 24(3),220.

El-Sayed H E M, Saadoon O M M,&Saadoon MMM., (2020).Effect of Listening to Holy Quran on Maternal and Neonatal Outcomes among Muslim Primi parous during the Active Phase of Labor. *International Journal of Novel Research in Healthcare and Nursing* Vol. 7, Issue 2, pp: (115-126), Month: May - August 2020, Available at: [www.noveltyjournals.com](http://www.noveltyjournals.com) Page | 115 Novelty Journals.

ElZanaty (2014): *Egypt Demographic and Health Survey Main Findings* Ministry of Health and Population Cairo, Egypt.

Eskandari,N.,Keshavars,M.,Ashayeri,H.,Jahdi,F.,&Hosseini,A. F. (2012): Quran Recitation: Short-Term Effects &Related Factors in Preterm Newborns. *ResJMed Sci*,6(3),148-153.

Esmail S., Ardestan N., &Karamkhani M. (2019). Investigating the visual-oral effect of Quran verses on the intensity of labor pain among prim-parous patients. *Journal of Research on Religion & Health*;5(1):112- 22.

Frih B, Mkacher W, Bouzguenda A, Jaafar H, ALkandari SA, Salah ZB, Sas B, Hammami M &Frih A., (2017). Effects of listening to Holy Qur'an recitation and physical training on dialysis efficacy, functional capacity, and psychosocial outcomes in elderly patients undergoing hemodialysis, *Libyan Journal of Medicine*, 12:1, 1372032, DOI:10.1080/19932820.2017.1372032.

Ghiasi A, Keramat A., (2018). The effect of listening to holy quran recitation on anxiety: A systematic review. *Iranian J Nursing Midwifery Res* 2018;23:411-20.

Hamidiyanti,B.Y,andPratiwi,I.G(2019):Effect of Listening to the Quran on Anxiety Level in Primipara .*Health, Spirituality and Medical Ethics*, 6(1),52-56.

Mat-Nor MB, Ibrahim NA, Ramly NF, Abdullah F., (2019). Physiological and Psychological Effects of Listening To Holy Quran Recitation in the Intensive Care Unit Patients: A Systematic Review. *International Medical Journal Malaysia*. 2019;18(1).

McCaffery M and Asero C (1999): *Numeric Pain Rating Scale & (VAS): Pain: Clinical Manual*, Mosby, St. Louis

Mirghafourvand M., Shafaie F., S., Mohammad-Alizadeh-Charandabi S., Jabbari B. (2016): Effect of Vocalization of the Holy Quran With and Without Translation on Pregnancy Outcomes: A Randomized Clinical Trial. *Iran Red Crescent Med J*. 2016 September; 18(9): e35421.

Miquelutti, M.A., Cecatti, J.G., Makuch, M.Y. (2013): Evaluation of a birth preparation program on lumbopelvic pain, urinary incontinence, anxiety and exercise: a randomized controlled trial. *BMC Pregnancy Childbirth*.; 13:154.

Nasr EG, Omar AM, & Hegazy SM., (2021). Effect of Listening to Holy Qur'an during labor on its Progress, Maternal and Neonatal outcome. *Egyptian Journal of Health Care*, 2021 EJH vol.12 no.1.

Nayak O., D., Rastogi S., Om Kumari Kathuria O., K. (2014). Effectiveness of music therapy on anxiety level, and pain perception in primipara mothers during first stage of labor in selected hospitals of IOSR *Journal of Nursing and Health Science* 3( 2) 07-14.

Smith, C.A., Collins, C.T., Crowther, C.A., Levett, K.M. (2011): Acupuncture or acupressure for pain management in labour. *Cochrane Database Syst Rev*.; (7): CD009232.

WHO (1994): *Preventing Prolonged labor: A practical guide (the Partograph Part 1: Principles and Strategies)*. Geneva: WHO. *women. Midwifery*, 31(4), 458-463.

