



A study to identify the level of functional status among hospitalized children in SMVMCH, at Puducherry in view to prepare self-instructional module to improve the functional abilities of hospitalized children

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ABSTRACT :

Functional status of hospitalized children is not improved much while identifying the Functional Status and it's suggested to go for some interventional technique to improve their functional status and it is found that FSS is reliable on assess the functional status of hospitalized children. In this study the investigator finds that the children admitting in the pediatric ward are having the normal and mildly abnormal scores. And children who are at the pediatric intensive care unit are comes under the moderately abnormal scores. During their data collection period there is no case of prolonged hospitalized children and the mechanical ventilator case so the investigator has no severely abnormal and very severely abnormal cases. Babies in the neonatal intensive care unit are included in the study samples and analyzed using FSS and determined its functional outcome. Overall, the tool is useful and effective in determining the functional outcome of the hospitalized children.

Keywords: Functional status scale, hospitalized children

1. Introduction :

Children are essential to the future and present of the country. Typically, parents, grandparents, aunts, and uncles are dedicated to giving their children every benefit, as well as to making sure they are healthy and have the opportunity they require to reach their full potential. However, communities differ greatly in their dedication to children's overall health and the resources they provide to address children's needs. Communities' approaches to their shared responsibility to children, particularly to their health, reflect this. The improvement of children's health and concerns affecting them have received more attention in recent years.

In addition to their current identities, children are now starting to be acknowledged for their potential contributions to the formation of families, the powering of the labor force, and the operation of American democracy. This viewpoint is supported by growing evidence that childhood health influences adult health, which also highlights the significant ethical, social, and financial need to guarantee that every kid has the best possible health. Children who are healthy have a higher chance of growing up to be healthy adults.

This lowers the prospects for these children now and in the future, as well as for the country overall. If the country wants to successfully maximize the potential of all of its children and secure the health of the country in the future, it must take into account the importance of figures like these and implement sensible measures to improve children's health. The leading causes of death in children differ according to age. Infectious disorders include malaria, pneumonia, diarrhea, HIV, and tuberculosis are particularly dangerous for children under five. It is possible to reverse these trends. Around the world, UNICEF works to safeguard children and save them from passing away from illness. We help nations fight prevalent infectious illnesses including HIV, TB, malaria, pneumonia, and diarrhea, as well as to improve primary health care systems, particularly at the community level.

One's life is significantly impacted by the sickness. In addition to causing weariness, reduced mobility or immobility, and even loss of physiological functions and control, the illness's various symptoms put the body in a condition of constant tension (Rowe, 1996). Apart from the ailment, the hospitalization itself may result in a variety of immediate and long-term effects. Modern hospitals are designed to give kids suffering from a range of diseases and ailments a secure and restorative environment. Patients receive the most up-to-date care accessible; they have committed medical professionals and take advantage of the latest technological advancements in medicine (Rollins, 2004). Even yet, being hospitalized after being ill causes a lot of psychological discomfort, making it one of the most upsetting experiences a person can have in their lifetime. One's life, daily habits, and activities are all severely disrupted when they are admitted to the hospital.

Hospitalization plays an important role in the care for children's health, especially children that require intensive medical care. In comparison to adults, as a result of the insufficient emotional and cognitive maturation on the one hand and the lack of sufficient and appropriate information on the other side, children are significantly more influenced by hospitalization and its associated factors. In addition to having to face the normal

developmental lawfulness, hospitalized children also have to face the challenges of separation from their home and family, hospitalization, illnesses and clinical procedures that they will undertake.

The intensity and the type of the psychosocial reaction of children to the hospitalization depends on significant variables such as the child's age, gender, personality traits, type and severity of the illness, type of treatment, duration of the inpatient length of stay and the time organization in the hospital. The hospitalization usually has a negative impact on the motor, cognitive, emotional and social development of the child. Most negative experiences of hospitalization are due to poor attention to the developmental needs of children in health care planning in hospitals and bad organization of the leisure time.

