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The Role of Social Factors in Childhood Stunting in Pakistan with Special Focus on Parental Aspects

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Abstract: *Stunting growth among children is one of the imperative health concerns for the global world. The paper measured the relationship of maternal, paternal, and communal factors with children's stunting growth in Pakistan. The study used the Pakistan Demographic Health Survey (PDHS) and analyzed with the help of statistical packages for social sciences (SPSS Version-21). The unit of analysis was stunted children, and the sample size was (n=7448). The univariate and bivariate statistical analyses were employed by using the Chi-square test. The results of the study found that maternal, paternal, and communal factors have an association with children's stunting growth. For example, specifically, child stunting growth is related to birth interval, low birth weight, mother education, incomplete immunization status, and poor wealth index. The study concluded that chances of child stunting increased with the help of maternal, paternal, and communal factors. The incomplete immunization status is associated with children's stunting growth. The study recommended that the issues of birth interval, low birth weight, mother education, incomplete immunization, and poor wealth index should be the focus of the policymakers to control children's stunting growth.*

Key Words: Children, Stunting Triangulation, Communal, and Parental Factors

Introduction

The phenomenon of stunting has been defined as "short height for age" and wasting as "short height for weight"(WHO, 2014). Branca et al. (2015) added that stunting affects more than 162 million children under five years worldwide. For example, "short height for age" is caused by inadequate nutritional intake, and "short height for weight" is due to an acute shortage of food (UNICEF, 2019). The study of Munir (2023) outlined that stunting is a severe form of health problem and also creates lifelong effects on children's academic achievement. The World Health Organization (WHO) found that the decision-making process can decrease stunting growth in 2025, which is on the agenda of Sustainable Development Goals (SDGs). WHO also predicted that predominant stunting in children under five years can be decreased up to 40% in 2025, which could eradicate absolute undernourishment by 2030 (Branca et al., 2015). Stunting has different causes, such as weakening children's cognitive and physical growth, underweight, etc. (UNICEF, 2019). There is very little empirical research done on children's stunting growth, which is caused by social, communal, and parental factors, especially in the Pakistani context.

Stunting is taken as low birth spacing among consecutive siblings. Children's low birth interval, stunting growth and direct mother death after delivery are big problems for Asian society (Dhingra & Pingali, 2021). On the other hand, higher birth intervals and spacing provide more space for the mother to recover and also allow her to give appropriate nutrition to their children (Hailu & Gulte, 2016; Wekesa, 2022). Thus, the studies concluded that fewer intervals mean more allocated care and consideration,

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leading to good nutrition and decreasing stunting growth among children (Ara et al., 2023; Khan & Raza, 2016). The offspring's prenatal and postnatal health state directly correlates with the mother's diet and nutritional status. The study delineated that prenatal and postnatal health, delivery weight, and early nutrition are related to children's stunting growth (Abhina, 2020; Marshak, 2021). Similarly, Vaidik and Wenzel (2018) concluded that malnutrition in children can cause stunting. The recommendation was put forward to the policymakers that undernutrition starts during pregnancy and remains for the extended life of the children. Thus, several authors agreed that long-term and short-term goals are needed to address the issue of stunting among children, which begins during the mother's pregnancy, nutrition and childcare (Haque et al., 2023; Minami et al., 2023; Munir, 2023). This work is conducted in response to the need to decrease children's stunting growth and improve food security, which is the most sensible and easily achievable goal in the short term. Moreover, a deeper understanding of these parameters is required to eliminate the threat of stunted growth among children and provide a more balanced diet for mothers. Currently, no method can inherently minimize children's stunting and develop a comprehensive mechanism to combat the problem.

Literature Review

Measuring children's stunting growth is a suitable variable and its association with communal and prenatal factors could be extended the present research horizon and domain. For example, there is a body of research that has focused extensively on lower birth weight and size relationships with children's stunting (Martorell & Zongrone, 2012). Likewise, Dewey and Huffman (2009) also revealed that children's stunting sometimes starts during a mother's pregnancy. De Onis et al. (2013) agreed that a child's mother does not create stunting but the societal external environment. The problem requires a multisectoral and collective response from the community people and health doctors (Stewart et al., 2013). Therefore, a solution with the individual and collaborative functioning of relevant departments is the social responsibility to provide mothers with food, nutrition, health, water, and sanitation (Stewart et al., 2009). Similarly, the children must be cared for and appropriately fed to overcome stunting growth. The reason for inadequate nourishment of children can cause stunting growth. The parents and caregivers understand the health apprehensions of children and improve their nutrition and balanced diet (Casey et al., 2001).

