

A STUDY OF PATTERN AND PREVALENCE OF THROMBOCYTOPENIA IN PEDIATRICS AND ITS AWARENESS AMONG PARENTS IN MULTISPECIALITY HOSPITAL

**Ms.Suji.U,*D.Pavithra, I.Madura Devi,M.Muhammad Ashraf,
S.Mohamed Riyas**

*Assistant professor, department of hospital administration, Dr.N.G.P. arts and Science
College, Coimbatore*

Department of hospital administration, Dr.N.G.P. arts and Science College, Coimbatore

ABSTRACT:

Thrombocytopenia, characterized by a low platelet count in the blood, poses significant health risks, especially in pediatric populations. This study investigates the patterns and prevalence of thrombocytopenia in children aged 0-10 years and evaluates parental awareness regarding this condition. Employing a descriptive study design, structured questionnaires were administered to 100 pediatric participants to gather data on factors contributing to thrombocytopenia, including blood groups, presence of sepsis/meningitis, hemoglobin levels, gestational age at birth, and family history of bleeding disorders. Analysis of the collected data using SPSS 29.0 Software revealed a concerning lack of awareness among parents, particularly in rural areas, regarding thrombocytopenia and its causes. Despite the majority of children being diagnosed with thrombocytopenia based on complete blood count tests, parental knowledge about this condition remains inadequate. The study underscores the necessity for educational interventions aimed at improving parental awareness and understanding of thrombocytopenia.

KEYWORDS:

Thrombocytopenia, Pediatrics, Prevalence, Parental Awareness, Educational Intervention.

INTRODUCTION:

Thrombocytopenia in pediatrics is a significant medical condition characterized by a low platelet count, which can lead to an increased risk of bleeding and thrombosis. Platelets play a crucial role in maintaining the integrity of the vascular endothelium and controlling hemorrhage from small-vessel injury through the formation of platelet plugs. Thrombocytopenia can be caused by various factors, including autoimmune disorders, lympho proliferative disorders, infections, and drug-induced thrombocytopenia.

Primary immune thrombocytopenia (ITP) is an autoimmune condition where antibodies are produced against platelets, resulting in platelet destruction. The incidence of ITP is 100 cases per 1 million persons annually, and approximately 50 percent of cases occur in children. ITP in children often resolves spontaneously but tends to be more insidious and chronic in older patients, patients on antiplatelet therapy, and patients with comorbid conditions.

STATEMENT OF THE PROBLEM:

. Thrombocytopenia low platelet levels may increase risk of issues like excessive bleeding and bruising. Severe thrombocytopenia increases risk of internal bleeding or heart attack. If people have this condition, it's important to understand why people have low platelet levels. According to the recent reports India has the prevalence of 27.6% of children had severe thrombocytopenia, while 29.7% of children had mild thrombocytopenia. This has motivated to address and wish to do “A Study of Pattern and Prevalence of Thrombocytopenia in Pediatrics and its awareness among Parents in multispeciality hospital, Bangalore.”

OBJECTIVES OF THE STUDY:

1. To identify the patterns which causes thrombocytopenia and its prevalence rate in selected group of population.
2. To assess the knowledge about thrombocytopenia among parents.
3. To identify the early signs of thrombocytopenia and the affected patients can be advised to get proper treatment from health care providers.
4. Raising the knowledge among the parents then considered as a part of prevention of thrombocytopenia.

PREVALENCE AND AWARENESS OF THROMBOCYTOPENIA:

However, studies suggest that parental awareness regarding thrombocytopenia and its implications may be limited (Al-Obaidi et al., 2020). Addressing these knowledge gaps and promoting parental education are vital steps in ensuring optimal care and outcomes for children with thrombocytopenia. In this context, the present study aims to investigate the patterns and prevalence of thrombocytopenia in pediatric patients, with a specific focus on parental awareness and understanding of this condition. By examining data from pediatric patients in multispeciality Hospital, Bangalore, and assessing parental awareness through structured questionnaires, this research seeks to contribute valuable insights into the landscape of thrombocytopenia in pediatric medicine and inform strategies for improved patient care and parental education.

