

**EFFECTIVENESS OF ACUPRESSURE AND WARM  
COMPRESS ON LABOUR PAIN DURING  
FIRST STAGE OF LABOUR AMONG  
PRIMIGRAVIDAE MOTHERS**



**A DISSERTATION SUBMITTED TO THE TAMIL NADU  
DR. M.G.R. MEDICAL UNIVERSITY, CHENNAI,  
IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE DEGREE  
OF MASTER OF SCIENCE  
IN NURSING**

**APRIL -2016**

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**BY  
301423152**

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ACUPRESSURE AND WARM COMPRESS ON LABOUR  
PAIN DURING FIRST STAGE OF LABOUR AMONG  
PRIMIGRAVIDAE MOTHERS IN SELECTED  
HOSPITALS AT KANYAKUMARI  
DISTRICT.**

**RESEARCH GUIDE:.....**

**Prof. Mrs. J. M Jerlin Priya M.Sc (N).Ph.D,**  
Principal, Annammal College of Nursing,  
Kuzhithurai, K.K District, Tamil Nadu.

**CLINICAL GUIDE: .....**

**Mrs. Ahitha.V.M.Sc (N).Associate Professor,**  
HOD in Obstetric and Gynaecology Nursing,  
Annammal College of Nursing, Kuzhithurai,  
K.K District, Tamil Nadu.

**MEDICAL GUIDE:.....**

**Dr. Sheeba Jayalal. MBBS, DGO,**  
Chairman and Chief Medical Officer,  
Consultant Reproductive Gynaecologist,  
Annammal Hospital, Kuzhithurai,  
K.K District, Tamil Nadu

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**APRIL –2016**



*Certified that this is the bonafide work of*

**301423152**

*At the Annammal College of Nursing,  
Kuzhithurai.*

*Submitted in partial fulfillment of the requirements for  
The degree of Master of Science in Nursing from the Tamilnadu  
Dr.M.G.R. Medical University, Chennai.*

**Examiners**

1. \_\_\_\_\_

2. \_\_\_\_\_

**Prof.Mrs.J.M. Jerlin Priya.,**

**Principal**

**APRIL-2016**

## **DECLARATION**

I hereby declare that the present dissertation titled as “ **A comparative study to assess the effectiveness of Acupressure and Warm compress on labour pain during first stage of labour among primigravidae mothers in selected hospitals at Kanyakumari district**”, is the outcome of the original research work undertaken and carried out by me under the guidance of **Prof. Mrs. J. M. JerlinPriya, MSc (N), PhD, Principal cum Professor**, in the Department of Medical Surgical Nursing and **Mrs. Ahitha.V, MSc (N), Associate Professor and HOD**, in the Department of Obstetrics and Gynaecological Nursing, Annammal College of Nursing. I also declare that the material of this has not found in anyway, the basis for the award of any degree or diploma in the university or any other university.

**301423152**

**M Sc (N) II year**

## ACKNOWLEDGEMENT

A dream ahead. Stones and thorns I stepped. Hope and desire I stepped. Hope and desire I had. Encouragement and guidance I got. Heart and mind to convey my gratitude and respect for all the good hearts.

New things, new hopes, new plans, new efforts, new triumphs. I thank the **Lord Almighty** who made my dreams come true successfully.

Giving opportunities make great things. My profound gratitude of thanks to our Chairman cum Medical guide **Dr. Sheeba Jayalal. MBBS, DGO**, for giving an opportunity to conduct the study and for her timely advice and guidance throughout the study.

I express my sincere gratitude to **Dr. Jayalal. MS., FICS., DLS(Germany), MBA., FIAGES.**, Hon. Secretary of Annammal College of Nursing for giving me the precious opportunity to be a part of this esteemed institution.

A director of this task who direct stop as through the way to achieve success. My hearty thanks to **Prof. Mrs. J.M. Jerlin Priya. M.Sc(N). Ph.D**, Principal cum Professor, Annamma I College of Nursing, for her invaluable guidance, direction, continuous support, suggestion and concern during the entire course of this dissertation.

My heart felt thanks to **Mrs. Sujatha. M.Sc(N).**, Vice Principal cum class co-ordinator, for her encouragement and support given during this work.

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My heartfelt thanks to **Mrs. S. Savitha M.Sc(N).**, Assistant Professor, in Obstetrics and Gynaecological Nursing, and other faculties from OBG department.

I extend my thanks to **Mr. Anto John Britto M.Sc., M.Ed., M.Phil., P.G.D BM.**, Professor of BioStatistics, for his valuable opinion, suggestions and guidance in analysis and interpretation of data.

I thank **Mrs. Mary Shajitha.**, Librarian, for helping me in referring to journals and books. I thank all the **Office Staffs** for their help in taking photocopies of study reviews.

I express my deep sense of gratitude and heartfelt thanks to the **experts** who have validated and edited my study and who devoted their valuable hours in solving my doubts and in providing meticulous attention.

I express my thanks to **Dr. (Mrs) PunithaMBBS., D.G.O.**, Department of Obstetrics and Gynaecology of PPK Hospital, Marthandam, for giving permission to conduct the study in their Hospital.

I express my thanks to the **Management and staff** of Annammal Hospital, Rathna Hospital, PPK Hospital for giving permission to conduct the study in their Hospital and to the **research participants** for their cooperation and participation, without whom this study would have been impossible.

I shower my gratitude to the **fine fruits of my batch** for their help and support throughout the course of this study.

In this world I can show my gratitude with a word of thanks to everyone. But the word thanks is not enough to show my gratitude to my family members who are the wonders of my life. I ominously pledge my actions, efforts and success **to my parents, Mr. T. Chandramohanan Nair, Mrs.R.V. Chandrasudha, my husband Mr. N.S. Abilash, my brother Mr.Adarsh. C, my best friend and my relatives** for their blessings, prayers and encouragement.

**301423152**

**M.Sc(N)II year**

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## **ABSTRACT**

### **EFFECTIVENESS OF ACUPRESSURE AND WARM COMPRESS ON LABOUR PAIN DURING FIRST STAGE OF LABOUR AMONG PRIMIGRAVIDAE MOTHERS**

#### **INTRODUCTION**

Women constituted the better half of the society of any human gatherings. So the wellbeing and respect towards women is important. She has been the torchbearer for centuries. She is responsible for the miracle of birth. She is also a provider of the family and embodiment of morality. Women are responsible for the image of the society. It is the woman who is considered the guardian of the respect and honor of a family.

Normally, labor pain in primi mothers is unbearable, usually they get feared also when intensity increases. Treating pain in labor is important because coping of parturients with pain influences birth experiences perceived as good or bad. Vaginal birth without analgesia contributes to optimal health outcome for mother and baby. Acupressure, heat applications, hypnosis, breathing and relaxation techniques prefer to be an effective measures in relieving pain. Still the story of pain relief during childbirth is full of retractions and obscure fear.

#### **STATEMENT OF PROBLEM**

**A comparative study to assess the effectiveness of acupressure and warm compress on labour pain during first stage of labour among primigravidae mothers in selected hospitals at kanyakumari district.**

#### **OBJECTIVES OF THE STUDY**

The objectives of the study were

- To assess the labour pain score before and after administration of acupressure and warm compress among primigravidae mothers in experimental group I and II.
- To compare the post intervention labour pain score among primigravidae mothers in experimental group I and II.
- To determine the association between post intervention labour pain score with selected Socio demographic variables .

#### **HYPOTHESES**

**H<sub>1</sub>** : There will be a significant difference between labour pain score before and after administration of acupressure and warm compress during first stage of labour among Primigravidae mothers in Experimental group I and II.

**H<sub>2</sub>** : There will be a significant difference between the post interventional labour pain score during first stage of labour among primigravidae mothers in Experimental group I and II.

**H<sub>3</sub>**: There will be a significant association between post interventional labour pain score during first stage of labour with selected Socio demographic variables of primigravidae mothers.

## **RESEARCH METHODOLOGY**

A comparative experimental design was used to achieve the objectives of the study. The study was conducted in Annammal hospital, PPK hospital and Rathna hospital at Kanyakumari district. Non probability convenient sampling was used to select the samples. The sample size of the present study was 60 (30 in experimental group I and 30 in experimental group II respectively). The validity was obtained from various experts and reliability was obtained through inter-rater reliability method and found to be highly reliable. Socio Demographic variable proforma and numerical Pain Intensity Scale were the tools used by the researcher. The pretest was done at 3cm dilatation by using Numerical Pain Intensity Scale. Acupressure and warm compress was given at every contraction from 3cm to 8cm dilatation. The post test level of pain was evaluated for both the groups with Numerical Pain Intensity Scale at 8cm dilatation.

## **DATA ANALYSIS**

Collected data was analyzed by using the descriptive statistics (mean, Standard deviation, frequency and percentage) and inferential statistics (unpaired t test, chi square) and results are obtained. Independent t test was used to assess the effectiveness of Acupressure and Warm compress on labour pain during first stage of labour among primigravidae mothers in Experimental group I and II. Chi square is used to find out the association between the post interventional level of labour pain with selected socio demographic variables in Experimental group I and II.

## **RESULT AND SUMMARY**

The main objective of the study was to find out the effectiveness of Acupressure and warm compress on labour pain and to find the association with socio demographic variables. The study was conducted among 60 primigravida mothers (30 in Experimental group I and

30 in Experimental group II) at 3 selected hospitals at Kanyakumari district. To assess the effectiveness, numerical pain Intensity scale was used. Acupressure and warm compress was administered to the primigravida mothers who are in labour, at every contractions from 3cm to 8cm dilatation. Pre test data was collected at 3cm and post test data at 8cm dilatation. In Experimental group I, the posttest mean score for level of labour pain is 3.3 with standard deviation of 1.37 and in Experimental group II, the posttest mean score for level of labour pain is 4.8 with standard deviation of 1.28. This shows that the mean post test score of level of labour pain in Experimental group I was lower than the mean post test score in Experimental group II. Also the table value (2.0000) is less than the calculated value (4.3884), it was inferred that both acupressure and warm compress was effective. While comparing both, warm compress was effective in reducing labour pain than acupressure.

## **CONCLUSION**

This study concludes that, warm compress was effective in reducing labour pain than acupressure among primigravidae mothers. The selected participants were comfortable and cooperated with the study. Overall I would conclude that both acupressure and warm compress were not only effective but also easy to apply and shows a better effect. While comparing both, warm compress was more effective than acupressure.



# CHAPTER I

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## INTRODUCTION

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- *Background of the study*
- *Need for the study*
- *Statement of the problem*
- *Objectives of the study*
- *Hypotheses*
- *Operational definitions*
- *Assumptions*
- *Delimitations*
- *Projected outcome*
- *Conceptual framework*
- *Summary*

# CHAPTER II

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## REVIEW OF LITERATURE

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- *Empirical literature related to labourpain perception*
- *Empirical literature related to nonpharmacological measures for labour pain relief*
- *Empirical literature related to acupressure on labour pain.*
- *Empirical literature related to warmcompress on labour pain.*

# CHAPTER III

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## RESEARCH METHODOLOGY

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- *Research approach*
- *Research design*
- *Variables*
- *Settings*
- *Population*
- *Sample*
- *Sample size*
- *Sampling technique*
- *Sampling criteria*
- *Development of the tool*
- *Description of the tool*
- *Validity*
- *Reliability*
- *Pilot study*
- *Data collection procedure*
- *Plan for data analysis*
- *Ethical consideration*
- *Summary*

# **CHAPTER IV**

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## **DATA ANALYSIS AND INTERPRETATION**

