Integrating Nutrition Education in Early Childhood Development (ECD) Curricula: A Pathway to Holistic Child Growth and Learning in Zimbabwe: A Case Study of Kwekwe District.

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ABSTRACT

Kwekwe District in Zimbabwe experiences learning challenges because its children receive insufficient nutrition education training through Early Childhood Development ECD centers. ECD centers conduct most of their educational activities through cognitive and social development programs while nutrition education enters their learning framework on rare occasions. The research investigates ECD programs through its study of nutrition education implementation and the obstacles that hinder its teaching process. The research team used qualitative case study design to collect data through three research methods which included conducting interviews and focus group discussions and observing teachers and parents and health workers. The study finds that structured nutrition education programming improves children's ability to concentrate and their health condition and their academic participation at school. Schools experience implementation difficulties because they neither possess educational materials nor have teachers received essential training and the existing curriculum materials do not fulfill educational requirements and students encounter financial difficulties at home. The study recommends that nutrition education should be formally included in the ECD curriculum, supported by teacher training, resources, and community involvement. The implementation of the above measures will result in better health outcomes for the children and improve educational achievements in Kwekwe District.

Key terms: Nutrition Education, Early Childhood Development (ECD), Early Childhood Development (ECD) Curricula, Holistic Child Growth and Learning

INTRODUCTION

Malnutrition is still one of the public health concerns in Zimbabwe, particularly among young children. It has effects such as impaired cognitive development, stunted growth, and hindered learning outcomes. UNICEF (2022) states that childhood malnutrition causes high stunting, poor immunity, and poor school performance, fuelling poverty and ill health in the long run. Nutrition education has a limited place in the ECD curricula, hence leaving gaps where early intervention could be done. Malnutrition is rampant in Kwekwe District, thus making it a relevant study site to interrogate what it entails to integrate nutrition education in ECD programs, and how it impinges on children's well-being and school readiness. This study follows a socio-ecological model, in which individual, community and systemic factors of health and education are traced over each of the early childhood development concerns and interventions. The aim is to find the most practical ways to implement nutrition education and deal with obstacles around sustainability. It further evaluates successes stories and challenges encountered in such efforts, offering lessons for evolving education policies towards a more holistic early childhood development model.

Background of the study

Nutrition education is an essential part of Early Childhood Development (ECD) curricula throughout the world. In the United States, preschools integrating nutrition education reduce obesity risks and help children choose healthier foods (Gonzalez, Smith, and Patel, 2022). In Sweden, research has pointed out that teachers influence children's food choices positively through a good training program (Johansson, Eriksson, and

Sundqvist, 2021). In low-and-middle-income countries, where malnutrition has become a stark reality, nutrition education becomes more important. Studies in India show that nutrition education with feeding programs can improve nutritional status and cognitive improvement (Sharma, Gupta, and Mehta, 2023). It is suggested that in Ethiopia, long-term training of parent-caregivers can induce dietary changes (Alemu and Mekonnen, 2022). The assumption inferred from the above findings is that there should be collaboration between educators, health workers, as well as families.

Child malnutrition raises grave alarm, particularly that of Zimbabwe. According to UNICEF (2022), the levels of stunting and micronutrient deficiencies for those below five years are horrifyingly high. The Kwekwe District has issues such as teacher training and lack of resources, as well as a gap in policy regarding the nutrition education development area for ECD (Ministry of Health and Child Care, 2023). In accordance with Bronfenbrenner's socio-ecological model, this study will investigate teacher skills, curriculum, and community participation in nutrition education as well as the role of government, NGOs, and health professionals. Some of the barriers like culture and resources that hinder nutrition education in Zimbabwe's ECD programs could be removed through experiential learning, for example, through school gardens, teaching technology, and family involvement (World Health Organization, 2021). Developing partnerships between educators, policy-makers, and the community will greatly enhance the realization of practical nutrition education from early on. The objective of this study will be to identify effective practices and challenges that will assist strategies for the implementation of nutrition education in Zimbabwe.

Problem Statement

Malnutrition hampers the growth and learning of young children. In Kwekwe District, nutrition education in Early Childhood Development (ECD) is underdeveloped and poorly integrated. Health initiatives are disjointed, teachers are untrained and unsupported, communities are disinterested, and these forces are working independently. Under energy and resource constraints, cultural beliefs, and low levels of enforcement for policy, nutrition education needs a concerted thrust into ECD. While this study looks to improving nutrition education approaches in ECD programs in Kwekwe, it considers factors such as teacher training, curriculum, and community engagement.

Research objectives

The objectives of this research study are:

- To examine the current integration of nutrition education into Early Childhood Development (ECD) curricula in Kwekwe District, Zimbabwe.

- To assess the perceived benefits of incorporating nutrition education into the ECD curricula on children's growth and learning outcomes in Kwekwe District.

- To identify the challenges faced by educators in Kwekwe District in effectively delivering nutrition education as part of the ECD curriculum.

- To propose strategies for improving the integration of nutrition education into Early Childhood Development (ECD) curricula in Kwekwe District to promote holistic child development.

