

Original Research Article

Problems and Problem Solving Strategy of Mothers of Children with Cancer in Selected Hospitals Mangalore

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ABSTRACT

Background: Cancer is a life threatening disease and considered the second cause of death after accident in children. Tata Memorial Centre in Mumbai's Parel area alone treats 2,000 new pediatric cancer cases annually. Diagnosis and treatment of cancer children represents a highly stressful situation for mothers emotionally, physically, socially and financially.

Objectives

Quantitative

1. To assess the problems of mothers of children with cancer.
2. To find association between problems of mothers of children with cancer and selected demographic variables.
3. To find the opinionnaire of informational leaflet.

Qualitative

1. To identify problem solving strategy for mothers of children with cancer.

Methods: A mixed method approach (embedded design) was used. Subjects consist of 30 mothers of children with cancer for quantitative and 15 mothers (until the data Saturation) for qualitative. Subjects were selected purposively and nested identical sampling was used.

Results: 60% of mothers of children with cancer were having quite a bit problems, 36.7% were very much problems and 3.3% were having somewhat problems. There was no significant association between the problems of mothers of children with cancer and the baseline variables. Through the thematic analysis the problem solving strategy were in areas of Physical and psychological, financial, spiritual, social and communication.

Interpretation and Conclusion: From this study we found that, even though the mothers of children suffering with cancer used problem solving strategies, it did not completely erase their problems but reduced the severity of the problems.

Key words: - problems, problem solving strategy, cancer children

INTRODUCTION

Cancer is characterized by uncontrolled and unregulated growth of cells. "The impact of cancer around the globe is growing everyday". In 2012, cancer is projected to become the world's leading cause of death, claiming more than 8 million

lives. Experts say pollution may have caused the rise in Pediatric cancers. Childhood cancers were 2.5% which have now risen to 5.5% according to the Indian Council for Medical Research. Tata Memorial Centre in Mumbai's annually treats 2,000 new pediatric cancer cases. ^[1]

Globally the burden of new cancer cases is increasing despite of advancement in diagnosis and treatment. During the year 2001 around 0.80 million new cases were estimated in the country that can be expected to increase to 1.22 million by 2016. Cancer causes changes in the family's identity, roles and daily functioning. [2] The family caregiver is afraid of and concerned about fear of cancer and its spread. [3] Being a caregiver is some of the hardest work in the world. They are the real doctors they are the real ministers and they are the warriors. [4]

When a person in the family is affected by cancer it is the family members who provide the maximum care to those affected by the disease. Cancer has direct impact on the entire family; this impact has been compared to the result of dropping a stone in a pond. The illness causes changes in the families' identity and the daily routines of life. [5] Researches have suggested that the caregivers of cancer patient were at risk of developing a variety of psychological and physical problems, including anxiety, depression, fatigue, reduced self esteem and somatic health problems. [6]

Problems and problem solving strategies are the concepts interlinked with health. The problem solving strategies is unique which may be either adaptive or maladaptive it depends on the parental acceptance of their child's illness. The adaptive problem solving strategies helps the parents to accept the child and its treatment in a positive direction. When the people are unable to cope effectively to the existing problems, they use maladaptive problem solving strategies. Maladaptive problem solving strategy response is found in different manner. Some may exhibit rejection or detachment from the ill child and others may show anger and blame each other.

Nurses play an important role, for the early detection and management of both physical and psychological symptoms of patient as well as the caregivers than

doctors. There is a need to use strategies that will empower mothers to have a greater sense of control over the illness and treatment of their dear ones especially those caregivers who are taking care of their child suffering from cancer. Keeping in view the above findings in literature, cancer can be considered as a prevalent problem, which adversely affects the life of many individuals including the life of mothers. The investigator in her personal experience realized that mothers of children with cancer experience agony, anxiety, and depression due to this illness of their child. After an extensive review of literature regarding problems of mothers and by the personal experience in this field, the investigator was interested to research on the same and has selected the present study.

Objectives of the study

The objectives of the study are;

Quantitative

1. To assess the problems of mothers of children with cancer using a rating scale.
2. To find association between problems of mothers of children with cancer and selected demographic variables.
3. To find the opinionnaire of informational leaflet on problems and problem solving strategy of mothers of children with cancer.

Qualitative

1. To identify problem solving strategy for mothers of children with cancer using semi structured interview schedule.

Combined objective

To assess the problem and problem solving strategy of mothers of children with cancer.

MATERIALS AND METHODS

Research design a embedded design was selected for the study In this study, subjects consist of 30 mothers of children with cancer for quantitative and 15 mothers for qualitative until the data saturation who

fulfilled the inclusion criteria and selected purposively. It was a nested identical sampling.

Sampling criteria

Inclusion criteria for sampling

- Mothers of children who were diagnosed with cancer.
- Mothers of children who were able to read and write English, Malayalam and Kannada.

Exclusion criteria for sampling

- Mothers of children with cancer who were intellectually compromised or seriously ill.

Data collection instruments

In this study the data collection instruments used were

- a) Baseline proforma of mothers of children with cancer.
- b) Baseline proforma of child with cancer.
- c) Rating scale on problem assessment of mothers of children diagnosed with cancer.
- d) Semi structured interview to identify the Problem solving strategies of mothers of children with cancer.

Reliability of the tool

Cronbach's Formula was used to find out the reliability. Reliability was 0.93, which indicated that the tool was reliable.