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# CHAPTER V

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**DISCUSSION**

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# CHAPTER VI

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**SUMMARY**

**CONCLUSION**

**IMPLICATIONS**

**RECOMMENDATIONS**

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## **ELECTRONIC VERSIONS**

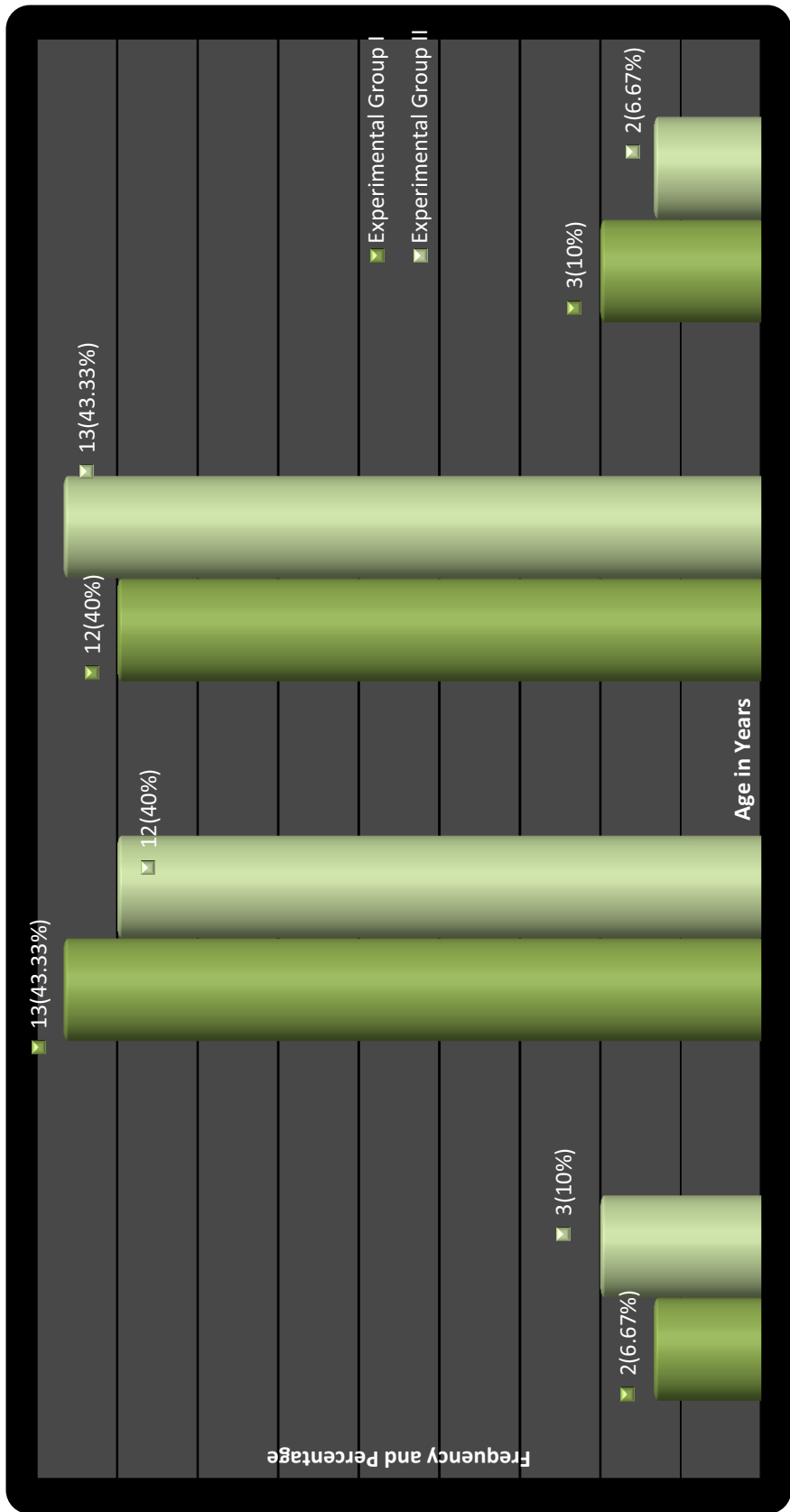
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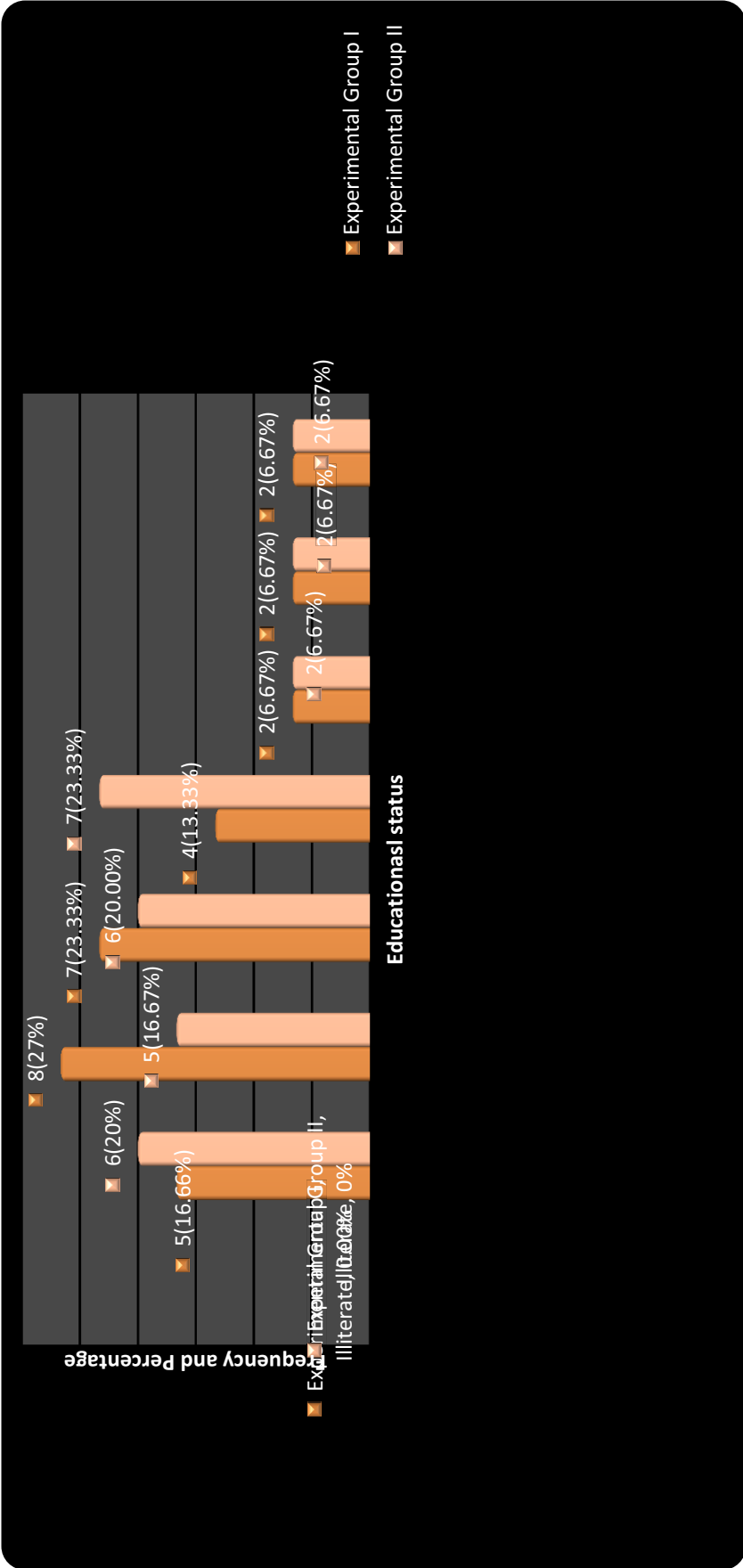
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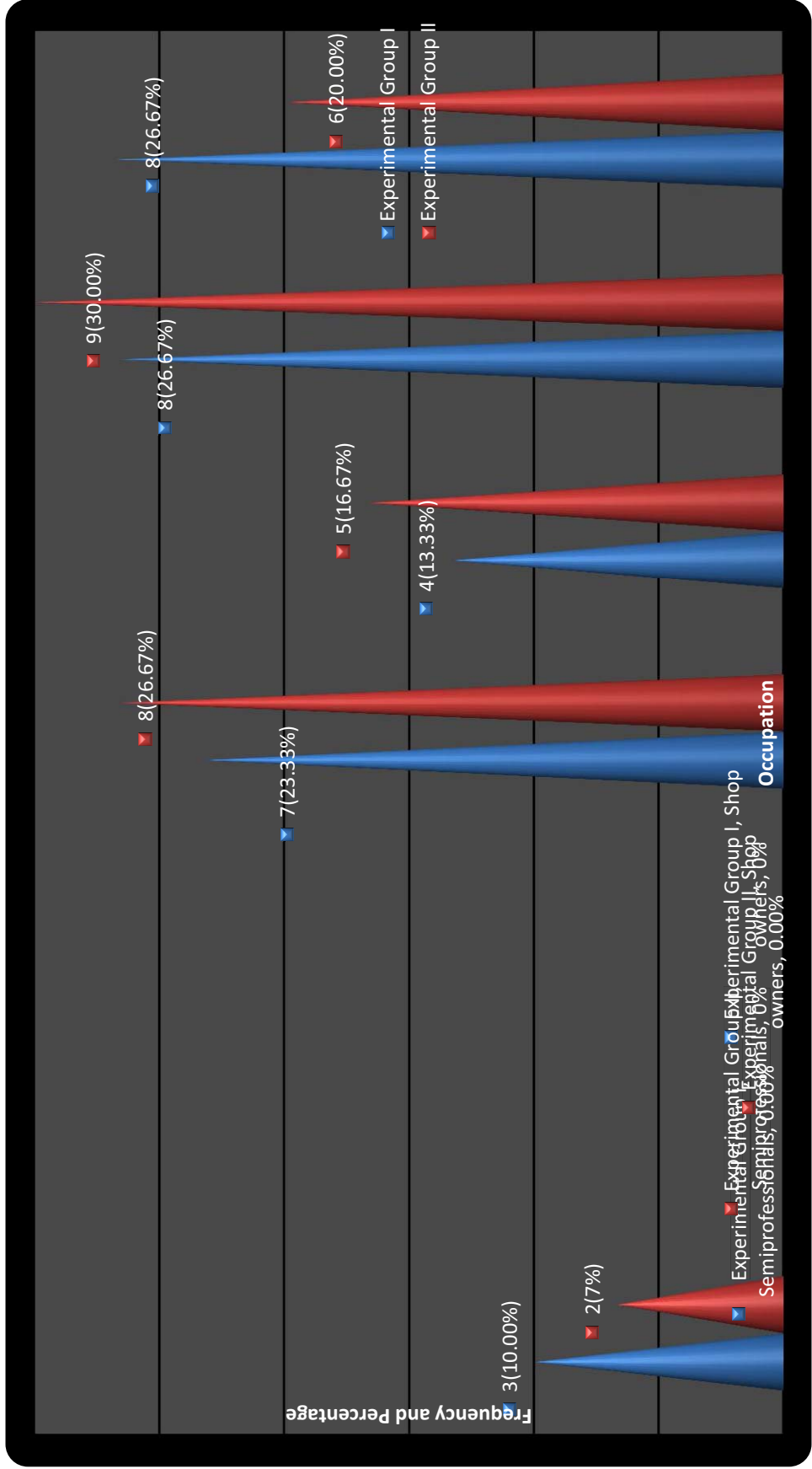
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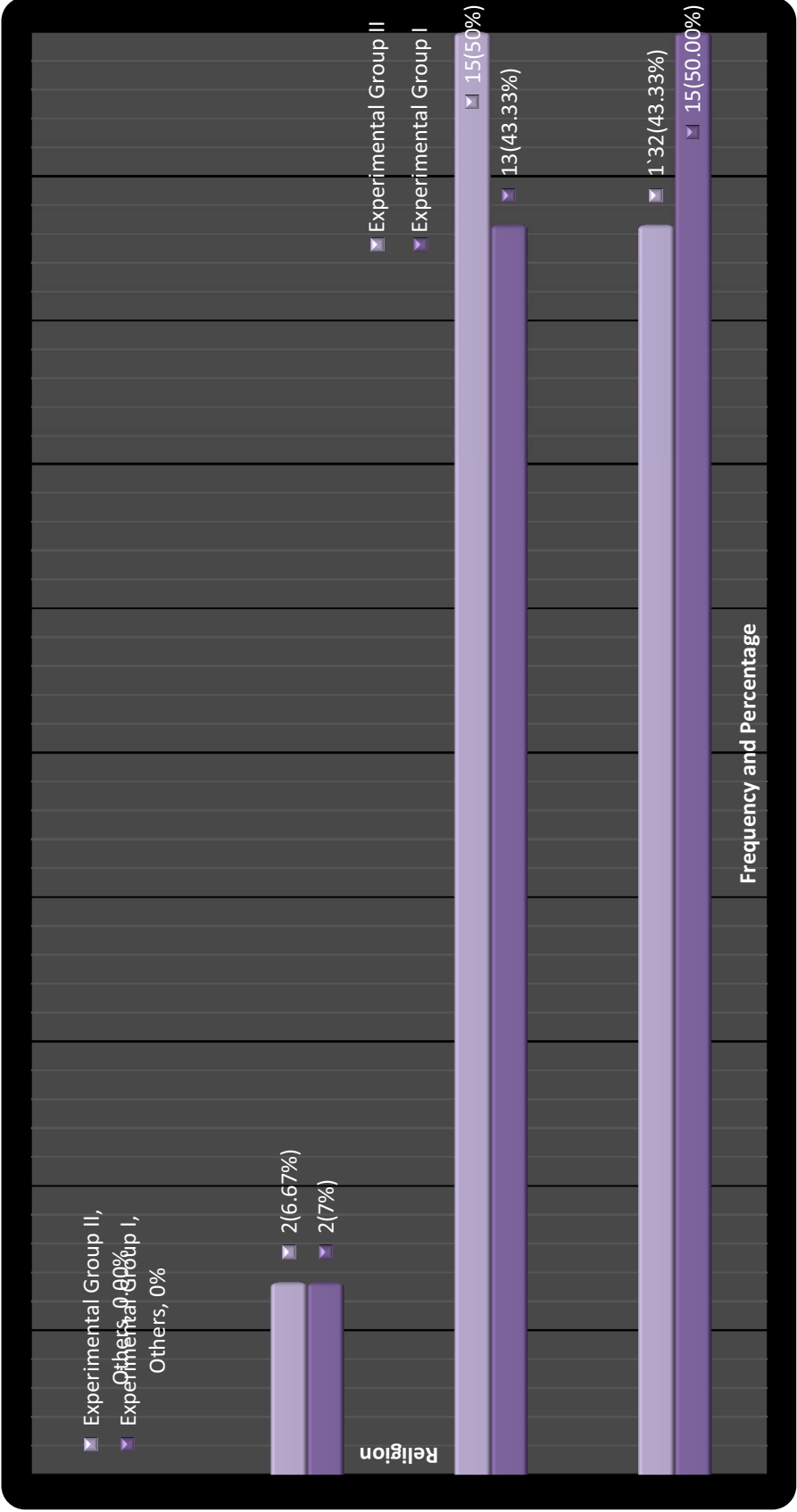
**FIG 3: FREQUENCY AND PERCENTAGE DISTRIBUTION OF PRIMI GRAVIDAE MOTHERS IN EXPERIMENTAL GROUP I AND II WITH REGARD TO AGE**



**FIG 4: FREQUENCY AND PERCENTAGE DISTRIBUTION OF PRIMI GRAVIDAE MOTHERS IN EXPERIMENTAL GROUP I AND II WITH REGARD TO EDUCATIONAL STATUS**

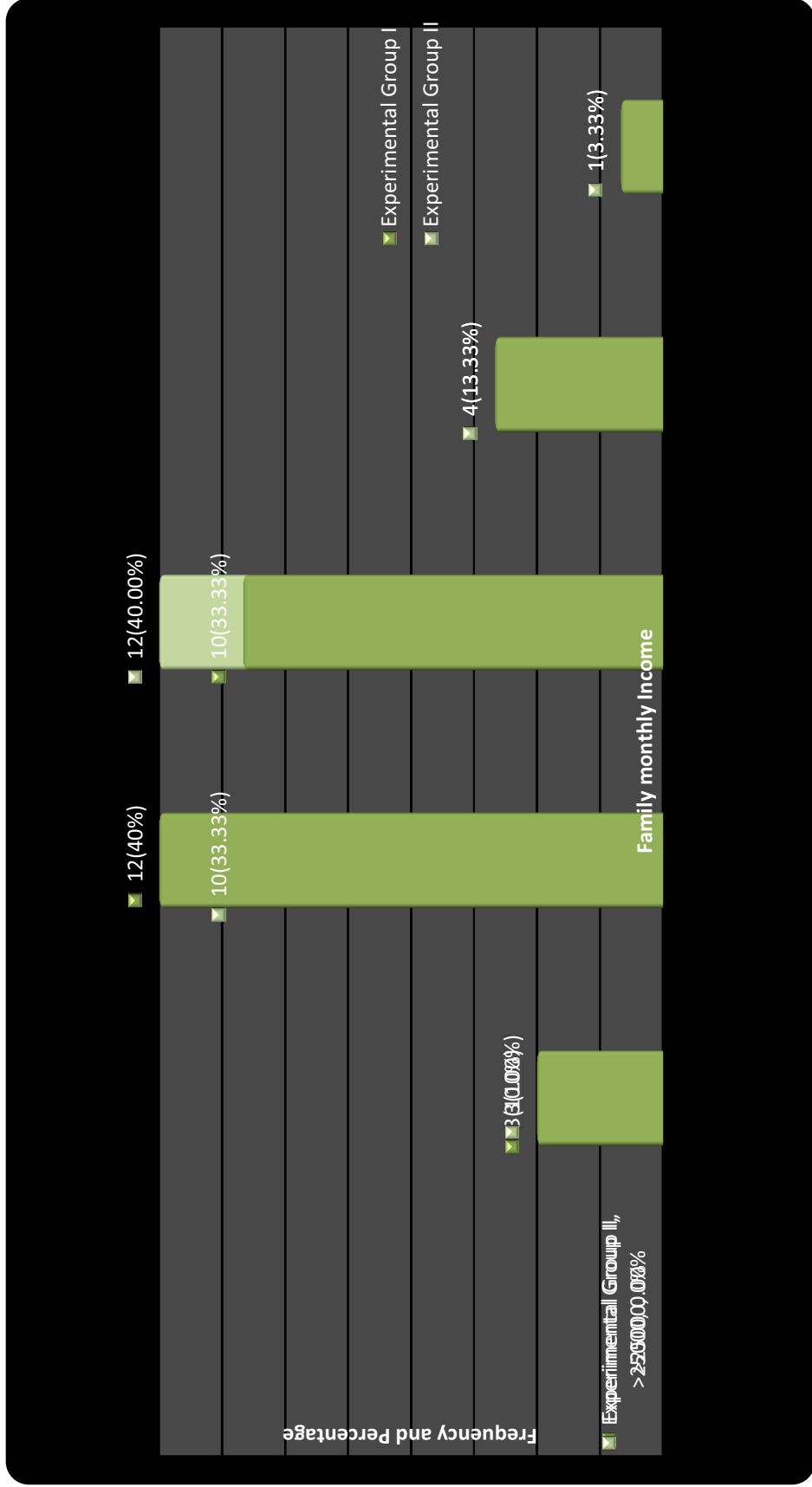


**FIG 5: FREQUENCY AND PERCENTAGE DISTRIBUTION OF PRIMI GRAVIDAE MOTHERS IN EXPERIMENTAL GROUP I AND II WITH REGARD TO OCCUPATION**

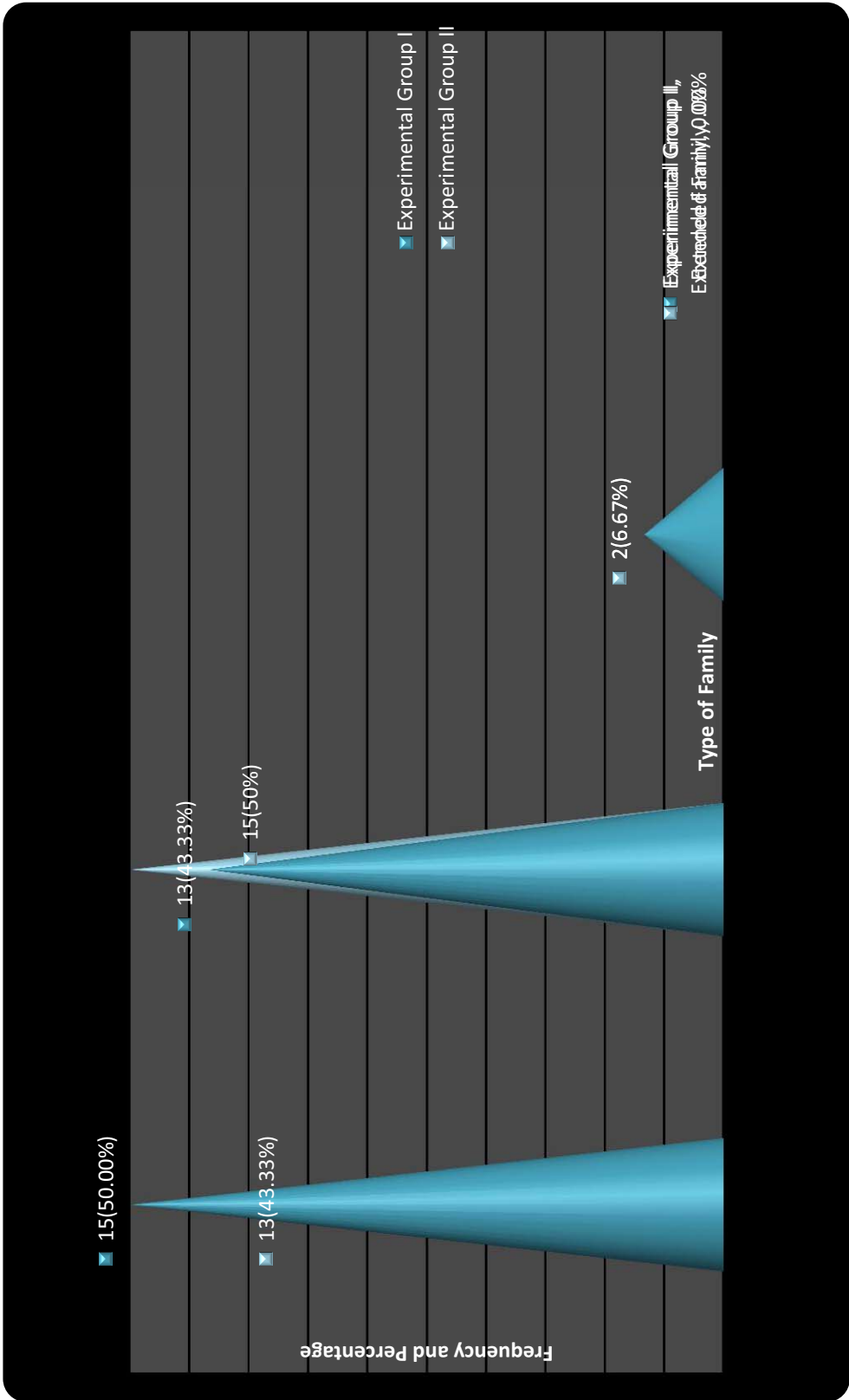


**FIG 6: FREQUENCY AND PERCENTAGE DISTRIBUTION OF PRIMI GRAVIDAE MOTHERS IN EXPERIMENTAL GROUP I AND II WITH REGARD TO RELIGION**

