



EFFECTIVENESS OF VIRTUAL REALITY THERAPY ON STRESS AMONG POST LSCS PRIMI

Obstetrics & Gynaecology

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ABSTRACT

Background: Giving birth to a new life is the most Stressful experience as well as happiest moment in women's life. In recent days LSCS became very common due to various reasons including mothers wish as well as unwillingness to take risk by health care professionals. The women who underwent LSCS not only suffer from the physical symptoms caused by incision, they may have some psychological symptoms like stress and anxiety due to outcome, care of newborn, and about daily activity. Stress is a feeling of emotional or physical tension; the fact is that the experience of stress after giving birth of the baby is same in both normal as well as caesarean deliveries.

Objectives: To assess the effectiveness of Virtual Reality Therapy on Stress among post LSCS primi mothers.

Design: True experimental research design.

Settings: Selected Hospital, Chennai.

Participants: Sixty post LSCS primi mothers, fulfilling the inclusion criteria were selected by systematic random sampling technique.

Methods: The study was conducted with 60 post LSCS primi mothers. Out of which 30 mothers were in control group and 30 mothers were in experimental group. Pre and post test assessment was done by using tools such as Demographic variable proforma, obstetric variable proforma, Tennessee postpartum stress scale, Rating scale on Level of acceptability of virtual reality therapy.

Results: The collected data was statistically analyzed and findings revealed that the virtual reality therapy was effective in reduction of stress during post operative period. The difference between the control ($M=57.4, SD=3.68$) and experimental ($M=44.26, SD=2.53$) group on these parameters was found statistically significant with 't' value of 9.56 at ($P<0.001$).

Conclusion: Virtual reality therapy is a simple, easy to implement and most acceptable non pharmacological method which can be used to reduce the stress among post LSCS primi mothers.

KEYWORDS

Virtual reality therapy, Stress, Post LSCS , Primi mother.

INTRODUCTION

Child birth is a universally celebrated event, an occasion for dancing, flowers, fireworks and gifts. Yet everyday for thousands of women child birth is experienced not as a joyful event as it should be, but as a private hell that may even end in death. Last few decades, the caesarean rates have increased dramatically in the developed world. In Around the world 15.9% of mother underwent C-Section, In India Caesarean section rates increased from 25.4% (2006) to 30% (2016). In Tamil Nadu, Caesarean section rates increased from 20.3% (2006) to 34.1% (2016) (WHO, 2016).

Caesarean section is a surgical procedure in which incision is made through a mother's abdomen and uterus to deliver one or more babies. It is usually performed when a vaginal delivery would put a baby's or mother's life or health at risk, this may include *obstructed labour*, *twin pregnancy*, *high blood pressure* in the mother, *breech birth*, or problems with the *placenta* or *umbilical cord*. A caesarean delivery may be performed based upon the shape of the mother's *pelvis* or history of a previous C-section (Fadhley, Salim, 2014).

C-section is an alternative option to vaginal delivery, about 32 percent of mothers prefer planned C-Section deliveries in fear of normal vaginal delivery, whereas they are not aware of LSCS pain, which leads to stress. Stress is a feeling of emotional or physical tension, the fact is that the experience of stress after giving birth of the baby is same in both normal as well as caesarean deliveries.

Lopez et al (2017) conducted prospective cohort study on women having a C-section in a tertiary hospital in Switzerland to identify Post-traumatic stress disorder (PTSD) of women following childbirth. The PTSD Checklist Scale and the Clinician Administered PTSD Scale were used for measurement of the 280 patients. Twenty (9.2%) had a PTSD profile and six (2.7%) a PTSD. When a full predictive model of risk factors for PTSD profile was built using logistic regression, maternal prepartum and intrapartum complications, anaesthetic complications and dissociative experiences during C-section were found to be the significant predictors for PTSD profile. Therefore it is essential for the health care professionals especially nurses to plan for the interventions to alleviate stress and cope with the problem. VR as "an advanced interface that allows the user to 'interact' with and

become 'immersed' within a computer-generated environment." VR is a computer-simulated technique that allows individuals to hear and feel stimuli that correspond with a visual image by wearing a head-mounted device that projects the images and accompanying sounds. VR is interactive, causes people to become immersed, and engages several senses simultaneously. Distraction is an emotion-focused coping strategy because it diverts the focus of attention away from unpleasant stimuli by manipulating the environment. Distraction interventions are effective because individuals can concentrate on pleasant or interesting stimuli instead of focusing on unpleasant symptoms. Techniques such as humor, relaxation, music, imagery, and VR all are classified as distraction interventions, and they can relieve physical symptoms such as pain, anxiety, nausea, and stress. (Rizzo and Wiederhold, 2009). Hence this study is conducted to assess the effectiveness of Virtual reality therapy on stress among post LSCS primi mothers. It aids the nurses to provide a holistic care in a simple, non-invasive, stressless, non-pharmacological ways to reduce post LSCS stress.

OBJECTIVES OF THE STUDY

1. To assess the level of stress among control and experimental group of post LSCS primi mothers before and after the virtual reality therapy.
2. To determine the effectiveness of virtual reality therapy by comparing the pre and post test level of stress among post LSCS primi mothers.

Null Hypotheses

H₀1: There will be no significant difference between pre test and post test in stress among post LSCS primi mothers before and after providing virtual reality therapy.

