



Oral Presentation

Testing Katharine Kolcaba Theory of Comfort on Post-Operative Children

Presented by

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Introduction

- Comfort is a term that has a significant historical and contemporary association with nursing.
- Since the time of Nightingale, it is cited to designate a desirable outcome of nursing care.
- Comfort is a particular concern in health care, as providing comfort to the sick and injured is the **goal of health care**, which facilitates recovery.



Introduction continued.....

- Nurses traditionally provide comfort to patients and their families through interventions that can be called comfort measures¹.



Need of the study

- Hospitalization and surgery have negative influences on children.
- Rudolph, Denning, and Weisz ² cited different events and influences which make the hospital a potentially stressful place.

Need continued

- Comforting is not a one shot intervention ;it is a process that occurs in many iterative steps within the interaction and the developing relationship .
- During the comforting interaction loop in which a comforting action occurs, the patient is re evaluated and another comforting action is provided across various context and so forth.

One of the theorist who addressed Integrative Comfort Care intervention



Dr. Katharine kolcaba

Problem statement

An experimental approach to test Katharine Kolcaba theory of comfort by evaluating the effectiveness of integrative comfort care interventions on discomfort experienced by children (age 5-10 years) during post operative period at selected hospitals of Punjab.

Aim of Study

Aim of study was to test Katharine Kolcaba theory of comfort by evaluating the effectiveness of integrative comfort care interventions on discomfort experienced by children (age 5-10 years) during post operative period.

Objectives

- To assess pretest level of discomfort in post operative children in experimental and control group.
- To assess post test level of discomfort in post operative children after implementing integrative comfort care intervention in experimental group.
- To evaluate the effectiveness of integrative comfort care interventions on level of discomforts experienced by children during post operative period by comparing mean post test discomfort scores of experimental and control group .
- To evaluate the effectiveness of integrative comfort care interventions on level of discomforts experienced by children during post operative period by comparing mean pre test and post test discomfort scores of experimental group .

Hypotheses

- H_1 = There is a significant difference in **post test** post operative discomfort scores of children in **experimental and control group** as measured by Comfort behavioral Observation check list and comfort daises at 0.05 level of significance.
- H_2 = There is a significant difference in **pre test and post test** post operative discomfort scores of children in **experimental** group as measured by Comfort behavioral Observation check list and comfort daises at 0.05 level of significance.

Operational Definitions

Integrative comfort care interventions – These are multiple comfort measures categorized as under

- **Standard comfort care interventions** - General nursing measures which are followed in delivery of nursing care to study subjects. These focus on physical care, helping the patient to maintain / regain physiological function, comfort and environment care.
- **Emotional oriented comfort care interventions-** The interventions focus on emotional, socio-cultural, psychological and spiritual aspects of nursing the study subjects

Operational Definitions contd.

- **Cognitive and functional oriented comfort care interventions**-These measures target transcendence of the child through diversion. This type of interventions divert the mind of the child by making him indulge in some play activities .

Comfort care interventions categorization –

Category	Standard Comfort Care Interventions	Emotional oriented Comfort Care Interventions	Cognitive and functional oriented Comfort Care Interventions
Types of Interventions	<p>Provision of comfortable bed, Comfort positioning Administering medication as prescribed by the doctor for identified problem which require medical intervention Administering fluid or any other interventions prescribed by the doctor etc</p>	<ul style="list-style-type: none"> •Parental presence •Hand holding •Positive talk •Listening •Emotional support , •Providing reassurance and developmentally appropriate information. 	<ul style="list-style-type: none"> •Story telling •Blowing water soap bubbles •Coloring Pictures Book

Operational Definitions contd.

- **Post operative discomfort**-It is feeling of uneasiness experienced by child after surgery .This may be manifested by feeling /symptoms of pain, nausea, vomiting, shivering, fever or itching, dehydration, anxiety, fear arising due to hospitalization, procedure for treatment, separation from parents or primary care giver and lack of ritualistic care. Environmental uneasiness arising due to hot or cold environment, sites, sound, smell and strangers.

Conceptual Frame Work

- Conceptual framework was based on Katharine Kolcaba Comfort Theory of Nursing .
- She mentioned that patient's ability to engage in health seeking behavior increases with enhancement of comfort.
- The theory states that nurses identify the holistic comfort needs of patients and their families, design interventions to address those needs, and account for intervening variables which will affect desired outcomes.

Conceptual Frame Work contd..

- If the interventions are successful, comfort is enhanced, which then enhances the recipients' engagement in health seeking behaviors (HSBs). HSBS can be internal, external, or a peaceful death if that is the most realistic outcome.
- When patients and/or family members engage in HSBs, institutional integrity is also enhanced Comfort theory as it identifies with nursing is best comprehended when partitioned and portrayed in three parts.

Conceptual Frame Work contd..

- Part 1 expresses that nurses evaluate the comprehensive (physical, psychospiritual, socio cultural and environmental) comfort needs of patients in all settings.
- After assessing the comfort needs and comfort level, nurse can plan and implement variety of comfort care interventions.
- There are positive and negative variables on which nurse has little control but success of comfort interventions depend upon control over these intervening variables .
- Example of these variables are patient prognosis ,mental status ,social support economical conditions etc.

Conceptual Frame Work contd..

- Part 2 of Comfort Theory expresses that improved comfort strengthens patients to intentionally or intuitively take part in behavior that move them toward a state of well-being.
- These behaviors are named as health-seeking behaviors and give rationale for execution of comfort interventions. Health seeking behaviors are related to institutional integrity.

Conceptual Frame Work contd..

- Part 3 of theory is related to institutional integrity which is defined as quality and state of health care organizations in term of being sound, complete, ethical and professional care provider as measured by cost of care, length of hospital stay, turnover of staff, patient and staff satisfaction.
- The Frame work of the theory has been used to assess patient condition, plan and deliver integrative comfort care interventions.

Propositions of the Kolcaba's Theory of Comfort³

1. Nurses identify comfort needs of patients and family members.
2. Nurses design interventions to meet identified needs.
3. Intervening variables are considered when designing interventions.
4. When interventions are delivered in a caring manner and are effective, and when enhanced comfort is attained, interventions are called “comfort measures”.
5. Patients and nurse agree on desirable and realistic health- seeking behaviors.

