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Undernourishment Needs Overemphasis: Lived Experiences of Elementary Teachers and Parents Having Undernourished Schoolchildren

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ABSTRACT

This present study aimed to explore the lived experiences of parents and elementary teachers with undernourished children or pupils. These pupils are enrolled in two elementary schools in the 4th District of Santa Catalina under the Division of Negros Oriental, Philippines. Employing the descriptive phenomenological design through the unstructured in-depth interview method on the experiences of teachers and parents with undernourished schoolchildren, twelve participants agreed to participate in this study. Digitally recorded interviews were thematically analyzed to generate the themes and subthemes. We generated four themes: (a) pupils' poor class performance and behavior; (b) teachers' strategic initiative aimed at enhancing performance and behavior; (c) Department of Education's (DepEd) support for pupils' well-being; and (d) children's poor eating behavior. Teachers were challenged in handling pupils who are undernourished as the latter becomes mentally and physically absent in the classroom. To ensure that these pupils are not left behind, teachers make some interventions, like peer tutoring, to help the pupils cope with every day's lesson. With the intention of improving the nutritional status of undernourished pupils, schools implemented the school-based feeding program and the giving of nutritious foods that may be brought home for pupils' breakfast or supper. We conclude that despite the challenges encountered, teachers and parents devise interventions to lessen the negative effects of undernutrition with the help of DepEd.

Keywords: lived experiences, poor class performance, pupils' well-being, teachers' strategic initiative, undernourishment

INTRODUCTION

Child undernutrition is a serious international health issue (Leroy *et al.* 2020). Countries that have quickly progressed against maternal and child undernutrition have been cited as having a common success trait (Nisbett *et al.* 2015). There is no denying the effectiveness of micronutrient treatments that have significant, favorable effects on mortality, morbidity, and health, particularly for mothers, children, and babies (Allen 2014). Additionally, an abrupt drop in food intake or a sickness, both of which can be linked to drought exposure, are common causes of acute undernutrition, which is sensitive to recent drops in a person's weight (Belesova *et al.* 2019). The quality of intake and illness are two elements affecting a child's nutritional condition (Buntoro *et al.* 2017). Multiple micronutrient deficiency in undernourished children affect their ability to grow and operate at their best (Carboo *et al.* 2023). Poor appetite may be a significant sign of these issues and may serve as a helpful indicator of how well-recovered an undernourished child will be (Ickes *et al.* 2018).

Underweight, stunting, and wasting are the three types of undernutrition (Salleh *et al.* 2021). Undernutrition generally affects two billion people (Nisbett *et al.* 2014). High rates of stunting were linked to income, a mother's level of education, and the amount of money spent on food. The frequency of inadequate calorie intake and the proportion of food spent were linked to the incidence of high wasting. The number of mothers with low levels of education and the proportion of food expenditure were related to the prevalence of high underweight (Mauludyani *et al.* 2012). The population also plays a role in

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developing high-risk types of undernutrition, depending on their environment, lifestyle, and resources.

Early childhood undernutrition has been linked to poor cognitive development and some behavioral changes (Baker-Henningham *et al.* 2009). It increases the risk of sickness, delayed mental development, subpar academic performance, diminished intellectual capacity, and even death (Fufa & Laloto 2021). The academic progress of underweight children performs below their potential (Smith & Haddad 2015). Compared to non-undernourished children, undernourished children have a poor intellectual quotient, a high absence rate, and a high rate of grade-level repetition (Ali *et al.* 2022). Stunting, recurring infections, and cognitive impairment are just a few of the long-term health issues undernutrition has been linked to (Claus 2013). A severe physiological and cognitive deprivation that affects 165 million children under the age of five is stunting or being short for a child's age (Nisbett *et al.* 2014).

Recent studies focus more on undernutrition itself than on the experiences of the people who handle children who are undernourished. Aside from those who directly experience undernutrition, there is also a need to document the voices and experiences of people who deal with undernourishment indirectly, such as the teachers and parents. This study has the objective of unveiling the lived experiences of indirect undernourishment.

Currently, there are no studies on the lived experiences of teachers and parents dealing with undernourished pupils or children. Along with supporting parents who cannot give their children nutritious food, proper nutritional education for parents is necessary (Khanam & Haque 2021), including their challenges and some of their insecurities about being one. Researchers focus more on undernourished children, including the challenges encountered and interventions made. However, the scientific community must hear the teachers' and parents' experiences on the way they deal with the challenges associated to having undernourished children.