A major challenge of pediatrics and its subspecialties is to develop a functional outcome measure that is well defined, quantitative, sufficiently rapid and reliable, minimally dependent on subjective assessments, applicable to as full an age spectrum as possible, and pertinent to hospitalized patients in as many inpatient environments as possible. Since existing measures available for children are either excessively time consuming to conduct, available or validated for a limited age spectrum, or simply require too much subjective assessment and future projection by raters, a new functional outcome measure fulfilling these criteria is especially desirable to enable large outcome studies.

Objectives of the study

- To identify the level of functional status among hospitalized children.
- To associate the level of functional status among hospitalized children with their selected demographic variables.

Materials and Methods:

In this study quantitative research design was used to identify the level of Functional status among the hospitalized children in SMVMCH, at Puducherry. The study was conducted using purposive sampling technique. The result was conducted using descriptive and inferential statistics.

Data collection tools:

Section A of the assessment tool collects demographic data such as Age, Sex, Religion, Area of Residence, Parents' Educational Status, Type of Family, Monthly Family Income, Duration of Hospitalization, Hospital Area, and Previous History of Hospitalization to understand the socio-economic and environmental context impacting the patient's health. Section B evaluates functional status through domains like Mental Status, Sensory Abilities, Communication Skills, Motor Function, Feeding Capabilities, and Respiratory Function, assessing the patient's overall functional capacity and identifying intervention needs. The scoring interpretation ranges from scores of 6-7, indicating "Good" functional health with minimal impairments, to 8-9 as "Mildly Abnormal" with slight difficulties. Scores of 10-15 suggest "Moderately Abnormal" limitations, 16-21 indicate "Severely Abnormal" challenges, and scores above 21 are "Very Severely Abnormal," showing extreme impairments and high dependency on care.

Statistical Analysis:

Descriptive statistics such as frequency distribution, mean, and standard deviation are utilized to analyze the demographic variables and assess the functional status among hospitalized children. Inferential statistics, specifically the Chi-square test, are employed to determine the association between the level of functional status and selected demographic variables of these children. The analyzed data is then presented in various formats, including tables, diagrams, and graphs, to effectively communicate the findings and illustrate any significant relationships or patterns identified through the statistical analysis.

Results and Discussion:

Out of 30 samples majority of the children belongs to the age group of 0-1 years and only 13% belongs to the age group of 10-14 years. Regarding gender, 63% belongs to male and 37% belongs to female. In family income, the majority of 63% belongs to the income of Rs.5000 - 10,000/- and only one of them were belongs to Rs. 15,000/- above. Under religion, majority of them were Hindu, and only 6% belongs to Christian. Regarding area of residence, majority of them belongs to rural and only 23% belongs to urban. In parents' educational status, majority 40% of them were belongs to degree and only 23% of them were in primary level of education. Regarding type of family, 63% of them were in joint family and 37% of them were in nuclear family. Regarding duration of hospitalization, majority of them were belongs to 2-4 days and only 13% of them were belongs to 7-10 days of hospitalization. Regarding Hospital area majority of them where belongs to pediatric ward and only 3% were belongs to NICU. In previous history of hospitalization, majority of them were belongs to yes category and 46 percentage were belongs to no category. Out of 30 samples 60 percentage were in normal, 33 percentage very mild abnormal, 07 percentage were in moderately abnormal and none of them were belongs to severely abnormal and very severely abnormal. Mean and standard deviation regarding Functional status among hospitalized children at SMVMCH Puducherry. The mean score is 7.53 with the standard deviation of 1.67. Among all the 10 demographic variables, no had a significant relationship at the level of $p < 0.05$.

TABLE 1: Frequency and percentage wise distribution of demographic variables among hospitalized children [N=30]