Propositions of the Kolcaba's Theory of Comfort³

6. If enhanced comfort is achieved, patients and family members are more likely to engage in health-seeking behaviors these further enhance comfort.
7. When patients and family members are given comfort care and engage in health-seeking behaviors , they are more satisfied with health care and have better health-related outcomes.
8. When patients, families, and nurses are satisfied with health care in an institution, public acknowledgment about that institution's contributions to health care will help the institution remain viable and flourish.

Source - Kolcaba, K. An introduction to comfort theory. 2010. In The comfort line. (Retrieved January 02, 2014) from <http://www.thecomfortline.com/home/intro.html>

Propositions of the Kolcaba's Theory of Comfort³

Out of 8-proposition, number 1-4 proposition were addressed by the researcher in present study, remaining 5-8 propositions were not part of the present study.

Proposition
number -1 Nurses
identify comfort
needs of patients
and family
members-

- Researcher addressed comfort needs of subjects holistically .
- Level of discomfort assessed by using Comfort Behaviors Check List and Comfort Daisies.
- In experimental group, the types of comfort were juxtaposed with the contexts of comfort, a 12-cell grid or taxonomic structure resulted.
- This grid depicted the content domains of holistic comfort.

Propositions of the Kolcaba's Theory of Comfort³

**Proposition
number -2 -Nurses
design
interventions to
meet identified
needs-**

- Researcher designed the comfort care intervention to address comfort needs holistically.
- Integrative comfort care interventions are multiple interventions that target many comfort needs addressed across four context of comfort physical, psycho spiritual, socio cultural and environmental.

**Proposition number -
3-
Intervening variables
are considered when
designing
interventions-**

- Intervening variables were identified and dealt properly to implement comfort care interventions effectively in order to enhance level of comfort among the subjects.
- Interventions were designed accordingly to overcome with intervening variables.

Propositions of the Kolcaba's Theory of Comfort³ ..

Proposition number -4

When interventions are delivered in a caring manner and are effective, and when enhanced comfort is attained, interventions are called “comfort measures”.

- Based on this proposition integrative comfort care interventions were designed and implemented to alleviate post-operative discomforts among children.
- This proposition guided researcher to frame hypotheses of the study .