REVIEW OF LITERATURE:

METHODOLOGY:

The study follows the descriptive research design to conduct on 5 point likert scale with quantitative analysis. Descriptive research design is used to describe characters of a population or phenomenon being studied. Data collection is a process of gathering information from all the relevant sources to find a solution to the research problem. In this study, primary data were used. The sample population consists of paediatrics and their parents.

In this study, data was collected from 100 users. The sampling technique that had been used in this study was judgemental sampling. It refers to a special kind of rates, percentage are used in making comparison between two or more series of data. A percentage is used to determine relationship between the series.

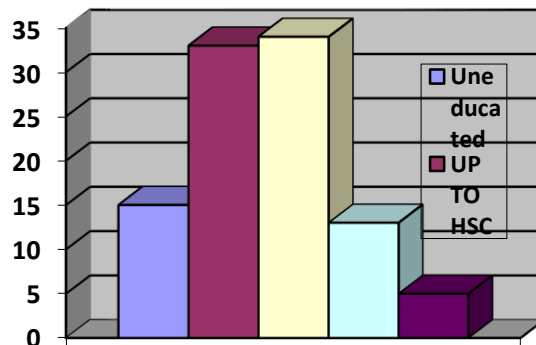
PERCENTAGE ANALYSIS:

$$\text{Percentage of respondents} = \frac{\text{Number of respondents}}{\text{Total respondents}} \times 100$$

ANALYSIS:

1. DISTRIBUTION OF RESPONDENTS ACCORDING TO EDUCATIONAL QUALIFICATION

		Frequency	Percent
Valid	Uneducated	15	15.0
	UP TO HSC	33	33.0
	UG	34	34.0
	PG	13	13.0
	Professional	5	5.0
	Total	100	100.0

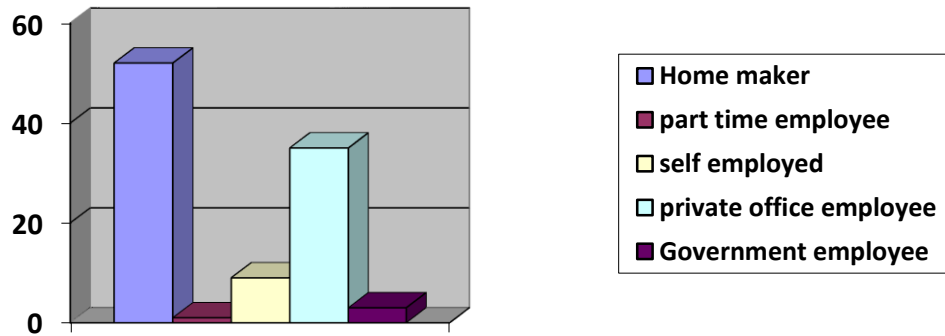


INFERENCE

According to the data collected it was observed that, 15% of respondents were uneducated, 33% of respondents were UP TO HSC, 34% of respondents were UG, 13% of respondents were PG, 5% of respondents were Professional.

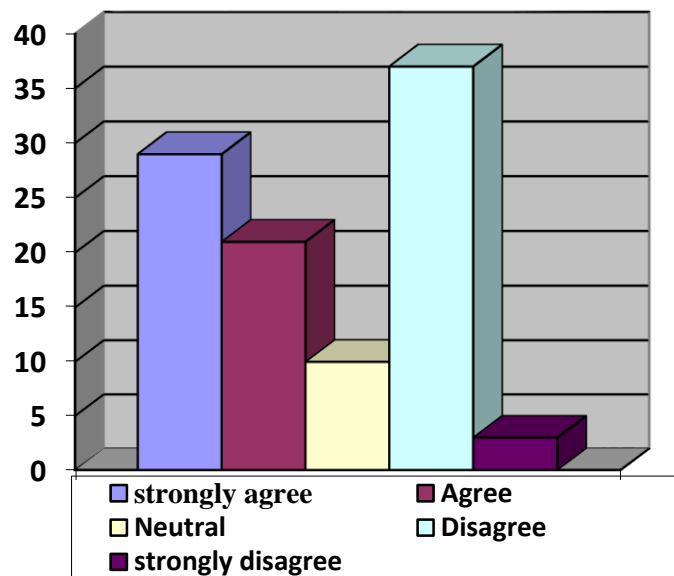
2. DISTRIBUTION OF RESPONDENTS ACCORDING TO OCCUPATION

		Frequency	Percent
Valid	Home maker	52	52.0
	part time	1	1.0
	self	9	9.0
	private employee	35	35.0
	Gov. employee	3	3.0
	Total	100	100.0