Thus, this research primarily aimed to investigate the lived experiences of teachers and parents with undernourished schoolchildren across grades one to six. The results of this study would help schools, communities, and the government understand the challenges and help teachers and parents with additional interventions that should be made. The output is expected to inform DepEd, the government, and the World Health Organization about Filipino teachers and parents' challenges, how they help their children, and the improvement of their undernourished schoolchildren.

METHODS

Design, location, and time

This study employed the descriptive phenomenological design using an unstructured in-depth interview method on the experiences of teachers and parents with undernourished pupils and children in Caigangan Elementary School and Amio Elementary School in Santa Catalina, Province of Negros Oriental, Philippines. We deemed this approach appropriate for this kind of study as it intends to explore significant experiences (challenges and interventions) narrated by the teachers, parents, or guardians. The best method for conducting this documentation is through descriptive phenomenology, which enables participants to speak freely and share their experiences in their own words. This study was issued with Ethics Clearance No. REA-2023-EXE-S-0037 by the Negros Oriental State University, Research Ethics Committee. All in-depth interviews were conducted in the month of April 2023.

Caigangan Elementary School (CES) is 15 km from the town proper and comprised 14 teachers and 369 pupils. Amio Elementary School (AES) is 18 km from the town proper and comprised 15 teachers and 349 pupils. These schools are small schools that are located in the rural area of Santa Catalina, with limited resources. Most of the children walk as their means of going to school, regardless of distance.

The pupils referred to in this study were those enrolled regardless of grade level in the two schools aforementioned. The identified undernourished children came from a medium-sized family with 4–7 siblings; most of them are the youngest in the family. They live in a small to medium-sized house made of light materials, like nipa and wood. Some live with their grandparents because of their separated parents, leaving the mother as the breadwinner; others live with their mothers only because their fathers are the

ones working in other cities and municipalities to provide for the family. The undernourished children at AES are residing near the main road, which is a 15-minute walk to the school (500 meters to one kilometer). On the other hand, undernourished children at CES are residing far from the main road with no accessible road from the main road to their house which is a 30–35 minutes walk to school (one to two kilometers).

Sampling

The researchers used 12 interviews as the base size for this study. Specifically, researchers interviewed six teachers and six parents of elementary grades 1 to 6 undernourished schoolchildren.

The following are the inclusion criteria for the in-depth interview: (a) must be a teacher, parent or guardian of undernourished individuals; (b) resident and teacher at CES or AES; (c) the child should be identified as undernourished by the Barangay Health Center or the adviser health monitoring form; (d) the child must be enrolled in any grade in the mentioned school. The exclusion criteria are as follows: (a) relatives of undernourished individuals who do not spend at least 24 hours in five days every week with the undernourished individuals, and; (b) teachers, parents or guardians of undernourished individuals who were not identified as undernourished by local health center or advisers' health monitoring chart.

Participant 1 is a 31-year-old female, married, and a Teacher I handling grade 5 at AES. She is currently studying for her master's degree at Cebu Technology University. She has been teaching at the said school for five years now; she graduated with the degree Bachelor of Elementary Education.

Participant 2 is a 34-year-old male, Teacher II, handling grade 6 at AES, a master's degree holder, and has been teaching for 12 years already. He resides in Barangay Amio, Sta. Catalina, Negros Oriental, near the school where he is currently teaching.

Participant 3 is a 28-year-old female, appointed as a Teacher III, handling grade 3 at AES. She has been teaching at the mentioned school for four years now; she is a graduate of Bachelor of Elementary Education.

Participant 4 is a 73-year-old grandmother residing at Proper Amio, Sta. Catalina, Negros Oriental, and a farmer on their mini-farm. She is a grandmother of fraternal twins, one of whom is identified as undernourished. She stood up as a mother since her daughter, the undernourished child's mother, works far from the barangay.

Participant 5 is a 53-year-old mother residing at Amio proper, Sta. Catalina, Negros Oriental, and a housewife. The undernourished child is her youngest child. Her husband works in Dumaguete City as the breadwinner of the family.

Participant 6 is a 50-year-old mother residing at Amio proper, Sta. Catalina, Negros Oriental, and a housewife. The undernourished child is her middle child. Her husband is an Overseas Filipino Worker (OFW) and the family's breadwinner.