S.NO	DEMOGRAPHIC VARIABLES	FREQUENCY	PERCENTAGE
01	Age of the children(years)		
	a) 0-1	13	43.29
	b) 2-5	7	23.31
	c) 6-10	6	19.98
	d) 10-14	4	13.32
02	Gender		
	a) Male	19	63.27
	b) Female	11	36.63
03	Family income		
	a) 5,000 – 10,000	19	63.27
	b) 11,000-15,000	10	33.3
	c) 15,000 above	1	3.33
04	Religion		
	a) Hindu	25	83.25
	b) Muslim	3	9.99
	c) Christian	2	6.66
05	Area of residence		
	a) Urban	7	23.31
	b) Rural	23	76.59
06	Parents educational status		
	a) Primary level	7	23.31
	b) Higher secondary	11	36.63
	c) Degree	12	39.96
07	Type of family		
	a) Joint family	19	63.27
	b) Nuclear family	11	36.63
08	Duration of hospitalization		
	a) 2-4 days	26	86.58
	b) 5-6 days	4	13.32
	c) 7-10 days	0	0
09	Hospital area		
	a) NICU	1	3.33
	b) PICU	14	46.62
	c) Paediatric ward	15	49.95
10	Previous history of hospitalization		
	a) Yes	16	53.28
	b) No	14	46.62

TABLE 1: shows that that frequency and percentage wise distribution of demographic variables among hospitalized children. Out of 30 samples majority of the children belongs to the age group of 0-1 years and only 13% belongs to the age group of 10-14 years. In the aspect of gender, 63% belongs to male and 37% belongs to female. In family income, the majority of 63% belongs to the income of Rs.5000 - 10,000/- and only one of them were belongs to Rs. 15,000/- above. Under religion, majority of them were Hindu, and only 6% belongs to Christian. Regarding area of residence, majority of them belongs to rural and only 23% belongs to urban. In parents' educational status, majority 40% of them were belongs to degree and only 23% of them were in primary level of education. Regarding type of family, 63% of them were in joint family and 37% of them were in nuclear family. Regarding duration of hospitalization, majority of them were belongs to 2-4 days and only 13% of them were belongs to 7-10 days of hospitalization. Regarding Hospital area majority of them where belongs to paediatric ward and only 3% were belongs to NICU. In previous history of hospitalization, majority of them were belongs to yes category and 46 percentage were belongs to no category which means there is no previous history of hospitalization.

TABLE 2: Frequency and percentage wise distribution of the level of Functional status samong hospitalized children [N=30]

S.NO	LEVEL OF PERSONAL EVALUATION	FREQUENCY	PERCENTAGE
1	Normal	18	60
2	Mild abnormal	10	33

3	Moderately abnormal	2	07
4	Severely abnormal	00	00
5	Very severely abnormal	00	00

TABLE 2 shows that Frequency and percentage wise distribution of effectiveness of Functional status scale (FSS) among hospitalized children. Out of 30 samples 60 percentage were in normal because they are in the general pediatric ward and with no special care facilities, 33 percentage very mild abnormal and they having the history of previous hospitalization with mild symptoms, 07 percentage were in moderately abnormal and none of them were belongs to severely abnormal and very severely abnormal because there is no mechanical ventilator case available at the time of data collection in the pediatric intensive care unit.

TABLE 3: Mean and standard deviation regarding the level of Functional status among hospitalized children [N=30]

S.NO	MEAN	STANDARD DEVIATION
1.	7.53	1.67

TABLE 3 shows that Mean and standard deviation regarding the level of functional status among hospitalized children. The mean score is 7.53 with the standard deviation of the 1.67.

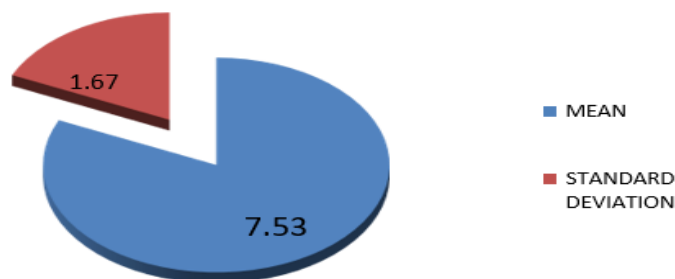


Figure 1: Mean and standard deviation regarding the level of functional status among hospitalized children

TABLE 4: Association with the level of Functional status among hospitalized children with their selected demographic variables. [N=30]