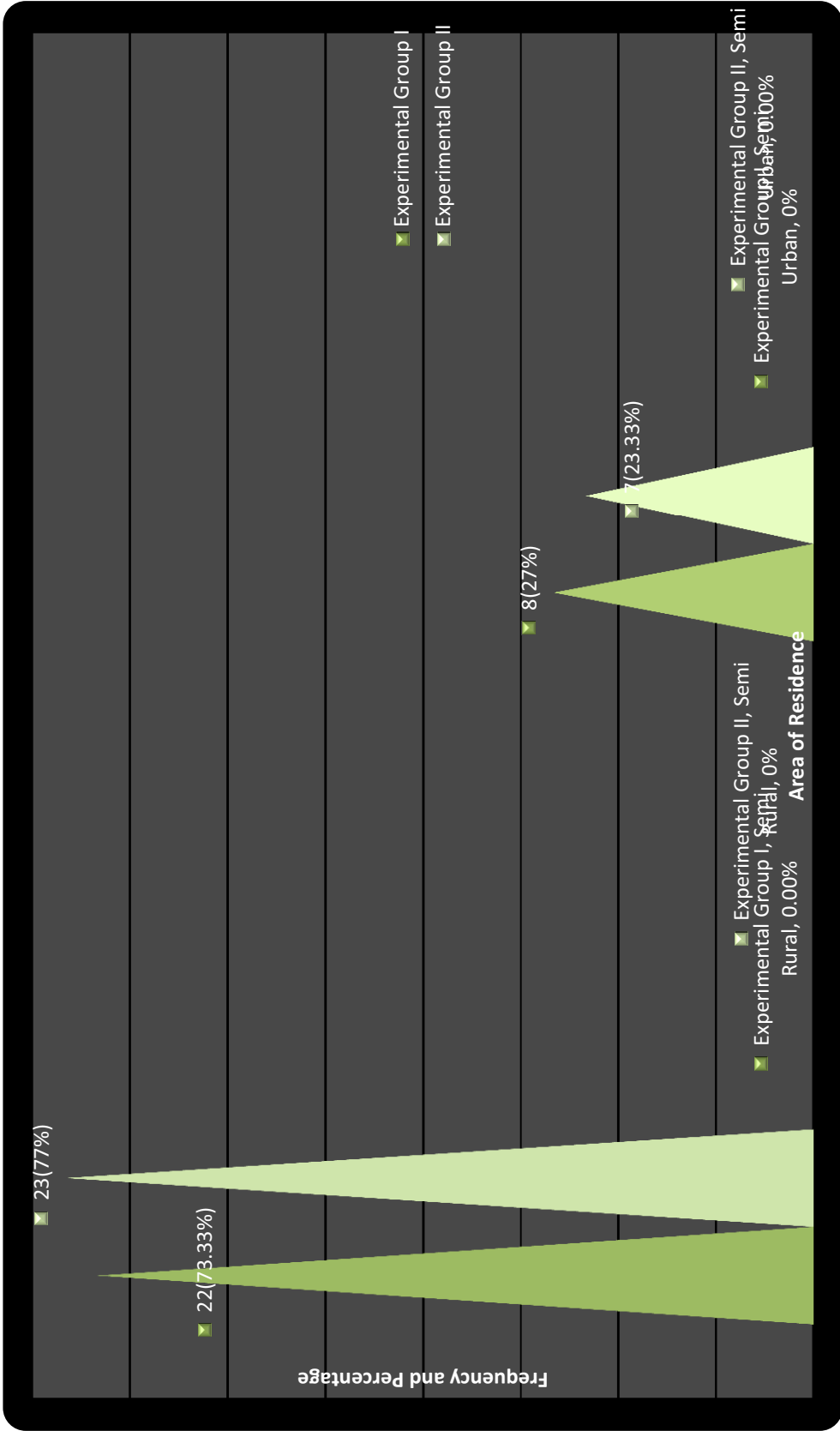




**FIG 7: FREQUENCY AND PERCENTAGE DISTRIBUTION OF PRIMI GRAVIDAE MOTHERS IN EXPERIMENTAL GROUP I AND II WITH REGARD TO FAMILY MONTHLY INCOME**



**FIG 8: FREQUENCY AND PERCENTAGE DISTRIBUTION OF PRIMI GRAVIDAE MOTHERS IN EXPERIMENTAL GROUP I AND II WITH REGARD TO TYPE OF FAMILY**



**FIG 9: FREQUENCY AND PERCENTAGE DISTRIBUTION OF PRIMI GRAVIDAE MOTHERS IN EXPERIMENTAL GROUP I AND II WITH REGARD TO AREA OF RESIDENCE**

**ANNEXURE 1**  
**LETTER SEEKING PERMISSION TO CONDUCT THE STUDY**



*Annammal College of Nursing*

(Approved by Govt. of Tamilnadu, TN Nurses & Midwives Council,  
Indian Nursing Council and Affiliated to The Tamilnadu Dr. MGR Medical University)

**Annammal Hospital Campus, KUZHITHURAI - 629 163**

**K.K. Dist, Tamil Nadu. Ph : 04651 - 260614, Fax : 04651 - 260605**

**www.annammalnursing college.com Email : annammalcollege2007@yahoo.co.in**

**Dr. Sheeba Jayalal** MBBS, DGO

Chairperson

From

Date : .....

Prof. Mrs. J.M. Jerlin Priya, M.Sc(N), Ph.D.,  
Principal,  
Annammal College of Nursing,  
Kuzhithurai.

To

Respected Sir,

Sub: Seeking permission to conduct the research study.

Mrs. Sree Chithra C, II year M.Sc (N) student of Annammal College of Nursing, Kuzhithurai, is approaching you to conduct a research on "A comparative study to assess the effectiveness of acupressure and warm compress on labour pain during first stage of labour among primi gravida mothers in selected hospitals at Kanyakumari District". Which she has to complete as a partial fulfillment of university requirement for the award of Master of Science in Nursing Degree.

In this regards I humbly request you to give permission to conduct the study in your hospital.

Thanking you

Yours faithfully,



Principal  
Principal

Annammal College of Nursing  
Kuzhithurai, K.K. Dist., - 629 163

*"What we are is gift of god and What we become is gift to god"*

## ANNEXURE II

### LETTER GRANDING PERMISSION TO CONDUCT THE STUDY



**ANNAMMAL  
HOSPITAL**

Annammal Hospital, Kuzhithurai, K.K. Dist - 629163  
Phone: 04651-260555, 260511 | Cell: +91 9788860031 -'24, Fax: 04651-260605  
E-mail: annammalhospital@yahoo.in

26-11-2015

**Sree Chithra C.**, a student of M.Sc(Nursing) program from Annammal College of Nursing, Kuzhithurai conducted a study on

**“A comparative study to assess the effectiveness of Acupressure and Warm compress on labour pain during first stage of labour among primi gravida mothers in selected hospitals at Kanyakumari District”.**

As part of her study she educated the staff regarding infection control measures also she conducted her research in our hospital in an excellent manner with good dedication and in a pleasant way.

We wish all the very best to **Sree Chithra C.** for a very successful and fruitful career.



  
Chief Medical Officer

Dr. SHEEBA JAYALAL, MBBS., DGO  
REG NO 80622  
CHIEF MEDICAL OFFICER  
ANNAMMAL HOSPITAL  
KUZHITHURAI

What we are is Gift of God and  
What we become is Gift to God

**ANNEXURE II**  
**LETTER GRANDING PERMISSION TO CONDUCT THE STUDY**



31.01.2016

To,

The Principal,  
Annammal College of Nursing,  
Kuzhithurai.

**Sub : Granting permission to conduct the research study – reg.**

-----

We would like to inform you that we are glad to permit a research on “A comparative study to assess the effectiveness of Acupressure and Warm compress on Labour pain during first stage of labour among Primigravida mothers in Selected Hospital at Kanyakumari District for Mrs. Sreechithra .C , II Year M.Sc (N) student for the month of December – 2015.



**Administrative Officer,**

**A. MATHIVANAN MBA**  
**ADMINISTRATOR OFFICER**  
**PPK HOSPITAL**  
**MARTHANDAM-629 165**

---

QUALITY HEALTH CARE WITHIN YOUR REACH

**ANNEXURE II**  
**LETTER GRANDING PERMISSION TO CONDUCT THE STUDY**

**Dr. M. Santhi** M.D.,D.G.O.,D.R.M.,(Germany)  
Director, Infertility Specialist  
Obstetrician & Gynecologist.



*DATE: 11/02/2016*

TO

The Principal  
Annammal College of Nursing  
Kuzhithurai

Sub: Granting Permission to conduct the Research Study - Reg

We would like to inform you that we are glad to permit for the research on " A comparative study to assess the effectiveness of Acupressure and warm compress on labour pain during first stage of labour among primi gravidae mothers in selected hospitals at Kanyakumari district" for Mrs. Sreechithra . C of II year M.Sc (N) student for the month of December 2015.

A handwritten signature in blue ink, appearing to read "Santhi".

**Dr. M. SANTHI**  
M.D.,D.G.O.,D.R.M.,(GERMANY)  
Reg. No : 56898



11/208, Main Road, Swamiyarmadam, Kattathurai Post, Kanyakumari District, TamilNadu -629 158.  
Ph: 04651 - 275120, mahilansanthi@gmail.com, www.rathnahospital.com

## ANNEXURE III ETHICAL CLEARANCE CERTIFICATE

Valid from : 2015

Valid to : 2016

Name of the Investigator: Mrs. Sreechithra. C

The Ethical committee meeting held on 07-03-2015 had reviewed the project titled "A comparative study to assess the effectiveness of Acupressure and Warm compress on labour pain during first stage of labour among primigravidae mothers in selected hospitals at Kanyakumari district". The proposal was submitted before the ethical committee for the acceptance and found to be acceptable on ethical grounds. The ethical committee held responsibility and accountability for the investigator for any other administrative approvals that may pertain to this research. This has to be carried out according to conditions outlined in the original protocol submitted for ethical review.

This certificate of approval is valid for the time period provided, there is no change in the methodology protocol or consent process and documents.

Any significant change should be reported to guide for its considerations in advance for its implementation.

Signature of Ethical Committee members:

1. **Dr. Sheeba Jayalal M.B.B.S.,D.G.O.,**  
Chief Medical Officer

2. **Dr. Jayalal M.S.,F.I.C.S.,(Germany),M.B.A.,F.I.A.G.E.S**  
Chief Surgeon

3. **Dr. Shanthi Appavu M.Sc(N),,PhD**  
Nursing Research Advisor

4. **Prof. Mrs. JerlinpriyaM.Sc (N),,PhD**  
Research Guide



**ANNEXURE IV**  
**LETTER SEEKING EXPERTS OPINION FOR THE VALIDITY OF**  
**THE TOOL**



*Annammal College of Nursing*

(Approved by Govt. of Tamilnadu, TN Nurses & Midwives Council,  
Indian Nursing Council and Affiliated to The Tamilnadu Dr. MGR Medical University)  
Annammal Hospital Campus, KUZHITHURAI - 629 163  
K.K. Dist, Tamil Nadu. Ph : 04651 - 260614, Fax : 04651 - 260605  
www.annammalnursing college.com Email : annammalcollege2007@yahoo.co.in

Dr. Sheeba Jayalal MBBS, DGO  
Chairperson

Date : .....

To

Respected Madam/Sir,

Sub: M.Sc Nursing Programme-Dissertation – Validation of study tool  
request-reg.

Mrs.Sreechithra.C, a bonafide II Year M.Sc (N) student of Annammal College of Nursing, Kuzhithurai is approaching you to obtain validation of her study tool pertaining to her dissertation in partial fulfilment of the requirements for the degree of Master of Science in Nursing. The selected topic is

“A comparative study to assess the effectiveness of acupressure and warm compress on labour pain during first stage of labour among primi gravida mothers in Selected Hospitals at Kanyakumari District.”

In this regards I humbly request you to kindly extent possible technical guidance and support for successful completion of dissertation.

I enclosed here with a checklist for your evaluation.

Thanking you

Yours faithfully,



*[Signature]*  
Principal  
Annammal College of Nursing  
Kuzhithurai, K.K. Dist.- 629 163

*“What we are is gift of god and What we become is gift to god”*

**ANNEXURE V**  
**EVALUATION CRITERIA CHECKLIST FOR VALIDATING THE**  
**TOOL**

**Instructions:**

The expert is requested to go through the following criteria for evaluation. Three columns are given for responses and a column for remarks. Kindly place tick mark in the appropriate column and give remarks.

SL NO	CRITERIA	1	2	3	REMARKS
1	Content ➤ Adequacy ➤ Relevance ➤ Organized				
2	Language ➤ Simplicity ➤ Clarity ➤ Relevant				
3	Scoring ➤ Easy to score ➤ Clarity ➤ Relevant				
4	Practicability ➤ Procedure ➤ Utility ➤ Feasibility				

**Interpretation of column:**

Column I : Meets the criteria.

Column II : Partially meets the criteria.

Column III: Does not meets the criteria.

Designation :

Signature of the Expert

**ANNEXURE VI**

## LIST OF EXPERTS

- 1. Dr. Sheeba Jayalal. MBBS, DGO,**  
Chairman and Chief Medical Officer,  
Consultant Reproductive Gynaecologist,  
Annammal Hospital, Kuzhiturai,  
K.K District, Tamil Nadu
- 2. Mrs . Joylet Pavilion.MSc(N)**  
Reader , OBG Department  
C. S.I College of Nursing,  
Marthandam.  
Kanyakumari District
- 3. Mrs . Asha packialet.MSc(N)**  
Associate Professor  
WhiteMemorial Collegeof Nursing,  
Attoor. Kanyakumari District
- 4. Mrs . Arzta Sofia .MSc(N),**  
Reader , OBG Department  
Christian College of Nursing  
Neyyoor, Kanyakumari District
- 5. Mrs .Jeba Nesa Mahiba.S.T MSc(N)**  
AssociateProfessor  
Christian Collegeof Nursing  
Neyyoor, Kanyakumari District
- 6. Mrs . Anita Mary Leena .MSc (N)**  
HOD , OBG Department  
St . Xaviers's Catholic College of Nursing,

Chunkankadai,  
Kanyakumari District

**7. Mrs . Jameela. MSc(N),**

Assistant Professor

Global College of Nursing,

Marthandam

Kanyakumari District.

**8. Mrs. Sheeja, Msc(N)**

Reader,

Grace College of Nursing

Padanthalumoodu

**9. Mrs. Felecia Jane Disuali, Msc(N)**

Assistant Professor,

Dept. of OBG,

Thasiah College of Nursing,

Marthandam.

**10. Mr. Anto John Britto. M.Sc., M.Ed., M.Phill., P.G., BBM.,**

Bio Statistician,

Scott Christian college,

Nagercoil, Kanyakumari District

**ANNEXURE VII**  
**CERTIFICATE FOR ACUPRESSURE TRAINING**



**JEEVANAM**

Yoga Therapy Clinic

2nd Floor, Althara Devi Mandiram,  
Vellayambalam, Thiruvananthapuram - 695010.  
email : drvasundharabnys@gmail.com

Dr. Vasundhara V.R., BNYS, Msc (Psy)  
Naturopathy, Yoga Consultant  
Reg. No. 19(TCMC)  
Mobile : 9496546042

Ref. :

Date.....30/05/2015

**TO WHOMEVER IT MAY CONCERN**

This is to certify that Mr / Mrs. Sree Chitra.C  
successfully completed 2 weeks training in  
Acupressure dated from 16/05/2015 to 29/05/2015.



*Dr. Vasundhara V.R.*  
Reg. No. 19.

Dr. Vasundhara.V.R  
CMO, JEEVANAM  
Yoga, Naturopathy &  
Wellness Clinic.

Place: Trivandrum

Date: 30/05/2015

**ANNEXURE VIII**  
**RESEARCH PARTICIPANT CONSENT FORM**  
**(ENGLISH)**

Dear participant,

I am Mrs. Sreechithra. C II year M.Sc Nursing student of Annammal College of Nursing, Kuzhithurai. As a part of my study, a research on Effectiveness of acupressure and warm compress on labour pain during first stage of labour among primigravidae mothers in selected hospitals at Kanyakumari district. The findings of the study will be helpful in reducing the pain perception. I here by seek your consent and co-operation to participate in the study. Please be frank and honest in your responses. The information collected will be kept confidential and anonymity will be maintained.

Signature of the researcher

I..... hereby consent to participate and undergo the study.

Signature of the participant

Place  
Date

**ANNEXURE VIII**  
**RESEARCH PARTICIPANT CONSENT FORM**  
**(TAMIL)**

**Muha;r;rp xg;g[jy; gotk;**

md;ghh]e;;j; g';FbgWnthnu/

\_rpj]uh.r Mfpa ehd; md;dk;khs; brtpypah; fy;Y}hpapy; brtpypah;  
KJfiyg]gl]lk] ,uz;lhk; Mz;L goj;J tUfpnwd.; vdJ gog;gpd; xUgFjpahf/ gpurtj;jp;d;  
nghJ jha;kh;fSf;F Vw;;g;glf;Toa gpurt typapid vspjpy; bghWj;Jf;bfhRs]tJ  
gw;wpa Muha;r;rp bra;fpnwd;. ,jw;F j';fSila mDkjpiaa[k;/ xj;JiHg;iga[k;  
juntz;Lfpnwd;. jat[ bra;J c';fSila gjpy;fs; cz;ikahft[k; btspg;gilahft[k; ,Uf;f  
ntz;Lfpnwd;. c';fs; gjpy;fs; midj;Jk; ufrpakhf ghJfhff;fg;gLk; vd cWjp  
mspf;fpnwd;.

Muha;r;rpahshpd; ifbahg;gk;

ehd; ..... ,e;j Muha;r;rpapy; g';Fbgw rk;kjpf;fpnwd;.

,lk;:

ehs;:

g';FbgWnthhpd; ifbahg;gk]

## ANNEXURE IX

### CERTIFICATE OF ENGLISH EDITING

#### CERTIFICATE OF ENGLISH EDITING

#### TO WHOMEVER IT MAY CONCERN

This is to certify that the dissertation, " A comparative study to assess the effectiveness of acupressure and warm compress on labour pain during first stage of labour among primigravidae mothers in selected hospitals at Kanyakumari district" by Mrs. Sreechithra. C, 2<sup>nd</sup> year MSc(N) student of Annammal College of Nursing was edited for English language appropriateness by .....*P. Sreevani*.....



*P. Sreevani*  
24/11/16  
PRINCIPAL  
ANNAMMAL COLLEGE OF NURSING  
KANYAKUMARI DISTRICT  
TAMIL NADU

Signature



## ANNEXURE X

### CERTIFICATE OF TAMIL EDITING

#### CERTIFICATE OF TAMIL EDITING

#### TO WHOMEVER IT MAY CONCERN

This is to certify that the dissertation, " A comparative study to assess the effectiveness of acupressure and warm compress on labour pain during first stage of labour among primigravidae mothers in selected hospitals at Kanyakumari district" by Mrs. Sreechithra. C, 2<sup>nd</sup> year MSc(N) student of Annammal College of Nursing was edited for Tamil language appropriateness by .....*hanbarami*.....



