

## Original Research Article

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# Assessment of level of fatigue and level of parenting efficacy among mothers of hospitalized children

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## ABSTRACT

**Background:** Fatigue is a vital concern among mothers of hospitalized children but it remains relatively unexplored. Parenting efficacy is parent's competence in taking care of the children. The present study was aimed to assess the level of fatigue and parenting efficacy among mothers of hospitalized children and to identify the correlation between them.

**Methods:** A cross-sectional study was carried out among 112 mothers of hospitalized children in paediatric medical ward of a tertiary care centre. Participants were recruited through convenient sampling. Socio-demographic proforma was used to collect the data concern with socio demographic details, Chalder's fatigue scale was used to assess the level of fatigue and parenting sense of competence (PSOC) scale was used to assess the level of parenting efficacy of mothers. Distribution of demographic variables, level of fatigue and level of parenting efficacy were expressed in frequency and percentage. Correlation between the level of fatigue and level of parenting efficacy was assessed by Karl Pearson correlation coefficient.

**Results:** Among 112 mothers 83.9% of them had moderate fatigue and only 42% had good parenting efficacy, Karl Pearson correlation had shown a negative correlation ( $r=-0.002$ ). Age and occupation had shown significant association with level of fatigue ( $p=0.004$ ,  $p=0.019$  respectively).

**Conclusions:** In order to provide family centered care to the children, strategies should be implemented in all paediatric care units to reduce fatigue and to improve parenting efficacy among mothers of hospitalized children.

**Keywords:** Fatigue, Parenting efficacy, Mothers of hospitalized children

## INTRODUCTION

The developmental concept of growth recognizes the role of mothers in meeting the physical and psychological needs of the children. For both dimension, the nurturing role and the role of the caretaker, the role of the mother is crucial in determining the needs of her child.<sup>1</sup> Mother stays at the child's bedside for the entire time of hospitalization and participates in the process of taking

care of the child with the staffs.<sup>2</sup> In paediatrics, family centered care mainly focuses on the concept that the family is the child's primary source of strength and support.<sup>3</sup> Fatigue is a vital concern among the parents of hospitalized children, but it remains relatively unexplored.<sup>4</sup> Tired mothers are less sensitive towards the needs of their children and more aggressive as compared to mothers who are not tired.<sup>5</sup> Parenting efficacy is a parent's competence in taking care of the children.<sup>6</sup> Jones and Prinz defined it as the expectation caregivers held

about their ability to parent successfully.<sup>7</sup> A competent parent perceives her child's needs, readily responds to them and flexibly adjusts her own behaviours as a function of circumstance, settings and context.<sup>8</sup> Parenting efficacy is a strong predictor of positive parenting behavior.<sup>9</sup> A confident mother is expected to be involved in her child's care efficiently with other health care providers, which may bring a sense of self-satisfaction in her, as well as the child may feel relaxed and secured in the hospital environment.<sup>10</sup> On the contrary, parents with low self-efficacy are at risk of frustration, stress and depression.<sup>11</sup> Parents who are adequately efficient in parenting are less likely to develop fatigue.<sup>12</sup> Mothers fatigue was influenced by physiological, psychological and situational factors such as mothers sleeping hours, her level of anxiety and the child's adaptation to hospitalization.<sup>13</sup> Common factors that contribute negatively to the level of maternal fatigue were dissatisfaction with sleep, shorter meal times per day and dissatisfaction with emotional, informational and appraisal support.<sup>14</sup> Parenting efficacy is positively related with family and friends support.<sup>15</sup>

In our country the needs of the parents who are staying with their sick children in the hospital are ignored. In both private and governmental hospitals very few facilities are available for addressing the needs of the parents. Most of the studies have been concerned with stress and anxiety experienced by mothers of hospitalized children. Mothers who are taking care of the ill child will also experience mild to severe level of fatigue which may affect their parenting efficacy is also an important issue. Hence, the present research was initiated with the aim to assess the level of fatigue and parenting efficacy among mothers of hospitalized children and to identify the correlation between them.