For instance, WHO set the goal to eliminate stunting growth up to 40% by the end of 2025, and it was predicted that 127 million children would be more stunted. Only 26% of children were not stunted, 40%, as the set goal is 100 million (De Onis et al., 2013). Even though malnutrition is the perfect reason for stunting, insufficient nutrition can cause it. It has been statistically evidenced by Shekar et al. (2006), who categorized that mammoth and manifold effects of stunting can decrease a country's economy and reduce individual productivity. The economists established that stunting could slash a country's GDP by up to 3%. For example, Ullah et al. (2022) found many stunted children in low-economic-status countries like Pakistan. In conclusion, Pakistan has focused on combating children's stunting growth. Even though, Asia has made significant progress to control up to 27% stunting among out of 48%. Pakistan started a struggle to control children's stunting up to 41.7% in 2008. The whole percentage was 32.3% among all children in 2008 (De Onis et al., 2013). WHO recommended to the policymakers that children's stunting growth can be controlled if we follow country-based SDGs guidelines (WHO, 2014). From the above scientific literature review, it was realized that children's stunting growth still needs to be measured with the help of secondary data, especially in the Pakistani context.

Rationale

The study aims to measure societal, parental, and communal factors with Pakistani children's stunting growth. It is to be noted that children's stunting growth is direly needed and should be pondered and premeditated methodically to control the issue. PDHS data is a reliable source and can easily explain the societal, parental, and communal factors direct association with children's stunting growth. Exploring the effects of other social and economic factors and ensuring food diversity and sufficient nutrition could influence children's stunting, which was investigated in the study. Using the highly reliable and carefully cum systematically collected data of PDHS from almost Pakistan is the rationale of the research and fills

the gap. The study explores the neglected societal and parental root causes associated with children stunting under five years of age, directly and indirectly.

Objective

The objective of the study is to find out the association of all possible societal, parental, and community factors based on (PDHS) data. These factors influence was related to stunting growth and status among children at the national level. Secondly, to find out how mothers' health and societal status affect children stunting linear growth. Policymakers and health departments earnest efforts are assessed statistically with children's stunting underage of 5 years old. The ultimate objective is to suggest some policy recommendations to Government institutions, health departments and social welfare departments to control stunting growth among children. As a result, Pakistan may be able to achieve its country and region-based SDGs goals, which are defined by the United Nations Organization (UNO) up to 2025.

Procedure and Protocols

The nature of the research was quantitative, and the research employed secondary data from the third national household survey PDHS 2012-2013 in Pakistan, which is a part of a global survey program. According to Corsi et al. (2012), the Demographic Health Survey (DHS) is critical for identifying and resolving socioeconomic health issues, particularly those affecting women and children. Family planning, maternity, child health services, and fertility are the main focuses of DHS (PDHS, 2012-2013). The Ministry of National Health Services (PDHS, 2012-2013) oversees the collection of the PDHS data, which is done in close cooperation with DHS, NIPS, the Government of Pakistan (Pakistan Bureau of Statistics), UNICEF, and the US Agency for International Development (USAID). A qualitative variable refers to similar attributes, and the values of a qualitative variable do not always convey a numerical order. There is no prescribed order; instead, it exhibits qualitative variations in values. It is sometimes called a categorical variable, and it refers to denote attributes or characteristics that may be grouped into distinct categories (Siegel, 2016). The study used qualitative variables because the nature of the variables was categorical and binary. The study applied all the independent variables as a qualitative nature variable.