Research Questions

1. How is nutrition education currently integrated into Early Childhood Development (ECD) curricula in Kwekwe District, Zimbabwe?

2. What are the perceived benefits of incorporating nutrition education into the ECD curricula for children’s growth and learning outcomes in Kwekwe District?

3. What challenges do educators in Kwekwe District face in effectively delivering nutrition education as part of the ECD curriculum?

4. What strategies can be implemented to improve the integration of nutrition education in Early Childhood Development (ECD) curricula in Kwekwe District to ensure holistic child development?

THEORETICAL FRAMEWORK

Generally, the study on the inclusion of nutrition education in Early Childhood Development (ECD) curricula is based on Vygotsky's Sociocultural Theory, which delivers the conception that learning and development of a child have strong effects from social interaction and cultural context. This indicates that introducing nutrition education into ECD curricula not only educates children about nutrition but also empowers caregivers and the community to practice behaviour that will support the child's healthy growth and learning (1978, Vygotsky; Moyo & Chirwa, 2023). By focusing on the social and cultural environments that mold the education of children, it constitutes an argument for community involvement in the promotion of healthy nutrition habits.

Review of the Literature

Integration of Nutrition Education into Early Childhood Development (ECD) Curricula

The studies show that Early Childhood Development is the most important time period when children develop their physical skills along with their mental abilities and emotional development. The research demonstrates different approaches to nutrition education implementation between various countries throughout the world. Developed countries provide well-organized nutrition education which links educational results to their programs while African nations face challenges because their nutrition education remains inadequate and informal while their students require more literacy and numeracy instruction. Research from developed countries shows that nutrition education is not treated as an extra activity but as part of the main ECD curriculum. The United States Head Start program regards nutrition as essential for developing children's cognitive abilities and preparing them for school (Moore, 2019). European studies show that children develop better learning skills through school gardening and simple cooking activities which help them build healthy habits from an early age (Mikkelsen et al., 2020). Schools achieve their goals by creating teacher training programs which help teachers develop expertise to follow their established curriculum standards.

African scholarship shows serious research shortcomings according to its findings. Area research found that subSaharan Africa has high rates of malnutrition and stunting while its programs for nutrition education fail to effectively design their programs and their programs lack sufficient funding (Akpan, 2018). The researchers found that academic subjects remain more important than nutrition in areas which exhibit the highest need for nutritional support (Kirkpatrick et al., 2019). The Kenyan early childhood development program teaches nutrition, but teachers who lack proper training and guidance cannot deliver effective educational content (Guloba, 2021).The classification mentioned does not meet the real needs of the students, as they pay more attention to different aspects.

The Zimbabwean research shows identical trends. Local research discovered that nutrition education delivery in ECD centres varies between informal methods about health education and formalized educational programs (Chisango, 2021). The national data shows that child malnutrition remains a major concern which affects many children in Zimbabwe particularly in rural areas where stunting occurs (Zimbabwe National Nutrition Survey, 2022). The studies document the problem but they focus less on how teachers receive training and how cultural practices impact nutrition teaching and resource availability impacts ECD classroom instruction.

The study identifies a research gap which exists between Zimbabwean literature and African research. The research investigates how nutrition education exists in ECD centres throughout Kwekwe while previous studies only documented the malnutrition problem. The study examines three factors which include teacher readiness, cultural impacts and resource access which researchers have studied only briefly in the local area. The study creates new local knowledge about ECD nutrition education by connecting international best practices with actual Zimbabwean ECD conditions.

Nutrition Education Benefits for Children Growth and Learning Outcomes

The public regards early childhood nutrition education as essential because it helps children maintain good

health and develop cognitive abilities and prepare for school. Research from developed nations demonstrates obvious advantages, although the studies indicate that different groups experience these benefits in an unequal

manner. The research demonstrates that nutrition education leads to better dietary habits and academic progress for children who participate in the U.S. Head Start Program (Moore, 2019). The research from Sweden and Finland demonstrates that early nutrition education leads to improved cognitive abilities and reduced rates of childhood obesity (Mikkelsen et al., 2021). The research shows that children from poor and marginalised communities in these countries continue to suffer from difficulties because they lack proper teacher training and access to nutritious foods (Kirkpatrick & Tarasuk, 2020). The research shows that effective programs require complete social and economic equality to achieve their desired outcomes.

The research from Africa demonstrates that nutrition education has the potential to enhance child health outcomes but shows significant obstacles that prevent successful execution of the program. The research in Kenya demonstrates that nutrition education provides advantages to children but the benefits decrease because teachers lack proper training and students do not have sufficient learning materials (Ochieng et al., 2020). Research from Uganda shows that child nutrition outcomes have improved at a slow pace because school-based programs do not receive enough funding and the existing infrastructure remains inadequate (Wamani et al., 2017). The research shows that nutrition education has value in Africa but African countries need to develop better systems to support education professionals and educational institutions.