INFERENCE: According to the data collected it was observed that 52% of respondents were home maker, 1% of respondent were part time employee, 9% of respondents were self-employed, 35% of respondents were private office employee, 3% of respondents were Government employee

3. DISTRIBUTION OF RESPONDENTS ACCORDING TO WHETHER MEDICAL TEAM DISCUSSED THE POSSIBLE CAUSES FOR THROMBOCYTOPENIA



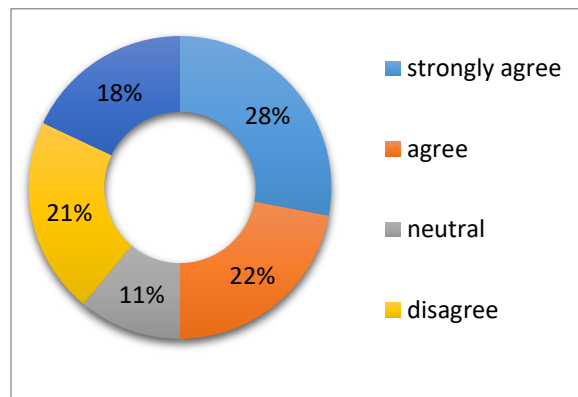
		Frequency	Percent
Valid	strongly agree	29	29.0
	Agree	21	21.0
	Neutral	10	10.0
	Disagree	37	37.0
	strongly disagree	3	3.0
	Total	100	100.0

INFERENCE:

According to the data collected it was observed that 29% of respondents were strongly agree,21% of the respondents were agree,10% of the respondents were neutral, 37% of respondents were disagree,3% of respondents were strongly disagree

4.1.4 DISTRIBUTION OF RESPONDENTS ACCORDING TO AWARENESS ABOUT THROMBOCYTOPENIA OCCUR DUE TO IMMUNE DEFICIENCY

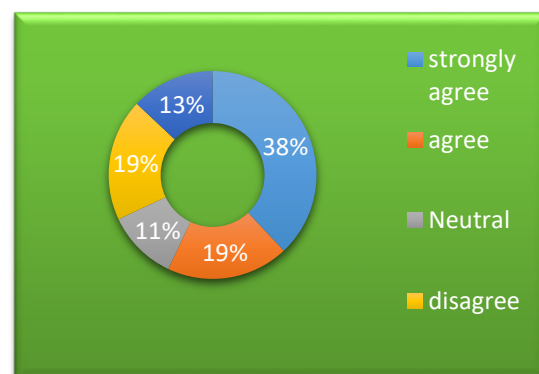
		Freque ncy	Percent
Valid	strongly agree	28	28.0
	Agree	22	22.0
	neutral	11	11.0
	disagree	21	21.0
	strongly disagree	18	18.0
	Total	100	100.0



INFERENCE: According to the data collected it was observed that 28% of respondents were strongly agree,22% of the respondents were agree,11% of the respondents were neutral, 21% of respondents were disagree,18% of respondents were strongly disagree

5. DISTRIBUTION OF RESPONDENTS ACCORDING TO CHILDRENS’S DIAGNOSED WITH THROMBOCYTOPENIA CAN BE CURED BY MEDICAL TREATMEN

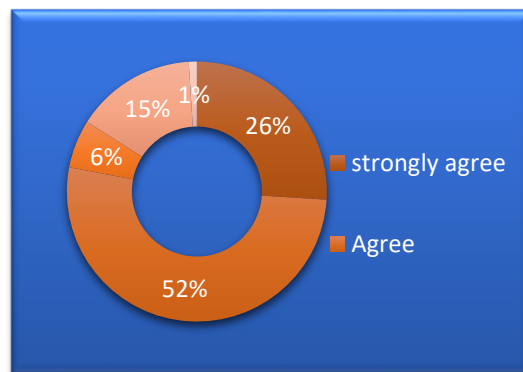
Frequency		Percent	
Valid	strongly agree	38	38.0
	Agree	19	19.0
	neutral	11	11.0
	disagree	19	19.0
	strongly disagree	13	13.0
	Total	100	100.0