*hanbarami*  
HEADMASTER  
ANNAMMAL COLLEGE OF NURSING  
KANYAKUMARI

Signature

**ANNEXURE XI**  
**TOOL FOR DATA COLLECTION (ENGLISH)**  
**TOOL 1**  
**DEMOGRAPHIC VARIABLES**

**SAMPLE NO:**

**INSTRUCTION:** Kindly place a tick mark  against the option which you feel as appropriate.

1. Age of the mother (in years)

- a.  $\leq 20$
- b. 21-25
- c. 26-30
- d.  $> 30$

2. Education

- a. Illiterate
- b. Primary school certificate
- c. Middle school certificate
- d. High school certificate
- e. Intermediate or post high school diploma
- f. Graduates or PG
- g. Professionals or honours
- h. Others

3. Occupation

- a. Professional
- b. Semi professional
- c. Shop owner
- d. Skilled worker
- e. Semi skilled worker

- f. Unskilled worker
- g. Unemployed
- 4. Family monthly income
  - a.  $\geq 25000$
  - b. 20000-24999
  - c. 15000-19999
  - d. 10000-14999
  - e. 5000-9999
  - g.  $\leq 5000$
- 5. Type of family
  - a. Nuclear
  - b. Joint
  - c. Broken family
  - d. Extended family
- 6. Religion
  - a. Hindu
  - b. Muslim
  - c. Christian
  - d. Others
- 7. Area of residence
  - a. Rural
  - b. Semi rural
  - c. Urban
  - d. Semi urban

## gFjp I

### m) Nehahspapd; nghJ tptuk;

gapw;rpf;F Njh;T nra;j eghpd; vz;zpf;if:

Fwpg;G: fPNo nfhLf;fg;gl;Ls;s Nfs;tpfSf;F rhpahd tpilia Njh;e;njLj;J mjw;Fhpa

fl;l;j;ppy; rhp  FwpapLf

1.taJ tuk;G

- a. 20 tajpw;F fPo; cs;Nshh;
- b. 21 taJ Kjy; 25 taJ tiu cs;Nshh;
- c. 26 taJ Kjy; 30 taJ tiu cs;Nshh;
- d. 30 tajpw;F Nky; cs;Nshh;

2.fy;tpj;jFjp

- a. gbg;gwptpy;yhjth;
- b. njhlf;fepiyf;fy;tp
- c. ,ilepiyf;fy;tp
- d. cah; epiyf;fy;tp
- e. Nky; epiyf;fy;tp
- f. gl;ljhhp my;yJ KJfiygl;ljhhp
- g. njhopy;Kiwf;fy;tp
- h. gpw fy;tp

3.njhopy; tptuk;

- a. ,gapw;rpngw;w njhopyhsh;
- b. ,ilgl;l gapw;rpngw;w njhopyhsh;
- c. fil chpikahsh;
- d. jpwikahd njhopyhsh;
- e. ,ilgl;l jpwikahd njhopyhsh;

- f. gapw;rpngwhj njhopyhsh;
- g. Ntiyapy;yhjth;

4.khj tUkhdk;

- a. &gha; 25000 my;yJ mjw;F Nky;
- b. &gha; 20000 Kjy; 24999
- c. &gha; 15000 Kjy; 19999
- d. &gha; 10000 Kjy; 14999
- e. &gha; 5000 Kjy; 9999
- f. &gha; 5000 jpw;F fPo;

5.FLk;g tif

- a. jdpf;FLk;gk;
- b. \$l;Lf;FLk;gk;
- c. gpsTgl;l FLk;gk;
- d. ngupa FLk;gk;

6)kjk;

- a. ,e;J
- b. fpwp];jth;
- c. K];yPk;
- d. gpw kjk;

7.thOkplk;

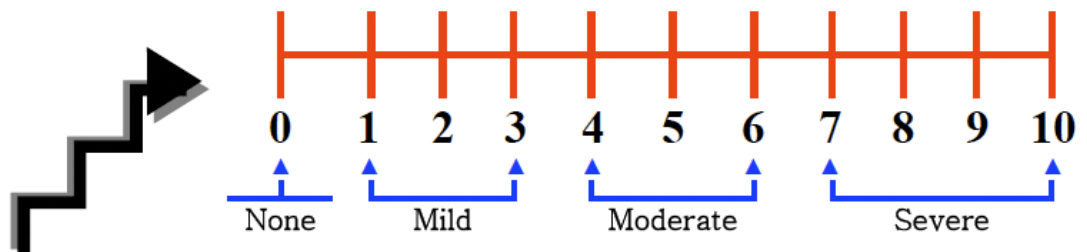
- a. efh;g;;Gwk;
- b. ,ilgl;l efh;g;;Gwk;
- c. fpuhkg;Gwk;
- d. ,ilgl;l fpuhkg;Gwk;

## TOOL-2

### NUMERICAL PAIN INTENSITY SCALE

**Purpose:** This scale is used to assess the level of pain experienced by parturient mothers before and after breathing techniques.

**Instructions:** The participants will put a tick mark (✓) according to the level of pain on the scale given to them.



### INTERPRETATION

LEVEL OF PAIN	SCORES
No pain	0
Mild pain	1-3
Moderate pain	4-6
Severe pain	7-10

## ANNEXURE XII

### MASTER SHEET FOR EXPERIMENTAL GROUP I

Sl. No	Age	Educational status	Occupational status	Religion	Family monthly income	Type of Family	Area of Residence
1	b	c	a	a	d	a	a
2	a	c	d	b	e	a	c
3	c	d	d	a	d	b	c
4	b	d	e	a	b	b	c
5	b	e	f	b	a	b	a
6	c	b	a	b	d	a	a
7	b	e	f	b	d	a	a
8	b	c	e	a	c	a	c
9	a	b	e	a	c	a	c
10	b	c	f	a	c	b	c
11	b	f	e	b	e	a	a
12	b	e	f	a	c	a	a
13	b	d	g	a	e	b	a
14	c	f	f	a	d	b	c
15	c	b	a	b	c	c	a
16	c	g	d	a	c	b	a
17	b	d	f	a	c	a	a
18	c	e	g	a	e	b	a
19	b	b	g	a	c	a	c
20	c	g	g	a	d	a	a
21	b	h	g	a	c	b	a
22	b	d	f	b	f	a	c
23	c	d	f	b	d	b	a
24	c	d	f	b	e	a	a
25	d	c	d	b	d	a	a
26	c	h	d	c	b	a	a
27	c	c	g	b	c	c	c
28	c	c	d	c	c	b	a
29	d	f	d	b	d	b	a
30	d	c	g	b	c	b	a

**MASTER SHEET FOR EXPERIMENTALGROUP II**

<b>Sl. No</b>	<b>Age</b>	<b>Educational status</b>	<b>Occupational status</b>	<b>Religion</b>	<b>Family monthly income</b>	<b>Type of Family</b>	<b>Area of Residence</b>
1	b	e	f	b	c	c	c
2	a	d	d	a	d	b	c
3	c	b	f	b	b	b	a
4	b	e	f	a	d	b	c
5	b	d	g	b	c	a	a
6	d	c	d	b	d	c	a
7	c	d	d	b	d	b	c
8	c	h	f	b	d	a	c
9	b	b	a	a	c	a	a
10	a	e	f	a	c	b	c
11	c	h	e	b	e	b	a
12	b	b	a	a	b	b	a
13	b	d	e	b	d	a	a
14	c	c	f	b	d	b	c
15	c	e	d	a	e	a	a
16	c	d	d	a	c	b	c
17	a	b	g	c	d	a	a
18	b	c	f	b	c	b	c
19	c	f	d	c	b	a	c
20	b	d	e	a	e	a	c
21	c	e	g	b	e	b	c
22	d	e	g	a	d	a	a
23	c	b	g	a	c	b	a
24	b	g	d	b	d	a	c
25	b	c	f	b	c	b	a
26	c	e	e	a	c	a	a
27	b	b	g	a	f	b	c
28	c	g	e	a	d	a	c
29	c	f	f	b	c	a	c
30	b	c	d	b	d	b	c



**ANNEXURE XIII  
PHOTOGRAPHS**



Data collection



Acupressure



Warm compress

# CHAPTER I

## INTRODUCTION

*“Motherhood is priced  
Of God, at price no man may dare  
To lessen or misunderstand”*

*-Helen Hunt Jackson*

Women constituted the better half of the society of any human gatherings. So the wellbeing and respect towards women is important. She has been the torchbearer for centuries. She is responsible for the miracle of birth. She is also a provider of the family and embodiment of morality. Women are responsible for the image of the society. It is the woman who is considered the guardian of the respect and honor of a family.

Pregnancy is a miraculous process. It is a very special event not only in the life of the woman but also in the entire family. The labor and birth process is an exciting, anxiety provoking but rewarding time for the women and her family. (Burroughs, 2001)

Childbirth is a natural biological process. The nature of pain experienced during labor depends on the cervical dilatation (Sr.cyriac, 1999). During this period a number of physical and psychological changes occurs in women. Childbirth is the mixture of joy and pain, fear and expectations. It is controlled by the social, religious and medical interest and doctrines.

Pain is a universal experience but is difficult to define. A scientific definition of the pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage. In the labour during dilatation (First stage) visceral pain predominated due to mechanical distension of the cervix and the lower part of the uterus. These stimuli are transmitted to the spinal cord at the level of the 10<sup>th</sup> thoracic to first lumbar region. Uterine contractions may be felt as back pain because the nerves that supply the uterus also supplies to the skin on the lower back or lumbar area. During the descent phase (Second stage) pain is also caused by distension and stretching of the pelvic floor and perineum. These stimulations are transmitted via pudental nerve to the second to fourth nerves .

Normally, labor pain in primi mothers is unbearable, usually they get feared also when intensity increases. Treating pain in labor is important because coping of parturients with pain influences birth experiences perceived as good or bad. Vaginal birth without analgesia contributes to optimal health outcome for mother and baby. Acupressure, heat applications, hypnosis, breathing and relaxation techniques prefer to be an effective measures in relieving pain. Still the story of pain relief during childbirth is full of retractions and obscure fear. Labour pain is a major damper in the joy of having a baby. The thought of the pain that the mother have to go through makes them ill. Labour pain is a fact of life that cannot be avoided. Sometimes the pain is easier to bear when they understand what is happening in the body.

## **BACKGROUND OF THE STUDY**

In the early 20th century, most women gave birth in the comfort and familiarity of their own homes. As they delivers in their home setup it make them to be in contact with their family members which help them to be relaxed and automatically they gains the energy to tolerate the pain. But there were also high rates of maternal and infant mortality. Advances in obstetric technology and maternal–fetal medicine shifted birth from the home to the hospital.

The average annual number of births during a year per 1,000 persons in the population at midyear; also known as crude birth rate. The birth rate is usually the dominant factor in determining the rate of population growth. It depends on both the level of fertility and the age structure of the population. Birth rate is estimated around 18.7 births/1,000 population worldwide. This rate results in about 255 worldwide births per minute or 4.3 births every second (2014)

In India, Child birth was estimated around 2,72,71,000 births per year. Out of which, 72% undergone normal vaginal deliveries and 90% occurs in hospital settings. Institutional deliveries are mostly performed in our country. Among them, 88% of the normal deliveries are conducted through pharmacological measures. Non Pharmacological measures are still alien to our society. In order to gain trust of our society, accurate and current studies in this aspect is also essential.

For several decades, childbirth educators have focused on the alleviation or reduction of pain and suffering during the childbearing experience. The management of labor pain is a major goal of intrapartum care. There are two general approaches: pharmacologic and non-pharmacologic. Pharmacologic approaches are directed at

elimination of the physical sensation of labor pain, whereas nonpharmacologic approaches are largely directed towards prevention of suffering. A wide array of nonpharmacological pain relief measures, as well as pharmacological interventions, is presently available to women in labor.

Acupressure is one of the best home remedies to induce labour because it concentrates both on physical and emotional wellbeing of the women before and during labour. Acupressure means applying pressure on specific points of the body with our fingertips and thumbs to get pain tolerating capacity during labour. The specific points are found on shoulders, hands, lower legs and ankles.

The main purposes of acupressure is to relieve pain, nervousness, irritability, fatigue, shoulder tension, muscle cramps, lower backache and ankle pain. The application of acupressure decreases the labour pain and shortens the length of the delivery time. SP6 acupressure can be an effective management for women in labour.

Warm compress or heat application is easy to use and inexpensive that requires no prior practice and have minimal negative side effects. It is popular with labouring women for reduction of pain. Heat is typically applied to women's back, lower abdomen, groin or perineum. It mainly includes warm water bottle, warm compress, electric heating pads to avoid burns.

The main purpose and advantages of warm compress is to relieve pain, chills, joint stiffness, muscle spasm and increases connective tissue extensibility. It helps to improve the cervical dilatation rate and reduces pain during labour. The relaxation occurs due to warm compress to increase the pain tolerance through number of mechanisms including reduction in anxiety, increased uterine blood flow and decreased muscle tension. This enhances contraction that may help women to cope with labour pain and encourage a positive attitude.

## **NEED FOR THE STUDY**

Pain is a basic protective mechanism that alerts a person to something harmful in the body. Labour pain can be deleterious for mother and baby. It is a highly unpleasant and very personal sensation that can not be shared with others. Labour pain is a fluctuating cycle pain, appearing in waves, radiating and then subsiding in turn. The causes of labour pain are uterine contractions and dilatation of cervix which causes unbearable pain in mothers. The obstetricians and midwives are the health care

providers who need to provide current maternity services to manage a women who is in labour.

**Penny Simkin.P.T., (2013)** conducted a quasi-experimental study to investigate the effect of SP6 acupressure for uterine contraction pain in labor. The main incidence is for identifying the contraction and labour pain score of 60 samples from the population. Result shows that the uterine contraction pain in the observation group was obviously decreased after 15 minutes. Study concluded that Sanyinjiao (SP 6) can relieve the uterine contraction pain, and has no side effect to mother and infant. It is one of the safe, effective and simple non-drug analgesia methods. Moreover, the method of administration is also easy and not expensive. It can be used in any setup. So it is felt by the investigator as a need for the study.

**Hjelmstedt.A, Shenoy.S.T., (2013)** conducted a randomized controlled trial to evaluate the effect of acupressure during labor on nulliparous women's ratings of labor pain performed in a Public hospital in India. Seventy-one women was randomized to receive acupressure at acupressure point (SP6) on both legs during contractions over a 30-minute period (acupressure group), 71 women were received light touch at SP6 on both legs during the same period of time (touch group) and 70 women were received standard care (standard care group). Experience of in-labor pain was assessed by visual analog scale at baseline before treatment and also after treatment. A reduction of in-labor pain intensity was found in the acupressure group and was most noticeable immediately after treatment (acupressure group vs. standard care group  $p < 0.001$ ; acupressure group vs. touch group  $p < 0.001$ ). Acupressure seems to produce pain toleration in nulliparous women giving birth in a context in which social support and epidural analgesia are not available. However, the treatment effect is small which suggests that acupressure may be most effective during the initial phase of labor.

**Anne Theau-Yonneau., (2011)** conducted a prospective study to assess the effect of warm compress during labour among 88 women. The study has concluded that warm compress during labour facilitates good cervical dilatation and reduces pain and discomfort. The investigator as a midwife has come across many women suffering from agonizing pain and discomfort during labour. The investigator found that majority of women would like to receive Non – pharmacological pain relief strategies and avoid pharmacological measures probably due to their side effects. This prompted the researcher to carry out the study and it was found effective. Hence, heat

application can be recommended to adopt in the clinical practice to get relief from labour pain.

**StenerVictorin E., (2012)** conducted a quasi experimental study (pretest-posttest control group) on effectiveness of warm compress on labour pain. The sample of 60, second and third gravid women in labour who met inclusion criteria were randomly assigned to group 1, group 2 and group 3. All the three groups had usual care and support from health care professionals. Data was collected by using visual analogue scale and structured observational check list. The study revealed that the experimental group had reduction in pain and experienced comfort than the control group at 0.05 level of significance. The study concluded that warm compress is one of the simple, effective, noninvasive and cost effective method having no side effects on mother and infant.

From the above mentioned studies related to acupressure and warm compress, the researcher felt that a significant difference in pain relief after using non-pharmacological strategies, showing labour pain tolerating capacity and also increased uterine blood flow. It was concluded that the strategies were effective in reducing the intensity of pain in the studied parturient in labor. It was found by the investigator during her experience that the mothers who are admitted in labour have severe pain and discomfort. This being the major problem among every mothers, hence forth the investigator personally felt that there is a need for the above studies and statistics and was inspired in selection of this dissertation.

## **STATEMENT OF THE PROBLEM**

A comparative study to assess the effectiveness of acupressure and warm compress on labour pain during first stage of labour among Primigravidae mothers in selected hospitals at kanyakumari district.

## **OBJECTIVES OF THE STUDY**

The objectives of the study are

- To assess the labour pain score before and after administration of acupressure and warm compress among Primigravidae mothers in Experimental group I and II.
- To compare the post interventional labour pain score among Primigravidae mothers in Experimental group I and II.

- To determine the association between post interventional labour pain score with selected Socio demographic variables.

## **HYPOTHESES**

**H<sub>1</sub>** : There will be a significant difference between labour pain score before and after administration of acupressure and warm compress during first stage of labour among Primigravidae mothers in Experimental group I and II.

**H<sub>2</sub>** : There will be a significant difference between the post interventional labour pain score during first stage of labour among primigravidae mothers in Experimental group I and II.

**H<sub>3</sub>**: There will be a significant association between post interventional labour pain score during first stage of labour with selected Socio demographic variables of primigravidae mothers.

## **OPERATIONAL DEFINITION**

### **Assess**

In this study, it refers to an activity to estimate the outcome of acupressure and warm compress by monitoring the level of labour pain by numerical pain intensity scale during first stage of labour among primigravidae mothers.

### **Effectiveness**

In this study, it refers to the extent to which acupressure and warm compress has produced desirable effects on reduction in labour pain starts from three centimetre cervical dilatation till full dilatation of cervix monitored by numerical pain intensity scale among primigravida mothers.

### **Acupressure**

In this study, it refers to the application of pressure on shoulders, hands, lower legs and ankles by using fingertips and thumbs every 20 minutes for a duration of 15 minutes to encourage the labour by helping the cervix to ripen and dilate and stimulate uterine contractions.

### **Warm Compress**

In this study, it refers to the application of moist heat over sacral region by means of Turkish towel wrung over the hot water in 100-105<sup>0</sup>F every 20 minutes for a duration of 15 minutes.

## **First stage of Labour**

In this study, it refers to the time interval from three centimeter cervical dilatation to full dilatation.