Data collection process

Prior to the data collection, the investigator collected information regarding the subjects from the care records and from the staffs on duty and familiarized herself with the subjects and explained the purpose of the study to them. She assured the confidentiality of their responses. An informed written consent was taken from each subject. The baseline proforma and rating scale on problem assessment of mothers of children with cancer was administered. Then semi structured

interview was used to identify the problem solving strategies used by the mothers.

STATISTICAL ANALYSIS

Data obtained was analyzed on the basis of objectives and hypothesis as follows.

1. Baseline characteristics were analyzed using frequency and percentage.
2. Rating scale on problem assessment of mothers of children with cancer was analyzed by mean, SD and mean percentage.
3. Semi structured interview to identify the problem solving strategy of mothers of children with cancer was analyzed by thematic analysis.
4. Association between problems of mothers of children with cancer and selected demographic variables was analyzed by Fishers exact test.
5. Assess the problem and problem solving strategy of mothers of children with cancer was analyzed by Meta matrix analysis.

RESULT

MARITAL STATUS

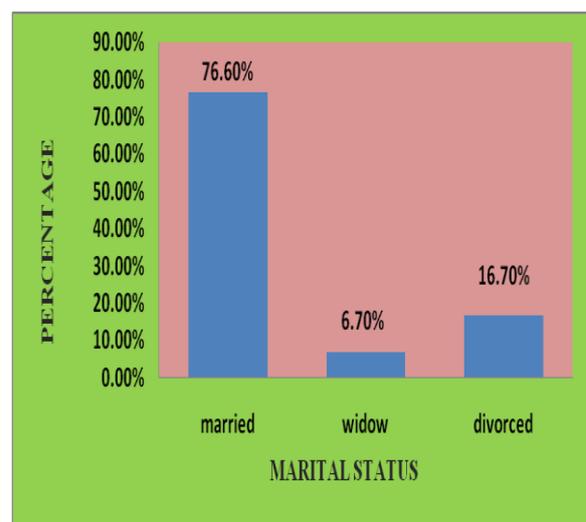


Figure 1: Bar diagram showing the distribution of subjects based on marital status

Figure 1 bar diagram shows that the majority (76.6%) of subjects was married and least of the subjects (6.7%) were widow.

Table 1: Frequency and percentage distribution of subjects according to their baseline characteristics N=30

Variables	Frequency	Percentage
Age of mothers		
21-25	7	23.3
26-30	9	30
31-36	7	23.3
>36	7	23.3
Family income		
<5000	6	20
5001-10000	12	40
10001-15000	6	20
>15001	6	20
Religion		
Hindu	12	40
Muslim	10	33.3
Christians	8	26.7
Type of family		
Nuclear	19	63.3
Joint	11	36.7
Residence		
Rural	14	46.7
Urban	16	53.3
Number of children		
One	7	23.3
Two	11	36.7
Three	7	23.3
Four or more	5	16.7
Age of the affected child		
1-5	19	63.3
6-10	5	16.7
11-15	4	13.3
>15	2	6.7
Education of the affected child		
Not yet admitted to school	21	70
LKG/UKG	1	3.3
Primary	3	10
High school	4	13.3
Higher secondary	1	3.3
Duration of illness		
Less than one year	15	50
1-2 yrs	7	23.3
2-3 yrs	2	6.7
More than 3 yrs	6	20
Number of hospitalization		
1-3 times	1	3.3
4-6 times	4	13.3
7-10 times	9	30
>10 times	16	53.3
Treatment cost for one month		
<5000	7	23.3
5001-10000	10	33.3
10001- 15000	8	26.7
>15000	5	16.7
Family history of cancer		
Yes	10	33.3
No	20	66.7
Type of cancer[in the family]		
Head and neck	1	10
Breast cancer	3	30
GI tract cancer	1	10
Blood cancer	3	30
Lung cancer	2	20
Financial assistance		
Yes	26	86.7
No	4	13.3
From whom		
Insurance scheme	8	30.8
Govt. Scheme	6	23
Temple/church/NGOs	8	30.8
Others	4	15.4
Cancer of child has caused some problems		
Yes	30	100

EDUCATION OF MOTHERS

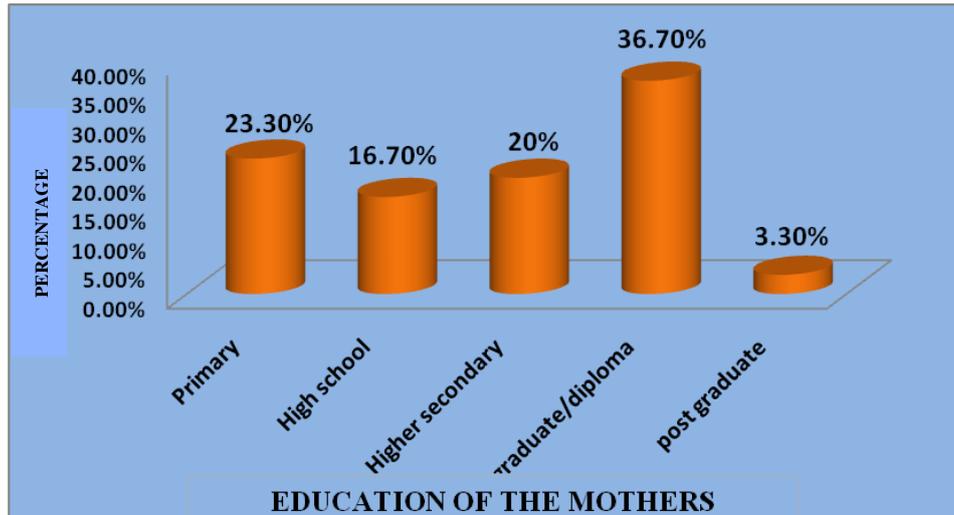


Figure 2: Bar diagram showing the distribution of subjects based on Educational status

Figure 2 presents that majority of the subjects (36.7%) had diploma/graduate and least of the subjects (3.3%) post graduate.