INFERENCE: According to the data collected it was observed that, 38% of the respondents were strongly agree, 19% of the respondents were agree, 11% of the respondents were neutral, 19% of the respondents were disagree, 13% of respondents were strongly disagree.

6. DISTRIBUTION OF RESPONDENTS ACCORDING TO CHILDREN’S DIAGNOSED WITH THROMBOCYTOPENIA NEED TO BE GIVEN IMMEDIATE TREATMENT AND SHOULD BE PROTECTED FROM BLEEDING EPISODES AND INJURIES

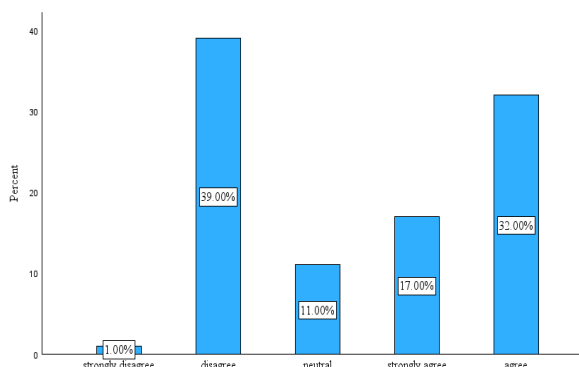
		Frequency	Percent
Valid	strongly agree	26	26.0
	Agree	52	52.0
	neutral	6	6.0
	disagree	15	15.0
	strongly disagree	1	1.0
	Total	100	100.0



INFERENCE: According to the data collected it was observed that 26% of respondents were strongly agree, 52% of respondents were agree, 6% of respondents were neutral, 15% of the respondents were disagree, 1% of respondents were strongly disagree

7. DISTRIBUTION OF RESPONDENTS ACCORDING TO AWARENESS ABOUT HOW TO ADMINISTER MEDICATIONS CORRECTLY IF PRESCRIBED WITH MEDICATION

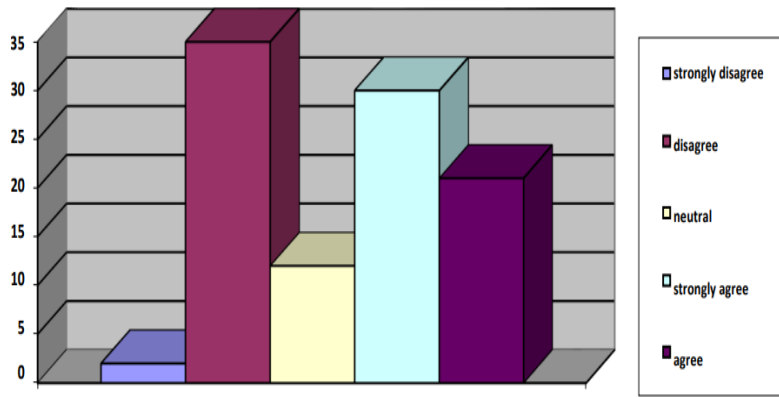
		Frequency	Percent
Valid	strongly agree	17	17.0
	Agree	32	32.0
	Neutral	11	11.0
	Disagree	39	39.0
	strongly disagree	1	1.0
	Total	100	100.0



INFERENCE: According to the data collected it was observed that, 17% of respondents were strongly agree, 32% of respondents were agree, 11% of respondents were neutral, 39% of respondents were disagree, 1% of respondents were strongly disagree

8. DISTRIBUTION OF RESPONDENTS ACCORDING TO AWARENESS ABOUT THE EMERGENCY PLANS IN CASE OF SEVERE BLEEDING EPISODES OR OTHER MEDICAL EMERGENCIES RELATED TO THROMBOCYTOPENIA