The research from Zimbabwe shows the same patterns. The research demonstrates that organized nutrition education programs enable children to achieve better health outcomes and develop healthier eating patterns (Muzondo et al., 2018). The existing advantages face limitations because of three main obstacles which consist of a shortage of qualified teachers, inefficient school nutrition programs and insufficient governmental backing. The Kwekwe District research study demonstrates that malnutrition and stunting rates continue to be high while ECD centers provide inadequate and insufficiently equipped nutrition education (Nyakudya, 2022).

The existing studies describe the challenges that ECD classrooms face regarding nutrition education yet they fail to show how educators establish their teaching methods for this subject matter. The research study fills the existing gap in academic literature. The research study examines the implementation of nutrition education at ECD centers in Kwekwe instead of focusing on previous research which only documented malnutrition occurrences. The study investigates whether current educational methods fulfill curriculum objectives while identifying areas where teachers require additional training and resources and institutional assistance needs better development. The research study investigates how nutrition education impacts children's health and educational achievements at the ECD level.

Challenges Faced by Educators in Delivering Nutrition Education

The research results show that teachers in every global region provide essential instruction to young children about nutrition. The research shows that instructors encounter multiple obstacles which stop them from providing instruction that achieves success rates. Canadian and American teachers consider nutrition education to be crucial information but they require improved resources which will help them fulfill this educational need (Moore et al., 2021). The existing research demonstrates that nutrition education faces scheduling conflicts with other academic subjects while teachers lack access to specific guidelines that define how they should implement educational programs (Kirkpatrick & Tarasuk, 2020). The research shows that nutrition education has become recognition as essential knowledge yet this acceptance of value does not create sufficient requirements which educational institutions need to establish effective teacher development programs for their ECD teachers.

The African research shows similar results as other studies but African countries experience more severe obstacles. The research conducted in Kenya shows that school-based nutrition programs lead to better dietary outcomes for students but the insufficient development of teaching professionals reduces program effectiveness Ochieng et al. (2020). The teaching staff in South Africa uses outdated educational resources which they supplement with minimal support from their educational institutions to conduct proper nutrition education Mashau and Nyawo (2022). The research conducted in Uganda shows that teachers lack access to both teaching materials and professional development training which creates obstacles for them to deliver effective nutrition education Wamani et al. (2017). Studies show that African nations have a common problem which enables them to create nutrition programs but their teachers do not receive continuous professional development training.

The situation is more severe in rural Zimbabwe. The local studies demonstrate that a significant number of early childhood development teachers lack official nutrition training and rely on non-specialized knowledge Muzondo et al. (2018). Kwekwe teachers demonstrate their support for nutrition education yet they must teach in classrooms that exceed safe capacity limits while their school receives minimal funding and lacks essential educational resources Nyakudya (2022). The absence of a structured nutritional educational program prevents teachers from delivering standardized and impactful nutrition training. The study addresses a research deficiency which exists in the current academic literature. The research assesses teaching difficulties yet fails to demonstrate their impact on nutritional instruction within rural ECD centers in Kwekwe District.

The study investigates the three types of barriers which ECD teachers in Kwekwe District experience with their institutional work and physical learning environment and teaching practices. The research study requires educational institutions to enhance their teacher training programs together with their curriculum development processes. The research results provide stakeholders and policymakers with essential insights about improving nutrition education programs at early childhood education facilities throughout Zimbabwe.

Strategies for Improving the Integration of Nutrition Education into ECD Curricula

The research shows that nutrition education programs face multiple execution problems in different global locations because these programs serve essential functions for early childhood development. The research shows that when Finland and Sweden implement early nutrition education through well-structured programs, their children experience improved health outcomes and academic performance (Mikkelsen et al., 2021). The researchers found that students from low-income families in developed nations do not access essential nutrition programs because they face two obstacles which are insufficient healthy food options and absence of comprehensive nutritional information (Kirkpatrick & Tarasuk, 2020). Different communities provide varying standards of nutritional education because they lack a common inclusive curriculum which leads children to receive different nutritional knowledge based on their area of residence.

The African continent shows increasing interest in implementing nutrition education into early childhood development ECD programs yet significant obstacles continue to exist. The research conducted in Kenya shows that preschool programs which include nutrition education lead to better health outcomes and increased classroom engagement among children. The research found that preschool nutrition education programs in Kenya resulted in improved health outcomes and higher classroom attendance rates among students. The research in Uganda shows that school nutrition programs provide benefits to students but funding shortfalls and weaknesses in curriculum development jeopardize their ability to maintain operational sustainability (Wamani et al., 2017). The research findings demonstrate that African nutrition programs rely mostly on donor support which creates dependency since local African countries possess insufficient governmental backing to establish enduring policies.

The situation in Zimbabwe has developed into a more serious crisis which matches the difficulties that other nations encounter. The research proves that organized nutrition education programs help children in local communities to make better food choices while also achieving better health results (Muzondo et al., 2018). The current evidence demonstrates that nutrition education programs at early childhood development centers face two major obstacles which include insufficient teacher training and poor feeding program resources together with inadequate government framework support. The Kwekwe District faces a major problem because its high malnutrition rates and inconsistent teaching methods contribute to the worsening academic situation (Nyakudya, 2022). The existing research studies present the issues which educational institutions encounter yet they fail to demonstrate the actual execution process of nutrition education programs in early childhood development classrooms.