Figure 4 presents the majority of the subjects that (46.7%) was ALL, and least (6.7%) was Brain tumour.

OCCUPATION

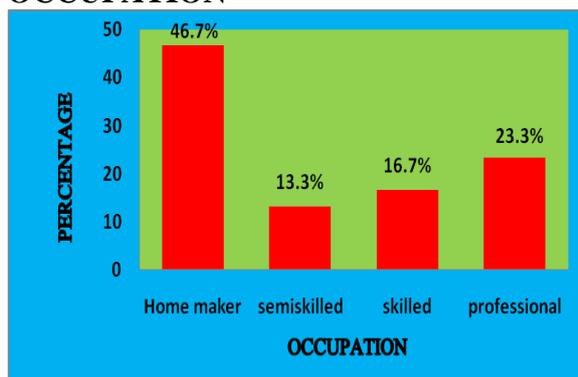


Figure 3: Bar diagram shows the distribution of subjects based on Occupation

Figure 3 shows that majority of the subjects (46.7%) were home makers and least (13.3%) were semiskilled workers.

TREATMENT MODALITY

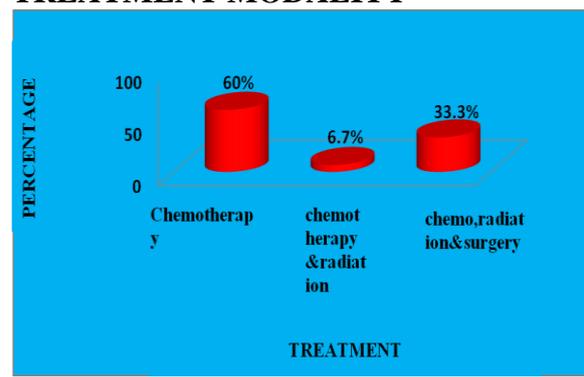


Figure 5: Bar diagram showing the treatment modality of the affected child

Figure 5 presents that 60% children treatment modality were chemotherapy and 6.7% were chemotherapy & radiation.

DIAGNOSIS

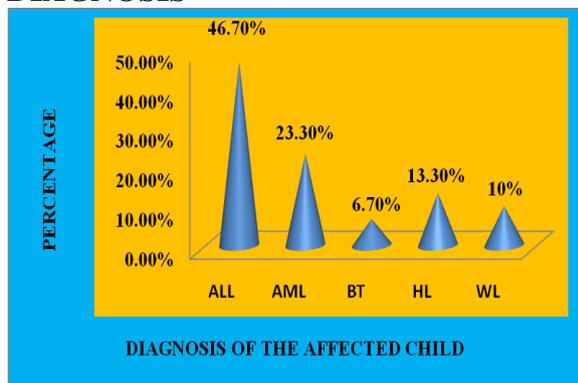


Figure 4: Cone diagram showing the diagnosis of the affected child

FAMILY MEMBER WITH HISTORY OF CANCER

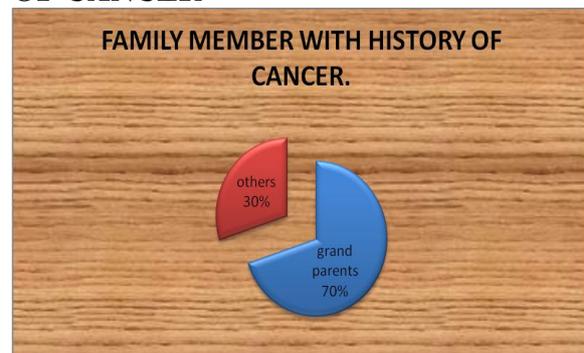


Figure 6: Pie diagram shows the family history of cancer to whom

Data in the figure 6 indicate that 70% of family history of cancer occurred in the grandparents and 30% were others.

INFORMATION ON CANCER

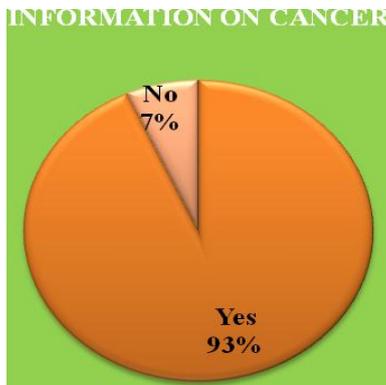


Figure 7: Pie diagram shows the Mothers information on cancer

Figure 7 shows that majority of the subjects (93%) were information about the cancer and cancer treatment and 7% were no any information on cancer.