		Frequency	Percent
Valid	strongly disagree	2	2.0
	disagree	35	35.0
	neutral	12	12.0
	strongly agree	30	30.0
	agree	21	21.0
	Total	100	100.0

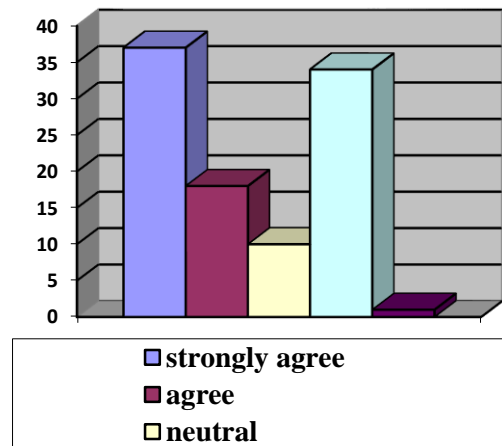


INFERENCE:

According to the data collected it was observed that, 2% of the respondents were strongly agree, 35% of the respondents were disagree, 12% of the respondents were neutral, 12% of the respondents were strongly agree, 21% of the respondents were agree.

9. DISTRIBUTION OF RESPONDENTS ACCORDING TO GUIDANCE PROVIDED BY HEALTH CARE PROVIDER WILL BE HELPFUL TO PREVENT INJURIES AND BLEEDING EPISODES

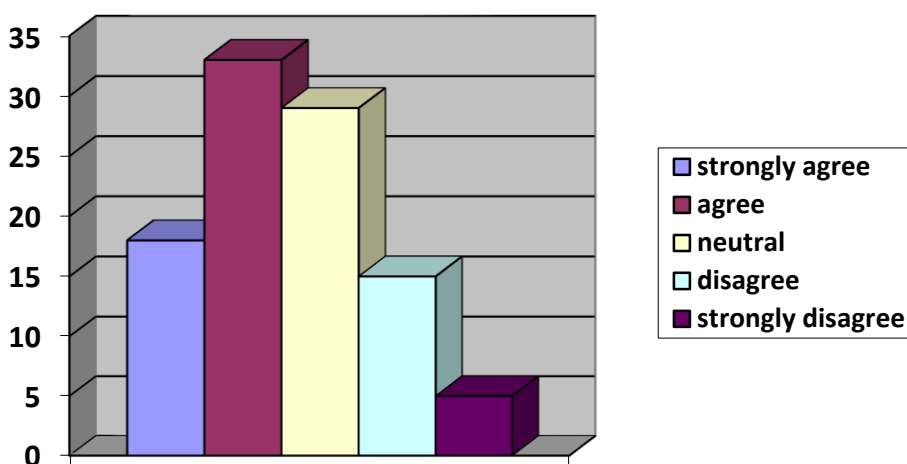
		Frequency	Percent
Valid	strongly agree	37	37.0
	agree	18	18.0
	neutral	10	10.0
	disagree	34	34.0
	strongly disagree	1	1.0
Total		100	100.0



INFERENCE: According to the data collected it has been observed that 37% strongly agree, 18% of the respondents were agree, 10 % of the respondents were neutral, 34% of the respondents were disagree, 1% of the respondents were strongly disagree

10. DISTRIBUTION OF RESPONDENTS ACCORDING TO PLAY, SCHOOL AND SOCIAL INTERACTIONS WILL BE AFFECTED FOR THE CHILDRENS DIAGNOSED WITH THROMBOCYTOPENIA IF APPROPRIATE GUIDANCE IS NOT PROVIDED

		Frequency	Percent
Valid	strongly agree	18	18.0
	Agree	33	33.0
	Neutral	29	29.0
	Disagree	15	15.0
	strongly disagree	5	5.0
	Total	100	100.0



INFERENCE

According to the data collected it was observed that 18% of respondents were strongly agree, 33% of respondents were agree, 29% of respondents were neutral, 15% of respondents were disagree, 5% of respondents were strongly disagree