Participant 7 is 42-year-old, mother of two children, and has been a Teacher II at CES for six years. She has been assigned to teach Grade 6 since then.

Participant 8 is a 38-year-old mother and a Teacher III for 11 years at CES. She is also a master's degree holder. She has been assigned to teach Grade 3 since then. She is residing near the school where she is teaching.

Participant 9 is a 30-year-old mother and Teacher II at CES for four years. She graduated with a Bachelor of Elementary Education, majoring in General Curriculum at NORSU-BSC.

Participant 10 is a 19-year-old sibling of the identified undernourished child from Caigangan, Sta. Catalina, Negros Oriental. The latter is a Grade 12 student of Obat High School. She is the current guardian since their parents work on their farm away from home.

Participant 11 is a 53-year-old mother from Caigangan, Sta. Catalina, Negros Oriental. She works at her own pace by selling random dishes around Caigangan. She also sells snacks such as bananaque and camoteque. She is also the mother of two children, including an undernourished child enrolled at CES.

Participant 12 is a 25-year-old mother of the identified undernourished child enrolled at CES. The family relies on the breadwinner's income who works in Dumaguete City for a living.

As to the recruitment process, the researchers employed snowball sampling or chain referral sampling as a technique in which personally known or existing subjects who met the inclusion criteria for this study were recruited

to participate as key informants in this project. They were encouraged to refer to the researchers some persons whom they know that would qualify as interview participants. Since the interviews were conducted face-to-face, the interviewer and interviewee strictly observed and complied with the minimum health standards required during the COVID-19 pandemic.

Data collection

Through in-person interviews, the participants were encouraged to speak openly and in their own words about their experiences having undernourished children at home or in school. Each interview lasted for at least 45 minutes. The project leader conducted all the interviews with the assistance of the project staff. The interviews were conducted in participants' houses or schools. Audio recording, transcription, translation, coding, and analysis were done after the interview. All transcripts are carefully verified by a bilingual translator proficient in Cebuano and English during the translation process. Triangulation took place, wherein after transcribing and translating, participants were able to see and verify their statements in English. The participants' comments and corrections regarding their statements that were included in the draft manuscript were duly considered before they formed part of this final paper.

Data analysis

Digitally recorded interviews were transcribed. Thematic analysis was then utilized in analyzing participants' experiences. An inductive approach was utilized, wherein researchers allowed the data to determine the themes. Specifically, the analysis proceeded using six steps developed by Braun and Clarke (2021). The process includes the following steps: (1) familiarizing with dataset; (2) coding; (3) generating themes; (4) reviewing themes; (5) defining and naming themes, and; (6) writing up.

RESULTS AND DISCUSSION

DepEd classified two types of below-normal or undernourishment in their nutritional status chart: wasted and severely wasted. Every child is classified according to their BMI-for-age. Through the thematic analysis of the in-depth interview transcripts, the researchers generated four themes to highlight the experiences, specifically the challenges encountered and primary interventions made by elementary teachers and parents who have undernourished children or pupils. These themes are: (a) pupils' poor class performance and behavior; (b) teachers' strategic initiative aimed at enhancing performance and behavior; (c) DepEd's support for pupils' well-being, and; (d) children's poor eating behavior.

Theme 1: Pupils' poor class performance and behavior

The first theme captures the poor performance and behavior of undernourished pupils in the class. This serves as a challenge in handling pupils identified as undernourished, as reflected in the following subthemes: mental absenteeism, and physical absenteeism.

Mental absenteeism. When a pupil physically enters a class, it does not mean they are ready. Going to school is part of a child's daily routine; however, it is not assured that their minds are ready when they step into their classrooms' doors. It may be put up as "physically present but mentally absent." A teacher, for example, recounted:

"Their school performance is affected early in the morning, they [undernourished children] don't have the energy and are tired already" (Participant 7, personal interview, 13 April 2023).

Teachers see that their pupils lack of energy and are tired first thing in the morning. Meanwhile, the teachers shared the experience of almost all the teachers in the two schools being able to notice the poor performance and behavior of pupils. Undernourished pupils tend to have slow cognitive skills that affect their academic development. Nutrients deficiency causes mental absenteeism, which causes poor academic development. A participant added:

"Nutrition can affect a child's performance. The slower their brain works, the slower their academic development is" (Participant 7, personal interview, 13 April 2023).