## **Primigravidae mothers**

In this study, it refers to the women who become pregnant for the first time

## **ASSUMPTIONS**

The study assumes that

- acupressure promotes women's ability to cope with labour pain.
- acupressure may give pain tolerating capacity for primigravidae mothers.
- acupressure may relieve nervousness, irritability, muscle cramps, lower back ache, increased uterine blood flow and enhances uterine contractions and give pain tolerating capacity for primigravidae mothers.
- warm compress helps to improve cervical dilatation and pain relief.
- warm compress helps to relieve pain, joint stiffness, muscle spasm and muscle cramps.
- warm compress helps to increase connective tissue extensibility.

## **DELIMITATIONS**

The study was delimited to

- only 60 primigravidae mothers undergoing normal vaginal delivery.
- time duration of every 20 minutes for acupressure during first stage of labour.
- time duration of every 20 minutes for warm compress during first stage of labour.

## **PROJECTED OUTCOMES**

- The study will be helpful to identifying the effectiveness of acupressure and warm compress on labour pain among primigravidae mothers.
- The study will help to compare the post test effect of acupressure and warm compress on labour pain among primigravidae mothers.



- The study will help to identify the association between selected socio demographic variables with post test level of labour pain in Experimental group-I and II.

## **CONCEPTUAL FRAMEWORK**

Conceptual framework is interrelated concepts or abstractions that are assembled together in some rational schemes by virtue of their relevance to a common theme.

**-Polit&Beck, 2004**

Conceptual framework act as a building block for research study. The purpose of frame work is to make scientific findings meaningful and generalized .It guides the researcher's understanding not only 'what' of natural phenomena but also "why" of their occurrence. Conceptual model reflects the set of values, beliefs and preferences for research approach. Conceptual framework setup for this study is "the comfort theory" by Katherine Kolcaba.

### **The Comfort Theory**

This nursing theory was developed in 1990's by Katherine Kolcaba. Comfort is the immediate experience of being strengthened by having needs for relief, social and environment.

The study is based on the concept that administration of acupressure and warm compress for mother in labour will reduce labour pain. The concept included in comfort theory and health care need, comforting interventions, intervening variables, enchanced comfort, health and seeking behaviours and institutional integrity.

### **Health care need**

The health care needs are those identified by the patient in particular practice setting.

In this study, health care need is to improve the labour process by increasing pain tolerance.

### **Comforting interventions**

Comforting interventions are designed to address specific comfort needs of recipients. The comforting interventions used in the study are administration of acupressure and warm compress.

### **Intervening variables**

They are interacting forces that influence recipient's perception towards total comfort. This includes factors such as past experiences, age, attitude, emotional status, support system, prognosis and finances.

The intervening variables of the present study are demographic variables such as age, educational status, occupation, area of residence, family monthly income and type of family.

### **Enhanced comfort**

It is an immediate desirable outcome of nursing care, according to the comfort theory. In this study, it refers to the reduction in level of labour pain.

### **Health seeking behavior**

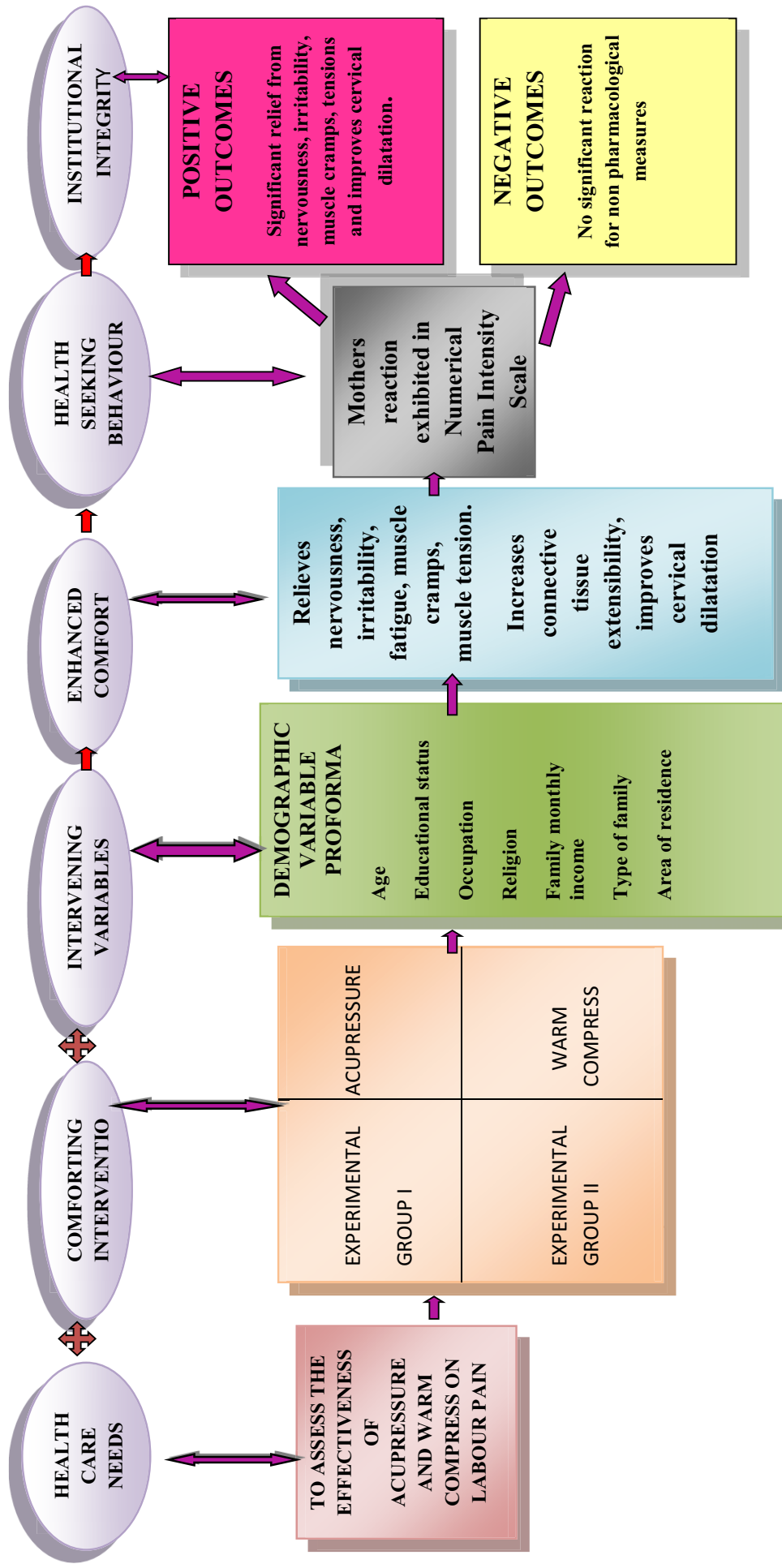
According to theory, health seeking behavior is the internal or external reaction exhibited by the patient, according to comfort theory. In this study, it refers to mothers reaction exhibited in numerical pain intensity scale.

### **Institutional integrity**

It is those protocols and procedures developed by an institution for specific patient or family applications after collecting evidence. In this study, it refers to outcome after interventions.

## **SUMMARY**

This chapter has dealt with the detailed information of labour pain, background of the study, need for the study, statement of the problem, objectives of the study, hypotheses, assumptions, operational definitions, delimitation, and conceptualframework.



**FIG: 1 CONCEPTUAL FRAMEWORK BASED ON COMFORT THEORY BY KATHERINE KOLCABAL (1990)**

## **CHAPTER-II**

### **REVIEW OF LITERATURE**

Review of literature is defined as a broad, comprehensive in depth, systematic and critical review of scholarly publications, unpublished scholarly print materials, audio visual materials and personal communications.

- **B.T.Basavanthappa**

Review of literature is an important step in the development of any research project. It helps the investigator to analyze what is already known about the topic and to describe methods of inquiry used in earlier work including the success and short coming. This chapter deals with the information collected with relevant to the present study through published and unpublished materials. These publications were the foundation to carry out the research work. Highly extensive review of literature pertaining to research topic was done to collect maximum information for laying foundation of the study.

Research literature were reviewed and organized under the following headings.

1. Empirical Literature related to labour pain perception
2. Empirical literature related to use of nonpharmacological measures for labour pain relief
3. Empirical Literature related to Acupressure on labour pain
4. Empirical Literature related to Warm compress on labour pain

#### **1. EMPIRICAL LITERATURE RELATED TO LABOUR PAIN PERCEPTION**

**Joyce Nilima James., (2012)** conducted a descriptive study to describe the quality and intensity of adolescent's pain during the progression of labour. The Gaston-Johansson Pain-O-Meter was administered to 33 adolescents during the three labor phases (2-4 cm, 5-7cm, and 8-10 cm) following a contraction. The most frequently selected sensory words were cramping in Phase I and pressing in Phases II and III. Miserable and killing were the most commonly chosen affective words during the three labour phases. The results showed that total pain intensity scores were highest during Phase III of labour and delivery. A t-test of independent samples found that quality and intensity pain scores for primiparous and multiparous adolescent participants were not significantly different during the progression of labour.

**Maniackam Ponniah., (2011)** conducted a descriptive study to assess the labour pain experience and intensity among 100 low risk Jordanian parturients who delivered vaginally in

labour room of a major hospital in the city of Amman. Three instruments, the numeric pain scale, a pain assessment questionnaire and demographic variable questionnaire were used to assess labour experiences and labour pain intensity levels. The results have shown that majority of parturients ( 81% ) who did not receive pain relief measures reported painful labour experiences and pain intensity levels as  $>8$  in stage I and 8.83 in stage II of labour on numerical pain intensity scale (ranging from zero – ten) . The study concluded that role of supporters and educators among maternity nurses and midwives need to improve considerably.

**Kunder Samuel Prakash., (2011)** conducted a study on perception of labour pain among mothers and their attending midwives in The Queen Elizabeth Hospital, South Australia. The study used Short Form Mc Gill Pain Questionnaire to assess labour pain for every 15 min during first stage of labour. The results have shown that both midwives and mothers pain interpretation scores were similar at mild and moderate pain levels, but have shown significant difference at severe pain levels at 0.05 level of significance. The study concluded that experience and perception of pain are subjective and thus remains difficult for an observer to estimate.

## **2. EMPIRICAL LITERATURE RELATED TO USE OF NON PHARMACOLOGICAL MEASURES FOR LABOUR PAIN RELIEF**

**Bucklin et al., (2005)** conducted a comparative study to compare the effect of acupuncture with transcutaneous electric nerve stimulation (TENS) and traditional analgesics for pain relief and relaxation during delivery with respect to pain intensity, birth experience, and obstetric outcome. Use of pharmacological and invasive methods was significantly lower in the acupuncture group (acupuncture vs. 17 traditional,  $p < 0.001$ ; acupuncture vs. TENS,  $p = 0.031$ ). Acupuncture did not influence the duration of labor or the use of oxytocin. Mean Apgar score at 5 minutes and umbilical cord pH value were significantly higher among infants in the acupuncture group compared with infants in the other groups. Acupuncture reduced the need for pharmacological and invasive methods during delivery and is a good supplement to existing pain relief methods.

**Cyan A.M.,(2007)**conducted a study to determine the effect of relaxation techniques on painrelief during labor. This study was carried out on 62 pregnant women referred to Fatemieh hospital during their labor. They were selected using convenience sampling and were divided randomly in two groups. The first group (control) received routine way of ward during their

labor and the second group (experimental group) went through the relaxation technique after training. The intensity of pain was determined using a standard pain number rating scale, and the behavioral reactions were recorded using an observational checklist. The statistical analysis of data showed significant difference in intensity of pain between the two groups ( $P = 0.0001$ ). Also there was a significant difference in behavioral reactions between the two groups ( $P < 0.0001$ ). Since the relaxation technique is easy to perform and without any risk and also has low expenses it is recommended for pain relief during labor.

**Madhugupta et al., (2008)** conducted a study to investigate the effect of applied relaxation training on reducing anxiety and perceived stress among pregnant women. A randomized controlled trial with a prospective pre-test-post-test experimental design was used. One hundred ten primigravid women (mean age=23.8 years) in their third trimester (mean of gestational age=20.2 weeks) were randomly assigned to experimental and control groups. The experimental group received routine prenatal care with applied relaxation training including breathing exercises, and the control group received only routine prenatal care. State/trait anxiety was measured with the Spiel Berger State-Trait Anxiety Inventory, and perceived stress was measured with the Cohen Perceived Stress Scale. There were significant reductions in state/trait anxiety and perceived stress (85%) for the experimental group compared to the control group after the intervention. The findings suggest beneficial effects of relaxation on reducing anxiety and perceived stress in pregnant women. 18

**Jane Yonnger., (2009)** conducted an evaluative study to determine the effect of selected antenatal exercise on outcome of labour in primigravid women in selected DK district hospital. A quasi experimental non-equivalent group was adopted by using a purposive sampling technique. The sample consisted of sixty primigravid women, thirty each in experimental and control groups. Teaching was given at the clinic and practice of exercises monitored. Data was collected during labour by an observation checklist. The findings of the study showed that the total duration of labour and standard deviation in experimental group was  $11.08 \pm 6.646$  hours whereas in the control group it was  $19.38 \pm 13.79$  hours. In the experimental group 95.29% of women demonstrated positive behavioural responses whereas in the control group 14.29% of women demonstrating the positive behaviour response. This study concluded that the practice of antenatal exercises have a positive effect on outcome of labour.

### **3. EMPIRICAL LITERATURE RELATED TO ACUPRESSURE ON LABOUR PAIN**

**Shariati Abbas., (2014)** conducted a single-blinded, randomized, control trial over a seven-month period, between October 2013 and April 2014, in Iran. The trial was approved by the Ethics Committee of Hormozgan University of Medical Sciences (HUMS), Iran to evaluate the effect of LI4 acupressure on labor pain and duration during the first stage of labor. Parturient women ( $n=149$ ) with singleton pregnancies in the active phase of spontaneous labor, without any medical or obstetric problems. Participants were placed into one of three groups: an LI4 acupressure group, a touching group, and a control group in which no pharmacological or non-pharmacological methods of pain relief were used. Pain intensity was measured by visual analogue scale before and after the intervention in the first stage of labor. Pressure or touch was applied for 30 minutes during uterine contractions. The difference in the pain scores between the acupressure and control group was statistically significant ( $p<0.001$ ) but there was no significant ( $p=0.942$ ) difference found in the duration of the first stage of labor between the three groups. The conclusion says that Acupressure is an effective, non-invasive, and easily applicable technique to reduce labor pain.

**Steiner Victorin.E., (2013)** conducted an experimental study to evaluate the effects of SP6 acupressure on labor pain and delivery time in women with labor. The result shows, there were significant differences between the groups in subjective labor pain scores at all time points following the intervention: immediately after the intervention; 30 minutes after the intervention; and 60 minutes after the intervention. The total labor time (3 cm dilatation to delivery) was significantly shorter in the SP6 acupressure intervention group than in the control group. The study concluded that SP6 acupressure was effective for decreasing labor pain and shortening the length of delivery time. SP6 acupressure can be an effective nursing management for women in labor.

**Lee et al., (2011)** evaluated the effects of SP6 acupressure on labor pain. 75 women in labor were randomly assigned to either the SP6 acupressure ( $n = 36$ ) or SP6 touch control ( $n = 39$ ) group using double-blinded method. Labor pain was measured four times using VAS. There were significant differences between the groups in pain scores at all times following the intervention: immediately after the intervention ( $P = 0.012$ ), 30 min after the intervention ( $P = 0.021$ ) and 60 min after the intervention ( $P = 0.012$ ). The total labor time (3 cm of dilatation to delivery) was significantly shorter in the SP6 acupressure intervention group than in the control group ( $P = 0.006$ ).

#### **4. EMPIRICAL LITERATURE RELATED TO WARM COMPRESS ON LABOUR PAIN**

**Hjelmstedt.A., (2012)** conducted a prospective study among 88 women who had warm compress for 30 minutes - 2 hours during first stage of labour after a strict normal pregnancy. The control group consisted of seventy two women during pregnancy and during labour. Apart from warm compress, the two groups followed the usual obstetric procedures of the department. The results showed that cervical dilatation for experimental group was 2.5 cms compared with 1.25 cms for control group. Mean pain score in experimental group was higher before the bath and they experienced pain relief during and after bath which was not observed in control group.

**Marjan. A. Shirvani., (2012)** conducted a quasi experimental study (pretest posttest control group) on effectiveness of warm compress on labour pain. The sample consisted of 60, second and third gravid women in labour who met inclusion criteria. They were randomly assigned to group 1, group 2 and group 3. All the three groups had usual care and support from health care professionals. Data was collected by using visual analogue scale and structured observational check list. The study revealed that the experimental group had reduction in pain and experienced comfort than the control group at 0.05 level of significance. The study concluded that warm compress is one of the simple, effective, non-invasive and cost effective method having no side effects on mother and infant.

**Carol Douglas., (2011)** conducted a randomized controlled trial on women's experience and midwives opinion on use of perineal warm packs in second stage of labour. Out of Seven hundred and seventeen primi women, 360 women were applied warm packs on perineum and 375 women received standard care. The findings stated that warm packs were highly acceptable to both women and midwives as a mean of relieving pain during the last second stage of labour. Almost the same number of women (79.7%) and midwives (80.4%) felt that warm packs reduces pain during the birth. Both women and midwives were positive about using warm packs in the future. Majority of the women (85.7%) said that they would like to use perineal warm packs again for their next birth and about 86.6% of women would like to recommended for their friends. Like wise 91% of midwives were positive about using them in the future as a part of routine maternity care in second stage of labour. The study concluded that warm packs on perineum in second stage of labour were highly acceptable and



effective that helps to relieve perineal pain and increases comfort.

**Lee Ann Sylvia Brown., (2011)** conducted a randomized clinical trial to investigate the effect of intermittent local heat and cold on pain intensity and child birth outcomes in nulliparous women admitted in labor unit in Emam Ali and ShahidRajai Hospitals (north of Iran, 2011). Sixty-four parturient women were recruited by purposive sampling and randomly allocated to intervention (32 participants) and control (32 participants) group. Participants in two groups were matched through blocking by body mass index(BMI) based on <19.8, 19.8-25, and >25 and status of membranes in the onset of active phase (rapture and intact). Inclusion criteria were nulliparous women between the age group of 18 to 35 years, gestational age between 37 to 41 weeks, single fetus, cephalic presentation, and beginning of the active phase of labor (dilatation of 3 to 4 cm). There were no significant differences in demographic and midwifery characteristics and the baseline pain between two groups. The pain was significantly lower in intervention group during the first and second phases of labor. The conclusion shows that Intermittent local heat and cold therapy is a non pharmacological, safe and effective method to relieve labour pain.