The research study aims to fill this existing gap present in current academic publications. The project will create evidence-based strategies which will improve Kwekwe District ECD centers nutritional educational programs. The study investigates three components which include policy backing and teacher education, along with family and community participation. The study intends to provide educational policymakers and stakeholders with immediate solutions and regional recommendations which will help them develop effective nutritional education programs for early childhood development in Zimbabwe.

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METHODOLOGY

The researchers selected an interpretivist method to conduct their study because they believe that people create their understanding of reality through their daily life experiences and their assigned meanings. The researchers found that ECD teachers and parents and curriculum developers needed to explain their own experiences and views to establish their understanding of nutrition education in the research (Creswell & Poth 2018). The research demonstrates this approach works because it reveals the cultural and social environments that determine ECD centres' understanding and implementation of nutrition education (Denzin & Lincoln 2019). The researchers selected a qualitative study method to enable them to understand nutrition education in school environments at a deep level. The method enables researchers to gather comprehensive and intricate information which cannot be adequately measured through numerical data (Merriam & Tisdell 2021). The researchers conducted a case study which examined specific ECD centres located in the Kwekwe District of Zimbabwe. The design enabled the researcher to conduct detailed observations about how actual nutrition education programs operate. The researchers collected data from three distinct groups of participants comprising of teachers and parents and curriculum developers who provided data to establish multiple perspectives which would enhance the research validity of findings through triangulation (Yin 2020). The study focused on ECD teachers and parents and curriculum developers as participants who represented both urban and rural areas of Kwekwe District. The researchers selected 30 teachers and 40 parents and 8 curriculum developers from the population to participate because all participants possessed essential knowledge about nutrition education and brought distinct life experiences (Patton 2020). The researchers collected data through semi-structured interviews which they conducted with teachers and curriculum developers to investigate curriculum matters and obstacles and through focus group discussions which they held with parents to find out about their home support functions (Kvale & Brinkmann 2019). The interview duration ranged from 45 minutes to 60 minutes. The participants provided their informed consent before the researchers recorded their interviews which were later transcribed. The researchers followed all requirements for ethical research conduct. The requirements included obtaining informed consent from participants and using anonymisation to protect participant identities and researchers needed to obtain permission from all relevant authorities to conduct research while respecting cultural values (Bryman 2021). The research team established trustworthiness through multiple data sources and detailed research context explanation and comprehensive record maintenance of all research activities which decreased potential bias (Shenton 2004). The research team executed data collection over a six-week period during which they visited selected times and locations to obtain data from participants who enabled the researcher to see both their spoken answers and their body language. The researchers used Braun and Clarke (2021) thematic analysis method to analyze the collected data. The researcher read all transcripts multiple times to develop a comprehensive understanding of the data contents. The researchers created initial codes by manually extracting recurring themes from the collected responses. The researchers developed themes after grouping all codes to establish their relationship with specific participant perspectives. The researchers confirmed the final themes connected with study objectives and theoretical framework elements to maintain study consistency and meaningfulness. The researchers used straightforward descriptions to present their findings which included direct participant quotations and relevant literature to enhance both transparency and methodological rigor.

RESEARCH FINDINGS AND DISCUSSION

Table 1: Demographics of Participants

Category	**Frequency**	**Percentage**
Gender		
Male	12	40%
Female	18	60%
Age Distribution		

21-30 years	6	20%
31-40 years	15	50%
41-50 years	6	20%
51+ years	3	10%
Professional Qualifications		
Certificate/Diploma	9	30%
Bachelor's Degree	18	60%
Master's Degree	3	10%
Teaching Experience		
0-5 years	9	30%
6-10 years	12	40%
11-15 years	6	20%
16+ years	3	10%

The study sample comprised 40% males (12 participants) and 60% females (18 participants). This higher representation of females correlates global trends in Early Childhood Development (ECD): an area where teaching is overwhelmingly dominated by women, according to UNESCO (2022). This gender distribution may have also influenced responses because female teachers are most involved in child nutrition, caregiving, and meal programs (Ertan & Balcı, 2023). They would seem to have a better understanding of the challenges and benefits of nutrition instruction in ECD curricula.

In terms of the level of age, half of the respondents fell within the age bracket of 31 to 40 years, while the other six equal age groups, 21-30 and 41-50 years, profile the same (20%) representation. Only 10% made up the 51 and above age cohort. Mid-career teachers decorate a fair mix of theoretical knowledge and practical experience. Young teachers from the ages of 21 to 30 are likely to offer innovative avenues into pedagogy and approaches to learning as compared to their older counterparts whose ages range beyond 41, well-set in time into examining nutrition challenges in ECD(Shaikh & Reddy, 2023).

The majority possessed Bachelors (60%), while 30% possessed the Certificates/Diplomas, with 10% being Master graduates. Such a case can therefore stand as an excellent entry-ground for enforcement and advocacy on nutrition education in ECD. Conversely, a smaller postgraduate population indicates that there're few whose research and knowledge on policy relative to child nutrition and holistic learning are advanced (Murray et al., 2022).