## METHODS

This is a cross sectional study carried out from October 2019 to February 2020 in Jawaharlal institute of post graduate medical education and research (JIPMER) hospital. Having obtained written consent from mothers

and permission from the ethics committee with the code number of JIP/IEC/2019/056 the study was conducted in paediatric medical ward. Mothers who were staying 24 hours in hospital with the sick child for five days were included in the study. Mothers of children with recurrent hospitalization and those who don't know tamil or english were excluded from the study.

The total sample size was 112 and convenient sampling technique was used to recruit the participants. Structured subject data sheet was used to collect the socio-demographic data of mothers. Chalder's fatigue scale was used to assess the level of fatigue of the mothers. This scale had 11 questions with scoring from 0-3. The total score was 33. Based on fatigue score the level of fatigue was classified as mild, moderate and severe. Parenting score of competence (PSOC) scale was used to assess the parenting efficacy of mothers. This scale had 16 items with scoring from 1-6. Based on parenting efficacy score the level of parenting efficacy was classified as poor, average, satisfaction, good, very good and excellent. The data of demographic characteristics, fatigue and parenting efficacy were collected from the mothers by self-reporting questionnaires. Both descriptive and inferential statistics were used to analyse the data. Descriptive statistics (frequency, percentage) was used to describe the demographic variables, level of fatigue and parenting efficacy. Correlation between level of fatigue and level of parenting efficacy was assessed by Karl Pearson correlation co-efficient. The association between level of fatigue and level of parenting efficacy with demographic variables were assessed by chi-square test. Data analysis was done with SPSS 21st version.

## RESULTS

Among 112 mothers of hospitalized children majority were in the age group of 18-29 years and 85.7% had secondary education and above. Most of them were working women and 50% belonged to joint family and 49% has less than ₹ 2000 as monthly income. Most of them had family support and 37.5% of the children were infant (Table 1).

**Table 1: Distribution of the demographic variables among mothers of hospitalized children (N=112).**

Sr. no.	Demographic variables	Frequency (N)	Percentage (%)
<b>1</b>	Age (in years)		
	18-29	73	65.2
	30-44	38	33.9
	45-51	1	0.9
<b>2</b>	Educational status		
	Illiterate	0	0
	Primary	16	14.3
	Secondary	31	27.7
	Higher secondary	32	28.6
	Graduate and above	33	29.5
<b>3</b>	Occupation		
	Working	59	52.7

Continued.

Sr. no.	Demographic variables	Frequency (N)	Percentage (%)
	Housewife	53	47.3
<b>4</b>	Type of family		
	Joint	56	50
	Nuclear	56	50
<b>5</b>	Monthly income		
	Less than ₹2000	55	49.1
	₹2001-5000	18	16.1
	₹5001-10000	14	12.5
	More than ₹10000	25	22.3
<b>6</b>	Family support		
	Yes	90	80.4
	No	22	19.6
<b>7</b>	Developmental stage of child		
	Infant	42	37.5
	Toddler	31	27.7
	Pre-schooler	12	10.7
	School age	27	24.1

**Table 2: Level of fatigue among mothers of hospitalized children (N=112).**

Level of fatigue	Frequency (N)	Percentage (%)
<b>Mild fatigue (score 0-11)</b>	14	12.5
<b>Moderate fatigue (score 12-22)</b>	94	83.9
<b>Severe fatigue (score 23-33)</b>	4	3.57

**Table 3: Level of parenting efficacy among mothers of hospitalized children (N=112).**

Level of parenting efficacy	Frequency (N)	Percentage (%)
<b>Poor (score 0-16)</b>	25	22.3
<b>Average (score 17-32)</b>	0	0
<b>Satisfactory (score 33-48)</b>	22	19.6
<b>Good (score 49-64)</b>	47	42
<b>Very good (score 65-80)</b>	18	16.1
<b>Excellent (score 81-96)</b>	0	0

**Table 4: Correlation between the level of fatigue and parenting efficacy among mothers of hospitalized children (N=112).**

Correlation between the level of fatigue and parenting efficacy	Mean	Standard deviation	Karl Pearson r value	P value
<b>Fatigue score</b>	16.18	3.63		
<b>Parenting efficacy score</b>	44.98	21.98	-0.002	0.982

**Table 5: Association of level of fatigue among mothers of hospitalized children with their selected demographic variables (N=112).**

S. no.	Demographic variables	Level of fatigue						X2	df	P value			
		Mild (0-11)		Moderate (12-22)		Severe (23-33)							
		n=14	%	n=94	%	n=4	%						
<b>1</b>	Age (in years)												
	18-29	9	64.3	64	68.1	0	0						
	30-44	4	28.6	30	31.9	4	100.0	15.10	4	0.004**			
	45-51	1	7.14	0	0	0	0						
<b>2</b>	Educational status							2.99	6	0.809			

Continued.