Conceptual framework based on Katharine Kolcaba Comfort Theory of Nursing³

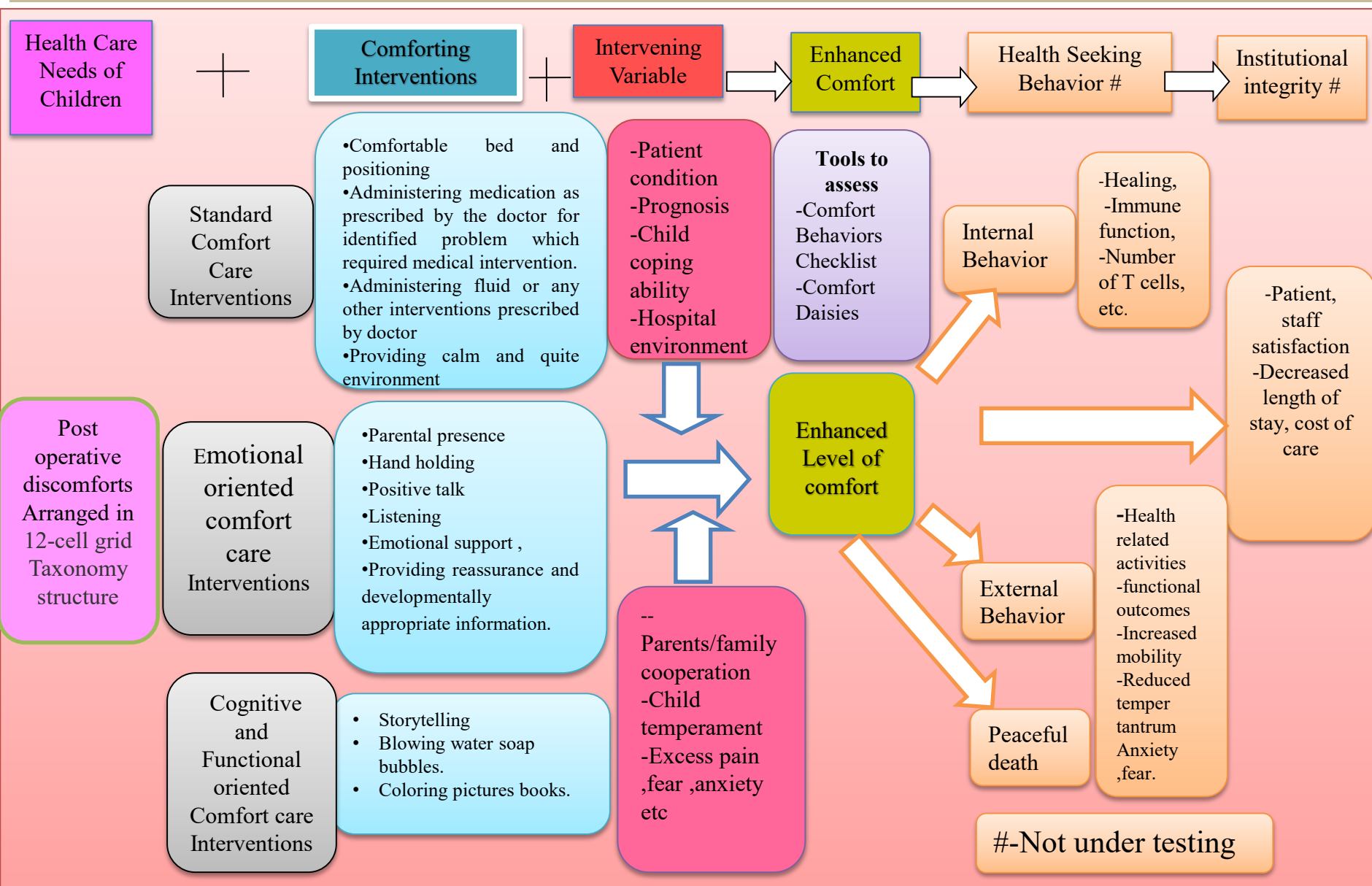


Figure 1 –Conceptual framework based on Katharine Kolcaba theory of comfort

Methodology

Research Approach

Experimental

Research Design

Pretest post test control group

Research Setting

Pediatric Post operative ward and PICU of
Selected hospitals of Punjab, India

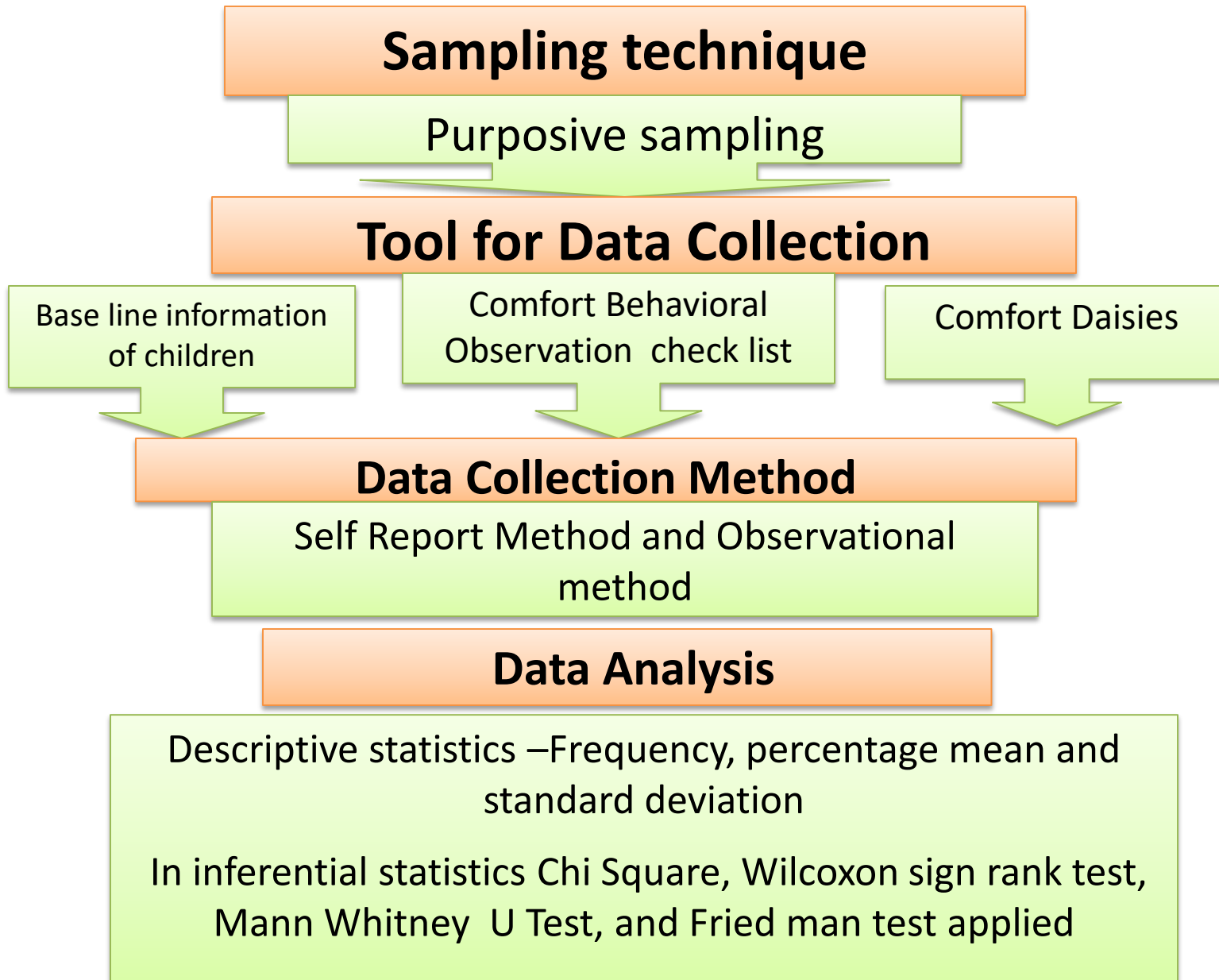
Target Population

Post operative children age 5-10 years

Sample

200 post operative children (100 in
experimental and 100 in control group)

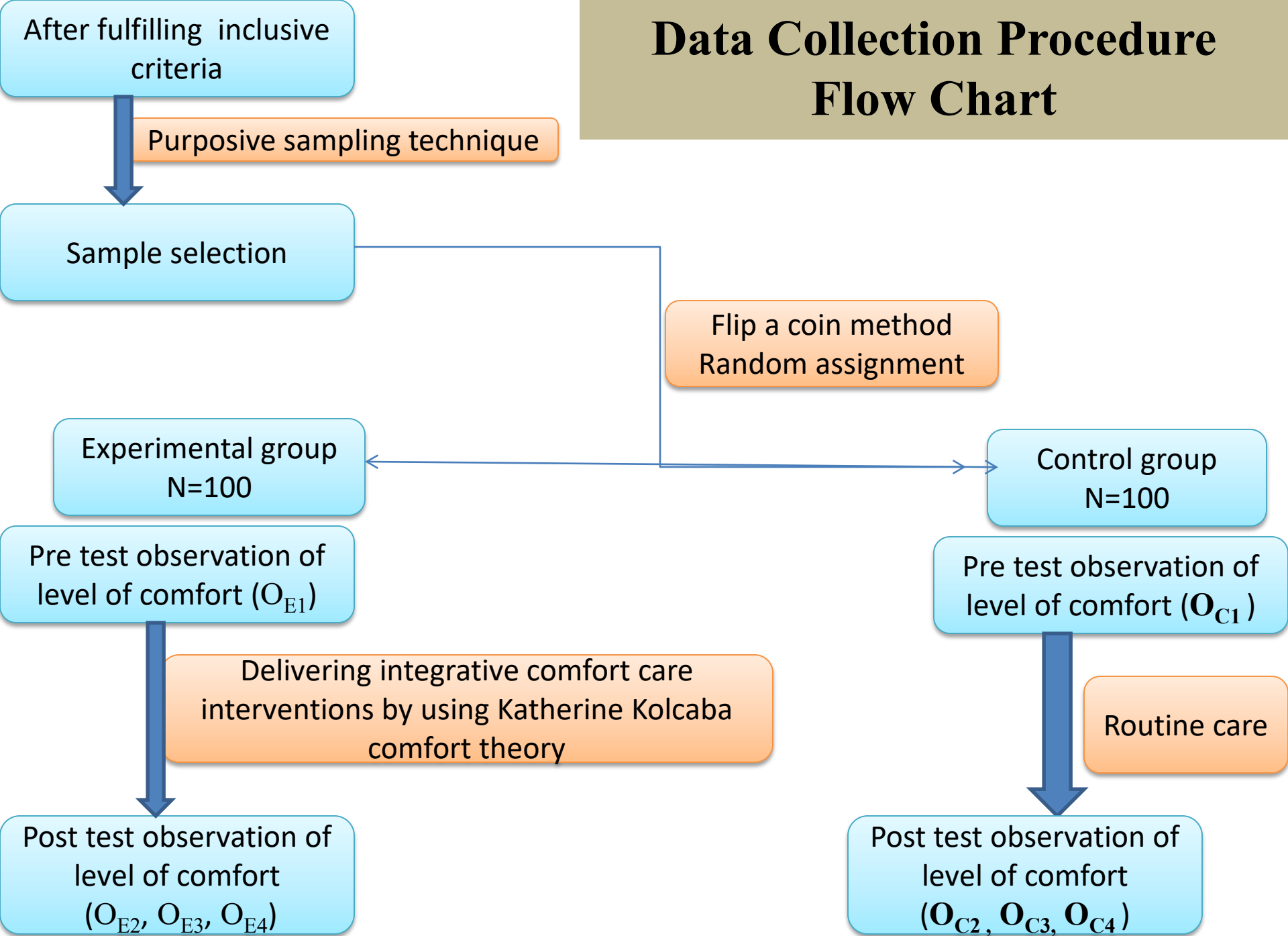
Methodology flow chart contd...