S. No	DEMOGRAPHIC VARIABLES	Normal		Mild		Moderate		X ²
		N	%			N	%	
01	Age of the children(years)							3.201 Df=6 0.783 N. S
	a) 0-1	7	23	4	13	2	7	
	b) 2-5	4	13	3	10	0	0	
	c) 6-10	4	13	2	7	0	0	
	d) 10-14	3	10	1	3	0	0	
02	Gender							1.818 Df=2 0.403 N.S
	a) Male	10	33	8	27	1	3	
	b) Female	8	27	2	7	1	3	
03	Family income							5.175 Df=4 0.270 N.S
	a) 5,000 – 10,000	13	43	4	13	2	7	
	b) 11,000-15,000	5	17	5	17	0	0	
	c) 15,000 above	0	0	1	3	0	0	
04	Religion							0.636 Df=4 0.959 N.S
	a) Hindu	15	50	8	27	2	7	
	b) Muslim	2	7	1	3	0	0	
	c) Christian	1	3	1	3	0	0	
05	Area of residence							1.870 Df=4
	a) Urban	3	10	3	10	0	0	

	b) Rural	14	47	7	23	3	9	0.760 N.S
06	Parents educational status							3.995
	a) Primary level	5	17	2	7	0	0	Df=4
	b) Higher secondary	6	20	5	17	0	0	0.407
	c) Degree	7	23	3	10	2	7	N.S
07	Type of family							1.818
	a) Joint family	10	33	8	27	1	3	Df=2
	b) Nuclear family	8	27	2	7	1	3	0.403
								N.S
08	Duration of hospitalization							0.769
	a) 2-4 days	16	53	8	27	2	7	Df=2
	b) 5-6 days	2	7	2	7	0	0	0.681
	c) 7-10 days							N.S
09	Hospital area							4.44
	a) NICU	0	0	1	3	0	0	Df=4
	b) PICU	8	27	4	13	2	7	0.349
	c) Pediatric ward	10	33	5	17	0	0	N.S
10	Previous history of hospitalization							1.161
	a) Yes	11	37	4	13	1	3	Df=2
	b) No	7	23	6	20	1	3	0.560
								N.S

Note: * - $p < 0.05$ Level of Significant, N.S. – Not Significant

TABLE 4 reveals the association with the level of Functional status among hospitalized children with their selected demographic variables. Among all the 10 demographic variables there was no significant association between the demographic variables such as age of the children, gender, family income, religion, area of residence, parents' educational status, type of family, duration of hospitalization, hospital area, previous history of hospitalization.

Conclusion:

This implies that on the content of study investigator have identified the functional status of hospitalized children are not improved much while assessing with Functional Status scale and it's suggested to go for some interventional technique to improve their functional status and it is found that FSS is reliable identifying the functional status of hospitalized children. In this study the investigator finds that the children admitting in the pediatric ward are having the normal and mildly abnormal scores. And children who are at the pediatric intensive care unit are comes under the moderately abnormal scores. During their data collection period there is no case of prolonged hospitalized children and the mechanical ventilator case so the investigator has no severely abnormal and very severely abnormal cases. Babies in the neonatal intensive care unit are included in the study samples and analyzed using FSS and identifies the functional status. Overall, the tool is useful and effective in determining the functional outcome of the hospitalized children. After identifying the functional status of the hospitalized children, herself decided to prepare self instructional module on improving the functional abilities of hospitalized children. The module contains the domains of functional status scale (FSS) mental status, sensory, communication, motor function, feeding, respiratory. Each domains consists the tips, care, therapies advices to improve the functional abilities in the aspect of parenteral knowledge.

REFERENCES :

Text books:

1. Basavanthappa, B.T. (2006). Pediatric/child health nursing. (1st ed.). New Delhi: Ahuja publishing house.
2. Dorothy, R.M. (2006). Textbook of pediatric nursing.(6thed.). New Delhi, Elsevier publications.
3. Ghai, O.P. (2013). Essential pediatrics. (6thed.). New Delhi, CBS publishers.
4. Marriner Ann, (2002). Nursing theories and its Work.(3rd ed.). Philadelphia: Mosby publications.
5. Gupta, D.C. (1994).Introduction to Statistics. New Delhi: Jaypee Brothers publication
6. Gupta, P. (2005). Statistical Methods.(23rded.). New Delhi, Sultan Chand and Sons publications.
7. Marriner Ann, (2002). Nursing theories and its Work.(3rd ed.). Philadelphia, Mosby publications.
8. Park,K. (2013). Preventive and social medicine. (22nd ed.). Jabalpur, Bhanot publishers
9. Parul dutta.,(2007). Paediatric nursing,. (2nd ed.). New Delhi, Jaypee brothers Publishers.
10. 10.Polit, D.F. (2005). Nursing Research Principles and Method. (6th ed.). New Delhi, Wolter klwer publications.