SOURCE OF KNOWLEDGE

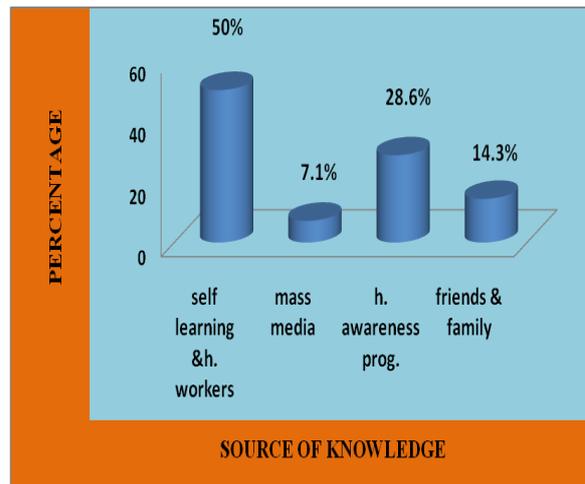


Figure 8: Bar diagram showing the source of knowledge

Figure 8 presents that the subjects (majority-50%) source of knowledge from health workers & self learning and least from (7.1%) from mass media.

PROBLEMS OF THE MOTHERS OF CHILDREN WITH CANCER

The problems of the 30 mothers were collected using a rating scale and is presented in Table 2 and figures.

Table 2: Score and percentage distribution, grading, mean \pm SD, mean percentage of problems of mothers of children with cancer. N = 30

Problems Level	Range of score	Percentage	Frequency	Percentage	Mean \pm SD	Mean %
Not at all	30	20%	-	-	115.8 \pm 16.9	77.2
A little bit	31-60	20.7- 40%	-	-		
Somewhat	61-90	40.7- 60%	1	3.3%		
Quite a bit	91-120	60.7- 80%	18	60%		
Very much	121-150	80.7-100%	11	36.7%		

Maximum score: 15

Data presented in Table 2 represents that 60% of the subjects (majority) had quite a

bit problems and 3.3% had somewhat problems.

Table 3: Domain wise mean, mean percentage and SD of Problem scores. N = 30

No.	Domain	No. of Items	Max.score	Mean \pm	SD	Mean %
1.	Physical	5	25	21.6 \pm	3.9	86.4%
2.	Psychological	7	35	32.7 \pm	3.7	93.4%
3.	Financial	4	20	16.2 \pm	3.9	81%
4.	Spiritual	3	15	7.7 \pm	4.0	51.3%
5.	Communication	3	15	9 \pm	3.4	60%
6.	Care related	4	20	15.6 \pm	2.9	77%
7.	Social	4	20	13 \pm	4.9	65%
	Total	30	150	115.8 \pm	16.9	

Maximum score: 150

The data presented in Table 3 shows that the mean percentage problem score is highest in the psychological problem (93.4%) whereas

least in the area of spiritual problems (51.3%).

H₀₁: There will be no significant association between the problems of mothers of children with cancer and selected demographic variables.

Table 4: Association between problems of mothers of children with cancer and selected demographic variables. N = 30

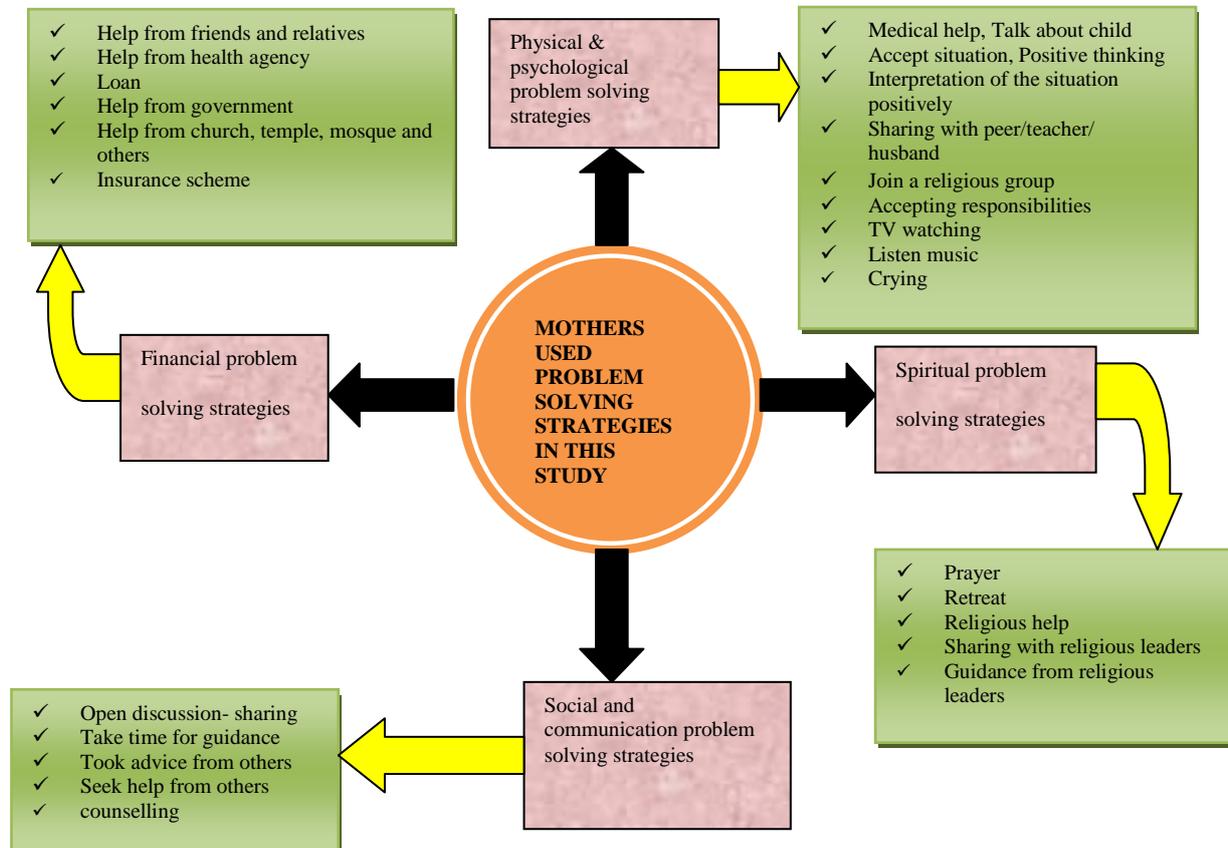
Variables	Problem scores		Fishers P value
	Median≤(112.5)	Median≥(112.5)	
Age of mothers			
21 – 25	3	4	
26 – 30	4	5	1.000
31 – 36	4	3	3
>36	4	3	
Marital Status			
Married	11	12	
Widow	1	1	1.000
Divorced	3	2	
Education of the mothers			
Primary	4	3	
High school	0	5	
Higher secondary	4	2	.133
Diploma / graduate	6	5	
Post graduate	1	0	
Occupation of the mothers			
Home maker	6	8	
Semiskilled	1	3	.369
Skilled	4	1	
Professional	4	3	
Family income / month in Rs			
<5000	4	2	
5001 – 10000	5	7	.608
10001 – 15000	2	4	
>15001	4	2	
Religion			
Hindu	4	8	
Muslim	5	5	.203
Christian	6	2	
Type of family			
Nuclear	10	9	
Joint	2	6	.078
Extended	3	0	
Residence			
Rural	5	9	.136
Urban	10	6	
Number of children			
One	4	3	
Two	5	6	
Three	4	3	1.000
Four or more	2	3	
Age of affected child			
1 – 5	7	12	
6 – 10	3	2	.124
11 – 15	4	0	
>15	1	1	
Education of the affected child			
Not yet admitted to school	8	13	
LKG / UKG	0	1	
Primary	2	1	.058
High school	4	0	
Higher secondary	1	0	
Diagnosis			
ALL	5	9	
AML	4	3	
BT	2	0	.613
HL	2	2	
WL	2	1	
Duration of illness			
Less than one year	9	6	
1 – 2 years	2	5	.671
2 – 3 years	1	1	
More than 3 years	3	3	