Once a child enters a classroom tired and apathetic, it results in poor participation during class. Regardless of grade level, teachers come up with the same observation: participation is the common element undernourished pupils tend to lack. Another teacher added:

"They [undernourished children] seem weak, and they could not often participate in class" (Participant 1, personal interview, 12 April 2023).

In the same observation made by teachers, a teacher also said that:

"Sometimes they [undernourished children] don't participate; others will just stare" (Participant 9, personal interview, 13 April 2023).

A teacher of a different grade level observed that:

"Undernourished children who were mentally absent were affected academically. They could not process information quickly" (Participant 2, personal interview, 13 April 2023).

Moreover, another teacher observed the same thing.

"His [undernourished child] memory is slow; it takes moments for him to understand" (Participant 8, personal interview, 13 April 2023).

Physical absenteeism. Teachers are challenged by pupils' poor performance inside the classroom. They grapple with undernourished pupils who seldom appear in class. Being physically absent also dramatically impacts their class performance. Classroom advisers are already questioning why they have dropped out pupils. Although this was an uncontrolled decision by the pupils who dropped out, advisers are still held responsible for their reasons for doing so. A teacher mentioned:

"As reported at the beginning of the school year, two undernourished [pupils] are no longer attending school, or shall we say they have already dropped out" (Participant 7, personal interview, 13 April 2023).

On the other hand, normal absences that do not fall under dropping out are observed by teachers. A teacher said:

"Some [undernourished pupils] are always absent" (Participant 3, personal interview, 13 April 2023).

It is observed that most absences come from undernourished pupils. A participant added:

"There are [undernourished] pupils who have an average [absence rate] of 60% in one school year" (Participant 2, personal interview, 13 April 2023).

Undernourished children have reasons for their absences, and most of their reasons appear to be because of sickness. According to a teacher, she said:

"[Undernourished pupils] will absent because they feel sick; this is their number one reason" (Participant 9, personal interview, 13 April 2023).

Theme 2: Teachers' strategic initiative aimed at enhancing performance and behavior

The second theme reveals the strategic initiative taken by teachers to enhance undernourished pupils' poor performance and behavior. Teacher make interventions to make sure that undernourished pupils will not get left behind, including encouragement given by teachers to all the undernourished pupils. As one teacher said:

"My everyday advice to them [undernourished children] is to sleep early, have a balanced diet, avoid junk foods, and exercise daily" (Participant 1, personal interview, 12 April 2023).

For teachers, it is natural to look after their pupils' well-being. Another teacher added:

"Encourage the children [undernourished children] that they should eat fruits and vegetables at home. They [undernourished children] should also sleep early so that their health status will change into normal" (Participant 7, personal interview, 13 April 2023).

To make learning effective, teachers have a duty to make it as fun as possible. It is their responsibility to ensure pupils learn and have fun at the same time. Moreover, with undernourished pupils, having fun while learning is challenging for teachers. Reinforcement of strategies is a must. A teacher, for example, said:

"*You should always be alive, alert, and enthusiastic because you do not know if your pupils already have breakfast. So, it would help if you were energetic when starting the class so the pupils would feel energetic. And then you should include games in your activities because, through games, the pupils will be more participative, energized, and motivated. Adding rewards to your activities makes the pupils more participative"* (Participant 1, personal interview, 12 April 2023).

Teachers also reinforced peer tutoring, allowing the undernourished pupils to cope with every day's lesson. A teacher added:

"In our everyday lesson, motivation is included to catch their attention. We involve activities such as peer tutorials or group discussions because we cannot hold time for all

of the pupils in one class. We also encourage them to participate in school activities to gain grades, because if they just sit and stare, they will only get low remarks" (Participant 9, personal interview, 13 April 2023).

This strategy is also utilized by teachers who cannot make time for one-on-one remediation with undernourished pupils. She said:

"I give them [undernourished children] peer tutors; a classmate who's good at class will be sitting beside wasted and severely wasted children" (Participant 7, personal interview, 13 April 2023).

Theme 3: DepEd's support for pupils' well–being

DepEd implemented programs as an intervention to address undernourishment. Its support for pupils' well being is further captured in the following subthemes: Department of Education program, and improvement of nutritional status of undernourished pupils.