- The final data collection was carried out from Jan 2015 to February 2016. A written permission was obtained from the concerned authorities prior to the study .
- To get the cooperation of the staff dealing with patients, orientation about the investigator's study topic and procedure was given to them.
- Researcher took ethical clearance from Institution ethical committee .

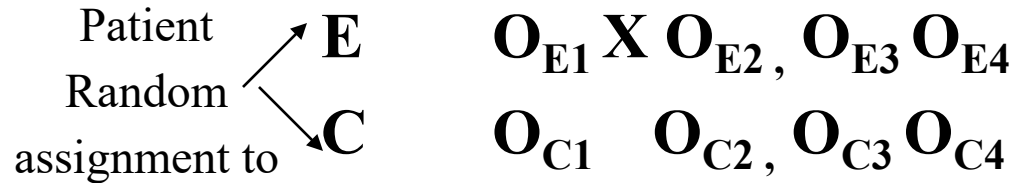
- The investigator explained the purpose of the study to the parents and staff.
- The investigator obtained verbal consent from the parents and assent from children to participate in the study.
- Confidentiality and anonymity of participants was ensured.

Data Collection Procedure Flow Chart



Methodology- Research design

Pre test and post test control group design was used



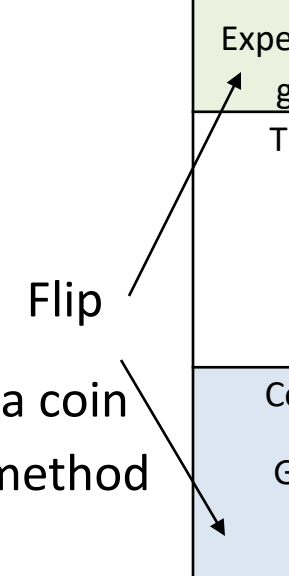
O_{E1} =Observation before introducing treatment in Experimental group O_{C1} -Pre test Observation in control group

O_{E2}, O_{E3}, O_{E4} =Observations after introducing treatment in experimental group O_{C2}, O_{C3}, O_{C4} =Post test Observations in control group

X=Integrative Comfort Care Interventions delivered by using Katharine Kolcaba comfort theory (Theoretical Based comfort care interventions)

Control group (C) –control group received routine care

Description of Research Design

Random Assignment	Groups	Pre test	Treatment X	Post test		
Flip a coin method 	Experimental group	O _{E1}	Integrative Comfort Care Interventions*	O _{E2}	O _{E3}	O _{E4}
	Timing	2 nd post-operative day	5-9 hours required for addressing all comfort needs.	Immediately after addressing all comfort needs	After one hour of O _{E2}	After one hour of O _{E3}
	Control Group	O _{C1}	Routine care	O _{C2}	O _{C3}	O _{C4}
	Timing	2 nd post-operative day		Immediately after providing routine care	After one hour of O _{C2}	After one hour of O _{C3}

- In experimental group, the types of comfort are juxtaposed with the contexts of comfort, a 12 cell grid or taxonomic structure resulted.
- This grid depicted the content domains of holistic comfort

Taxonomy Structure of Comfort

Need	Relief	Ease	Transcendence
Physical			
Psycho spiritual			
Sociocultural			
Environmental			

- Comfort care interventions consisted of nursing interventions focused on physical, psycho spiritual, socio cultural, and environmental aspect of comfort.
- After assessing comfort needs in experimental group, Comfort Care Interventions were delivered in integrative manner by using nursing process approach as defined by Katharine Kolcaba in her theory

Frame work used for Delivering integrative comfort care intervention by using Nursing Process as defined in Katharine Kolcaba comfort theory

Type of comfort need	Assessment of comfort need	Goal	Planning	Implementation	Evaluation
Relief					
Ease					
Transcendence					

- In control group these observation (O_{c2} , O_{c3} , O_{c4}) were performed after completion of routine care.
- Control group subjects received only routine care .(Theoretical based approach was not used in delivering routine care to control group).