Table 4 to be Continued...			
Treatment			
Chemotherapy	8	10	
Chemotherapy and radiation	1	1	.842
Chemotherapy, radiation & surgery	6	4	
Number of hospitalization			
1 – 3 times	0	1	
4 – 6 times	4	0	.150
7 – 10 times	4	5	
>10 times	7	9	
Treatment cost / month			
<5000	3	4	
5001 – 10000	3	7	.259
10001 – 15000	5	3	
>15001	4	1	
History of cancer in the family			
Yes	6	4	.350
No	9	11	
Financial assistance			
Yes	13	13	
No	2	2	.701
Any information on cancer			
Yes	14	14	.759
No	1	1	

Data presented in the Table 4 shows that ‘P’ value computed between problems of mothers of children with cancer and demographic variables are more than 0.05 ($p > 0.05$). Hence null hypothesis was

accepted and we concluded that there is no significant association between problems of mothers of children with cancer and selected demographic variables.

FIGURE 9: THEMATIC ANALYSIS OF MOTHERS OF CHILDREN WITH CANCER USING PROBLEM SOLVING STRATEGIES IN THEIR DAILY LIFE



OPINIONNAIRE ON LEAFLET ON PROBLEMS AND PROBLEM SOLVING STRATEGY OF MOTHERS HAVING CHILDREN WITH CANCER

Table 5: Frequency and percentage distribution of subjects according to their opinionnaire N=30

Questions	Frequency	percentage
– Leaflet is useful	30	100
– It acquire new knowledge	30	100
– Leaflet helped me to clear my doubts	30	100
– Leaflet were simple	30	100
– Information in the leaflet could be implemented in sorting out my day to day problems.	28	93.3
– Leaflet helped me to know the problem solving strategies in the areas like,		
a) Physical	27	90
b) Psychological	30	100
c) Social	26	86.7
d) Spiritual	30	100
e) Financial	23	76.7
f) Care related	30	100
g) communication	21	70

Maximum Score=12

Meta inference

In this study of Meta inference of 15 samples are included. All the mothers are facing problems; such as physical, psychological, financial, spiritual, communication and social problems. Based on the semi structured interview it was found that all the mothers (14) except one uses problem solving strategies, this as mother didn't respond to any of the questions and kept on crying. The psychological problem (93.4%) was faced by the majority of the mothers of children with cancer. Then comes physical (86.4%), financial (81%), social (65%), communication (60%) and spiritual (51.3%) problems. Problem solving strategy is very much used psychological (60%) and financial (60%) domains. Other problem solving strategy in different domains are spiritual (46.6%), communication (40%), physical (33%), and social (20%). The major problem solving strategies under physical and psychological domain were, Medical help (40%), Talk about child (6.6%), Accept situation (20%), Positive thinking (53.3%), Interpretation of the situation positively (20%), Sharing with peer/teacher/ husband/others (53.3%), Join a religious community (20%), Accepting responsibilities (13.3%), TV watching

(13.3%), Listen music (13.3%) and Crying (13.3%). The major problem solving strategies under financial domain were, Help from friends and relatives (20%), Help from health agency (6.6%), Loan (13.3%), Help from government(6.6%), Help from church, temple, mosque and others (20%), Insurance scheme (20%). The major problem solving strategies under spiritual domain was Prayer (66.6%), Retreat (33.3%), sharing with religious leaders (26.6%), Guidance from religious leaders (20%) and religious help (6.6%). The major problem solving strategies under social and communication domain were, Open discussion- sharing with others (80%), take time for guidance (46.6%), Took advice from others (40%), Seek help from others (6.6%) and counselling (13.3%). From this study we found that, even though the mothers of children suffering with cancer uses problem solving strategies, it does not completely erase their problems but reduces the severity of the problems faced up to an extent and gives a relief to them.