Teaching experience had 40% in 6-10 years of experience; 30% in 0-5 years: 20% in 11-15 years; while 10% of participants have 16 years and above. The presence of mid-career teachers indicates enough classroom experience to deliver practical insights on the integration of nutrition education. Less-experienced teachers may have bright ideas on how to introduce innovativeness in teaching, whereas highly experienced teachers possess institutional knowledge coupled with long-term perspectives (Li et al., 2022).

The demographic profile presents the specific factors there which affect the integration of nutrition education in ECD. The predominance of females emphasizes the caregiving approach and will thus embed nutrition education into everyday practices. The high number of degree holders suggests that teachers are academically prepared to integrate nutrition concepts. However, the small number of postgraduates drives the need for further training. Research indicates that nutrition education led by teachers has a positive effect on the eating

behaviors and knowledge of children (Gómez-Pinilla, 2023). It would, therefore, be necessary to improve the training of teachers with regard to nutrition topics as a measure towards building healthy eating habits among young learners.

Integration of Nutrition Education into Early Childhood Development (ECD) Curricula

The research results demonstrate that Kwekwe District considers nutrition education to be essential yet the implementation of its teaching remains inconsistent and deficient. Teachers and curriculum developers together with parents provide evidence that nutrition education is essential for students to achieve proper health and educational progress. Previous research established that proper nutrition leads to better attention span and academic performance and readiness for school in children (Moore, 2019; Mikkelsen et al., 2021). All ECD teachers agreed that nutrition education should be part of the curriculum. The teachers proceeded to describe how students who arrive at school without sufficient food face difficulties in maintaining their concentration during their studies. A teacher reported that students lose their ability to concentrate when they experience hunger. The research supports developmental theories which establish that physical health directly affects cognitive development (Piaget, 1952; Vygotsky, 1978). Teachers mentioned that nutrition education exists in the curriculum as an undefined subject which requires them to create their own teaching methods. The situation showcases an African challenge because educational systems do not officially integrate nutrition education, which results in ineffective program execution (Ochieng et al., 2020; Kirkpatrick & Tarasuk, 2020). The curriculum development team verified that nutrition education exists in the educational program but through indirect channels which lead to health and life skills instruction. The developer expressed that nutrition should not be considered an independent academic discipline. Curriculum theory establishes that the present educational system diminishes the value of nutrition which results in teachers facing difficulties when they need to teach this subject. The research demonstrates that educational institutions which lack specific nutrition definitions in their curriculum framework get to treat nutrition as an optional subject which leads to its frequent disregard (Mashau & Nyawo, 2022; Yin, 2020). The parents displayed different degrees of knowledge about the situation and their involvement in the process. The majority of participants recognized the significance of proper nutrition yet financial difficulties prevented them from supplying their family with nutritious food. The parent explained that they know which foods are healthy but their financial situation prevents them from buying them. The research supports ecological theory which establishes that children grow through interactions with both their educational institutions and domestic spaces (Bronfenbrenner, 1979). The previous research indicates that child health outcomes improve with nutrition education only when combined with essential supporting structures like school feeding programs and community based programs (Wamani et al., 2017; Nyakudya, 2022).

Importance of Nutrition Education on the Growth and Learning Outcomes of Children

The research results demonstrate that all stakeholders in Kwekwe District recognize and appreciate how nutrition education benefits early childhood development. All three groups teachers, curriculum developers and parents believe that nutrition education helps children reach their full potential. The findings match existing research which demonstrates that nutrition boosts children's health and attention as well as their academic performance in school (Moore, 2019; Mikkelsen et al., 2021). The ECD teachers reported that nutrition education enables students to achieve better health outcomes while increasing their classroom participation and learning abilities. A teacher explained that students who eat nutritious meals show better focus which supports the developmental theory that links physical health to cognitive development (Piaget, 1952).A teacher explained that good nutrition helps students remember and concentrate better which matches recent research findings that linked early nutrition to improved cognitive functioning (Gibson et al., 2020; Mikkelsen et al., 2021). A few teachers also noted that teaching children about balanced meals encourages them to make healthier choices and even influence their parents. The social learning theory explains how children learn through their family observational experiences as they share their acquired knowledge with family members (Bandura, 1977). One teacher explained that children remind their parents about healthy food after learning about it at school.

Curriculum developers acknowledged the need for nutrition education yet they pointed out that curriculum materials do not provide sufficient support for this subject. The developer explained that research demonstrates that malnourished children face developmental obstacles while nutrition education enables them to enhance

their academic performance. Another developer explained that teaching becomes impossible because hunger reduces students' ability to maintain discipline and concentrate. According to Maslow's hierarchy of needs children need to fulfill their essential requirements such as food before they can effectively learn (Maslow, 1943).The African studies demonstrate that students can only achieve learning success through nutrition education when established educational systems provide them with adequate support (Ochieng et al., 2020; Wamani et al., 2017).