Department of education program. Other than knowledge, they will also be equipped with protection. Aside from medical supplies, DepEd also implemented a program for undernourished pupils. As stated by a teacher:

"With regard to their [undernourished children] health, we always prioritize them [undernourished children] because in every school year, they are included in the budget of MOOE (Maintenance and Other Operating Expenses) for medical supplies, such as vitamins and paracetamols" (Participant 1, personal interview, 12 April 2023).

Concerning the program that gives undernourished pupils nutritious food to improve their nutritional status, a teacher stated:

"We have this program called SBFP (School-Based Feeding Program)" (Participant 3, personal interview, 13 April 2023).

Teachers are most grateful for DepEd's implementation of this program. A teacher expressed:

"I am happy because these children will be given food through the SBFP, as well as food that they can bring into their house for breakfast or lunch" (Participant 9, personal interview, 13 April 2023).

Teachers became emotional when they saw their pupils with nothing to eat. They also have limitations as much as they want to help. That is why the program at DepEd brought them such joy. A teacher also added:

"As a teacher, I don't have money to feed them [undernourished children]. My joy is that they will be given allocations by the SBFP" (Participant 9, personal interview, 13 April 2023).

Another teacher expressed her commendation:

"Feeding program is a big help to get the children to engage more in activities" (Participant 8, personal interview, 13 April 2023).

Implementing a program is a sure hit for teachers since they know their department backs them up. It is not just them who care but also the higher authorities.

Improvement of the nutritional status of undernourished pupils. During the program's implementation, the nutritional status of undernourished pupils is expected to improve—even a bit. According to a teacher:

"There are some of them [undernourished children] who gained more weight" (Participant 2, personal interview, 13 April 2023).

A teacher observed:

"In my 4 years here, yes, there are improvements. Some children [undernourished] graduated [from being undernourished] and there are some [undernourished children] who stayed [as undernourished]" (Participant 3, personal interview, 13 April 2023).

As teachers observed improvements, they also empathized with undernourished pupils, especially those who show no improvement.

Another teacher claimed:

"There is an improvement in nutritional status because of the SBFP by DepEd…" (Participant 1, personal interview, 13 April 2023).

Theme 4: Children's poor eating behavior

In undernourished pupils' respective homes, parents also observe their terrible eating habits and struggled to make their children eat. They also know that poor eating habits result in poorly nourished children who tend to have weaker immune systems. Sucking is also a process to break down food. However, sucking food instead of chewing takes too much time; children lose their appetite afterward, which results in less food and less nutrient intake. A struggling parent stated:

"He [undernourished child] rarely eats, because he sucks the food every time he eats" (Participant 6, personal interview, 13 April 2023).

Some parents also observed:

"He [undernourished child] is a slow eater, and when he eats, he chooses his food" (Participant 10, personal interview, 13 April 2023).

In this case, an undernourished child eats slowly, which also takes too much time, which may result in losing their appetite. The child was not a picky eater; however, he disliked eating. Given that the child also picks food he wants to eat over the food he needs to eat, another parent stated this observation:

"He [undernourished child] is not a picky eater, but he doesn't like to eat" (Participant 11, personal interview, 13 April 2023).

Nutrients are primarily found in vegetables. However, children usually eat to satisfy their cravings rather than the nutrients their body needs. Another parent added:

"He [undernourished child] does not eat vegetables. He won't even try the soup" (Participant 12, personal interview, 13 April 2023).

There is a causal link between poor behavior and academic performance. Poor behavior and performance in class may both be caused by undernourishment. Our generated result strongly agrees with the statement that childhood undernutrition's long-term effects include diminished physical ability for labor, lower intellectual quotients, a higher risk for illness and mortality, and cognitive impairment (Ali *et al.* 2022). Undernourished children are more prone to experience delayed cognitive development, which can cause attention and learning issues. They are also prone to fatigue, making it challenging to concentrate and participate in class. Undernourished schoolchildren can also be less motivated to learn, as they may feel they need more energy to do so. Meeting their nutritional needs directly contributes to their capacity for engaging in classroom activities. If they lack even the energy to even participate, then their potential as successful students will remain unfulfilled. This idea is further supported by the finding that Fufa and Laloto (2021) established, stating that early childhood undernutrition increases the risk of sickness, delayed mental development, subpar academic performance, diminished intellectual capacity, and even death.

Teachers play a vital role in enhancing the performance and behavior of undernourished children. One of their roles is to take good care of their pupils. Ayyaz *et al.* (2021) emphasized that understanding and recognizing the risk factors will be very beneficial for efforts to avoid undernutrition. They are responsible for monitoring and evaluating children for them to be aware of their nutritional status.