Table 6: META MATRIX ANALYSIS ON PROBLEMS AND PROBLEM SOLVING STRATEGY OF MOTHERS OF CHILDREN WITH CANCER

Name	Age range	Family income	Duration Of illness	Quantitative:- problems of mothers of children with cancer.		Qualitative: - problem solving strategy of mothers of children with cancer.	Themes and Subthemes (problem solving strategies)			
				Type of problems	Percentage		Physical & Psychological	Financial	Spiritual	Social & Communication
Mrs. A	>36	<5000	<1 yr.	Physical Financial Social Psychological Communication Spiritual	88% 80% 80% 57% 46% 20%	After my son was admitted in the hospital, I was unable to sleep and feeling tiredness. So I used to go to medical store and get medicines. I pray a lot for my child. Spiritual guidance is given by our spiritual leaders. My relatives and friends help in all the aspect of my needs and I desire to talk with others about my child so that they may pray for my child. God is my great power.	-Medical help -Talk about child -Accept situation -Positive thinking	-Help from friends and relatives	-Prayer -Sharing with religious leaders	-Open discussion - sharing
Mrs. B	26-30	<5000	<1 yr.	Psychological Physical Financial Social Communication Spiritual	94% 92% 85% 80% 46% 20%	I can only say what Job has said in the Bible 'God has given and himself has taken it back. Now I can accept the reality. My mind was affecting my physical health. So I used to seek the guidance of my parish priest, retreat and friends, and I share openly my feelings also. My financial needs were met by my friends.	-Positive thinking -Interpretation of the situation positively -Accept situation	-Help from friends	-Guidance from parish priest -Retreat	-Open discussion - sharing -Taking guidance
Mrs. C	26-30	<5000	1-2 yrs.	Communication Psychological Financial Social Physical Spiritual	93% 88% 85% 80% 72% 66%	I used to take advises from my friends and relatives. There's no one for me except God, I pray a lot for my child. My teacher was the one who helped me to take decision regarding the treatment of my child. My financial problems were solved by the health agencies. I am getting spiritual guidance from my parish priest, religious sisters and from retreat centres.	-Sharing with teacher -Positive thinking	-Help from health agency	-prayer -retreat -Guidance from parish priest	-Took advice from others - Sharing with others
Mrs. D	31-36	10001-15000	<1 yr.	Spiritual Financial Physical Psychological Communication Social	100% 100% 100% 100% 100% 100%	Prayer is my strength. For my physical health based on her (family friend- nurse) advice I used to go to medical store and get medicines My jewels and the property were kept in the bank and had taken the loan for my child's treatment.	-Medical help	-Loan from bank	-Prayers	
Mrs. E	>36	>15000	>3yrs.	Psychological Physical Financial Communication Social spiritual	100% 80% 70% 60% 40% 26%	I receive money from the government. I share my innermost feelings of my heart with my friends and family members; and whenever I feel so sad I go to church, attend retreat, prayers. After my son was admitted in the hospital, I was unable to sleep and feeling tiredness. So I used to go to medical store and get medicines.	-Peer Sharing -medical help	-Financial support from government	-Prayers -Attending Retreat	-Open discussion - sharing
Mrs. F	31-36	>15000	1-2 yrs.	Physical Psychological Financial Spiritual communication Social	100% 100% 100% 100% 100% 100%	I share all my feelings to one of my friend's sister, who is religious nun. My sister is working in an abroad, so she helped me financially.	- Sharing feelings	-Help from family	-Religious help	-Open discussion - sharing
Mrs. G	31-36	>15000	2-3 yrs.	Physical Psychological Financial Spiritual Social Communication	100% 100% 60% 53% 50% 40%	Crying.....(not responding)	Crying			
Mrs. H	21-25	5001-10000	<1 yr.	Psychological Physical Spiritual Social Financial communication	100% 92% 60% 50% 20% 20%	As a mother, if I feel sad, who will help and take care of my child? I accept this pain and suffering because it is the part of my life. My family members are helping financially. I find time and pray. I seek guidance from religious leaders and I discuss about the treatment of my child and me with the doctor and treat my child accordingly.	-Medical help -Positive thinking -Accepting responsibilities -Interpretation of the situation positively	-Help from family	-seek guidance from religious leaders -Prayer - Join a religious group	-Take time for guidance

Table6 to be continued...