## **SUMMARY**

This chapter had dealt the review of literature related to labour pain perception, acupressure and warm compress. In brief, the literature review had provided an understanding and broadened the investigator's outlook necessary for designing the conceptual framework, research design and construction of the study tool.

## **CHAPTER-III**

### **RESEARCH METHODOLOGY**

Research methodology involves the systematic procedures by which the researcher starts from the identification of the problem to its final conclusion. It involves steps, procedure and strategies for gathering and analyzing data in a research investigation.

**Denise F. Polit (2011)**

This chapter deals with the research methodology adapted for the proposed study and the different steps undertaken after gathering and organizing data for the investigation. It includes research approach, research design, variables, settings, population, sample, sample size and criteria for sample selections. Sampling techniques, development of the tool, validity, reliability, pilot study, data collection procedure, plan for data analysis and ethical clearance.

The present study aimed at determining the effectiveness of acupressure and warm compress on reducing labour pain during first stage of labour among primigravidae mothers in selected hospital, kanyakumari district.

#### **RESEARCH APPROACH**

A research approach tells the researcher what to collect and how to analyze it. It also suggest possible conclusion to be drawn from the data, in view of the nature of the problem under study and to accomplish the objectives of the study.

**Densie F Polit(2011)**

The investigator examined casual relationship to determine the effect of one variable to another. It involved implementing intervention and examining the effect of acupressure and warm compress in using selected methods of measurements. The quantitative research approach was considered to be the most appropriate method for this study.

#### **RESEARCH DESIGN**

Research design is the researcher's overall plan for answering the researcher question.

**Polit(2004)**

Research design is the arrangement of condition that aims to combine relevance to the research purpose with economy in procedure. To evaluate the effect of two selected nursing

interventions, the investigator selected quasi experimental design, comparative experimental design .

<b>E1</b>	<b>O1</b>	<b>X1</b>	<b>O2</b>
<b>E2</b>	<b>O3</b>	<b>X2</b>	<b>O4</b>

E1,E2 = Experimental group I and II

O1, O3 =Pretest assessment of labour pain before administering acupressure and warm compress

O2,O4 = Posttest assessment of labour pain after administering acupressure and warm compress

X1,X2 = Administration of acupressure and warm compress

## **VARIABLES**

Variables are defined as “An attribute that varies, that is, takes on different values”.

**Denise F. Polit (2011)**

Variables are the qualities, properties, or characteristics of persons , things or situations that change or vary and are manipulated or measured in research.

### **DEPENDENT VARIABLE**

Dependent variable is defined as “the variable hypothesized to depend on or be caused by another variable of interest”.

**Denise.F.Polit (2011)**

In this study, the dependent variable is labour pain.

### **INDEPENDENT VARIABLE**

Independent variable is defined as “The variable that is believed to cause or influence the dependent variable”.

**Denise.F. Polit (2011)**

In this study, the independent variables are the two selected nursing interventions such as administration of

- Acupressure
- Warm compress

## **EXTRANEOUS VARIABLE**

A variable that confronts the relationship between the independent and dependent variable and that needs to be controlled in the research design

**Denise.F. Polit (2011)**

In this study, it refers to age, education, occupation, area of residence, family monthly income, type of family and religion.

## **SETTING**

Setting refers to the physical location and condition in which data collection takes place.

**Denise.F. Polit**

The setting was chosen on the basis of the availability of samples and the cooperation extended by the management. The study is planned to be conducted in Annammal Hospital- Kuzhithurai, PPK Hospital- Marthandam and Ratna Hospital- Swamiyarmadam. All the three hospitals are specialized in the field of obstetrics and gynaecology and also in the infertility treatment.

Annammal Hospital is 150 bedded hospital with daily outpatient of 30 in obstetrics and gynaecology department. There are around 25 normal deliveries each month. PPK Hospital is situated at Marthandam junction. It is a 200 bedded hospital with normal delivery around 30 per month. Ratna Hospital is also an obstetrics and gynaecology specialty hospital. It has daily outpatient of around 40 per month and statistics of more than 30 normal deliveries per month.

## **POPULATION**

A population is defined as “the entire set of individuals or objects having some common characteristics”.

**Denise.F. Polit**

In this study, the population consists of primigravidae mothers during first stage of labour in selected hospitals at kanyakumari districts.

## **TARGET POPULATION**

Target population is the group of population that the researcher aim to study and to whom the study findings will be generalized.

**Denise.F. Polit (2011)**

In this study, the target population comprises of primigravidae mothers during first stage of labour in selected hospitals at kanyakumari district.

### **ACCESSIBLE POPULATION**

The accessible population is the list of population that the researcher finds in study.

**Denise.F. Polit (2011)**

The accessible population in this study was primigravidae mothers during first stage of labour in Annammal Hospital- Kuzhithurai, PPK Hospital- Marthandam and Ratna Hospital- Swamiyarmadam atkanyakumari district.

### **SAMPLE**

Sample is defined as “a subset of a population comprising those selected to participate in the study”.

**Denise.F. Polit**

The sample consists of primigravidae mothers during first stage of labour in selected hospitals at kanyakumari district.

### **SAMPLE SIZE**

Sample size is defined as, “the number of people who participate in the study”.

**Denise.F. Polit**

The sample size for the study comprises of 60 primigravidae mothers who satisfied the inclusion criteria, 30 primigravidae mothers in each experimental group.

### **SAMPLING TECHNIQUE**

Sampling technique is defined as “the process of selecting a portion of the population to represent the entire population”.

**Denise.F. Polit (2011)**

The participants of the study were selected by nonprobability convenient sampling technique. The researcher selected the participants based on the inclusion criteria.

### **SAMPLING CRITERIA**

Sampling criteria involves selecting the cases that meet some predetermined criterion of importance. The criteria for sample selection are mainly depicted under two headings, which include the inclusion criteria and exclusion criteria.

## **INCLUSION CRITERIA**

The study included primigravidae mothers who

- were willing to participate in the study
- had 3cm cervical dilatation
- were in first stage of labour
- were undergoing normal vaginal delivery

## **EXCLUSION CRITERIA**

The study excluded primigravidae mothers who

- were at high risk labour
- were undergoing LSCS

## **SELECTION AND DEVELOPMENT OF TOOL**

Tool development is a complex and time consuming process. It consist of defining the construct to be measured, formulating the items, assessing the items for content validity, developing instructions for respondents, pre-testing, estimating the reliability and conducting pilot-study.

Data collection is the gathering of information needed to address the research problem. Data collection instruments were developed through an extensive review of literature.

The tool was prepared on the basis of objectives of the study. The following methods were used for the development of the tool by the investigator.

- Review of literature from books, journals, other publications and websites.
- Discussion with subject experts like guides, obstetricians.
- Review of the standardized tool.

The researcher developed demographic variable Proforma, Numerical pain scale to determine the effectiveness of administering acupressure and warm compress in reducing labour pain among primigravidae mothers during first stage of labour.( No pain 0), (mild:1-3), (moderate:4-6),( severe:7-10).

## RESEARCH TOOL

- Socio Demographic variable proforma
- Numerical pain intensity scale

## DESCRIPTION OF TOOL

Researcher developed demographic variable Proforma and Numerical pain intensity scale to determine the effectiveness of administration of acupressure and warm compress.

### TOOL 1

#### SOCIO DEMOGRAPHIC VARIABLE PROFORMA

Socio Demographic variable Proforma was developed to obtain baseline characteristics. It is the first part of tool which consists of age, educational status, occupation, area of residence, family monthly income and type of family.

### TOOL II

#### NUMERICAL PAIN INTENSITY SCALE

Numerical pain Intensity scale is used to assess the level of pain experienced by parturient mothers before and after administration of acupressure and warm compress. The participants should make a tick mark( ) according to the level of pain

LEVEL OF PAIN	SCORES
NO PAIN	0
MILD PAIN	1-3
MODERATE PAIN	4-6
SEVERE PAIN	7-10

## VALIDITY OF THE TOOL

Validity is a degree to which an instrument measures what is intended to measure.

**-Denise.F. Polit(2011)**

To ensure the content validity, the prepared data collection tool along with the problem statement, objectives, operational definitions, hypothesis, sampling techniques and the criteria

checklist designed for the validation were submitted to ten experts including eight obstetrics and gynaecology nursing personnel, one gynaecologist and one statistician. The experts were requested to judge the items for relevance, appropriateness and degree of agreement for the study. All the experts gave their consensus and the tool was finalized.

## **RELIABILITY**

Reliability is the degree of consistency of dependability with which an instrument measures the attribute it is designed to measure.

- **Denise. F. Polit (2011)**

The reliability of Numerical Pain Intensity Scale was checked by using Karl Pearson co-efficient formula. In this study, the reliability of the tool was 0.9. Thus the tool was found reliable.

## **PILOT STUDY**

Pilot Study is defined as “a small scale version or trial run, done in preparation of a major study”.

- **Denise. F. Polit (2011)**

Pilot study was conducted in Annammal hospital, Kuzhithurai during the month of November for a period of one week. Initial permission was sought from the institution and formal permission was sought from the medical officers for conducting the study. Consent was obtained from the participants. 6 primigravidae mothers were selected. Three participants were administered acupressure and the other three were administered warm compress. Results of the pilot study gave the evidence that the tools were reliable. Finding of the pilot study also revealed that it was feasible and practicable to conduct the study at selected settings and the criteria measures were found to be effective.

## **DATA COLLECTION PROCEDURE**

Data collection is the gathering of information needed to address the problem. Initial permission was obtained from the ethical committee of Annammal College of nursing, Kuzhithurai. Formal permission was obtained from the respective authorities of selected hospitals at kanyakumari district. At first a rapport was established with the primigravidae mothers and the purpose of the study was explained to them. Primigravidae mothers who had undergone normal vaginal delivery were selected. Verbal and written consent was taken from the primigravidae mothers. The samples of 60 primigravidae mothers was selected by using



non- probability convenient sampling technique. Socio Demographic variables were obtained. The pre interventional test was done on first by using numerical pain intensity scale. Acupressure was administered to experimental group I and warm compress was administered to experimental group II every 20 minutes for a duration of 15 minutes. The post interventional level of labour pain was evaluated by numerical pain intensity scale. Towards the end, the researcher terminated the data collection procedure by thanking the primigravidae mothers for their co-operation.

Data collection profile include

Sl No	Date	Sample No	Hospitals Name					
			Annammal Hospital		PPK Hospital		Rathna Hospital	
			Pretest	Posttest	Pretest	Posttest	Pretest	Posttest
1	4/12/15	3			4/12/15	4/12/15		
2	5/12/15	3			5/12/15	5/12/15		
3	6/12/15	4			6/12/15	6/12/15		
4	7/12/15	4			7/12/15	7/12/15		
5	8/12/15	3					8/12/15	8/12/15
6	10/12/15	4					10/12/15	10/12/15
7	11/12/15	3					11/12/15	11/12/15
8	12/12/15	3					12/12/15	12/12/15
9	13/12/15	4	13/12/15	13/12/15				
10	14/12/15	4	14/12/15	14/12/15				
11	16/12/15	5	16/12/15	16/12/15				
12	17/12/15	4	17/12/15	17/12/15				
13	20/12/15	3			20/12/15	20/12/15		
14	21/12/15	5			21/12/15	21/12/15		
15	22/12/15	4			22/12/15	22/12/15		
16	23/12/15	4					23/12/15	23/12/15

## **PLAN FOR DATA ANALYSIS**

The data analyzes is the systemic organization and the synthesis of research data and testing of research hypothesis by using the obtained data.

**-Polit and Beck (2007)**

The data collected was analysed using descriptive and inferential statistics such as mean, standard deviation, chi square, paired 't' test and unpaired 't' test.

## **DESCRIPTIVE STATISTICS**

- Frequency and percentage distribution was used to assess the demographic variables of primigravidae mothers who are undergoing normal vaginal delivery.
- Frequency and percentage distribution was used to assess the level of labour pain.
- Mean and standard deviation was used to assess the effectiveness of acupressure and warm compress.

## **INFERENCEAL STATISTICS**

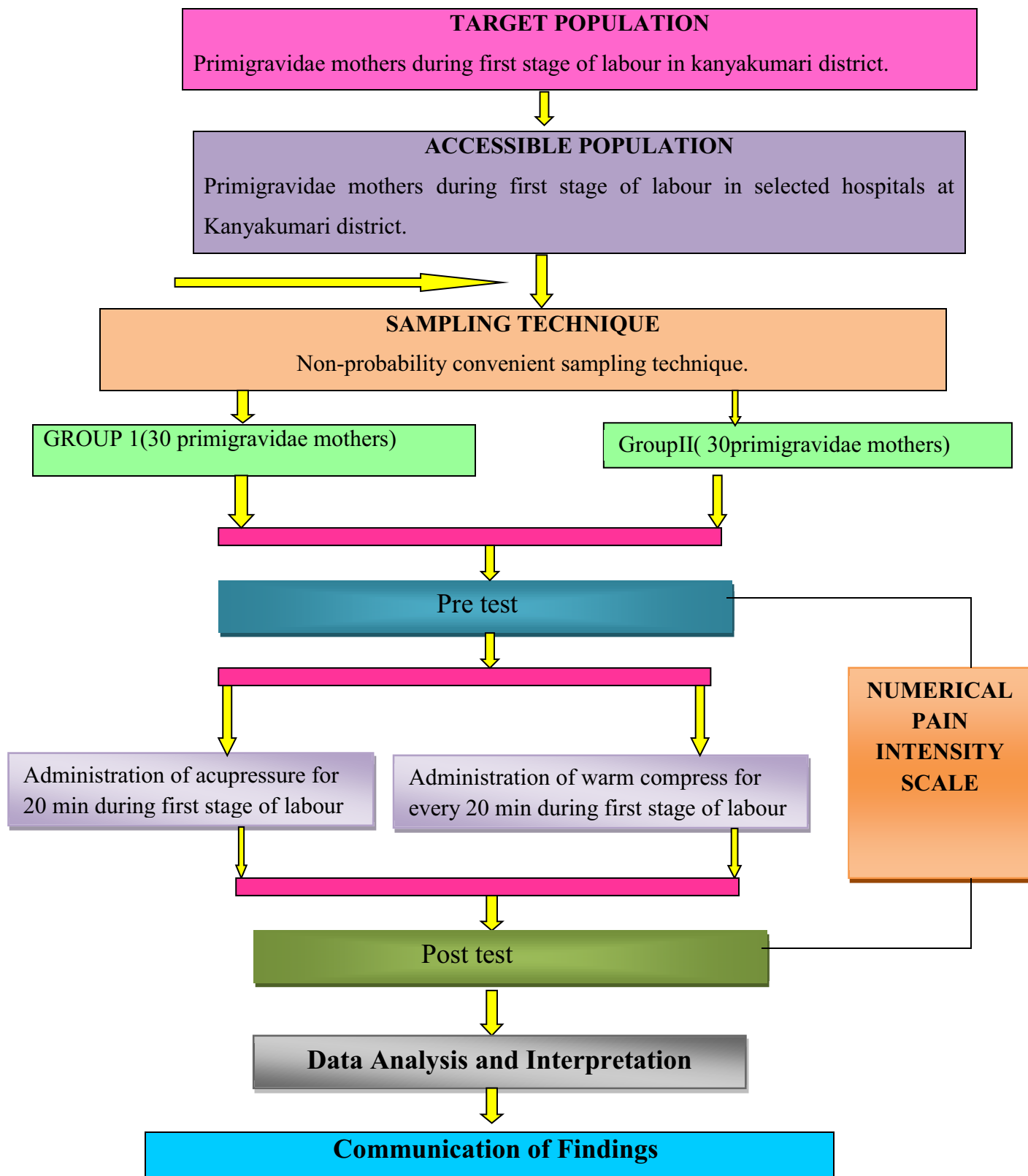
- Unpaired 't' test was used to compare the posttest level of labour pain between Experimental group I and II.
- Unpaired 't' test was used to evaluate the effectiveness of acupressure and warm compress in Experimental group I and II.
- Chi- square test was used to find out the association between the posttest level of labour pain with the selected socio demographic variables in study group I and II.

## **ETHICAL CLEARANCE**

- Permission was obtained from the ethical committee of Annammal Hospital as well as selected hospitals at kanyakumari district.
- Written consent was obtained from each primigravidae mothers before starting the data collection.
- Assurance was given to each primigravidae mothers regarding the confidentiality of the data collected.

## **SUMMARY**

This chapter has dealt with the selection about the research approach, research design, variables, setting of the study, population, selection criteria, development of tool, validity, reliability, pilot study, data collection, plan for data analysis and ethical clearance.



**FIG 2: SCHEMATIC PRESENTATION OF RESEARCH DESIGN**

## **CHAPTER IV**

### **DATA ANALYSIS AND INTERPRETATION**

The analysis is defined as the method of organizing data in such a way that the research question can be answered.

**(Polit and Beck, 2004)**

Interpretation is the process of the result and of examining the simplification of findings with in a boarder context.

**(Polit and Beck, 2004)**

Analysis and interpretation of data of this study was done using descriptive and inferential statistics.

### **OBJECTIVES OF THE STUDY**

The objectives of the study were

- To assess the labour pain score before and after administration of acupressure and warm compress among primigravidae mothers in Experimental group I and II.
- To compare the post interventional labour pain score among Primigravidae mothers in Experimental group I and II.
- To determine the association between post interventional labour pain score with selected Socio demographic variables.

### **ORGANIZATION OF THE FINDINGS**

Data collected were edited, tabulated, analyzed, interpreted and findings obtained were presented in the form of tables and diagrams represented under the following sections

#### **Section – I**

Data pertaining to frequency and percentage distribution of socio demographic variables among Primigravidae mothers in Experimental group I and II.

#### **Section – II**

Data pertaining to frequency and percentage distribution of pretest and posttest level of labour pain by using Numerical Pain Intensity Scale among Primigravidae mothers in Experimental group - I

### **Section – III**

Data pertaining to frequency and percentage distribution of pretest and posttest level of labour pain by using Numerical Pain Intensity Scale among Primigravidae mothers in Experimental group-II.

### **Section – IV**

Data pertaining to the effectiveness of acupressure and warm compress on labour pain during first stage of labour among Primigravidae mothers in Experimental group I and II.