S. no.	Demographic variables	Level of fatigue						X <sup>2</sup>	df	P value			
		Mild (0-11)		Moderate (12-22)		Severe (23-33)							
		n=14	%	n=94	%	n=4	%						
	Primary	3	21.4	13	13.8	0	0						
	Secondary	5	35.7	24	25.5	2	50.0						
	Higher secondary	3	21.4	28	29.8	1	25.0						
	Graduate and above	3	21.4	29	30.9	1	25.0						
3	Occupation							7.89	2	0.019*			
	Working	12	85.7	46	48.9	1	25.0						
	Housewife	2	14.3	48	51.1	3	75.0						
4	Type of family							1.31	2	0.483			
	Joint	6	42.9	49	52.1	1	25.0						
	Nuclear	8	57.1	45	47.9	3	75.0						
5	Monthly income							7.62	6	0.267			
	Less than ₹2000	6	42.9	49	52.1	0	0						
	₹2001-5000	3	21.4	13	13.8	2	50.0						
	₹5001-10000	2	14.3	12	12.8	0	0						
	More than ₹10000	3	21.4	20	21.3	2	50.0						
6	Family support							0.79	2	0.629			
	Yes	10	71.4	7	81.9	3	75.0						
	No	4	28.5	7	18.1	1	25.0						
7	Developmental stage of child							8.51	6	0.203			
	Infant	7	50.0	34	36.2	1	25.0						
	Toddler	1	7.14	30	31.9	0	0						
	Pre-schooler	3	21.4	8	8.51	1	25.0						
	School age	3	21.4	22	23.4	2	50.0						

P&lt;0.01 highly significant \*\* p&lt;0.05 significant \*

**Table 6: Association of level of parenting efficacy among mothers of hospitalized children with their selected demographic variables (N=112).**

Sr. No.	Demographic variables	Level of parenting efficacy						X <sup>2</sup>	df	P value
		Poor n=25	%	Satisfactory n=22	%	Good n=47	%			
1	Age (in years)									
	18-29	15	60.0	18	81.8	29	61.7	11	61.1	
	30-44	10	40.0	4	18.2	18	38.3	6	33.3	8.53
	45-51	0	0	0	0	0	0	1	5.56	6
2	Educational status									
	Primary	1	4.0	7	31.8	5	10.6	3	16.7	
	Secondary	9	36.0	5	22.7	14	29.8	3	16.7	
	Higher secondary	9	36.0	9	40.9	9	19.1	5	27.8	19.25
	Graduate and above	6	24.0	1	4.55	19	40.4	7	38.9	9
3	Occupation									
	Working	15	60.0	7	31.8	27	57.4	10	55.6	4.86
	Housewife	10	40.0	15	68.1	20	42.6	8	44.4	3
4	Type of family									
	Joint	12	48.0	10	45.5	26	55.3	8	44.4	0.98
	Nuclear	13	52.0	12	54.5	21	44.7	10	55.6	3
5	Monthly income									
	Less than ₹2000	10	40.0	14	63.6	22	46.8	9	50.0	8.72
	₹2001-5000	2	8.00	3	13.6	8	17.0	5	27.8	9
	₹5001-10000	5	20.0	1	4.55	7	14.9	1	5.56	0.463

Continued.