Analysis and Interpretation-Section A: Samples characteristics in frequency and percentage

Table 1: Socio Demographic Profiles of the subjects

N=200

S.N.	Variables	Control group		Experimental group		χ^2	df	P value
		f	%	f	%			
1	Age of child							
	1.5-7 year	36	36	37	37	0.2131	2	0.899 $p>0.05$ (NS)
	2.>7-9 year	36	36	33	33			
	3.>9-10 years	28	28	30	30			
II	Sex of the child?							
	1.Male	70	70	65	65	0.5698	1	P=0.451 $p>0.05$ (NS)
	2.Female	30	30	35	35			
III	Education of Child							
	1.No formal education	03	03	05	05	6.4726	2	P=0.039 $P<0.05$ (Sig)
	2.Under first class	18	18	15	15			
	3.1 st to 3 rd	72	72	61	61			
	4.>3 rd to above	07	07	19	19			

S.N.	Variables	Control group		Experimental group		χ2	df	P value
		f	%	f	%			
IV	Name of surgery child undergone							
	A. GI and ENT surgeries	61	61	57	57	0.3307	1	P=0.565 P>0.05 (NS)
	1.Laprotomy	12	12	06	06			
	2.Appendectomy	9	09	15	15			
	3.Hernia	11	11	15	15			
	4.Intestinal obstruction	12	12	05	05			
	5.Anorectal mal formation	02	02	03	03			
	6.Colostomy	04	04	03	03			
	7.Cholecystectomy	01	01	01	01			
	8.Choledochal cyst	03	03	02	02			
	9.Removal of cyst	03	03	03	03			
	10.Umbilical sinus ,Sinus tract excision	01	01	-	-			
	11.Tonsillectomy	03	03	04	04			
	B. Genitourinary surgeries	39	39	43	43			
	Hypospadiasis	12	12	17	17			
	Urethroplasty	13	13	09	09			
	Pyeloplasty	07	07	08	08			
	Post urethral valve obstruction	05	05	05	05			
	Rediculo pyeloplasty	-	-	01	01			
	Bladder diverticulum	02	02	03	03			

Table 1: Socio Demographic profile of the subjects continued...							N=200	
S.N.	Variables	Control group		Experimental group		χ^2	df	P value
		f	%	f	%			
V	Day of child post-operative							
	1. 2 nd day	100	100	100	100			
VI	Who is Primary care giver?							
	A. Parents	87	87	80	80	1.7783	1	P=0.182 p>0.05 (NS)
	1.Father	01	01	01	01			
	2.Mother	86	86	79	79			
	B.Relative	13	13	20	20			
	1.Grand mother	10	10	15	15			
	2.Aunty	03	03	05	05			
VII	Level of consciousness							
	1. Conscious	100	100	100	100			
VIII	Number of previous hospitalization					0.1096	1	P=0.740 P>0.05 (NS)
	A. ≤ 1 time	77	77	75	75			
	1.Nil (Admitted for the first time)	27	27	29	29			
	2.one time	50	50	46	46			
	B.≥ 2 times	23	23	25	25			
	1.two times	21	21	20	20			
	2.more than two times	2	02	05	05			

- Table 1-presents the sociodemographic profile of the subjects.
- The Chi-Square used for assessing homogeneity in experimental and control groups and it was found that both the **groups were homogenous at $p > 0.05$ level** of significance, except education status of subjects.

Table-2-Distribution of the sample in experimental and control group according to the level of Comfort and discomfort **N=200**

Comfort Assessment Tools	Observation	Score	Experimental group		Control group	
			F	%	F	%
Comfort Behavioral Observation Check list	O ₁	Comfortable state=88-116	00	00%	00	00%
		Mild discomfort=59-87	12	12%	22	22%
		Moderate discomfort=30-58	88	88%	78	78%
		Discomfortable state=1-29	00	00%	00	00%
	O ₂	Comfortable state=88-116	98	98%	00	00%
		Mild discomfort=59-87	2	2%	16	16%
		Moderate discomfort=30-58	0	0%	94	94%
		Discomfortable state=1-29	0	0%	00	00%
	O ₃	Comfortable state=88-116	42	42%	00	00%
		Mild discomfort=59-87	58	58%	17	17%
		Moderate discomfort=30-58	00	00%	83	83%
		Discomfortable state=1-29	00	00%	00	00%
	O ₄	Comfortable state=88-116	13	13%	00	00%
		Mild discomfort=59-87	86	86%	15	15%
		Moderate discomfort=30-58	1	1%	85	85%
		Discomfortable state=1-29	00	00%	00	00%

Table-2-Distribution of the sample in experimental and control group conti.....**N=200**

Comfort Assessment Tools	Observation	Score	Experimental group		Control group	
			F	%	F	%
Comfort daises (Right Now I feel:)	O ₁	1.Very bad	72	72%	33	33%
		2.Sort of bad	26	26%	65	65%
		3.Sort of good	2	2%	02	02%
		4.Very good	00	00%	00	00%
	O ₂	1.Very bad	00	00%	39	39%
		2.Sort of bad	00	00%	59	59%
		3.Sort of good	08	08%	02	02%
		4.Very good	92	92%	00	00%
	O ₃	1.Very bad	00	00%	37	37%
		2.Sort of bad	00	00%	59	59%
		3.Sort of good	93	93%	04	04%
		4.Very good	07	07%	00	00%
	O ₄	1.Very bad	00	00%	34	34%
		2.Sort of bad	07	07%	63	63%
		3.Sort of good	93	93%	03	03%
		4.Very good	00	00%	00	00%

Table 3: - Mean SD and level of Comfort among subjects as assessed by Comfort Behaviors Check list.
N=200

Score		Pretest Observation		Posttest Observations					
		O ₁		O ₂		O ₃		O ₄	
		Exp. Group	Control Group	Exp. Group	Control Group	Exp. Group	Control Group	Exp. Group	Control Group
Mean ± SD		45.88 ± 9.917	51.68 ± 10.835	104.5±6.629	49.57 ± 9.733	87.69 ± 5.389	49.54 ± 10.176	83.65 ± 5.878	49.38 ± 10.580
Min. comfort score		30	35	87	34	76	35	56	30
Max. comfort score		77	78	136	77	110	87	105	87
Level of comfort *		Moderate discomfort	Moderate discomfort	Comfortable state	Moderate discomfort	Comfortable state	Moderate discomfort	Mild discomfort	Moderate discomfort
*Key-	Level of comfort Score-Comfortable state(88-116), Mild discomfort(59-87),Moderate discomfort (30-58),Dis comfortable state (1-29) .								