Sampling Technique and Sample Size

Except for the Federally Administered Tribal Area (FATA), which was merged into Newly Merged Tribal Districts and Azad Jammu and Kashmir (AJK), data for the PDHS are gathered from ever-married women and some ever-married males across Pakistan. Four hundred ninety-eight (498) locations throughout all provinces were chosen for data collection, along with urban areas being split up into enumerated blocks of 200-250 families (mutually exclusive) and rural data being gathered based on villages (PDHS, 2012-2013). The study's sample size is 7448, drawn from the PDHS using the SPSS "select cases" function. Only those participants who had at least one kid in the previous five years were considered as unit of analysis.

Definition and Coding of Dependent Variable (Child Stunting)

The variable of children stunting under the age of five was considered as a dependent qualitative variable. The obtained data was from PDHS and transformed into binary categories in the form of "stunting" (yes) and "not stunting" (no). The stated cutoff values for standard deviation from means are determined by the World Health Organization (WHO). Hence, children whose Z-score is more than two (2) standard deviations below the median of the WHO reference population are classified as "stunted". In contrast, those with a Z-score of less than negative three (-3) are called "severely stunted". The variable representing age for height was documented, and the value below -2 was categorized as "Stunting" and classifying all others as "Not Stunted".

Coding of Socio-demographic in PDHS

The researchers considered several socio-demographic factors related to children's stunting growth in the study. Therefore, the variables of child sex, race, dwelling area, birth interval, age ranges, vaccination status, and birth size were included and subjected to statistical analysis using the SPSS software to examine their association with stunting rate.

Parental Variable

The previous extensive literature review widely acknowledged that children's stunting growth does not solely start after birth but instead commences gradually from the moment of a mother and her interaction with different societal and communal factors. Consequently, several crucial factors about the mother, such as her health, dietary intake, educational attainment, employment status, pregnancy information access, decision-making, authority, and breastfeeding practices were identified and categorized by recoding specific original variables. Internally and within the academic context, appropriate definitions and references were utilized during the recording process. In analogous, the father's role is crucial in the context of child-rearing and domestic nourishment, including the children's well-being and their mother's pregnancy as well as postoperative care. Several critical factors from the PDHS were considered to examine their potential link with childhood stunting. The variables employed in this study were educational level (ranging from no education through elementary, secondary, and higher education) as well as the status of individuals as either educated or uneducated. Additionally, the household head variable was also statistically measured in relation to children's stunting growth.

Coding of Communal Variable (Community and Household Environment)

In addition, the association between communal factors and children's stunting growth were measured. The household status was categorized into three groups: the middle class, the rich class, and the impoverished class. In a similar vein, provinces were also considered variable (See Table 2). Furthermore, the sample was categorized into two living categories based on whether folks were living in urban or rural areas. Again, six language categories were differentiated based on spoken languages, such as Urdu, Punjabi, Sindhi, Balochi, Pashtu, and other minority groups.

Data Analysis

Univariate analysis was measured to describe percentages and frequency distribution of the demographic variables in the data. A bivariate statistical analysis was conducted to measure crosstab—the significance level of Chi-Square values less than zero point five ($p<.05$).

Ethical Considerations

Since the researchers employed PDHS secondary data, the DHS granted that PDHS data do not need any departmental ethical approval. Therefore, the researchers did not take any ethical permission from the Bureau of Statistics of Pakistan.

Interpretation of Uni-variate Analysis

Table 1 shows demographic information of the respondents in that study. A total of 2700(100.0%) children were measured regarding stunting in the PDHS data. About 1755(65.7%) respondents were not stunted whereas 925(34.3%) were stunted. Similarly, unemployed mothers were 5923(79.5%) and employed mothers were 1525(20.5%) out of 7448(100.0%). For example, the total children's birth interval was measured 6053(100.0%). The results showed that 3913(64.6%) children had low birth intervals, and 2140(35.4.9%) had more than 36 months' birth intervals.

Correspondingly, 3106(41.6%) had poor living standards and had middle-income, i.e., 1429 (19.2%). On the other hand, rich respondents were 2926(39.2%), total wealth index 7461(100.0%). Punjabi participants were 2008(26.9%) and also Sindhi were 1591(21.3%). The KPK respondents were in the middle, 1532(20.5%) as compared to other provinces, whereas Baluchistan residents were 1149(15.4%). As well as, Gilgit Baltistan province participants were 709(9.5%) and 472(6.3%) belonged to ICT out of 7461(100.0%). Almost all urban areas respondents were 3090(14.4%), while 4371(58.6%) were living in the rural areas of Pakistan, out of 7461(100.0%) (see Table 1).