Journal reference

1. Dr. Minakshi Misra, (2019) "Clinico-Epidemiologists study of Acute Lower Respiratory Tract Infections in Children 5 years of age needing hospital admission", Published by Association for Scientific and Medical Education, Volume 6, Issue 4.

2. Dhivyanaryani M, Raju V, Jeyachandran P (2018) "clinical profile of acute lower respiratory tract infection in children aged 2 months to 6 years", Published by International Journal of Contemporary Pediatrics, Volume 5, Issue 4.
3. Bekkam M, Vasundhara A. (2018) "A study of risk factors for acute lower respiratory tract infection (ALRTI) in children aged 1 month to 5 years", Published by International Journal of Pediatric Research, Volume 5, Issue 9.
4. J Clin Diagn Res, (2016) "A study on Acute Respiratory Infections among children at Urban Slums of Gulbarga City: A Longitudinal Study", Published by National Library of Medicine, Volume 10, Issue 5.
5. Mohammadreza Mirkarini, (2016) "A study on Clinical and Epidemiological Determinants of Lower Respiratory Tract Infections in Hospitalized Pediatric Patients", Published by International Journal of Pediatrics, Volume 6, Issue 5.
6. Pereira, L.M.(2010) "A study on Health burden of co-morbid asthma and allergic rhinitis in children attending asthma clinics in selected public sector health clinics, Trinidad", Published by National Library of Medicine, Volume 38, Issue 3.
7. Mary T. Caserta et al, (2018) "A study on Development of a Global Respiratory Severity Score for Respiratory Syncytial Virus Infection in children", Published by The Journal of Infectious Diseases, Volume 6, Issue 2.
8. Hector Rodriguez, et al, (2016) "A study on simple Pediatric respiratory severity score that may be used in evaluation of acute respiratory infection", Published by BMC Research Notes, Volume 8, Issue 5.
9. Amy S. Feldman, MD, et al, (2015) "A Study on Pediatric Respiratory Severity Score separates upper versus lower respiratory tract infections and predicts measures of disease severity", Published by National Library of Medicine, Volume 28, Issue 2.
10. Yumiko Miyaji, (2015) conducted a study on Pediatric Respiratory Severity Score (PRESS) for Respiratory Tract Infections in Children, Published by National Library of Medicine, Volume 28, Issue 2.
11. Spree Krishna Y, (2018) "A study of Effect of lower Respiratory tract infections on peak expiratory flow rate in children", Published by Research Gate, Volume 6, Issue 1.
12. Eva Maria Kraus, (2017) "A study on Antibiotic prescribing for acute lower respiratory tract infections (LRTI)", Published by BMC Research Notes, Volume 12, Issue 3.
13. Helen Martina, MA, (2015) "Effectiveness of massage therapy on respiratory status among preschooler with lower respiratory tract infection", Published by Journal of Science, Volume 4, Issue 10.
14. Marie Ximena Rojas-Reyes (2014) "A study on Oxygen therapy for lower respiratory tract infections in children between 3 months and 15 years of age", Published by National Library of Medicine, Volume 28, Issue 2.
15. Arul vimala, (2012) "A quasi experimental study to evaluate the effectiveness of Strelkova breathing exercises on respiratory signs and parameters among children with lower respiratory tract infection in Masonic Hospital, Coimbatore", Published by Research Gate, Volume 6, Issue 1

Internet reference

1. <http://www.medical encyclopedia>
2. <http://www.2009medicine.com>.
3. <http://www.expand-a-lung.com>
4. <http://www.aaaai.org>
5. <http://www.pobmed.com>
6. <http://zhaodong@public.wh.hb.cn>
7. <http://www.virologyj.com/content/6/1/155>
8. <http://www.academicjournals.org/ajpp>
9. http://en.wikipedia.org/wiki/Postural_Restoratatio
10. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2971640/>