Parents believed that nutrition has a direct impact on the amount of energy their children display during school activities. The majority of parents observed that children who consume breakfast together with balanced meals demonstrate higher levels of activity and happiness, while those who skip meals experience decreased energy and concentration. The ecological theory describes how children develop because their development experiences end educational environments of both school and home (Bronfenbrenner, 1979). The Zimbabwean study results indicate that families without available resources and support prevent successful implementation of nutrition education within their households (Nyakudya, 2022; Muzondo et al., 2018).

Challenges Faced by Educators in Delivering Nutrition Education

The research indicates that Kwekwe District teachers encounter multiple difficulties which obstruct their efforts to provide nutrition education instruction at ECD centres. The existing problems stem from insufficient resources plus excessive work demands and inadequately developed educational materials and poverty conditions. The findings support previous research which demonstrated that rural areas lack proper support systems which impede successful nutrition education delivery (Bain et al., 2020; Akpan, 2019).

The teachers reported they require additional educational materials which include charts and books and child friendly guides to deliver proper nutrition education. The teacher explained their primary teaching method involves speaking which does not always succeed in helping students comprehend the material. This supports earlier research that highlights the need for practical teaching aids in nutrition education (Lemke et al., 2021). Teachers stated that instructors should teach students through practical exercises which include school gardening activities but budget restrictions stop these initiatives from running. The research demonstrates that African countries experience practical nutrition education challenges which arise from both insufficient funding and inadequate infrastructure (Hawkes et al., 2021; Ochieng et al., 2020). One teacher noted that a school garden would help children learn by doing.

Teachers explained they face difficulties implementing nutrition education because their existing nutrition education requirements already occupy their complete curriculum schedule. The curriculum overload theory states that teachers choose to deliver content which appears essential for assessment instead of teaching all material (Apple, 2019). Nutritional education receives insufficient attention when it does not rank among critical educational topics according to research from multiple studies (Kirkpatrick & Tarasuk, 2020; Mashau & Nyawo, 2022). One teacher explained that the syllabus is packed, so they have little time for nutrition lessons.

Nutrition education falls under life skills according to curriculum developers who explain that it constitutes only one element of this broader field. The excessive workload creates difficulties for teachers who need to handle their existing teaching responsibilities while developing nutrition lessons. Curriculum theory suggests that when a topic lacks clear definition in the curriculum teachers will not deliver effective instruction (Taba, 2020). The research shows that nutritional instruction exists in several countries yet educators choose to teach it with varying levels of emphasis which creates inconsistency (Mikkelsen et al., 2021; Wamani et al., 2017). The developer reported that the majority of ECD teachers lack proper nutrition science training which results in diminished teaching abilities and confidence to deliver nutrition instruction. The research demonstrates that nutrition education delivery requires teacher training programs to achieve effective results (Hawkes et al., 2021; Ruel et al., 2022).

The parents assessed that poverty acts as the primary obstacle which prevents them from obtaining educational resources. The parents believed their nutrition education support existed but their financial situation restricted their ability to purchase healthy meals. The ecological theory states that children develop abilities which depend on various environmental aspects which exist beyond the immediate surroundings (Bronfenbrenner,

1979). Parents explained that cultural traditions restrict their ability to provide certain foods to their children which includes eggs and particular protein sources. Research shows that cultural norms affect parents' child-feeding practices which leads to nutritional deficiencies in children (Pelto et al., 2020; Mwaniki et al., 2022). The parent explained that families prevent their members from accessing nutritious food because they believe traditional customs dictate their dietary choices.

Strategies for Improving the Integration of Nutrition Education into ECD Curricula

The study analyzed how nutrition education should be incorporated into the Early Childhood Development curriculum for Kwekwe District in Zimbabwe. The three groups of teachers and curriculum developers and parents formed a unified agreement which established that nutrition education should be included in school programs. The researchers discovered that current educational systems together with their methods used in schools create barriers which stop successful nutrition teaching from happening. The research findings validate previous research that states nutrition education requires structured implementation with training support and practical application to achieve maximum effectiveness (Ruel et al., 2022; Hawkes et al., 2021).

Teachers believed that nutrition education should be integrated into the curriculum but they claimed that the existing framework does not provide a clear definition. The teacher reported that the curriculum does not include nutrition content which results in teachers teaching it only when they choose to do so. The implementation theory of curriculum shows that teachers will not teach topics which remain undefined according to Taba 2020. The teachers declared that they need to improve their understanding of nutrition instruction methods. The research evidences that inadequate teacher training presents a significant challenge for delivering effective nutrition education (Ruel et al., 2022; McLean et al., 2021). The teacher explained that teachers who lack knowledge about nutrition teaching methods create lower teaching standards.

The ECD guidelines established by curriculum developers include nutrition education requirements yet the actual implementation of those guidelines in schools falls short of meeting those standards. The developers reported that various schools in the region demonstrate different levels of project implementation success because their available resources determine their project outcomes. African countries maintain nutrition education as a documented policy but they struggle to implement those policies which resembles the situation that exists in this area (Ochieng et al., 2020; Wamani et al., 2017). The developers proposed that creating a specialized nutrition module would enhance educational outcomes through practical activities that include gardening and cooking. International research results indicate that children develop better long-term habits through practical nutrition education which also enhances their understanding of nutrition (Mikkelsen et al., 2021; Tandon et al., 2022).