Mrs. I	>36	>15000	>3yrs.	Psychological Physical Financial Spiritual Communication Social	100% 80% 80% 60% 40% 20%	In the beginning when I see my child's face I used to cry. Whenever, I feel sad, I like to watch a comedy movie, and listen to the devotional songs. I discuss about the treatment of mine and my child with the doctors. From church and my house I received help. I am praying for my child's health.	-TV watching -Listen music -Medical help -positive thinking -Crying	-Help from others	-Prayer - Help from church	-Took advice from others -Take time for guidance
Mrs. J	21-25	5001-10000	<1 yr.	Physical Psychological Financial Communication Spiritual Social	100% 100% 40% 33% 30% 20%	Nothing happens without the knowledge of God. I attend a retreat met a counsellor and shared all my problems with him. Even if am strong, prayer is only my strong support. I share everything with my mother openly. I received financial support from mosque and insurance scheme.	-Positive thinking -accept situation -Sharing problems	-Help from mosque -Insurance scheme	-Prayer -Retreat -Sharing with religious leaders	-Open discussion – sharing -Seek help from others -Took advice from others -Counselling -Take time for guidance
Mrs. K	31-36	<5000	<1 yr.	Psychological Communication Financial Physical Social spiritual	94% 80% 65% 64% 50% 20%	I am the one who has to look after family. My sister is helping me. I had taken the loan. I have good relationship with all. I am praying that is my strength. I seek guidance from our religious leaders.	-peer sharing -positive thinking -Join a religious group -Accepting responsibilities	-Loan	-Prayer -Sharing with religious leaders	-Open discussion – sharing -Took advice from others -Take time for guidance
Mrs. L	26-30	5001-10000	<1 yr.	Physical Psychological Financial Social Spiritual Communication	100% 100% 100% 60% 53% 40%	I pray more than an hour daily. My mother and spiritual leaders help me to take the decision. I seek help from insurance scheme. I have good communication with others.		Insurance scheme	-prayer -sharing with religious leaders	-Open discussion – sharing -take time for guidance
Mrs. M	21-25	5001-10000	<1 yr.	Physical Psychological Financial Spiritual Communication Social	100% 100% 90% 53% 40% 35%	Prayer and husband are the great support for me. I attend a retreat met a counsellor and shared all my problems with him. Sometimes we seek the help of our parish priest. I get guidance from the prayer groups; I feel my feelings and worries are nothing when I compare with others.	-sharing with husband -positive thinking -Join a religious group -Interpretation of the situation positively.		-prayer -Retreat -Sharing with religious leaders	-Counselling -Open discussion – sharing -take time for guidance -Took advice from others
Mrs. N	26-30	5001-10000	<1 yr.	Financial Physical Psychological Communication Social Spiritual	100% 84% 80% 40% 35% 20%	The insurance scheme helps me regarding money matter. Whenever I feel sad I like to watch movie and listen songs When I share my feelings with my teacher only I feel free and relaxed.	-watch movie -Listen music - sharing with teacher	-Insurance scheme		-Open discussion – sharing -Take time for guidance
Mrs. O	26-30	5001-10000	1-2yrs.	Psychological Physical Financial Social Spiritual communication	94% 80% 60% 50% 46% 40%	I find time for prayer. I receive help from the doctors and nurses. The needs are met by the temple. Friends were very supportive. I like to interact with others.	-medical help -Peer discussion	- seek help from temple	-prayer	-Open discussion – sharing

DISCUSSION

In the present study, almost subjects had belongs to age group of 26-30 (30%), rest of them are 21-25, 31-35 and >36 (23.3%). Family income majority were (40%) 5001-10000, least were (20%) <5000, 10001-15000 and >15001 Rs/month. Maximum number of participants 40% were Hindu, 33.3% were Muslims, 26.7% were Christian. Majority of the subjects, (53.3%) were residing in urban areas, 63.3% belonged to nuclear family and 76.65 were married. Further, study showed that 36.7% subject had educational status of either diploma or graduate and least of the subjects (3.3%) post graduate. Occupational status of subjects showed that majorities (46.7%) were home makers and least (13.3%) were semiskilled. Mothers had (100%) problems related to their child condition.

Age of the affected child, majority were (63.3%) 1-5 years, 16.7% were 6-10 years, 13.3% were 11-15 years and 6.7% were > 15 years. Majority of children, duration of illness were less than one year (50%), (23.3%) 1-2 years, (20%) more than 3 years and (6.7%) 3-4 years. The majority of the subjects that (46.7%) was ALL, and least (6.7%) was Brain tumour, 33.4% of children admitted in the hospital more than ten times, also most of the children (60%) had taken chemotherapy and treatment cost (majority) 33.3% had family history of cancer, most of the family is getting financial assistance, majority (30.8%) from Insurance scheme and Temple/church/NGOs, rest of them were 23% from Govt. Scheme and 15.4% from others.

The findings of the current study were found consistent with the findings of another study conducted in Korea, The report of coping strategies and psychosocial adjustment in Korean mothers of children with cancer, more than half (56.5%) of the participants were in their 30s with an average age of 34.7 years (SD = 5.2). Most were married (97%), well educated (90% completed at least a high school level of education), and identified themselves as

full-time housewives (85%). Although 26% left the question about household income blank, income levels ranged from \$318 to \$4545. The age range for children was from 1 month to 18 years ($M = 6.9$, $SD = 4.4$). About half (49%) of the children were diagnosed within the past 6 months prior to the study, with the most frequent diagnosis being leukaemia (45%). Nearly half of the children's diagnoses were leukaemia or lymphomas, and almost two- third of the children had been diagnosed in the last 5 years. Most children (almost 90%) had received chemotherapy. [7]

In the present study shows that rating scale on problem assessment of mothers of children with cancer with 30 items to assess the problems (physical problems, psychological problems, financial problems, spiritual problems and communication problems, care related problems and social problems) of mothers of children with cancer. 60% of the subjects (majority) had quite a bit problem, 36.7% of subjects had very much problems and 3.3% had somewhat problems. The mean percentage problem score is highest in the psychological problem (93.4%) and in the areas of physical problems (86.4%), financial problems (81%), care related problems (77%), social problems (65%), communication problems (60%), whereas least in the area of spiritual problems (51.3%).