Equivalently, 840(32.8%) children were in the age of one year, whereas 593(23.2%) were two years old and three years old children were 528(20.6%). Along with that, four-year-old children had 364(14.2%), and five-year-old children were 235(9.2%) out of 2560(100.0%). The respondents were divided based on access to information. In addition, 2226(39.3%) respondents had no access to information, whereas had

access to information 3431(60.7%) in a total of 7461(100.0%). Accordingly, the demographic variable of the mother's education was computed. There were 4121(55.2%) who had no education, and 3340(44.8%) had education from different institutes. Similarly, the degree of education was also compared among respondents. Most respondents have no certificate of education 4121(55.2%) and 1065(14.3%) had a certificate of primary education. As a result, the findings showed that participants had secondary education certificates 1373(18.4%), and very few respondents had higher education degrees 902(12.1%), a total of 7461(100.0%) (see Table 1).

Respectively, the husband's educational level was measured in this particular paper because it was one of the factors and 2293(30.8%) husbands had no education. On the other hand, 1014(13.6%) husbands had primary education, as well as 2441(32.8%) had secondary education, and 1689(22.7%) had higher education, as well as 07(0.10%) husbands had no education out of 7444(100.0%). In addition, father education was one of the important factors; 2293(30.8%) had education, and 5144(69.2%) fathers had no education, a total of 7437(100.0%). Stunting growth can be related to the size and weight of the children. The study measured a dichotomous variable with the help of "0" and "1" responses. Out of the total children, 825(62.0%) had less size and weight, and 505(38.0%) had more size and weight. Moreover, the food diversity was segregated into two responses: such as, 1515(38.6%) had no food diversity, and 4213(61.4%) had food diversity, which is shown in Table 1.

However, language based on ethnicity was measured for children's stunting growth. Likewise, Urdu speakers were 610(8.2%) and 1556(20.9%) were Punjabi speakers as well as 742(10.0%) were Sindhi speakers and 1699(22.8%) were Pashto speakers. Baluchi speakers were very low 350(4.7%), and other language speakers were 2500(33.5%) out of 7457(100.0%). In addition, the mother's decision-making power was computed; childbearing mothers 163(2.2%) and 7184(97.8%) mothers did not decide by themselves but by others. Lastly, the breastfeeding variable was categorized into two different categories. Mothers who were not interested in breastfeeding were 3585(48.1%), and those mothers who were interested in breastfeeding were 3866(51.9%). All the demographic variables were taken from PDHS and were computed for study importance and measurement evaluation (see Table 1).

Table 1

Descriptive statistics related to children stunting and non-stunting growth (n=7448)

Variables	f	(%)
Stunting growth		
Not stunting	1715	65.7
Stunting	194	34.3
Total	2700	100.0
Employed	**f**	**(%)**
Unemployed	5923	79.4
Employed	1525	20.5
Total	7448	100.0
Birth Interval in Months	**f**	**(%)**
Low Birth Interval	3913	64.6
Other more than 36 Months	2140	35.4
Total	6053	100.0
Wealth Index Classification	**f**	**(%)**
Poor (1-2)	3106	14.6
Middle 3	1429	19.2
Rich 3-5	2926	39.2
Total	7461	100.0
Province Wise Division	**f**	**(%)**
Punjab	2008	26.9
Sindh	1591	21.3
Khyber Pakhtunkhwa (KP)	1532	20.5
Baluchistan	1149	15.4

Gilgit and Baltistan	709	9.5
ICT	472	6.3
Total	7461	100.0

Area Wise	f	(%)
Urban	3090	41.4
Rural	4371	58.6
Total	7461	100.0

Age Groups of Children	f	(%)
One year	840	32.8
Two years	593	23.2
Three years	528	20.6
Four years	364	14.2
Five years	235	9.2
Total	2560	100.0

Access to Information	f	(%)
No access to information	2226	39.3
Have access to information	3431	60.7
Total	5657	100.0