Wong, D. and Whaley, L. (1986): *The Pain Intensity Scale: 0 to 10*. Adapted from "Wong-Baker Faces Pain Rating Scale" in *Clinical Handbook of Pediatric Nursing* (2nd ed., p. 373), St. Louis, MO: C.V. Mosby Company, for "Pain Medications for Labor & Birth"

Yekta Kooshali MH, Moladoust M, Pourrajabi A. (2019): The Effect of Sound of the Quran on Hygiene, Mental Health, and Physiological Functions: A Systematic Review. *Journal of Pizhūhishdardīnvasalāmat*.; 5(1):136-47.

<https://doi.org/10.22037/jrrh.v5i1.19289>.

Zijlmans M., A., C., Beijers R., Riksen-Walraven M., J., & De Weerth C., (2017). Maternal late pregnancy anxiety and stress is associated with children's health: A longitudinal study. *Stress* 20(5):49.

Kornelsen, J & Ramsey, M. (2014). Maternal and Newborn Outcomes in a Rural Midwifery-Led Maternity Service in British Columbia: A Retrospective Chart Review, *Canadian Journal of Midwifery Research and Practice*, 12(2):8-17.

El-Sayed H E., Saadoon O M M., and Saadoon M M M (2020):

*International Journal of Novel Research in Healthcare and Nursing* Vol. 7, Issue 2, pp: (115-126), Month: May - August, Available at: [www.noveltyjournals.com](http://www.noveltyjournals.com)

## تأثير سماع القرآن الكريم على تقدم عملية الولادة ونتائج الأم والمولود

صفاء سليمان احمد محمد<sup>1</sup>، مؤمن محمد زكريا<sup>2</sup>، سناء محمود احمد حسان<sup>3</sup>

حنان فوزى السيد<sup>4</sup>

استاذ مساعد تمريض صحة الام وحديثى الولادة.كلية تمريض .جامعة بنى سويف.مصر<sup>1</sup>

مدرس طب نساء والتوليد كلية طب جامعة بنى سويف .مصر<sup>2</sup>

استاذ مساعد تمريض الاطفال.كلية تمريض .جامعة المنيا.مصر<sup>3</sup>

استاذ مساعد تمريض صحة الام وحديثى الولادة.كلية تمريض .جامعة حلوان<sup>4</sup>

### الخلاصة

أثناء المخاض ، تعاني النساء من آلام شديدة ومؤلمة. القلق والألم مترابطان بشكل وثيق. يمكن أن تؤثر التدخلات غير الدوائية على نتائج الأمهات والمواليد بطريقة إيجابية. الهدف من هذه الدراسة هو تقييم فعالية الاستماع لآيات القرآن الكريم على تقدم عملية الولادة ونتائج الأم والوليد. الموضوعات والطرق: التصميم: أجريت هذه الدراسة شبه التجريبية في وحدة الولادة بمستشفى بني سويف الجامعي ومستشفى حلوان العام. (100) والتحكم (رقم 100). استمعت مجموعة الدراسة إلى تلاوة القرآن بواسطة سماعة أذن عبر هاتف. أدوات جمع البيانات: تم استخدام البيانات الاجتماعية والديموغرافية والتوليد ، وتقييم التقدم في الولادة والنتائج ، ومقياس شدة الألم البصري التناظري ، والمقياس التناظري البصري للقلق ، ومقياس التعامل مع الألم كأدوات بحث. النتائج: أوضحت الدراسة أن موضوع ومدة المرحلة الأولى من المخاض ، ومتوسط درجة القلق كان أقل بشكل ملحوظ ، في حين أن متوسط درجة التعامل مع الألم ، والولادة المهبلية التلقائية كانت أعلى بشكل ملحوظ في مجموعة القرآن. الخلاصة: الاستماع للقرآن كطريقة غير دوائية أثناء المخاض له آثار إيجابية على تقدم المخاض ونتائج الأمهات والاطفال حديثي الولادة. التوصيات: تشجيع النساء على الاستماع إلى القرآن أثناء مراحل المخاض كأحد الأساليب المهمة لتحسين تقدم المخاض وإدارة الألم والقلق والحصول على تجربة ولادة أكثر إرضاءً.

**الكلمات المرشدة:** القرآن الكريم ، الولادة ، نتائج المترتبة على الولادة فى الأمهات والمواليد