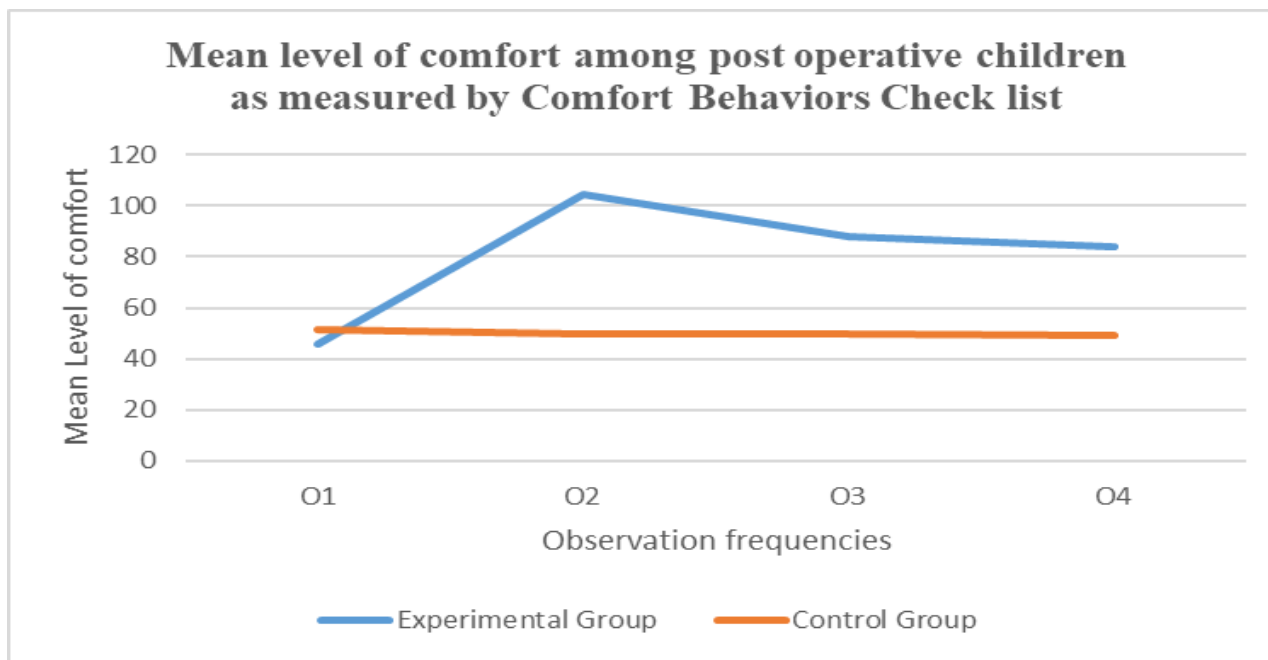


Figure 1-line chart showing mean level of comfort among subjects as measured by Comfort behaviors checklist

Figure 1 Line chart and **table 3** findings revealed that mean comfort score of subjects in experimental group who received integrative comfort care interventions were in comfortable state as compared to subjects in the control group.

Table-4:-Mean, SD and level of comfort among subjects as assessed by Comfort Daisies. N=200

Score	Pretest Observation		Posttest Observations					
	O ₁		O ₂		O ₃		O ₄	
	Exp. Group	Control Group	Exp. Group	Control Group	Exp. Group	Control Group	Exp. Group	Control Group
Mean	1.30	1.69	3.92	1.63	3.07	1.67	2.93	1.69
±	±.	±.	±	±	±.	±.	±.	±
SD	0.503	0.506	.0.273	.0.525	0.256	0.551	0.256	0.526.
Min. score reported	1	1	3	1	3	1	2	1
Max. score reported	3	3	4	3	4	3	3	3

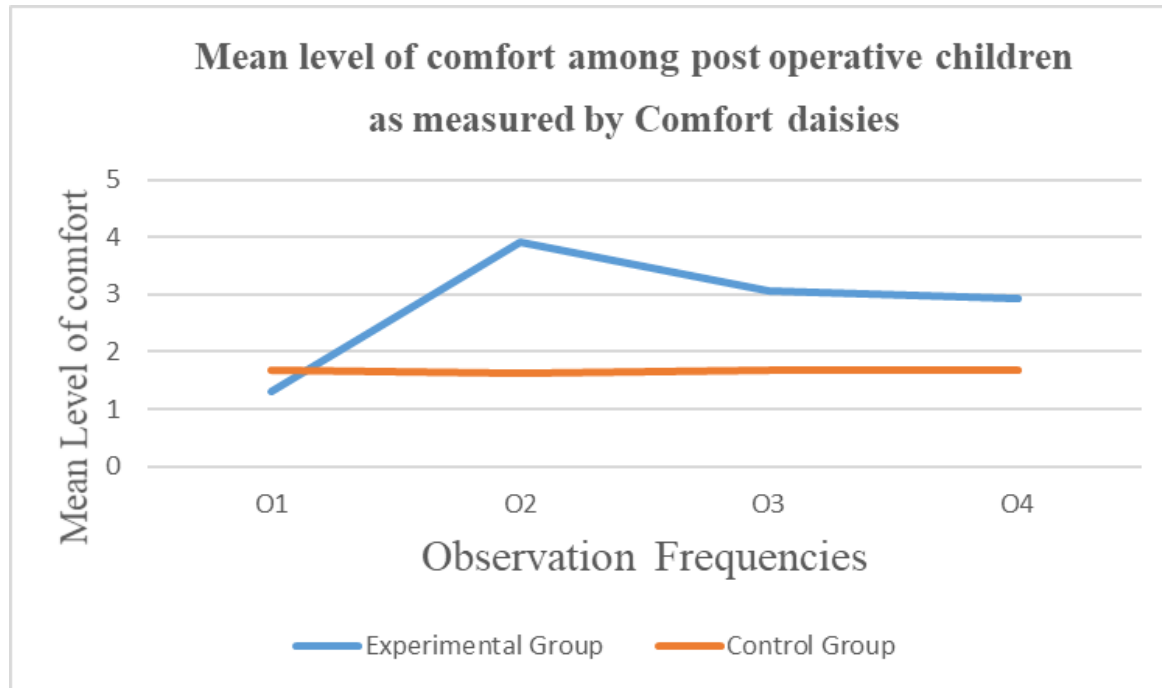


Figure 2 –Line chart showing Mean level of comfort among post-operative children as measured by Comfort Daisies

Figure 2 –Line chart and table -4 findings revealed that mean comfort score of subjects in experimental group who received integrative comfort care interventions were in comfortable state as compared to subjects in control group.

Hypotheses

- H_1 - There is a significant difference in **post test** post operative discomfort scores of children in experimental and control group as measured by comfort behavioral observation checklist and comfort daises at 0.05 level of significance.
- H_{01} : There is no significant difference in **post test** post operative discomfort scores of children in experimental and control group as measured by comfort behavioral observation checklist and comfort daises at 0.05 level of significance.