Teachers' strategic initiative includes encouraging students to engage in physical activity during breaks, Physical Education class, and other school events. It should be noted that the value of a healthy diet and how to make healthy food choices can be taught to students and their families by teachers. One of the teachers' ways is to give details on government initiatives that help low-income families with their food needs. As educators, informing and teaching is their expertise and they could explain it in a way that is suited to a child's level of understanding. Ultimately, it will be up to the family and the children themselves to acquire the much needed nutritional intake along with some assistance or government programs, the children's needs could be met.

Government policies and initiatives meant to promote health must consider the provision of wholesome, suitable, and inexpensive food products (Mohseni *et al.* 2019). This idea is further supported by the finding in this study that the government has assigned an agency in charge of basic education programs, the DepEd of the Philippines. Together with DepEd, there is also an alliance with the United Nations International Children's Emergency Fund (UNICEF), which assists governments and other organizations in raising awareness of the issue of undernutrition. Another alliance is with the World Health Organization (WHO), an international leading authority concerned with public health. Malaysia also has the Ministry of Education as the agency focusing on basic education. The Ministry of Education of Malaysia has integrated an intervention wherein food handlers in every school canteen and a nutritionist collaborate to ensure they serve an appealing and healthy menu for the schoolchildren (Teo *et al.* 2019). DepEd has an alliance with international organizations; however, they still need to implement a collaboration of public-school food handlers and nutritionists.

The present study's results strongly imply that children's poor eating behavior can lead to

undernourishment, a serious health problem that can have long-term consequences, not only in terms of their physical wellbeing, but their mental and cognitive wellbeing as well. Scaglioni *et al.* (2018) emphasized that parental food choices and feeding strategies are the most dominant determinants of a child's eating behavior and food choices. Thus, teachers being the adult role models next only to their parents should lead and guide the children about their nourishment needs and what could happen if they fail to meet them. This idea is further supported by the finding in this present study that schoolchildren are picky eaters and do not care about the health benefits. However, with parental guidance and feeding strategies, there is a considerable chance that schoolchildren will consume a balanced diet.

Elementary teachers and parents experienced challenges with undernutrition among schoolchildren. This finding will pave the way for everyone to know what difficulties teachers and parents encountered that made them carry the burden of undernutrition. Teachers carry the burden of improving nutrition intake among undernourished pupils to help them catch up with everyday lessons. On the other hand, parents also strive hard to improve their children's nutrition. Despite challenges encountered by teachers and parents, along with the DepEd, they have devised interventions to solve the undernutrition problem. A program was implemented by DepEd for teachers to monitor the progress and for parents to make sure that the pupils or children have enough intake of vitamins and nutrients from food.

Monitoring children's health should thoroughly evaluate their nutritional status to spot kids and teens at risk for nutrition problems (Więch *et al.* 2022). Thus, understanding and recognizing the risk factors will be very beneficial for efforts to avoid undernutrition (Ayyaz *et al.* 2021). To reduce childhood undernutrition, it is preferable to focus on healthy eating habits and active lifestyles (Ali *et al.* 2022).

Even though stunting, underweight, and wasting were relatively rare (5%), the existing approach to child nutrition needs to be strengthened (Zhang *et al.* 2022). The number of mothers with low levels of education and the proportion of food expenditure were linked to the prevalence of high underweight among children (Mauludyani *et al.* 2012). It is essential to implement nutrition education and school feeding programs, enhance drinking water infrastructure, and boost the local economy to address undernutrition (Berhanu *et al.* 2023). However, nutrition-based interventions alone cannot address the burden of undernutrition unless there is a concurrent emphasis on underlying determinants (Das & Salam 2019). Parents' educational level, employment position, the child's age, a lack of appetite, vaccination history, and recurrent diarrhea all affect wasting (Danso & Appiah 2023).

Along with support for parents who cannot give their children nutritious food, proper nutritional education for parents is necessary (Khanam & Haque 2021). For the family head and households, government policies and initiatives to promote health must consider providing wholesome, suitable, and inexpensive food products (Mohseni *et al.* 2019). It was also suggested that strengthening family nutritional counseling and family planning program sensitization should be a priority for all stakeholders (Nugusse *et al.* 2022). Furthermore, the Sustainable Development Goal for better nutrition and eradicating all forms of undernourishment by 2030 states that children with Severe Acute Malnutrition (SAM) have a high risk of illness and developmental delays contributing to widespread morbidity and mortality, particularly in the developing countries. The current progress is insufficient to achieve this goal (Kumar *et al.* 2023).