Mother Education	f	(%)
No education	4121	55.2
Educated	3340	44.8
Total	7461	100.0

Husband/Partner's Education Level	f	(%)
No education	2293	30.8
Primary	1014	13.6
Secondary	2441	32.8
Higher	1689	22.7
Don't know	7	0.10
Total	7444	100.0

Father Education	f	(%)
No education	2293	30.8
Educated	5144	69.2
Total	7437	100.0

Size and Weight	f	(%)
00.0	825	62.0
1.00	505	38.0
Total	1330	100.0

Food Diversity	f	(%)
Children with no Food Diversity	1515	38.6
Children with Food Diversity	2413	61.4
Total	3928	100.0

Ethnicity based on Language	f	(%)
Urdu	610	8.2
Punjabi	1556	20.9
Sindhi	742	10.0
Pushto	1699	22.8
Balochi	350	4.7
Others	2500	33.5
Total	7457	100.0

Decision-making Power of Mothers	f	(%)
Decision Taken by Mothers Alone (1)	163	2.2

Decision Taken by Others (2)	7184	97.8
Total	7347	100.0
Breast Feeding	**f**	**(%)**
Not Breast Feeding	3585	48.1
Breast Feeding	3866	51.9
Total	7451	100.0

Note: f = Frequency and % = Percentage, Source: Pakistan Demographic Health Survey (2012–2013)

Interpretation of Bi-variate Analysis

Table 2 depicted Bi-variate analysis of the social and parental factors in relation to children's stunting growth. It was hypothesized that children having incomplete immunization had more chances of stunting. The study assumed that low birth weight children are more likely to be stunted. Furthermore, it was hypothesized that uneducated mothers are more likely to stunt children. In addition, the earnings of the mother are more likely to stunt the child as compared to not paid. Thus, the poor wealth index of households has stunting in children. As far as significant association was not found between child sex and stunting of a child (p=.531). Similarly, it is evident from the results that the male and female percentage was equal (50%). Both males and females have no association with stunting growth.

Furthermore, a significant association was found between birth interval and children's stunting growth with p-value less than zero point five (p=.051). Similarly, the given results revealed that 66 % of the children who had equal birth intervals had stunting growth. Similarly, the age group of the children was not significant factor for stunting growth and there was no association found (see p=.061). Moreover, a significant association was found between incomplete immunization status and the children's stunting growth (p=.003). In addition, the current study results revealed that 65% of the children who had stunted due to incomplete immunization status.

A significant association was found between birth size, weight, and stunting of a child (p=.005). Similarly, the computed result revealed that 71% of the children who had low birth size and weight had higher chances of stunting. On the other side, there was a significant association was found between mother employment and stunting of a child, because (p=.038). Apart from that, a significant association was found between a mother's education and the children's stunting growth (p=.000). As a result, 58% of uneducated mother's children had higher chances of stunting as compared to educated mothers.

Also, there was no significant association found between mothers having access to information and the children's stunting growth (p=.223). Similarly, the result showed that 41% of the mothers had no information and had no chance of child stunting. Likewise, decision-making power of mothers and children's stunting growth have no association. On the other hand, a significant association was found between the earnings of mothers and the children's stunting growth (p=.051). As a result, the results showed that 74% of the children had a chance of stunting due to mothers earning factors. Along with that, there was a significant association found between mother breastfeeding and children's stunting growth (p= .032). As well as mother's level of education had also no significant association with children's stunting growth.

Equally, father education is not concerned with stunting in children which is not significantly associated with education. Similarly, the father's level of education had no association with the stunting of the child. So far, community factors have been significantly associated with stunting of children. The factor of household wealth index was formally concerned with stunting growth because the significant value was less than .05 (p=.000). The result of the statistics showed that 49% of poor households significantly fell into children's stunting growth.

The result revealed that a significant association was found between province-based and children stunting (p=.000). So, it was statistically proved that Sindh had 24% stunting of the children and similarly Baluchistan had 23% chances of stunting in children. And the other side, locality-wise children were not stunted. Thus, a significant association was found between ethnicity based on language and children's stunting (p=.000). Then, it is evident from the results that Baluchi was 8% of the children's stunting and they had higher chances of stunting. In addition, the result revealed that there were significant associations

between other minorities and children's stunting. The study revealed that 37% percent of the children were known to undergo the process of stunting. Food diversity has a strong association with children's stunting growth (p=.050) and the result depicted that 37% of the children were stunted (see Table 2).