METHODS AND MATERIALS

This study was conducted after obtaining ethical clearance from IEC of the institution and permission from concerned authorities of the setting. The study was conducted by using a true experimental research design. The study sample consists of sixty post LSCS primi mothers who were selected using consecutive sampling technique who fulfilled the inclusion criteria from this 30 mothers for the control group and 30 mothers for the experimental group were considered. Written consent

was obtained from mothers for participating in this study. The rapport was established by a brief introduction about the virtual reality therapy on stress. It is the simulation in real or imaginary world through an immersive, interactive, multisensory theatre environment which can be explored and interacted by a person. The post LSCS mothers in the control and experimental group, before the therapy, were assessed for the following like demographic variables, obstetric variables, level of stress using Tennessee postpartum stress scale. Experimental group of mothers were exposed to Virtual reality therapy for 15-20 minutes every day for 3 days, after the therapy the level of stress and were assessed in both control and experimental group of mothers. The level of acceptability of virtual reality was assessed with rating scale among experimental group of primi mothers. The collected data was analyzed using appropriate descriptive and inferential statistics.

RESULTS AND DISCUSSION

Giving birth is one of the most miraculous things you will ever experience, but after delivery stress is one of the most unpleasant experiences. Virtual reality therapy is the best and safest way to reduce the post-operative stress without having resort to chemicals that fear to harm the mother and baby. The present findings regarding the Demographic variables of the post LSCS primi mothers revealed that less than half of the mothers were between age group of 26-30 years (46.6%, 46.6%), housewives and more than half of the mothers were educated (56.65%, 63.3%). In experimental and control group of post LSCS mothers, Obstetrical Variables denotes more than half of the mothers underwent emergency LSCS for fetal factors (60%) in control group whereas in experimental group due to maternal factors (66.7%), all the mothers (100%) had horizontal incision and received both oral and parental administration of medication. Majority of the mothers (73.3%) had average stress before therapy in control group and experimental group nearly (40%) had average stress and more than half (60%) high level stress, but after therapy it was reduced to moderate (100%) in control group and (76.6%) in experimental. In experimental group after therapy stress score was low ($M=44.26, SD=2.53$) in comparison with before therapy level of stress score ($M=73.6, SD=8.7$). There was significant difference found statistically ($p<0.001$) which can be attributed to the effectiveness of virtual reality therapy.

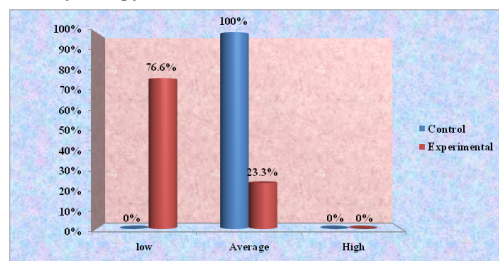


Fig 1: Percentage Distribution of level of stress among Control and Experimental Group of Mothers after the Virtual Reality Therapy

Table 1 Comparison of Mean and Standard Deviation of Stress scores among Control and Experimental Group of Post LSCS Primi Mothers Before and After the Therapy.

Group	Before VR therapy		After VR therapy		Paired 't' value
	Mean	SD	Mean	SD	
Control (n=30)	68.3	4.8	57.4	3.68	11.31 ***
Experimental (n=30)	73.6	8.7	44.26	2.53	16.08***

*** $P<0.0001$

Shourab, et.al (2016) Conducted Randomized clinical trial to assess the effectiveness of Virtual reality on anxiety in primiparous women during episiotomy repair on 30 primigravida from May to July 2012 in the maternity unit of the Omolbanin Hospital, Mashhad city, Iran. The samples were divided randomly into two groups with the toss of a coin. Anxiety was evaluated by the numeric 0-10 anxiety self-report, in the first and during labor. However, after delivery, anxiety was measured analyze data. Anxiety scores were not significantly different between the two groups (wearing video-glass and receiving routine care), but anxiety scores were lower in the intervention group during and after repair ($P=0.001$). They have concluded that VR are safe, appropriate, and nonpharmacologic to decrease and manage

the anxiety-associated episiotomy.

Implications

Midwife need to play a key role in providing comfort measures during post operative period by inculcating various complementary and alternative therapies in practice. This showed that all mothers were not able to cope with stress, irrespective of their obstetric variables. It is the midwives responsibility to adopt virtual reality therapy which is a non pharmacological therapy in the area of stress management.

CONCLUSION

Delivery is like a flower harvesting, but the stress which will be experienced by the mother after delivery is like thorn prickles so take care of mother after delivery is very vital. Virtual reality therapy is a simple, easy to implement and most acceptable way to cope up with stress among post LSCS mothers. The after therapy level of stress was significantly reduced among the mothers those who received virtual reality therapy. Overall this study demonstrated that VRT is effective in reducing stress among post LSCS primi mothers. Health Care professionals especially nurses can play vital role in incorporating VRT for primi mothers who underwent LSCS to achieve the joy of safe, comfortable and happy child birth experience.

Recommendations

- The same study can be conducted for larger number of samples. The same study can be conducted among various groups like patients suffering from long term illnesses, students, or workers of different settings.
- comparative study can be conducted between various alternative complementary methods to reduce stress

REFERENCES

- Fadhley, Salim (2014). "Caesarean section photography". WikiJournal of Medicine. 1 (2). doi:10.15347/wjm/2014.006..
- Lopez, U. M., Meyer, V., Loures, I., Iselin-Chaves, M., Epiney, C., Kern & G. Haller. (2017). Journal: Health and Quality of Life Outcomes, 15(1)
- Rizzo, Albert, Hartholt, Arno, Grimani, Mario, Leeds, Andrew, Liewer, Matt (2014). "Virtual Reality Exposure Therapy for Combat-Related Posttraumatic Stress Disorder". Computer. 47: 31-37.
- Shourab, N. J., Zagami, S. E., Golmakhani, N., Mazlom, S. R., Nahvi, A., Pabarja, F., & Rizi, S. M. (2016). Virtual reality and anxiety in primiparous women during episiotomy repair. Iranian Journal of Nursing and Midwifery Research, 21(5), 521-526.