Test used for testing this hypothesis-Mann-Whitney U

Table 5: Comparison of post-operative discomfort scores of subjects in experimental and control groups (Assessed by comfort behavior checklist) N = 200								
Scores	Pretest Observation		Posttest Observations					
	O ₁		O ₂		O ₃		O ₄	
	Exp. Group	Control Group	Exp. Group	Control Group	Exp. Group	Control Group	Exp. Group	Control Group
Mean Rank	84.57	116.44	150.50	50.50	149.98	51.03	149.15	51.85
Sum of Rank	8456.50	11643.5	15050.	5050.00	14997.5	5102.5	14915.	5185.0
Mann-Whitney U	3406.500		.000		52.500		135.000	
p <.001								

Table 5 Findings were significant at <.001, revealed that subjects who received integrative comfort care interventions by using comfort theory were in more comfortable state than subjects in the control group.

Table 6: Comparison of post-operative discomfort scores of subjects in experimental and control groups as assessed by comfort Daisies N=200								
Scores	Pretest Observation		Posttest Observations					
	O ₁		O ₂		O ₃		O ₄	
	Exp. Group	Control Group	Exp. Group	Control Group	Exp. Group	Control Group	Exp. Group	Control Group
Mean Rank	81.39	119.61	150.42	5058.00	148.64	5236.0	146.69	5431.00
Sum of Rank	8139.0	11961.0	15042.	5058.00	14864.0	5236.0	14669.0	5431.00
Mann-Whitney U	3089.0		8.00		186.0		381.0	
p <.001								

Table -6 Findings were significant at <.001, It revealed that subjects who received integrative comfort care interventions using comfort theory were in more comfortable state than subjects in the control group.

Hypotheses

- H_2 = There is a significant difference in **pre test and post test** post operative discomfort scores of children in experimental group as measured by comfort behavioral observation checklist and comfort daises at 0.05 level of significance.
- H_{02} : There is no significant difference in **pre test and post test** post operative discomfort scores of children in experimental group as measured by comfort behavioral observation checklist and comfort daises at 0.05 level of significance.
- Test used for testing this hypothesis-Friedman test

Table –7 Comparison of pre-test and post-test discomfort scores of subjects in experimental group. (Comparing more than 3 dependent groups) N=100							
Tools	Scores	Pretest Observation	Posttest Observations				Friedman test
		O ₁	O ₂	O ₃	O ₄		
Comfort Behaviors Check List	Mean ±SD	45.88±9.917	104.55±6.629	87.69±5.389	83.65±5.878	282.714	
	Mean Rank	1.00	3.99	2.82	2.20		
Comfort Daisies (Right Now I feel:)	Mean	45.88±9.917	104.55±6.629	87.69±5.389	83.65±5.878	281.788	
	Mean Rank	1.00	3.99	2.82	2.20		
p<.001, df-3							

- Findings in table -7 shows a significant difference ($\chi^2 = 282.714$, $P < .001$) in pretest and posttest post-operative discomfort scores of the subjects as assessed by CBC.
- Similarly a significant difference ($\chi^2 = 281.788$, $P < .001$) was observed among subjects in experimental group as assessed by Comfort Daisies.
- Hence, concluded that integrative comfort care interventions were effective in reducing the post-operative discomfort significantly among the subjects.

Table 8- Comparison of Pretest and Posttest discomfort scores among subjects in experimental group (Comparison of 2 dependent groups)- N= 100		
Comfort Assessment Tools	Comparison of observation	Wilcoxon Signed Ranks Test (Z)
Comfort Behaviors Check List	O ₁ and O ₂	-8.683*
	O ₁ and O ₃	-8.683*
	O ₁ and O ₄	8.684*
Comfort Daisies (Right Now I feel:)	O ₁ and O ₂	-9.073*
	O ₁ and O ₃	-8.975*
	O ₁ and O ₄	-8.942*
p<.001*		

- For evaluating the effectiveness of integrative comfort care interventions comparison was done between frequent observations.
- **Wilcoxon signed ranks test** was used to compare two dependent groups observation. Table 8 shows comparisons of O₁ and O₂ , O₁ and O₃, O₁ and O₄ observation and findings revealed a significance decrease in level of discomfort and increase in the level of comfort among post-operative children as assessed by Comfort Behaviors Check List (Z =-8.683,-8.683,-8.684 ,p<.001).

Discussion of findings with other studies

- A study by Kolcaba , K. & Di Marco, M. A. concluded that the framework of Comfort Theory for pediatric practice and research is easy to understand and implement.
- The application of the theory is strengthening and satisfying for pediatric patients/families and nurses, and benefits institutions where a culture of comfort is valued.

Discussion -Example of **Integrated Comfort Care Interventions** used by Wilson ,l & Kolcaba , k ⁴ in practical application of comfort theory in the perianesthesia setting. Categorization of comfort care interventions was similar to this fashion i.e. 3 types of standard comfort interventions ,coaching and comfort food for soul.

Type of Comfort Care Intervention	Example
Standard comfort interventions	Vital signs , Lab results ,Patient assessment Medications and treatments
Coaching	Emotional support , Reassurance, Education Listening
Comfort food for the soul	Therapeutic touch ,Music therapy ,Spending time ,Personal connections

Discussion contd.....

- **Polkki et al** The study indicated that **emotional support**, helping with daily activities and creating a comfortable environment were reported to be used routinely, whereas the **cognitive-behavioural** and **physical methods** included some less frequently used and less well known strategies.
5 surveyed the nurses' use of selected non pharmacological techniques in relieving postoperative pain in hospitalized 8-12-year- old children's .

Discussion contd..

Here are some other studies which used different comfort measures in reducing discomfort in children

Author	Concept studied	Findings
Li HC, Lopez V, Lee TL ⁶	Therapeutic play, parental involvement , psycho educational preparation of children , children under going surgery	That both children and their parents in the experimental group reported lower state anxiety scores in pre- and post-operative periods.
Tunney AM, Boore J ⁷	Story telling , anxiety, tonsillectomy and adenoidectomy	The storybook was found to be effective in reducing pre-operative anxiety and was found to be particularly effective for females and in the 7-year-old age group.
Lata Kanchan , Sharma Mukesh Chandra , Sareen Aarti ⁸	A Randomized Clinical Trial ,Storytelling by Researcher on the ,Hospitalization Anxiety of Children	Results showed there is significant decrease in post-test hospitalization anxiety scores ($z=-8.243$, $p<0.05$) assessed by observational checklist, and by interview schedule. ($z=-9.381$, $p<0.05\%$)

Discussion contd.....

