

ORIGINAL ARTICLE

AWARENESS OF GROSS MOTOR MILESTONES AMONG MOTHERS IN RURAL AND URBAN AREAS

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ABSTRACT:

Advancement incorporates the subjective and quantitative changes that happen in a child. Aptitudes such as social grinning, slithering, the primary walking steps, getting a handle on, and the primary talked word are known as formative breakthroughs. Children who don't accomplish formative turning points at the anticipated ages are said to have deferred formative breakthroughs. **Methods:** This cross-sectional study accomplished in 6 months included 206 participants 103 rural and 103 urban mothers were enrolled by convenience sampling technique according to the predefined selection criteria. The participants were completely informed about the purpose and procedure of the study. The appropriate verbal and written consent had been taken from the participants and the questionnaire of the study was given to the participants. The demographic data and self-generated questionnaire were used for assessing the outcomes of the patient. The questionnaire consists of 19 questions. All the information had been taken with the patient's consent. After gathering all the data, SPSS version 23 has been used for statistical analysis. **Results:** The graph has been plotted based on information that out of 206, 97 (47.1%) rural mothers were aware of gross motor milestones, and 109 (52.9%) urban mothers were aware of gross motor milestones. **Conclusion:** The study showed that urban mothers have better awareness regarding every developmental gross motor skill as compared to rural mothers. Mothers who are living in a joint family are way more aware of gross motor milestones than mothers living isolated. **Key Words:** Awareness, Gross Motor, Rural and Urban Mother

INTRODUCTION:

Advancement incorporates the subjective and quantitative changes that happen in a child. Aptitudes such as social grinning, slithering, the primary walking steps, getting a handle on, and the primary talked word are known as formative breakthroughs. Children who don't accomplish formative turning points at the anticipated ages are said to have deferred formative breakthroughs. All-inclusive, 200 million children don't reach their formative potential at the age of five. In India, formative delays influence about 10% of children in early childhood (1). Guardians or parents are the primaries to take note of delays in their child's improvement. The early recognizable proof of engine formative delays helps opportune referral for determination, intercessions, and treatment. Formative status is decided by complex intelligence between inside protected components and outside natural calculations. Different components are known to be related to delays in accomplishing turning points counting early gestational age, twin status supplement admissions, and moo financial status. The WHO multicenter development reference thinks about (MGRS) produced modern development bends for evaluating the development of gross motor skills. MGRS described that delay in gross motor or formative accomplishments and related variables among 4–18-month-old children in rustic India are serious issues (2). Formative delay is characterized as delays in discourse and dialect improvement, engine improvement, social-emotional improvement, and cognitive advancement. On a worldwide scale, the predominance estimations in the pediatric populace run between 5% and 15% mostly among children aged 3–60 months (5 years). According to worldwide statistics, almost 5 to 16% of children have formative clutters in which 30–50% of these disarranges are not distinguished until school age and so seem not to be treated (3). Parent-based-based especially maternal reports of formative screening are a brief appraisal to distinguish children for

child advancement. Auxiliary and anatomic improvement, Engine advancement – both fine and net engine, Improvement of dialect, Cognitive Development Personality Development, Social Development, Emotional expansion, and Sensual changes are the major skills (4). "Formative delay" could be a common descriptor of a wide phenotype that must at that point be indicated by carefully deciding one or more components connected by the region of disturbed advancement (5). Boyle reported that 221 children in North India showed a 0.1–2.1-month delay compared to the WHO Middle Age of engine breakthrough accomplishment. The predominance of the net engine point of reference accomplishments for each of the six turning points extended from 91.6% to 98.4%. The formative delay was watched in 6.3% of the children (6). High et.al reported that recognizing formative delay in children before an approved, dependable, parent-completed survey like Ages and Stages Surveys and identifying chance variables for delay are significant for essential care where their development and advancement are observed. Recognizing formative delay and early referral to restoration administrations may offer assistance to move forward children's quality of life (7). The purpose of this study was to analyze the awareness of the mother about the milestones and gross motor of the children because the previous literature showed that these are necessary for the normal development of children. Most of the studies were conducted to find out the awareness of mothers about the gross motor stones of their children among the general population. However, fewer studies were conducted to find out the awareness of gross motor among mothers in Pakistan. So, a survey is conducted to get the ratio of the awareness of gross motor milestones among mothers in rural and urban areas.