### **Section – V**

Data pertaining to the post test effect of acupressure and warm compress on labour pain among Primigravidae mothers in Experimental group-I and II.

### **Section – VI**

Data pertaining to association between posttest level of labour pain and selected socio demographic variables among Primigravidae mothers in Experimental group-I

### **Section – VII**

Data pertaining to association between posttest level of labour pain and selected socio demographic variables among primigravidae mothers in experimental group-II

## SECTION – I

**Table 1: Data pertaining to frequency and percentage distribution of socio demographic variables among Primigravidae mothers in Experimental group - I and II**

N=60

S. No	Socio demographic variables	Experimental group I n= 30		Experimental group II N= 30		$\chi^2$	P value
		F	%	f	%		
1	<b>Age (in years)</b>					0.48	df-3 0.923
	a) $\leq 20$	2	6.67	3	10.00		
	b) 21-25	13	43.33	12	40.00		
	c) 26-30	12	40.00	13	43.33		
	d) $\geq 30$	3	10.00	2	6.67		
2	<b>Education</b>					1.678	df-6 0.94
	a) Illiterate	0	0	0	0		
	b) Primary school certificate	5	16.66	6	20.00		
	c) Middle school certificate	8	26.67	5	16.66		
	d) High school certificate	7	23.33	6	20.00		
	e) Intermediate or post high school diploma	4	13.33	7	23.33		
	f) Graduate or post graduate	2	6.67	2	6.67		
	g) Professional or Honours	2	6.67	2	6.67		
	h) Others	2	6.67	2	6.67		

3	<b>Occupation</b>						
	a) Profession	3	10.00	2	6.67	0.722	df-4 0.94
	b) Semi profession	0	0.00	0	0.00		
	c) Shop owners	0	0.00	0	0.00		
	d) Skilled worker	7	23.33	8	26.67		
	e) Semiskilled worker	4	13.33	5	16.66		
	f) Unskilled worker	8	26.67	9	30.00		
	g) Unemployed	8	26.67	6	20.00		
4	<b>Religion</b>						
	a) Hindu	15	50.00	13	43.33	0.28	df-2 0.866
	b) Muslim	13	43.33	15	50.00		
	c) Christian	2	6.67	2	6.67		
	d) Others	0	0.00	0	0.00		
5	<b>Family monthly income</b>						
	a) >25000	0	0.00	0	0.00	0.364	df-4 0.99
	b) 20000-24999	3	10.00	3	10.00		
	c) 15000-19999	12	40.00	10	33.33		
	d) 10000-14999	10	33.33	12	40.00		
	e) 5000-9999	4	13.33	4	13.33		
	f) <5000	1	3.33	1	3.33		
6	<b>Type of family</b>						
	a) Nuclear	15	50.00	13	43.33	0.28	df- 2 0.866
	b) Joint	13	43.33	15	50.00		
	c) Broken	2	6.67	2	6.67		
	d) Extended family	0	0.00	0	0.00		
7	<b>Area of residence</b>						
	a) Rural	22	73.33	23	76.67	0.089	df-1 0.76
	b) Semirural	0	0.00	0	0.00		
	c) Urban	8	26.67	7	23.33		
	d) Semi urban	0	0.00	0	0.00		

**Table 1** represents the frequency and percentage distribution of Primigravidae mothers with selected socio demographic variables including Age, Education, Occupation, and Religion, Family monthly Income, Type of Family and Area of residence.

With regard to age, majority of 13(43.33%) falls under age group of 21-25 years in Experimental group-I and similar proportion between 26-30 years in Experimental group-II. Also a least proportion of 2(6.67%) were found among age group less than 20years in Experimental group I and similar proportion of greater than 30 in Experimental group II.

Regarding educational status, in Experimental group-I 8(26.67%) acquired middle school certificate, 7(23.33%) had high school certificate, 5(16.66%) completed primary school certificate, 4(13.33%) undergone post high school diploma course and minimum number of graduates and professionals were found in proportion of 2(6.67%). In Experimental group-II 7(23.33%) completed post high school diploma, 6(20.00%) acquired primary and high school certificates and minimum number of graduates and professionals were found in proportion of 2(6.67%).

With regard to occupational status, among patients in Experimental group-I a proportion of 8(26.67%) were unskilled workers and unemployed, 7(23.33%) were skilled workers, semiskilled workers and professionalist were 4(13.3%) and 3(10.00%) respectively. In Experimental group-II, 9(30.00%) were unskilled worker, 8(26.67%) were skilled worker, minimum number of professionalist were found in proportion of 2(6.67%).

With regard to religious status, majority of 15(50%) were Hindus, 13(43.33%) were Muslims in Experimental group-I, whereas in Experimental group –II, Muslims hold the leading proportion of 15(50%), next Hindus with 13(43.33%). Comparatively among both the groups Christians were found limited in number of 2(6.67%). Regarding Family monthly income, in Experimental group I, 12(40.00%) were earning between 15000-19999, and similar proportion in between 10000-14999 in Experimental group II. Also the least of 1(3.33%) is earning less than 5000 per month in both Experimental group I and II.

With regard to type of family, majority of 15(50%) belongs to Nuclear family, 13(43.33%) belongs to Joint family in Experimental group-I, whereas in Experimental group –II Joint family hold the leading proportion of 15(50%), next Nuclear family



with 13(43.33%). Comparatively among both the groups broken family were found limited in number of 2(6.67%) respectively.

Regarding area of residence, majority of study participants in Experimental group-I and II were from rural background of 22(73.33%) and 23(76.67%) respectively.

## Section –II

### Data pertaining to frequency and percentage distribution of pretest and posttest level of labour pain by using Numerical pain Intensity Scale among primigravidae mothers in Experimental group –I

#### Testing of hypothesis

**H<sub>1</sub>:** There will be a significant difference between the pre and post interventional level of labour pain among primigravidae mothers in Experimental group I.

**Table 2:** Data pertaining to frequency and percentage distribution of pretest and posttest level of labour pain by using Numerical Pain Intensity Scale among primigravidae mothers in Experimental group –I

n=30

Parameters	Level of pain	Experimental group I				$\chi^2$	P value
		Pre test		Post test			
		F	%	f	%		
Numerical Pain Intensity Scale	No pain	0	0	0	0	8.864	df-1 0.0029 **
	Mild	0	0	0	0		
	Moderate	5	16.67	16	53.33		
	Severe	25	83.33	14	46.66		
	<b>TOTAL</b>	<b>30</b>	<b>100</b>	<b>30</b>	<b>100</b>		

\*\* P<0.01

**Table 2** shows the frequency and percentage distribution of pre and post interventional level of labour pain among primigravidae mothers in Experimental group I. During pretest, majority of the primigravidae mothers, 5(16.67%) had moderate pain and 25(83.33%) had severe pain whereas the intensity of pain reduced

during posttest of which only 14(46.66%) had severe pain and 16(53.33%) had moderate pain. The chi square value for Experimental group I is (8.864) and the P value is (0.0029) which shows that it is significant at the level of  $P < 0.01$ .

### Section – III

#### Data pertaining to frequency and percentage distribution of pretest and posttest level of labour pain by using Numerical Pain Intensity Scale among primigravidae mothers in Experimental group-II

##### Testing of hypothesis

**H<sub>1</sub>:** There will be a significant difference between the pre and post interventional level of labour pain among primigravidae mothers in Experimental group II

**Table 3:** Data pertaining to frequency and percentage distribution of pretest and posttest level of labour pain by using Numerical Pain Intensity Scale among primigravidae mothers in Experimental group –II

n=30

Parameters	Level of pain	Experimental group II				$\chi^2$	P value
		Pre test		Post test			
		f	%	f	%		
Numerical Pain Intensity scale	No pain	0	0	0	0	21.6	df-1 0.0000336 ****
	Mild	0	0	0	0		
	Moderate	6	20	24	80		
	Severe	24	80	6	20		
	<b>TOTAL</b>	<b>30</b>	<b>100</b>	<b>30</b>	<b>100</b>		

\*\*\*\*  $P < 0.0001$

**Table 3** shows the frequency and percentage distribution of pre and post interventional level of labour pain among primigravidae mothers in Experimental group II. During pretest, majority of the primigravidae mothers, 6(20%) had moderate pain and 24(80%) had severe pain whereas during the post test, the intensity of pain reduced and only 6(20%) had severe pain and 24(80%) had moderate pain. The chi square value for Experimental group II is (21.6) and the P value is (0.0000336) which shows that it is highly significant at the level of  $P < 0.0001$ .

Hence from the Table 2 and 3, it was clear that there is difference between pre and post interventional level of symptoms. Hence the research hypothesis H1 was accepted.

#### Section – IV

### Data pertaining to posttest effect of acupressure and warm compress on labour pain during first stage of labour among primigravidae mothers in experimental group I and II.

#### Testing of hypothesis

**H<sub>2</sub>:** There will be a significant difference between post interventional level of labour pain among primigravidae mothers in experimental group I and II.

**Table 4:** Data pertaining to the effectiveness of Acupressure and warm compress on labour pain among primigravidae mothers in experimental group I and II.

N=60

Level of pain	Experimental group I		Experimental group II		$\chi^2$	P value
	f	%	f	%		
No pain	0	0	0	0	4.8	df-1 0.028 *
Mild	0	0	0	0		
Moderate	16	53.33	24	80		
Severe	14	46.66	6	20		
<b>Total</b>	<b>30</b>	<b>100</b>	<b>30</b>	<b>100</b>		

**\*P<0.01**

**Table 4** depicts the frequency and percentage distribution of posttest level of labour pain among primigravidae mothers in Experimental group I and II. It shows that in Experimental group I, 16(53.33%) had moderate pain and 14(46.66%) had severe pain. In Experimental group II, 24(80%) had moderate pain and 6(20%) had severe pain. It shows the difference between two techniques which was used as

aintervention in both groups, the chi-square value is (4.8) and P value is (0.028), which is significant. That is there is difference between Acupressure and warm compress on labour pain among primigravidae mothers.

This shows that there was significant difference between Acupressure and warm compress on labour pain among primigravidaemothers in Experimental group I and II. Hence the research hypothesis H2 accepted.

### Section – V

### Data pertaining to the effectiveness of acupressure and warm compress on labour pain among Primigravidae mothers in Experimental group-I and II

#### Testing of hypothesis

**H<sub>3</sub>:** There is a significant difference between Acupressure and warm compress technique.

**Table 5:** Data pertaining to the effectiveness of Acupressure and warm compress on labour pain among primigravidaemothers in experimental group I and II.

N=60

Variable	Post test		Paired t test	df	P value
	Mean	SD			
Experimental group I	3.3	1.37	4.3884	58	0.0001 ***
Experimental group II	4.8	1.28			

\*\*\* P< 0.001

Table 5 shows that In Experimental group I, the posttest mean score for level of labour pain is 3.3 with standard deviation of 1.37 and in Experimental group II, the posttest mean score for level of labour pain is 4.8 with standard deviation of 1.28. This shows that the mean post test score of level of labour pain in Experimental group

I was lower than the mean post test score in Experimental group II. Also the table value (2.0000) was less than the calculated value (4.3884) which shows that warm compress was more effective than the acupuncture.

## Section – VI

### Data pertaining to association between posttest level of labour pain and selected socio demographic variables among Primigravidae mothers in Experimental group-I

#### Testing of Hypothesis

**H<sub>3</sub>:** There is a significant association between posttest level of labour pain among primigravidae mothers with selected demographic variables in Experimental group I

**Table 6 :** Data pertaining to association between posttest level of labour pain and selected socio demographic variables among primigravidae mothers in experimental group-I.

n=30

S. No	Socio Demographic Variables	Experimental group I				$\chi^2$	P value
		Level of Labour pain					
		No pain	Mild	Moderate	Severe		
1	<b>Age (in years)</b>					7.979	df-3 0.046 *
	a) $\leq 20$	0	0	0	2		
	b) 21-25	0	0	7	6		
	c) 26-30	0	0	9	3		
	d) $\geq 30$	0	0	0	3		
2	<b>Education</b>					8.748	df-6 0.18
	a) Illiterate	0	0	0	0		
	b) Primary school certificate	0	0	2	3		
	c) Middle school certificate	0	0	5	3		
	d) High school						

	certificate	0	0	4	3		
	e) Intermediate or post high school diploma						
	f) Graduate or post graduate	0	0	4	0		
	g) Professional or Honours	0	0	0	2		
	h) Others	0	0	0	2		
		0	0	1	1		
<b>3</b>	<b>Occupation</b>						
	a) Profession	0	0	0	3		
	b) Semi profession	0	0	0	0		
	c) Shop owners	0	0	0	0	21.25	df-4
	d) Skilled worker	0	0	5	2		0.00028
	e) Semiskilled worker	0	0	3	1		***
	f) Unskilled worker	0	0	8	0		
	g) Unemployed	0	0	0	8		
<b>4</b>	<b>Religion</b>						
	a) Hindu	0	0	9	6		
	b) Muslim	0	0	7	6	2.56	df-2
	c) Christian	0	0	0	2		0.278
	d) Others	0	0	0	0		
<b>5</b>	<b>Family monthly income</b>						
	a) >25000	0	0	0	0		
	b) 20000-24999	0	0	2	1	3.95	df-4
	c) 15000-19999	0	0	4	8		0.41
	d) 14999-10000	0	0	6	4		
	e) 9999-5000	0	0	3	1		
	f) <5000	0	0	1	0		
<b>6</b>	<b>Type of family</b>						
	a) Nuclear	0	0	10	5	2.236	df-2
	b) Joint	0	0	5	8		0.326

	c) Broken	0	0	1	1		
	d) Extended family	0	0	0	0		
<b>7</b>	<b>Area of residence</b>						df-1
	a) Rural	0	0	16	6	12.468	0.0004
	b) Semirural	0	0	0	0		***
	c) Urban	0	0	0	8		
	d) Semi urban	0	0	0	0		

\*  $P < 0.05$  \*\*\*  $P < 0.001$

**Table 6** indicates the sustentative summary of chi-square analysis, which was used to bring out the association between posttest level of labour pain and their selected socio demographic variables in Experimental group I.

The table shows that there was a significant association between the level of labour pain and selected demographic variable, Age, chi-square is (7.979) with P value (0.046) at  $P < 0.05$ , in Occupation, chi square is (21.247) with P value (0.00028) and area of residence, chi square is (12.468) with P value (0.0004) at P value  $< 0.001$ . There is no significant association between level of pain and selected demographic variable such as educational status, Religion, family monthly income and type of family. Hence the research hypothesis H2 was partially accepted in Experimental group I.

## Section – VII

### **Data pertaining to association between posttest level of labour pain and selected socio demographic variables among Primigravidae mothers in experimental group-II.**

#### **Testing of Hypothesis**

**H<sub>3</sub>:** There is a significant association between posttest level of labour pain among Primigravidae mothers with selected demographic variables in Experimental group II

**Table 7:** Data pertaining to association between posttest level of labour pain and selected socio demographic variables among Primigravidae mothers in Experimental group-II.

n=30

S. No	Socio Demographic Variables	Experimental group II				$\chi^2$	P value
		Level of labour pain					
		No pain	Mild	Moderate	Severe		
1	<b>Age (in years)</b>					12.69	df-3 0.005 **
	a) $\leq 20$	0	0	3	0		
	b) 21-25	0	0	12	0		
	c) 26-30	0	0	9	4		
	d) $\geq 30$	0	0	0	2		
2	<b>Education</b>					11.46	df-6 0.07
	a) Illiterate	0	0	0	0		
	b) Primary school certificate	0	0	2	4		
	c) Middle school certificate	0	0	4	1		
	d) High school certificate	0	0	5	1		
	e) Intermediate or post high school diploma	0	0	7	0		
	f) Graduate or post graduate	0	0	2	0		
	g) Professional or Honours	0	0	2	0		
	h) Others	0	0	2	0		



<b>3</b>	<b>Occupation</b>						
	a) Profession	0	0	1	1	21.67	df-4 0.00023 ***
	b) Semi profession	0	0	0	0		
	c) Shop owners	0	0	0	0		
	d) Skilled worker	0	0	8	0		
	e) Semiskilled worker	0	0	5	0		
	f) Unskilled worker	0	0	9	0		
	g) Unemployed	0	0	1	5		
<b>4</b>	<b>Religion</b>						
	a) Hindu	0	0	11	2	8.59	df-2 0.013 *
	b) Muslim	0	0	13	2		
	c) Christian	0	0	0	2		
	d) Others	0	0	0	0		
<b>5</b>	<b>Family monthly income</b>						
	a) >25000	0	0	0	0	24.27	df-4 0.00007 ****
	b) 24999- 20000	0	0	3	0		
	c) 19999-15000	0	0	10	0		
	d) 14999-10000	0	0	11	1		
	e) 9999-5000	0	0	0	4		
	f) <5000	0	0	0	1		
<b>6</b>	<b>Type of family</b>						
	a) Nuclear	0	0	10	3	1.619	df-2 0.445
	b) Joint	0	0	13	2		
	c) Broken	0	0	1	1		
	d) Extended family	0	0	0	0		
<b>7</b>	<b>Area of residence</b>						
	a) Rural	0	0	20	3	2.981	df-1 0.084
	b) Semirural	0	0	0	0		
	c) Urban	0	0	4	3		
	d) Semi urban	0	0	0	0		

\*\* P<0.01 \*\*\* P<0.001 \*\*\*\* P<0.0001

**Table 7** indicates the sustentative summary of chi-square analysis, which was used to bring out the association between posttest level of labour pain and their selected socio demographic variables in experimental group II.

The table shows that there is a significant association between the level of labour pain and selected demographic variable, Age, chi-square is (12.692) with P value (0.005), Occupation, chi square is (21.667) with P value (0.00023), Religion, chi square is (8.59) with P value (0.013) and Family monthly Income, chi square is (24.271) with P value (0.00007) at P value < 0.05. There is no significant association between level of pain and selected demographic variable such as educational status, type of family and Area of residence. Hence the research hypothesis H3 was partially accepted in Experimental group II.

Hence it was concluded that there was significant association between level of labour pain and selected socio demographic variables.

## **SUMMARY**

This chapter dealt with analysis and interpretation of data obtained by the researcher. The analysis of the result showed that the Acupressure and warm compress both were effective on labour pain during first stage of labour among primigravidae mothers. By comparing both techniques, Warm compress was more effective than Acupressure among Primigravidae mothers.