Table 2

Crosstab and chi-square results of societal and parental variables with stunting growth in children under 5 years (N=7448)

Variables	Stunting Growth in Children Under Age Five Years		P value
	Yes	No	
	f (%)	f (%)	
Factors Related to Children's Stunting			
Sex of Child			
Male	463(50.1)	911(51.3)	.531
Female	462(49.9)	864(48.7)	
Birth Interval among children			
Low Birth Interval	495(66.5)	956(65.3)	.051
Normal Birth interval	249(33.5)	507(34.7)	
Age Groups of Children			
One year	294(33.7)	546(32.4)	.060
Two years	207(23.7)	386(22.9)	
Three years	175(20.0)	353(20.9)	
Four years	117(13.4)	247(14.6)	
Five years	80(9.2)	155(9.2)	
Immunization Status of Children			
Incomplete Immunization	489(65.1)	1042(58.8)	.003
Complete Immunization	262(34.9)	730(41.2)	
Birth weight of the child			
Low birth weight	71(50.4)	136(36.7)	.005
Normal birth weight	70(49.6)	235(63.3)	
Maternal Factors			
Employment Status of Mothers			
Employed	196(21.3)	366(20.6)	.038
Unemployed	725(78.7)	1409(79.4)	
Mother Education			
Educated	386(41.7)	868(48.9)	.000
Uneducated	539(58.3)	907(51.1)	
Access of Information to Mothers			
Have Information	421(58.3)	814(61.1)	.223
No Information	301(41.7)	519(38.9)	
Decision-Making Power of Mothers			
Taken by mothers	21(35.6)	38(64.4)	.821
Taken by others	891(34.2)	1716(65.8)	
Type of Earnings of Mothers			
Not paid	15(7.7)	34(9.3)	.051
Cash only	144(73.8)	273(74.6)	
Cash and in-kind	7(3.6)	27(7.4)	
In-kind only	29(14.9)	32(8.7)	
Breast Feeding Practice			
Mothers, not breastfeeding	449(35.2)	827(64.8)	.032
Mothers breastfeeding	475(33.4)	947(66.6)	
Mother's level of education			
No education	539(37.3)	907(62.7)	

Primary	142(34.5)	269(65.5)	
Secondary	162(31.1)	359(68.9)	
Higher	82(25.5)	240(74.5)	
Paternal Factors			
Father Education			
Educated	627(68.2)	1269(71.6)	.620
Uneducated	293(31.8)	503(28.4)	
Fathers' level of education			
No education	293(36.8)	503(632)	
Primary	149(40.5)	219(59.5)	
Secondary	278(31.1)	617(68.9)	
Higher	200(31.6)	433(68.4)	
Communal Factors			
Wealth Index of Household			
Poor	424(45.8)	682(38.4)	.000
Middle	170(18.4)	321(18.1)	
Rich	331(35.8)	772(43.5)	
Province Based Data Results			
Punjab	207(22.4)	520(29.3)	.000
Sindh	228(24.6)	338(19.0)	
Khyber Pakhtunkhwa	148(16.0)	395(22.3)	
Baluchistan	215(23.2)	212(11.9)	
Gilgit Baltistan	83(9.0)	178(10.0)	
Islamabad	44(4.8)	132(7.4)	
Locality of Children			
Urban	374(40.4)	759(42.8)	.245
Rural	551(59.6)	1016(57.2)	
Ethnicity based on Language			
Urdu	74 (8.0)	146 (8.2)	.000
Punjabi	145 (15.7)	409 (23.0)	
Sindhi	100 (10.8)	162(9.1)	
Pashto	178 (19.3)	428(24.1)	
Baluchi	78 (8.4)	60 (3.4)	
Other minorities	349 (37.8)	570 (32.1)	
Food Diversity			
Children with no Food Diversity	200(37.4)	335(62.6)	.050
Children Having Food Diversity	281(32.9)	573(67.1)	