Sr. No.	Demographic variables	Level of parenting efficacy								X <sup>2</sup>	df	P value
		Poor		Satisfactory		Good		Very good				
		n= 25	%	n= 22	%	n= 47	%	n= 18	%			
	More than ₹10000	8	32.0	4	18.2	10	21.3	3	16.7			
<b>6.</b>	<b>Family support</b>											
	Yes	19	76	21	95.5	38	80.9	12	66.7	5.62	3	0.132
	No	6	24	1	4.55	9	19.1	6	33.3			
<b>7.</b>	<b>Developmental stage of child</b>											
	Infant	8	32	10	45.5	20	42.6	4	22.2			
	Toddler	6	24	6	27.3	12	25.5	7	38.9	5.48	9	0.790
	Pre-schooler	4	16	1	4.55	4	8.51	3	16.7			
	School age	7	28	5	22.7	11	23.4	4	22.2			

Majority of the mothers (83.9%) experienced moderate level of fatigue and 4% had severe fatigue (Table 2). Regarding parenting efficacy 42% had good parenting efficacy and 16.1% had very good parenting efficacy and 22.3% had poor parenting efficacy (Table 3).

Karl Pearson correlation had shown a negative correlation between the fatigue and parenting efficacy ( $r=-0.002$ ) and it was not significant ( $p=0.982$ ) (Table 4) while assessing the association between level of fatigue and demographic variables, age and occupation had shown significant association ( $p=0.004$  and  $0.019$  respectively) (Table 5) and in level of parenting efficacy educational status showed significant association ( $p=0.023$ ) (Table 6).

## DISCUSSION

In this study 80.4% of mothers reported that they had family support which is consistent with a study by Song et al where 87.3% of mothers had family support. Pertaining to educational status 29.5% were graduates whereas 61.8% in Song et al study. Regarding age 65.2% were in the age group of 18-29 years which is contrary in Song et al study where 65.6% were more than 33 years of age. In this study 47.3% of mothers were housewives and in Song et al study 60.5% were housewives.

This cross-sectional study included 112 mothers of hospitalized children. Among them 83.9% had moderate level of fatigue. Similar observations were documented in a study by Iwasaki et al at Kurume university hospital with 68 mothers of hospitalized children and the mean score of fatigue was  $12.6 \pm 6.7$ .<sup>16</sup> In consistent with above results a prospective observational study conducted in paediatric intensive care units among 118 mothers by Stremler et al revealed that significant level of fatigue was noted  $p=0.03$ .<sup>17</sup> Similar findings were revealed in Lee et al study where American parents were assessed for their fatigue level when their infants were hospitalized in intensive care unit, Fatigue severity was assessed by numeric rating scale and the results revealed that compared to fathers mothers reported more severe fatigue.<sup>18</sup> Similarly a study by Song et al also showed that mean score of fatigue was  $2.11 \pm 0.53$  among mothers of hospitalized children.<sup>19</sup>

In this study there is a negative correlation between level of fatigue and level of parenting efficacy. Similarly a study by Song et al also reported similar findings ( $r=-0.26$ ,  $p=0.001$ ).<sup>19</sup> In an another study by Cooklin et al revealed that fatigue was significantly associated with parental competence ( $p<0.005$ ).<sup>20</sup> Similarly Bates et al conducted a study with 34 mothers whose children were hospitalized and reported that higher levels of maternal fatigue was associated with fewer polite words from mothers ( $r=-0.32$ ,  $p=0.07$ ) revealed that mother with fatigue would have fewer positive verbal strategies and more negative verbal strategies while guiding the child.<sup>21</sup> In this study, level of fatigue showed significant association with age of the mother ( $p=0.004$ ) and occupation ( $p=0.019$ ). In contrary to this Song et al study reported significant association with educational status of the mother ( $p=0.018$ ) and family support ( $p=0.009$ ). In another study by Cooklin et al revealed that fatigue was associated with social support, poorer diet and poorer sleep quality.<sup>20</sup> Present study reported significant association of level of parenting efficacy with educational status of the mother. Similar findings was reported by Colemen et al where  $p<0.001$ .<sup>22</sup>

The results of the study were not generalizable owing to the small sample size. Moreover, the study was confined to a single tertiary care hospital only.

## CONCLUSION

The present study showed that almost all the mothers who were staying with their children in the hospital developed mild to severe level of fatigue and many of them were lacking in efficiency in parenting their children. Strategies should be implemented in all paediatric care unit to reduce the fatigue and to improve the parenting efficacy of the mothers to promote family centered care.

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