## **CHAPTER V**

### **DISCUSSION**

This chapter deals with the discussion of the data analyzed based on the objective and hypothesis of the study. The problem statement was “A comparative study to assess the effectiveness of Acupressure and warm compress on labour pain during first stage of labour among Primigravidae mothers in selected hospitals at Kanyakumaridistrict”.The discussion was based on the objectives of the study and the hypotheses mentioned in the study.

#### **OBJECTIVES OF THE STUDY**

The objectives of the study were

- To assess the labour pain score before and after administration of acupressure and warm compress among Primigravidae mothers in Experimental group I and II.
- To compare the post interventional labour pain score among Primigravidae mothers in Experimental group I and II.
- To determine the association between post interventional labour pain score with selected Socio demographic variables.

#### **SOCIO DEMOGRAPHIC VARIABLES AMONG PRIMI GRAVIDAE MOTHERS IN EXPERIMENTAL GROUP I AND II**

With regard to age, majority of 13(43.33%) falls under age group of 21-25 years in Experimental group-I and similar proportion between 26-30 years in Experimental group-II. Also a least proportion of 2(6.67%) were found among age group less than 20years in Experimental group I and similar proportion of greater than 30 in Experimental group II.

Regarding educational status, in Experimental group-I 8(26.67%) acquired middle school certificate, 7(23.33%) had high school certificate, 5(16.66%) completed primary school certificate, 4(13.33%) undergone post high school diploma course and minimum number of graduates and professionals were found in proportion of 2(6.67%). In Experimental group-II 7(23.33%) completed post high school diploma, 6(20.00%) acquired primary and high school certificates and minimum number of graduates and professionals were found in proportion of 2(6.67%).

With regard to occupational status, among patients in Experimental group-I a proportion of 8(26.67%) were unskilled workers and unemployed, 7(23.33%) were skilled workers, semiskilled workers and professionalist were 4(13.3%) and 3(10.00%) respectively. In Experimental group-II, 9(30.00%) were unskilled worker, 8(26.67%) were skilled worker, minimum number of professionalist were found in proportion of 2(6.67%).

With regard to religious status, majority of 15(50%) were Hindus, 13(43.33%) were Muslims in Experimental group-I, whereas in Experimental group –II, Muslims hold the leading proportion of 15(50%), next Hindus with 13(43.33%). Comparatively among both the groups Christians were found limited in number of 2(6.67%). Regarding Family monthly income, in Experimental group I, 12(40.00%) were earning between 15000-19999, and similar proportion in between 10000-14999 in Experimental group II. Also the least of 1(3.33%) is earning less than 5000 per month in both Experimental group I and II.

With regard to type of family, majority of 15(50%) belongs to Nuclear family, 13(43.33%) belongs to Joint family in Experimental group-I, whereas in Experimental group –II Joint family hold the leading proportion of 15(50%), next Nuclear family with 13(43.33%). Comparatively among both the groups broken family were found limited in number of 2(6.67%) respectively.

Regarding area of residence, majority of study participants in Experimental group-I and II were from rural background of 22(73.33%) and 23(76.67%) respectively.

## **OBJECTIVES-1**

### **To assess the level of labour pain with Acupressure in Experimental group I**

In Experimental group I, it reveals that during pretest, majority of the primigravidae mothers, 5(16.67%) had moderate pain and 25(83.33%) had severe pain whereas the intensity of pain reduced during posttest of which only 14(46.66%) had severe pain and 16(53.33%) had moderate pain. The chi square value for Experimental group I was (8.864) and the P value was (0.0029) which shows that it was significant at the level of  $P < 0.01$ .

It was revealed that there was difference between pre and post interventional level of symptoms in Experimental group I. Hence the research hypothesis H<sub>1</sub> was accepted.

### **To assess the level of labour pain with Warm compress in Experimental group II**

In Experimental group II, it reveals that during pretest, majority of the primigravidae mothers, 6(20%) had moderate pain and 24(80%) had severe pain whereas during the post test, the intensity of pain reduced and only 6(20%) had severe pain and 24(80%) had moderate pain. The chi square value for Experimental group II is (21.6) and the P value is (0.0000336) which shows that it was highly significant at the level of P<0.0001.

It was revealed that there was difference between pre and post interventional level of symptoms in Experimental group II. Hence the research hypothesis H<sub>1</sub> was accepted.

### **OBJECTIVES-2**

#### **To assess the effectiveness by comparing the posttest level of labour pain among Primigravidae mothers in Experimental group I and II**

By comparing the effectiveness, In Experimental group I, the posttest mean score for level of labour pain was 3.3 with standard deviation of 1.37 and in Experimental group II, the posttest mean score for level of labour pain was 4.8 with standard deviation of 1.28. This shows that the mean post test score of level of labour pain in Experimental group I was lower than the mean post test score in Experimental group II. Also the table value (2.0000) is less than the calculated value (4.3884) which shows that warm compress was more effective than the acupressure.

### **OBJECTIVE – 3**

#### **To find out the association between post interventional labour pain score with selected demographic variables in Experimental group I and II**

In Experimental group I, there was a significant association between the level of labour pain and selected demographic variable, Age, chi-square was (7.979) with P

value (0.046) at  $P < 0.05$ , in Occupation, chi square was (21.247) with P value (0.00028) and Area of Residence, chi square was (12.468) with P value (0.0004) at  $P < 0.001$ . There was no significant association between level of pain and selected demographic variable such as educational status, Religion, family monthly income and type of family. Hence the research hypothesis H<sub>3</sub> was partially accepted in Experimental group I.

In Experimental group II, there was a significant association between the level of labour pain and selected demographic variable, Age, chi-square was (12.692) with P value (0.005), Occupation, chi square was (21.667) with P value (0.00023), Religion, chi square was (8.59) with P value (0.013) and Family monthly Income, chi square is (24.271) with P value (0.00007) at  $P < 0.05$ . There was no significant association between level of pain and selected demographic variable such as educational status, type of family and Area of residence. Hence the research hypothesis H<sub>3</sub> was partially accepted in Experimental group II.

It was revealed that there was a significant association between post interventional labour pain score during first stage of labour with selected demographic variables of Primigravidae mothers in Experimental group I and II. The hypothesis H<sub>3</sub> was accepted. Hence it was concluded that there was significant association between level of labour pain and selected socio demographic variables.

## **SUMMARY**

This chapter dealt with the objectives of the study, major findings of the demographic variables of primigravidae mothers in labour, description of level of labour pain with Acupressure and warm compress, effectiveness by comparing the level of labour pain between experimental group I and II, association between the posttest level of labour pain with selected demographic variables in experimental group I and II.

## **CHAPTER VI**

### **SUMMARY, CONCLUSION, IMPLICATIONS & RECOMMENDATIONS**

This chapter deals with the summary of the study and the conclusion drawn from the study, implication of the study for different areas like nursing practice, nursing education, nursing administration and nursing research and also includes the recommendation for future research in the field.

#### **SUMMARY**

The summary includes the objectives of the study, description of procedures used, major findings, conclusion and recommendations for the research study. The present study was **“A comparative study to assess the effectiveness of Acupressure and warm compress on labour pain during first stage of labour among primigravidae mothers in selected hospitals at Kanyakumari district”**.

#### **OBJECTIVES OF THE STUDY**

The objectives of the study were

- To assess the labour pain score before and after administration of acupressure and warm compress among primigravidae mothers in Experimental group I and II.
- To compare the post interventional labour pain score among primigravidae mothers in Experimental group I and II.
- To determine the association between post interventional labour pain score with selected Socio demographic variables.

#### **HYPOTHESES**

**H<sub>1</sub>:** There will be a significant difference between labour pain score before and after administration of acupressure and warm compress during first stage of labour among primigravidae mothers in Experimental group I and II.

**H<sub>2</sub>:** There will be a significant difference between the post interventional labour pain score during first stage of labour among primigravidae mothers in Experimental group I and II.

**H<sub>3</sub>:** There will be a significant association between post interventional labour pain score during first stage of labour with selected Socio demographic variables of primigravidae mothers.

The **conceptual framework** and model adopted for this study is based on Modified & developed in 1990's by Katherine Kolcaba. Comfort is the immediate experience of being strengthened by having needs for relief, social and environment.

The investigator organized the **Review of literature** under the following

1. Empirical literature related to labour pain perception
2. Empirical literature related to use of nonpharmacological measures for labour pain relief
3. Empirical literature related to acupressure on labour pain
4. Empirical literature related to warm compress on labour pain

In the **methodology** the investigator used non Probability Convenient sampling technique to draw sample.

The variables in the study are as follows,

- **Independent variable:** Acupressure and Warm compress.
- **Dependent variable:** Labour pain among primigravidae mothers.

The tools used for data collection includes,

**TOOL-I:**Consist of socio demographic variables including age, education, religion, occupation, family monthly income, Type of family and area of residence.

**TOOL-II:**Numerical Pain Intensity scale is used to assess the level of pain experienced by parturient mothers before and after administration of acupressure and warm compress.The participants should make a tick mark(✓) according to the level of pain and find out the result.

Content validity was established by 7 Nursing Experts and 1 medical expert and was found to be reliable and feasible. Reliability of the tool was calculated by Karl Pearson co-efficient formula in order to assess the reliability. Pilot study was conducted among 6 primigravidae mothers in Annammal hospital, Kuzhithurai.

Main study data collection was done for 4 weeks in Annammal hospital, Kuzhithurai PPK hospital, Marthandam and Rathna hospital, Swamiarmadam on the



month of December. The non probability convenient sampling technique was adopted to select the samples based on the inclusion and exclusion criteria. The pretest was done at 3 cm dilatation by using Numerical Pain Intensity Scale. Acupressure and warm compress was given at every contraction from 3 cm to 8 cm dilatation. The post test level of pain was evaluated for both the groups with Numerical Pain Intensity Scale at 8 cm dilatation of the study by using the Descriptive statistics (Mean, Standard deviation, Frequency, and percentage) and the inferential statistics (t-test, Chi-square) methods after careful editing, coding, and transfer to computer, tabulating and decoding.

The pretest was done at 3 cm dilatation by using Numerical Pain Intensity Scale. Acupressure and warm compress was given at every 20 minutes from 3 cm to 8 cm dilatation. The posttest level of pain was evaluated for both the groups with Numerical Pain Intensity Scale at 8 cm dilatation.

## **FINDINGS**

Major findings of the study are presented under the following headings

### **1. FINDINGS RELATED TO SOCIO DEMOGRAPHIC VARIABLES OF PRIMIGRAVIDAE MOTHERS IN LABOUR.**

With regard to age, majority of 13(43.33%) falls under age group of 21-25 years in Experimental group-I and similar proportion between 26-30 years in Experimental group-II. Also a least proportion of 2(6.67%) were found among age group less than 20 years in Experimental group I and similar proportion of greater than 30 in Experimental group II.

Regarding educational status, in Experimental group-I 8(26.67%) acquired middle school certificate, 7(23.33%) had high school certificate, 5(16.66%) completed primary school certificate, 4(13.33%) undergone post high school diploma course and minimum number of graduates and professionals were found in proportion of 2(6.67%). In Experimental group-II 7(23.33%) completed post high school diploma, 6(20.00%) acquired primary and high school certificates and minimum number of graduates and professionals were found in proportion of 2(6.67%).

With regard to occupational status, among patients in Experimental group-I a proportion of 8(26.67%) were unskilled workers and unemployed, 7(23.33%) were skilled workers, semiskilled workers and professionalist were 4(13.3%) and

3(10.00%) respectively. In Experimental group-II, 9(30.00%) were unskilled worker, 8(26.67%) were skilled worker, minimum number of professionalist were found in proportion of 2(6.67%).

With regard to religious status, majority of 15(50%) were Hindus, 13(43.33%) were Muslims in Experimental group-I, whereas in Experimental group –II, Muslims hold the leading proportion of 15(50%), next Hindus with 13(43.33%). Comparatively among both the groups Christians were found limited in number of 2(6.67%). Regarding Family monthly income, in Experimental group I, 12(40.00%) were earning between 15000-19999, and similar proportion in between 10000-14999 in Experimental group II. Also the least of 1(3.33%) is earning less than 5000 per month in both Experimental group I and II.

With regard to type of family, majority of 15(50%) belongs to Nuclear family, 13(43.33%) belongs to Joint family in Experimental group-I, whereas in Experimental group –II Joint family hold the leading proportion of 15(50%), next Nuclear family with 13(43.33%). Comparatively among both the groups broken family were found limited in number of 2(6.67%) respectively.

Regarding area of residence, majority of study participants in Experimental group-I and II were from rural background of 22(73.33%) and 23(76.67%) respectively.

## **2. FINDINGS RELATED TO LEVEL OF LABOUR PAIN AMONG PRIMIGRAVIDAE MOTHERS IN EXPERIMENTAL GROUP I AND II**

In Experimental group I, it reveals that during pretest, majority of the primigravidae mothers, 5(16.67%) had moderate pain and 25(83.33%) had severe pain whereas the intensity of pain reduced during posttest of which only 14(46.66%) had severe pain and 16(53.33%) had moderate pain. The chi square value for Experimental group I was (8.864) and the P value was (0.0029) which shows that it was significant at the level of  $P < 0.01$ .

In Experimental group II, it reveals that during pretest, majority of the primigravidae mothers, 6(20%) had moderate pain and 24(80%) had severe pain whereas during the post test, the intensity of pain reduced and only 6(20%) had severe pain and 24(80%) had moderate pain. The chi square value for Experimental group II was (21.6) and the P value was (0.0000336) which shows that it was highly significant at the level of  $P < 0.0001$ .

### **3. FINDINGS RELATED TO EFFECTIVENESS OF ACUPRESSURE AND WARM COMPRESS ON LABOUR PAIN.**

By comparing the effectiveness, In Experimental group I, the posttest mean score for level of labour pain was 3.3 with standard deviation of 1.37 and in Experimental group II, the posttest mean score for level of labour pain was 4.8 with standard deviation of 1.28. This shows that the mean post test score of level of labour pain in Experimental group I was lower than the mean post test score in Experimental group II. Also the table value (2.0000) was less than the calculated value (4.3884) which shows that warm compress was more effective than the acupressure.

### **4. FINDINGS RELATED TO ASSOCIATION BETWEEN THE POST TEST LEVEL OF LABOUR PAIN ON SOCIO DEMOGRAPHIC VARIABLES IN EXPERIMENTAL GROUP I AND II.**

In Experimental group I, there was a significant association between the level of labour pain and selected demographic variable, Age, chi-square was (7.979) with P value (0.046) at  $P < 0.05$ , in Occupation, chi square was (21.247) with P value (0.00028) and Area of Residence, chi square was (12.468) with P value (0.0004) at  $P \text{ value} < 0.001$ . There was no significant association between level of pain and selected demographic variable such as educational status, Religion, family monthly income and type of family. Hence the research hypothesis H3 was partially accepted in Experimental group I.

In Experimental group II, there was a significant association between the level of labour pain and selected demographic variable, Age, chi-square was (12.692) with P value (0.005), Occupation, chi square was (21.667) with P value (0.00023), Religion, chi square was (8.59) with P value (0.013) and Family monthly Income, chi square was (24.271) with P value (0.00007) at  $P \text{ value} < 0.05$ . There was no significant association between level of pain and selected demographic variable such as educational status, type of family and Area of residence. Hence the research hypothesis H3 was partially accepted in Experimental group II.

It was revealed that there was a significant association between post interventional labourpain score during first stage of labour with selected demographic variables of Primigravidae mothers in Experimental group I and II. The hypothesis

H<sub>3</sub> was accepted. Hence it is concluded that there was significant association between level of labour pain and selected socio demographic variables.

## **CONCLUSION**

- The main conclusion of the present study is, both acupressure and warm compress are effective. While comparing both, Warm compress was more effective on labour pain among primigravidae mothers.
- The participants were comfortable and cooperative throughout the study. From this it is concluded that acupressure and warm compress were not only cost effective but also to apply and shows a better effect.
- The nurses can include warm compress routinely in order to obtain good labour outcome.

## **IMPLICATIONS OF THE STUDY**

Based on the findings the researcher recommended the implications on Nursing practice, Nursing education, Nursing administration and Nursing research.

## **NURSING PRACTICE**

- The findings of the study revealed that warm compress can be included for nursing management during labour.
- Warm compress were considered as complimentary therapy and can be imparted to nursing students to improve skill in providing care and update their knowledge on evidence based practice.
- In service education can be provided by the nursing personnel to help mothers to gain comfort during labour.
- Nurses are in best position to impart warm compress to mothers in labour pain.
- Nurses play an important role in primary health care by early detection and prevention of pain.

## **NURSING EDUCATION**

- With the emerging health care demands and newer trends in field of nursing, education must focus on the innovations to enhance the nursing care.

- Nurses could learn the assessment of pain and use of warm compress on labour pain.
- Nursing students should be taught about the importance of warm compress thereby they can help mothers in labour to overcome the discomforts during labour.
- Adequate practical training can be given to the nursing staff and students regarding warm compress
- Techniques in reducing pain and discomforts during labour and it can be incorporated in nursing curriculum.

## **NURSING ADMINISTRATION**

- With technological advances and ever growing challenges, the health care administrators have the responsibility to provide continuing nursing education opportunities to understand the pain management with complementary therapies including acupressure and warm compress.
- The Nurse administrators can initiate warm compress to reduce the pain through development programmes like in-service education and continuing nursing education programme.
- This enables the nurse to update the knowledge and to render the cost effective care to the public.
- The nurse administrators can train the nurses to identify level of pain, and to give counselling and teaching regarding management of pain during labour.
- Nurse administrators can prepare written policies and protocols regarding care of mothers in labour.

## **NURSING RESEARCH**

- The professionals and the students can conduct many studies in different complimentary therapies to bring about newer perspectives in nursing care.
- Nurse researcher should challenge to perform scientific work and take part in assessment, applications, evaluation of complementary therapies in mothers with labour.

- The study finding will motivate the initial researchers to conduct the same study on large scale and study will be the reference for the extensive and intensive nursing care. Disseminate the findings of research through conferences, seminars and publishing in nursing journals.

## **RECOMMENDATIONS**

- The sample study can be done on a larger population.
- A quasi experimental study can be conducted on a larger sample to generalize the results.
- A comparative study can be conducted in different settings with similar facilities.
- A comparative study can be conducted similarly between various alternative complementary methods to reduce pain perception during labour.