Discussion

The child mortality rate is one of the public health issues in Pakistan, and it leading to infant mortality (Patel et al., 2021). Previous studies draw attention toward children's stunting growth among different countries of the global world. Such as, Uttar Pradesh and Bihar in India had 47.3, and 49.4% children's stunting growth ratio. While African countries (Sierra Leone) also had 45% of children's stunting growth. The children's stunting growth in Pakistan was decreased according to 2017–2018 PDHS measure (Ullah et al., 2022). One previous study suggested that mother malnutrition affects low birth weight among children, which increases 20% children's stunting growth (Stewart et al., 2013). In the similar context, Ullah et al. (2022) found that social factors strongly associated with children's stunting growth. The study put forward to the policy makers that parental and communal factors should be evaluated by future researchers with the help of PDHS. The current research found the gap and fills the gap with the help of parental and communal factors in response to children's stunting growth. The research found that most children were stunted due to low birth size and weight. The statistical results proved that low birth size and weight were associated with children's stunting growth. Thus, the computed result revealed that 71% of children have low birth size and weight and had higher chances of stunting. Generally, the study concluded that those

mothers that they are not breastfeeding their children have significantly influence children's stunting growth (Bhutta et al., 2013). Similarly, the current study results were in line with the Bhutta et al. (2013) and it was found that not breastfeeding mothers have significant association children's stunting growth.

However, the study of Headey and Ruel (2022) statistically proved that the short-and long-term health of the child is affected due to mother's education and low wages. The study found that a mother's poor thinking is associated with children's stunting growth. In addition, the result of the present study suggested that 58% of uneducated mothers had higher chances of children's stunting as compared to educated mothers. Furthermore, the previous literature confirms that child malnutrition is associated with child stunting growth. The study recommended that the World Health Organization Global Target 2025 could be achieved if Pakistan controlled children's stunting growth (Siddiqa et al., 2023). The present study results were linked to the current results, such as the study found that child malnutrition and no food diversity were associated with children stunting. Besides, Banu et al. (2023) announced that low socio-economic status was associated with the children's stunting. In relation to the study of Banu et al. (2023), the contemporary research delineated that poor households have significant associated with children's stunting growth.

Conclusion

Childrens' stunting growth is a glaring issue in Pakistan, which is causing the nation to prevent future progress, healthy generations, and mothers to give more healthy offspring. This is a genuine effort to solve the problem of child stunting and develop a comprehensive framework to control children's stunting in the future. The current study has found communal and prenatal factors which are making the nation and future mothers crippled in many ways. Ergo, these factors are needed to counter a stern hands halt to Pakistan's predominant condition regarding children's stunting. For instance, incomplete immunization status, low mother education, low birth weight, mother earning status, household environment, poor wealth index, and ethnicity-based language were primary factors that increased children's stunting growth. The study gives us a roadmap and vision for a way forward to eliminate the stunting menace from Pakistani society. Based on the findings of this study, children's stunting growth was relatively higher in the provinces of Baluchistan and Sindh in Pakistan. Outstandingly, rural areas have fallen in severe threats regarding children stunting. This warrants a serious, pragmatic, short-and long-term policy initiative for the health sectors and social institutions to stop children stunting growth up to 2025. While doing so, special attention should be given to marginalized and neglected segments of the country. It is important to note that the concentration of civil society is more goal-oriented and significantly impacts the status quo of children stunting than just criticizing the Governmental and Non-governmental agencies. But more is needed to relieve the responsible ones from their prime duties, especially in public sectors of education, health, food, and community municipalities.

Recommendations

On the basis of the study's findings, the researchers put forward the following recommendations.

- The study sensitized that the health sector should make practical and persuasive policies for parents to inform about children's stunting growth in their communities.
- Policymakers must realize that children's stunting growth is not only short-term linear growth in their children but also disturbs their long-term future prosperity.
- All stakeholders should understand the inevitabilities of their role in achieving the SDGs, but it is relatively easy to accomplish in reality.
- The instructors and parents are required to play vital roles in controlling the current severe situation of children's stunting growth and assist the Government of Pakistan in achieving its targets by 2025.

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