Parents at ECD centers showed strong support for better nutrition education. The parents wanted their children to understand healthy food choices but they needed extra knowledge and support about this matter. The ecological theory demonstrates how children learn from both their school environment and their home environment according to Bronfenbrenner 1979. Parents requested schools to provide them with workshops or training which would assist them in delivering nutritional support to their children at home. Research studies show that parental involvement amplifies the effectiveness of nutrition education according to Gibson et al. 2020 and Pelto et al. 2020.

DISCUSSION OF FINDINGS

Integration of Nutrition Education into Early Childhood Development (ECD) Curricula

The study results show that all stakeholders in the research, which includes teachers and curriculum developers

and parents, believe that nutrition education is essential for students' health and educational progress. Students who do not eat breakfast or lunch at school face challenges which reduce their ability to focus and participate in class activities. The evidence establishes that various environmental factors which include home and school environments and access to community resources shape children's learning abilities (Bronfenbrenner, 1979). Students who face food shortages at home start their school day with educational disadvantages which impede their academic performance. Educational institutions teach nutrition alongside life skills through their educational programs instead of offering it as a separate academic subject. Sociocultural factors determine nutrition curriculum identity because nutritional content remains undefined in educational materials who develop educational programs need to establish clear dietary guidelines which should be followed by all academic staff members. The study found that undefined nutrition curriculum content leads to different nutrition teaching practices which depend on the individual teaching methods of each educator (Ochieng et al.,

2020; Kirkpatrick & Tarasuk, 2020). The developers of the curriculum content stated that health-related subjects already exist in the curriculum but1 their nutrition-related content receives insufficient emphasis. The policy documents consider nutrition to be an essential matter but they do not provide effective implementation guidelines or operational directives. Parents understood nutrition education value yet they explained that their family income status makes it impossible for them to prepare nutritious meals3. The socio-ecological framework shows how economic conditions impact both student health outcomes and their educational performance. Children acquire their eating patterns through cultural traditions and family customs which requires nutrition education to involve family and community members for its effective execution (Pelto et al., 2020; Mwaniki et al., 2022). The research demonstrates that organized nutrition education during early childhood leads to improved health outcomes and academic achievements which continue into adulthood (Hendricks et al., 2023). The research discovered three essential modifications which required educational curriculum enhancements and teacher professional development programs and collaborative initiatives between schools and medical centers and community health organizations. The study results demonstrate that school nutrition programs need inter-ministerial coordination because this approach has proven successful in other countries (Ruel et al., 2022; Tandon et al., 2022).

Benefits of Nutrition Education on Children's Growth and Learning Outcomes

The research findings show that every participant recognized the vital role of nutrition education in promoting children's health and their development of cognitive skills and academic performance. Teachers reported that students who eat proper meals show better participation in class and they retain information more effectively. The socio-ecological framework shows how children learn because their educational journey depends on various environmental factors which include their home and family backgrounds. Research shows that malnourished children suffer from cognitive and learning disabilities which prevent them from being ready for school (Black et al., 2022; Grantham-McGregor et al., 2023). Curriculum developers discovered that nutrition impacts learning according to one developer who said students who eat properly demonstrate better behavior and active participation in school. Parents observed their children who ate balanced meals experienced better energy and concentration levels. Parents frequently state that their financial situation prevents them from providing their children with proper nutrition. The socio-ecological perspective demonstrates that family poverty creates barriers which prevent children from achieving educational success and maintaining their health. The sociocultural perspective shows that family beliefs and local practices determine children's dietary choices which makes it essential for nutrition education to work together with parents and community members (Mchiza et al., 2022; Pelto et al., 2020). The research findings show that school nutrition programs function as successful solutions which reduce the harmful effects of poverty on children's dietary habits (WHO, 2023; Bundy et al., 2024). The research recommends that ECD teachers should receive structured nutrition education and nutrition education should become a formal curriculum requirement while school feeding programs should expand to guarantee all students access to nutritious meals. The national and global education policies aim to ensure that all children receive equal access to nutrition education which needs to be implemented for all students.