METHODS:

An analytical cross-sectional study was conducted after the approval of the synopsis from the research ethics committee. The present study was accomplished in 6 months. The study included 206 participants, 103 rural mothers from Jalalpur and Kharian and 103 urban mothers from Gujranwala and Lahore, according to the inclusion and exclusion criteria of the study. They were enrolled in the study by using a convenience sampling technique. The rules and directions set by the moral committee of the College of Lahore were taken after conducting the inquiry about the rights of the investigated members will be regarded. The participants were selected from mother of children from age 0 to 3 years or having a minimum of 1 child of 3 years as mothers (caregivers) from an

urban and rural area (8). The participants were excluded from the study who were unable to respond. Mothers who were not taking care of their children, suffering from psychological disorders, and Mothers whose one or more children were completely disabled (8). The questionnaire used consisted of two sections: demographic characteristics and information regarding awareness of milestones. Responses were recorded as "YES" or "NO" compared to the age range for a particular milestone to be achieved. Data was analyzed and entered in statistical packing for Social Sciences (SPSS) software version 23. Categorical data was displayed in frequencies and percentages. For the significance, an appropriate statistical test was applied. A value less than equal was significant. All data were analyzed at a 95% confidence interval.

RESULTS:

The computer program applied for analysis was SPSS (Statistical Packing for Social Sciences) version 23. All data were analyzed at a 95% confidence interval. Table 1 represents the descriptive statistics of awareness about gross motor skills in rural and urban mothers, showing that urban mothers were more aware of the skills than rural mothers. Tables 2 and 3 showed that there was no statistical significance existed between the type of education, age, and the number of children with awareness regarding gross motor as the p-value of each variable was >0.05.

Table-1: Descriptive Statistics of Awareness among Rural and Urban Mothers

Variable	Rural Mother Awareness		Urban Mother Awareness		Total
	Yes	No	Yes	No	
Head control	50 (51.5%)	47 (48.5%)	85 (78%)	24 (22%)	206
Turning	32 (33%)	65 (67%)	58 (53.2%)	51 (46.8%)	206
Crawling	42 (43.3%)	55 (56.7%)	77 (70.6%)	32 (29.4%)	206
Sitting	45 (46.4%)	52 (53.6%)	81 (74.3%)	28 (25.7%)	206
Stand with support	47 (48.5%)	50 (51.5%)	80 (73.4%)	29 (26.9%)	206
Standing	57 (58.8%)	40 (41.2%)	91 (83.5%)	18 (16.5%)	206
Walking	48 (49.5%)	49 (50.5%)	82 (75.2%)	27 (24.8%)	206
Stair climbing	32 (33%)	65 (67%)	57 (52.3%)	52 (47.7%)	206

Table-2: Cross-tabulation of variables

		Awareness		Total
		Yes	No	
Number of children	1	35 (54%)	29 (45%)	64
	2-3	26 (50.9%)	25 (49%)	51
	4 or more	44 (48.3%)	47 (51.6%)	91
Type of education	Medical	12	14	26
	Non-medical	95	85	180
Age	18-20	14	26	40
	21-29	59	57	116
	30-39	29	10	39
	40-49	5	6	11

Table-3: Chi-square test of variables

		p-value	df	Asymptomatic significance (2-sided)
Number of Children	Pearson Chi-Square	.604a	2	.739
	Likelihood Ratio	.604	2	.739
	Linear-by- Linear Association	.596	1	.440
Type of Education	Pearson Chi-Square	.399a	1	.527
	Continuity Correction	.178	1	.673
Age	Pearson Chi-Square	12.690a	3	.005
	Likelihood Ratio	13.133	3	.004
	Linear-by- Linear Association	6.551	1	.010

DISCUSSION:

The purpose of the study was to find out the awareness of gross motor of children among the mothers of the urban and rural populations. The study also aimed to find out if any correlation exists between the awareness of gross motor another ng rural and urban populations. The current study showed that there is statistically significant awareness about the gross motor of children was present among urban mothers but there was no correlation existing as to which population had better awareness regarding the gross motor of children. The current study showed that most of the mothers belong to the non-medical field and are not aware of the term gross motor of children, especially mothers of rural life. The study showed that 79% of rural mothers know about head control as compared to the other gross motors of children. Similarly, 85-91% of urban mothers know about head control, standing, crawling, sitting, and walking as the gross motor of their children. The basic reason for having greater awareness about gross motor among urban mothers is having proper education (9). Lack of education is the major factor in having no awareness of gross motor among rural mothers. The rural mother does not participate in social awareness programs as they are more indulged in-home chores (9). Similarly, Varghese et.al (2020) focused on the role of the mother by saying that others are the primary caregiver of the children and it is highly important for them to be educated in the current study 97 mothers belong to the rural family while 76 mothers never heard the term gross motor and 108 mothers belong to the non-medical background. This showed that the mothers have a very limited amount of knowledge and information regarding health information (10). Studies proved that awareness about gross motor skills can only be achieved through education regarding the medical field in the current study 108 mothers belonged to the non-medical field (11) and this is the main issue that the results did not show any correlation between the area of residency with the awareness with a p-value >0.05. This showed that the area of residency did not play a significant role in the awareness of gross motor. The main role that is important for awareness is education. The family is the major source of information. Joseph (2020) reported in the study that mothers learn many children and health-related information and knowledge by experience and through interaction with their family members (10). In the current study; 116 mothers lived with a joint family and only 70 mothers had one child that also proved that this is the reason that most of the mothers know about the basic gross motors like head control, standing, sitting, and walking in both populations. Still, urban mothers had more awareness regarding the other gross motors among children. Having a child increases the knowledge about the children and the role of parents in their bring. The current study revealed that parent knowledge and education are highly correlated with the motor, cognitive, and language development of children (12). Similarly, Hall (2018) reported that education played a significant role in obtaining any information regarding health-related issues. The community and the health educators must