A cross sectional study conducted in Filipino to evaluate the family function and care giver strain in childhood cancer. 90 family included in the study, the modified caregiver strain index (MCSI) used for data collection, 11 item questionnaire that deals with four major areas of burden – physical, personal, emotional and financial. Each item can be answered by a 3 point Likert scale. 54.4% of the care givers were without caregiver strain, 30% were with predisposition to caregivers strain and 15.5% were with severe caregiver strain. [8]

A study conducted in Chennai, showed parental psychological distress of the mothers that 47.9% had moderate

intrusion, 49.3% had severe intrusion, 2.8% has extreme intrusion while 22.5% had moderate avoidance, 73.3% had severe avoidance, 4.2% had extreme avoidance and 36.6% had moderate hyper arousal, 59.2% had severe hyper arousal and 4.2% had extreme hyper arousal. [9]

A qualitative study was done in Iran, on challenges of children with cancer and their mothers. In this study conducted through thematic analysis approach. The main themes were spiritual problems, psychological problem, communication problems, knowledge problem and care related problems. The results showed that lack of awareness and spiritual problems were the most important problems of the mothers. [10]

In the present study problem solving strategy of mothers of children with cancer identified by with the help of semi structured interview. Through the thematic analysis the problem solving strategy of mothers of children with cancer were social, communication, financial, physical, psychological and spiritual problems.

A study conducted in Pune, coping strategy used by the mothers of children with leukaemia: Results of this study showed 71.7 % of the mothers of children with leukaemia are having poor coping strategies. The mothers have used both problem solving and emotional coping strategy equally as follows, seeking support (5.33 ± 0.75), then emotive coping strategy (4.8 ± 1.30), Acceptance (2.9 ± 0.51), Avoidance (2.5 ± 0.64) Distancing (1.9 ± 0.87) then positive action (1.6 ± 1.2). [11]

Hildenbrand AK, Alderfer MA, Deatrick JA, Marsac ML. conducted a mixed method research on assessment of coping with cancer. Semi structured interview used to assess parent coping assistance strategies utilized to manage cancer-related stressors. Qualitative data illustrated that parents coping assistance strategies including promoting relaxation, promoting social support, encouraging distraction, facilitating emotional

expression, providing information, and encouraging their child to take control. [12]

Present study shows that there was no significant association between the problems of mothers of children with cancer and selected demographic variables. 'P' values are more than 0.05 ($p > 0.05$), at 0.05 level of significance. Hence null hypothesis was accepted.

A study conducted in Asia Pacific, shows that there were no significant association between the problems of mothers of children with cancer (caregivers strains such as; social, economic, cultural and medical) and selected demographic variables. [3]

Present study shows that 60% of the subjects (majority) had quite a bit problem, 36.7% of subjects had very much problems and 3.3% had somewhat problems. Mothers of children with cancer using problem solving strategies in their daily life, they are as follow: social, communication, financial, physical, psychological and spiritual problems.

A study conducted in Mansoura city about Stressors and Coping Strategies of Mothers Having Children with Cancer. The results of this study revealed that most of mothers of studied cancer children (86.4%) suffered from psychological stressors followed by financial stressors, stressors related to treatment, physical stressors and social stressors (83.5%, 74. 74.8%, 52.4%, 5.8% respectively), most of them (68.9%) used emotional coping strategies and highest percentage of them (78.6%) used problem solving coping strategies. [13]

"The impact of childhood cancer on the family: a qualitative analysis of strains, resources, and coping behaviors" is conducted by Patterson JM, Holm KE, Gurney GJ. Using the Family Adjustment and Adaptation Response theoretical model to organize the data, the domains of strains and resources were delineated into themes and sub-themes related to the cancer, child, family, health-care system, and community. Within a third domain, coping, sub-themes were identified within the themes of

appraisal-focused, problem-focused, and emotion-focused coping behaviors. Integration of this information should serve to improve future studies of health-related quality of life among children who survive cancer. [14]

Present study shows that the percentage of effectiveness of leaflet distribution; the usefulness (100%), simple (100%), knowledge gain (100%) and doubt clearance (100%). the percentage of effectiveness of leaflet distribution especially the use of problem solving strategies. This leaflet was helpful majority of the subjects (100%) in psychological, spiritual and care related, least of the subject (70%) were only in communication.

A study conducted in an experimental study done in Iran, on “The effect of prayer on level of anxiety in mothers of children with cancer”. The results showed that difference between mean anxiety in two groups was significant ($p=0.001$), and mean anxiety reduced after praying from 56.2 ± 13.9 to 40.9 ± 12.4 in case group ($p=0.001$). The results of this study showed that praying can reduce anxiety in mothers with children suffer from cancer and could be useful for them. [15]

CONCLUSION

This study concluded that, even though the mothers of children suffering with cancer uses problem solving strategies, it does not completely erase their problems but reduces the severity of the problems faced up to an extent and gives a relief to them. More of such studies can be considered to be conducted so that primary care givers problems can be assessed and effectively managed.

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