FINDINGS:

- From the results it was observed that there were a greater number of respondents were UG and followed by respondents UPTO HSC.
- From the results it was observed there were greater number of respondents were Home maker and followed by private office employee
- From the results it was observed there was a greater number of respondents were strongly agree followed by agree towards awareness about thrombocytopenia occur due to immune deficiency
- From the results it was observed there was a greater number of respondents were strongly agree and followed by agree towards children’s diagnosed with thrombocytopenia can be cured by medical treatment
- From the results it was observed that greater number or respondents were strongly agree followed by agree towards children’s diagnosed with thrombocytopenia need to be given immediate treatment and should be protected from bleeding episodes and injuries

- From the results it was observed that greater number of respondents were disagree followed by strongly agree towards awareness about how to administer medications correctly if prescribed with medications
- From the results it was observed there was a greater number of respondents were disagree and followed by strongly agree towards awareness about the emergency plans in case of severe bleeding episodes or other medical emergencies.
- From the results it was observed that greater number of respondents were strongly agree followed by disagree towards guidance provided by health care provider will be helpful to prevent injuries and bleeding episodes.
- From the results it has been observed that greater number of respondents were disagree followed by strongly agree towards received guidance from healthcare provider on how to prevent injuries and bleeding episodes in children's given the low platelet count
- From the results it was observed there was a greater number of respondents were agree and followed by neutral towards play, school and social interactions will be affected for the children's diagnosed with thrombocytopenia if appropriate treatment is not provided

SUGGESTIONS:

Based on the findings of the study the following recommendations are made

- The similar study can be replicated with large sample including adults
- Awareness programmes must be conducted to rural peoples on periodic intervals and proper medical facilities must be allocated to them.

CONCLUSION:

Thrombocytopenia prevalence has been increased during the few years in India. The study has showed that most the respondents belonging to urban population were aware about the causes and curative measures of thrombocytopenia their children's were not affected with thrombocytopenia whereas most of the respondents belonging to rural population were not aware about the causes and preventive measure and does not have adequate curative measure due to various reasons such as inability to afford for medications, absence of well skilled and less number of health care workers and most of the pediatrics belonging to rural population has been affected with thrombocytopenia. Health education is very important to lead a healthy wellbeing lack of awareness is the reason behind various health problems hence the block medical officer must conduct periodic health camps and awareness programs among rural population and help them in understanding the factors that contribute to thrombocytopenia.

REFERENCE:

1. *Consolini, D. M. (2011). Thrombocytopenia in infants and children. Pediatrics in Review-Elk Grove, 32(4), 135.*
2. *Lee, A. C. W. (2018). Isolated thrombocytopenia in childhood: what if it is not immune thrombocytopenia?. Singapore medical journal, 59(7), 390.*
3. *Buchanan, G. R. (2005). Thrombocytopenia during childhood: what the pediatrician needs to know. Pediatrics in review, 26(11), 401-409.*

4. Gauer, Robert L., and Michael M. Braun. "Thrombocytopenia." *American family physician* 85, no. 6 (2012): 612-622.
5. Jinna, Sruthi, and Paras B. Khandhar. "Thrombocytopenia." (2019).
6. Bolton-Maggs, P. H., & Chalmers, E. A. (2016). Severe bleeding disorders. *Hematology/oncology clinics of North America*, 30(3), 709–729. <https://doi.org/10.1016/j.hoc.2016.02.007>
7. Neunert, C., Lim, W., Crowther, M., Cohen, A., Solberg, L. Jr., & Crowther, M. A. (2011). The American Society of Hematology 2011 evidence-based practice guideline for immune thrombocytopenia. *Blood*, 117(16), 4190–4207. <https://doi.org/10.1182/blood-2010-08-302984>.
8. Al-Obaidi, A. S., Alebbi, S. H., Al-Hakeim, H. K., Al-Saadi, H. A., & Alwan, A. F. (2020). Assessment of the awareness and knowledge about thrombocytopenia among Iraqi parents. *Journal of Clinical Medicine Research*, 12(2), 100–105. <https://doi.org/10.14740/jocmr3961>.