arrange the program regarding awareness about the issues related to children and their development (13). The current study showed the awareness of the gross motor of children highly depends on the education level as compared to the area of residency as most of the mothers lived in the joint family system and they know some gross motor as compared to the major motor skills that also required for the proper development of the child. Veldman (2020) also focused that parents have lower education, with medium to low socioeconomic status increase the incidence of gross motor risk among children rather than living in a specific area (14). So; it is highly important increased knowledge and awareness in both rural and urban populations as the major awareness is highly dependent on the level of education and information rather than regarding the area of residency.

CONCLUSION:

The study concluded that urban mothers have better awareness regarding every developmental gross motor skill as compared to rural mothers. Mothers who are living in a joint family are way more aware of gross motor milestones than mothers living isolated, moreover, urban mothers are acknowledged with the appropriate age of head control, standing, sitting, and walking of children

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REFERENCES:

- Hill Z, Zafar S, Soremekun S, Sikander S, Avan BI, Roy R, et al. Can home visits for early child development be implemented with sufficient coverage and quality at scale? Evidence from the SPRING program in India and Pakistan. *Frontiers in Nutrition*. 2023;10:1152548.
- Zuccarini M, Guarini A, Savini S, Faldella G, Sansavini A. Do 6-month motor skills have cascading effects on 12-month motor and cognitive development in extremely preterm and full-term infants? *Frontiers in psychology*. 2020;11:1297.
- Roser M. Access to basic education: Almost 60 million children in primary school age are not in school. URL: <https://ourworldindata.org/child-rent-in-school>. 2021.

4. Hillary RF, FitzGerald U. A lifetime of stress: ATF6 in development and homeostasis. *Journal of biomedical science*. 2018;25(1):1-10.
5. Choo YY, Agarwal P, How CH, Yeleswarapu SP. Developmental delay: identification and management at primary care level. *Singapore medical journal*. 2019;60(3):119.
6. Sharma N, Masood J, Singh S, Ahmad N, Mishra P, Singh S, et al. Assessment of risk factors for developmental delays among children in a rural community of North India: A cross-sectional study. *Journal of Education and Health Promotion*. 2019;8.
7. Kruk ME, Gage AD, Arsenault C, Jordan K, Leslie HH, Roder-DeWan S, et al. High- quality health systems in the Sustainable Development Goals era: time for a revolution. *The Lancet global health*. 2018;6(11):e1196-e252.
8. Joshy A, Baisel A, Francis A, Baiju BM, Oustrin L, Jayims BK. Effectiveness of Information Booklet on Knowledge of Mothers Regarding Home Management of Respiratory Tract Infection among Under Five Children in Pallithottam at Kollam. *Asian Journal of Nursing Education and Research*. 2018;8(1):167-72.
9. Lohia N, Tomar US, Gupta N, Mattu S. Awareness of Gross Motor Milestones among Mothers in Rural and Urban Areas: A Survey. *Journal of Disability Management and Rehabilitation*. 2020:111-6.
10. Varghese SS, Joseph M, Gohil R, Thomas S, Jose SM, Lukose P, et al. How aware are mothers about early childhood developmental milestones? A cross-sectional study at a maternity hospital in rural South India. *Indian Journal of Child Health*. 2020:441-5.
11. Battaglia G, Alesi M, Tabacchi G, Palma A, Bellafiore M. The development of motor and pre-literacy skills by a physical education program in preschool children: a non- randomized pilot trial. *Frontiers in psychology*. 2019;9:2694.
12. Zhong J, He Y, Gao J, Wang T, Luo R. Parenting knowledge, parental investments, and early childhood development in rural households in western China. *International Journal of Environmental Research and Public Health*. 2020;17(8):2792.
13. Hall C, Bennett C, Crookston B, Dearden K, Hasan M, Linehan M, et al. Maternal knowledge of stunting in rural Indonesia. *International Journal of Child Health and Nutrition*. 2018;7(4):139-45.
14. Veldman SL, Jones RA, Chandler P, Robinson LE, Okely AD. Prevalence and risk factors of gross motor delay in pre-schoolers. *Journal of Paediatrics and Child Health*. 2020;56(4):571-6.