CONCLUSION

Teachers observed two types of challenges among their students who are undernourished: mental absenteeism and physical absenteeism. Moreover, parents have encountered challenges as they have observed the poor eating habits of their children. Despite the challenges encountered, teachers and parents devise interventions to lessen the burden of undernutrition with the help of DepEd, which implemented some programs to help address undernutrition. Teachers also always motivate pupils to strive more regarding their nutrition and academics. Therefore, the cooperation of elementary teachers, parents, and other community members has a huge role in guaranteeing that all children have the opportunity to attain their full potential, by improving their nutritional status. Some unique

obstacles that elementary teachers and parents encounter while dealing with undernourished pupils are: undernourished pupils having difficulty concentrating in class, undernourished pupils more likely get sick, and undernourished children may feel isolated and ashamed therefore affecting them socially and emotionally.

For the practical utility of the data generated from this study, more emphasis and support should be provided by the government to teachers and parents in dealing with undernourishment. Parents' nutritional education is also a viable intervention that would help address undernutrition.

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REFERENCES

Ali MS, Kassahun CW, Wubneh CA, Mekonen EG, Workneh BS. 2022. Determinants of undernutrition among private and public primary school children: A comparative cross-sectional study toward nutritional transition in northwest Ethiopia. Nutrition 96:111575. https://doi.org/10.1016/j.nut.2021.111575

Allen LH. 2014. Micronutrient research, programs, and policy: From meta-analyses to metabolomics. Adv Nutr 5(3):344S–351S. https://doi.org/10.3945/an.113.005421

Ayyaz R, Meraj MA, Mustafa F. 2021. Exploring the fundamental risk factors of child malnutrition: An application of Proportional Odds Model (POM). Pakistan Journal of Public Health 11(2):113–119. https://doi.org/10.32413/pjph.v11i2.766

Baker-Henningham H, Hamadani JD, Huda SN, Grantham-McGregor SM. 2009. Undernourished children have different temperaments than better-nourished children in rural Bangladesh. J Nutr 139(9):1765–1771. https://doi.org/10.3945/jn.109.106294

Belesova K, Agabiirwe CN, Zou M, Phalkey R, Wilkinson P. 2019. Drought exposure as a risk factor for child undernutrition in low- and middle-income countries: A systematic review and assessment of empirical evidence. Environ Int 131:104973. https://doi.org/10.1016/j.envint.2019.104973

Berhanu G, Dessalegn B, Ali H, Animut K. 2023. Determinants of nutritional status among primary school students in Dilla Town: Application of an ordinal logistic regression model. Heliyon 9(3):e13928. https://doi.org/10.1016/j.heliyon.2023.e13928

Braun V, Clarke V. 2021. Thematic Analysis: A Practical Guide. London (UK): Sage

Buntoro IF, Deo DA, Woda RR. 2017. The impact of nutrition, helminth infection, and lifestyle on elementary school student's achievement. J Trop Life Sci 7(1):30–33. https://doi.org/10.11594/jtls.07.01.05

Carboo JA, Malan L, Lombard MJ, Dolman-Macleod RC. 2023. Vitamin D status in relation to systemic and intestinal inflammation in undernourished children, 6–59 months old: Design and rationale of a non-controlled open label trial. Hum Nutr Metab 31:200181. https://doi.org/10.1016/j.hnm.2022.200181

Claus SP. 2013. Fighting undernutrition: Don't forget the bugs. Cell Host & Microbe 13(3):239–240. https://doi.org/10.1016/j.chom.2013.02.015

Danso F, Appiah MA. 2023. Prevalence and associated factors influencing stunting and wasting among children of ages 1 to 5 years in Nkwanta South Municipality, Ghana. Nutrition 110:111996. https://doi.org/10.1016/j.nut.2023.111996

Das JK, Salam RA. 2019. Addressing childhood undernutrition and development through education and lipid-based supplements. Lancet Glob Health 7(9):e1160–e1161. https://doi.org/10.1016/s2214-109x(19)30341-9