Author	Concept studied	Findings
Scalford D etc ⁹	Pain management, Drug therapy, Parental presence , children aged 5 to 10 years after adenotonsillectomy	Combination of drug therapy and parental presence helpful in decreasing pain and post anesthesia care unit length of stay.
Kaur gurjit ,Sharma MC ¹⁰ (Gray literature)	Primary care giver presence , behavioral distress among children of age 3 to 6 years , invasive procedure	Result showed that Mean behavioral distress score during procedure in control group (7.433 ± 1.632) was higher than the experimental group (6.53 ± 2.54) .
Salmela M_et al ¹¹	Child-reported coping strategies , hospital-related fears , 4-6-year-old children	The most frequent child-reported coping strategies were: the presence of parents and other family members (81/517, 15.7%), the help of the hospital personnel (58/517, 11.2%), positive images and humour (57/517, 11%), play (57/517, 11%) and the child's own safety toy (45/517, 8.7%).

Discussion cont..

Author	Concept studied	Findings
Windich-Biermeier et al ¹²	Self-selected distracters (ie, bubbles , Super Challenger book, music table, virtual reality glasses, or handheld video games) ,pain, fear, and distress ,cancer, ages 5 to 18 years.	Intervention participants demonstrated significantly less fear (P <.001) and distress (P = .03) as rated by the nurse and approached significantly less fear (P = .07) as rated by the parent.
Kaur N and Sharma M C ¹³ (Gray literature)	Effectiveness, Postoperative pain, Distraction with blowing soap bubbles, Children.	Results of the study shows the effectiveness of distraction with blowing soap bubbles by comparing mean postoperative pain score of experimental and control group using ANOVA.Comparison of pre and post pain scores in experimental by wilcoxon paired sign rank test also revealed the significant difference Z=-6.829, p<0.05) between pre and post pain score (through FLACC scale as well as with (Z = -6.901, p<0.05Wong Baker Pain Rating scale .

Discussion cont..

Author	Concept studied	Findings
Sparks L ¹⁴	Injections , children, distraction to decrease pain.	Found both forms of distraction, touch and bubble-blowing , significantly reduced pain perception. There were no interaction effects of either age or gender. Fear was a significant covariate, but distraction was effective even when fear was not held constant.
Heden L et al ¹⁵	Needle procedure ,children ,cancer	Children also experienced less fear ($P < 0.05$) and distress ($P < 0.05$) when subjected to standard care + blowing soap bubbles vs. standard care ($n = 14$).

Implications

Nursing Practice

- Effective care will be delivered if nurses focus on the delivery of care in holistic way.
- Comfort theory provides a platform for delivering nursing care in holistic and an integrated way.
- Identify comfort care interventions as per the patient needs and deliver it in integrated way.
- This study can be utilized in assessing, planning and delivering comfort care interventions as per the comfort needs of the children.

Nursing Education

- Application of nursing theories in nursing practices are lagging behind.
- Students can be encouraged to develop other comfort care interventions based on patients needs and they can test it by using similar frame work .
- They can be taught in similar way to utilize and test nursing theories so that thoughts of nurse theorist can be utilized in delivering effective nursing care to patients.

Implications

Nursing Administration

- Making a policy in using frame work of theory in delivering nursing care .
- Development of comfort care interventions based on available evidences and can promote patient comfort in all age groups.
- Development of nursing practice standards, protocols and manuals of comfort assessment and discomfort management among children of various ages.
- An in-service education program - understanding the utilization and application of nursing theories.

Nursing Research

- By using similar frame work effectiveness of new comfort care interventions can be tested in other settings.
- Further research can be conducted in testing same theory in other way .
- New comfort care bundle can be identified and tested in relieving discomfort among children by using similar methodology .
- This research can show way to test other nursing theories in nursing practice.

Recommendations

- A large sample can be taken for similar study to make it more generalizable.
- For increasing rigor in research samples can be selected by using random sampling.
- Further study can be conducted by using case study approach for detailed investigation .
- Identify other comfort care interventions under same category and conduct further study on different sample.
- Various complementary and alternative therapies can be part of comfort care bundle.

Conclusion

- This Katharine theory of nursing is an excellent way to design and assess the effects of integrative comfort care interventions .It is applicable for pediatric clients .
- The patient's level of comfort increased after the administration of integrative comfort care interventions among experimental group as compared to control group.
- The positive thing about this theory is that all the needs of children were addressed holistically.

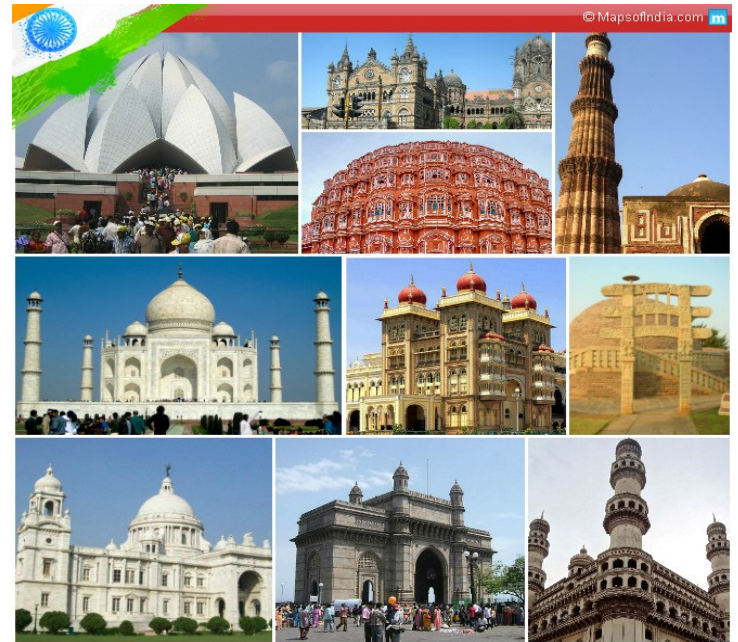
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Thanks!