Fufa DA, Laloto TD. 2021. Factors associated with undernutrition among children aged between 6–36 months in Semien Bench district, Ethiopia. Heliyon 7(5): e07072. https://doi.org/10.1016/j.heliyon.2021.e07072

Ickes SB, Hossain M, Ritter G, Lazarus M, Reynolds K, Nahar B, Ahmed T, Walson J, Denno DM. 2018. Systematic review of tools and methods to measure appetite in undernourished children in the context of low- and middle-income countries. Adv Nutr 9(6):789–812. https://doi.org/10.1093/advances/nmy042

Khanam SJ, Haque MA. 2021. Prevalence and determinants of malnutrition among primary school going children in the haor areas of Kishoreganj district of Bangladesh. Heliyon 7(9):e08077. https://doi.org/10.1016/j.heliyon.2021.e08077

Kumar P, Zode M, Basu S. 2023. The effectiveness of facility-based management of children with severe acute malnutrition and their determinants in Jharkhand, India: A retrospective study. Dialogues in Health 2:100096. https://doi.org/10.1016/j.dialog.2022.100096

Leroy JL, Frongillo EA, Dewan P, Black MM, Waterland RA. 2020. Can children catch up from the consequences of undernourishment? Evidence from child linear growth, developmental epigenetics, and brain and neurocognitive development. Adv Nutr 11(4):1032–1041. https://doi.org/10.1093/advances/nmaa020

Mauludyani AVR, Fahmida U, Santika O. 2012. Undernutrition prevalence among children under two years old in Indonesia during economic crisis and its related factors. J Gizi Pangan 7(3):169–174. https://doi.org/10.25182/jgp.2012.7.3.169-174

Mohseni M, Aryankhesal A, Kalantari N. 2019. Prevention of malnutrition among children under 5 years old in Iran: A policy analysis. Plos One 14(3): e0213136. https://doi.org/10.1371/journal.pone.0213136

Nisbett N, Gillespie S, Haddad L, Harris J. 2014. Why worry about the politics of childhood undernutrition? World Dev 64:420–433. https://doi.org/10.1016/j.worlddev.2014.06.018

Nisbett N, Wach E, Haddad L, Arifeen SE. 2015. What drives and constrains effective leadership in tackling child undernutrition? Findings from Bangladesh, Ethiopia, India and Kenya. Food Policy 53:33–45. https://doi.org/10.1016/j.foodpol.2015.04.001

Nugusse A, Mitiku H, Raru TB, Abdurke M, Yousuf J, Brewis A, Roba KT. 2022. Correlates of undernutrition of children (Aged 5–14 Years) in Haramaya District, Eastern Ethiopia. Hum Nutr Metab 29:200157. https://doi.org/10.1016/j.hnm.2022.200157

Salleh NW, Hamid SBA, Nor NM, Shuhaimi FA, Zaman MK, Ismail NH. 2021. Diet quality and growth status of children aged two to six years at Tuba Island, Langkawi, Malaysia. J Gizi Pangan 16(3):159–168. https://doi.org/10.25182/jgp.2021.16.3.159-168

Scaglioni S, De Cosmi V, Ciappolino V, Parazzini F, Brambilla P, Agostoni C. 2018. Factors influencing children's eating behaviours. Nutrients 10(6):706. https://doi.org/10.3390/nu10060706

Smith LC, Haddad L. 2015. Reducing child undernutrition: Past drivers and priorities for the post-MDG era. World Dev 68:180–204. https://doi.org/10.1016/j.worlddev.2014.11.014

Teo CH, Chin YS, Lim PY, Masrom SAH, Shariff ZM. 2019. School-based intervention that integrates nutrition education and supportive healthy school food environment among Malaysian primary school children: A study protocol. BMC Public Health 19(1):1–10. https://doi.org/10.1186/s12889-019-7708-y

Więch P, Sałacińska I, Bączek M, Bazaliński D. 2022. The nutritional status of healthy children using bioelectrical impedance and anthropometric measurement. J Pediatr 98(2):161–167. https://doi.org/10.1016/j.jped.2021.05.009

Zhang M, Giloi N, Shen Y, Yu Y, Aza Sherin MY, Lim MC. 2022. Prevalence of malnutrition and associated factors among children aged 6–24 months under poverty alleviation policy in Shanxi Province, China: A cross-sectional study. Ann Med Surg 81:104317. https://doi.org/10.1016/j.amsu.2022.104317