Challenges Faced by Educators in Delivering Nutrition Education

People in Kwekwe District acknowledge the significance of nutrition education, but teachers encounter multiple challenges while delivering this content. The educators reported that their teaching resources are insufficient because they lack proper child-friendly charts and books which leads to decreased lesson engagement and student comprehension difficulties. The educators disclosed that the existing syllabus already contains multiple subjects, which creates insufficient time for teaching nutrition effectively. The developers of the curriculum identified nutrition as a missing component from the ECD curriculum which exists within broader topics that teachers must teach yet they face challenges in delivering this content to students. Teachers encounter difficulties because they lack access to special training programs which results in their teaching methods being based on their personal knowledge. Parents identified poverty as the primary obstacle because they understand which foods are healthy yet they lack the financial means to purchase them. Parents reported that traditional beliefs prevent them from providing certain nutritious foods to their young children. The research shows which elements of educational resources and academic program development together with home environment conditions affect student nutritional intake and their academic performance according to the socio-ecological model. The sociocultural framework explains how cultural beliefs and community traditions

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determine both the dietary habits of children and the methods used to teach them proper nutrition (Pelto et al., 2020; Agyemang et al., 2023).The results show that poverty and insufficient resources result in poor child nutrition according to recent studies (UNICEF, 2023; World Bank, 2024). The government and education stakeholders need to establish distinct nutrition modules for the ECD curriculum while supplying teaching resources and conducting nutrition training for teachers and establishing school garden and feeding programs which will support student learning and nutrition needs (WHO, 2023; Bundy et al., 2024).

Strategies for Improving the Integration of Nutrition Education into ECD Curricula

The study outcomes generated multiple suggestions which teachers can apply to improve nutritional teaching methods used in early childhood development programs. Teachers believed that nutrition education should receive equal importance through its inclusion in the official curriculum like other subjects. The curriculum developers proposed specific policy modifications which would mandate dedicated nutrition instructional periods together with training sessions that teachers could attend to acquire necessary teaching skills. The proposed solutions follow international standards which demonstrate that structured nutritional education programs effectively enhance children's dietary choices through their international recognition (UNICEF, 2023; FAO, 2024). Parents emphasized the importance of school feeding programs because these programs deliver nutritional education and assist families who need help accessing healthy food. The participants requested community workshops which would enable parents to discover economical methods for creating nutritious meals. The socio-ecological framework supports these suggestions because it shows that children's nutritional status becomes influenced by various social domains which include family connections and educational institutions and public environments (Bronfenbrenner, 1979; Sallis et al., 2023). The sociocultural framework establishes its validity because cultural beliefs and local practices determine what children eat, requiring families and communities to take part in nutrition education (Pelto et al., 2020; Agyemang et al., 2023). The research shows that multi-stakeholder methods which engage schools together with health experts and community members lead to successful reductions in child malnutrition rates (Gelli et al., 2023; World Bank, 2024). The implementation of these enhancements requires collaboration between government ministries and teachers and health professionals and community members to ensure that all children receive high-quality nutritional education and assistance.

CONCLUSION

Socioeconomic factors, combined with teacher attitudes and policy gaps, emerged from data analysis as critical contributing issues identified by various factors in the root cause analysis of the problem. Indirectly, financial shortage, inadequate resources, and poorly motivated teachers negatively affect effective intervention programs. While government policies and school systems exist, they are undermined by lack of funds, poor teacher training, and non-involvement of the community. The most important roles played by all, such as lawyers, administrators, politicians, and NGOs, are advocating policies, supplying, and creating awareness. These findings are consistent with existing literature and indicate a need for targeted action to address these problems, including adequate funding, proper teacher training, and collaboration at the level of school and community.

RECOMMENDATIONS

The study confirmed that ECD centers in Kwekwe District face multiple obstacles which prevent them from providing effective nutrition education because they lack teacher training resources and their policy execution falls short and their families face financial hardships. The research evidence functions as the foundation for our recommendations which will directly solve the identified problems. The study discovered that teachers needed to receive proper training because they did not have enough confidence to teach nutrition education. ECD teachers and caregivers and all other stakeholders must receive continual training through capacity-building programs. The programs should teach teachers about nutrition through teaching techniques and hands-on experience so they can create structured and effective nutrition education programs. Training will enable teachers to manage their limited resources which will lead to better educational results for students because the results show that well-nourished students maintain better concentration and achieve higher academic performance. The research identified that the current ECD curriculum fails to teach nutrition education because it lacks proper identification. Policymakers must establish clear requirements to deliver strict policy

enforcement which demands that nutrition education should become a fundamental element of all educational programs. Schools need to strengthen their enforcement systems which should include ongoing monitoring to guarantee their compliance with established regulations. The study determined that nutrition education delivery across different centers depends on whether teachers organize their teaching plans or not. The findings show that economic problems and cultural beliefs create obstacles for parents and communities which result in negative effects on child nutrition. The study recommends that communities should establish stronger partnerships. The community should become partners in community development through regular workshops which will include parents and local leaders and community groups. The solution will guide families toward following budget-friendly methods which promote healthy eating and create cross-cultural bridges that lead to better access of nutritious food. The study established that the absence of teaching resources, school feeding program food, and essential learning instruments such as school gardens creates obstacles for nutrition education. The government together with relevant organizations needs to allocate more resources for better educational outcomes. ECD centers require sustainable funding solutions which should be identified and allocated to provide essential materials for feeding programs and school gardens which support hands-on learning. The study determined that parents who worked long hours or lived far from schools had limited access to nutrition information and communication channels. ICT tools together with digital platforms should support nutrition education through their implementation. Schools and homes can improve nutrition awareness through mobile messages and educational videos and online training resources.

REFERENCES

1. Agyemang, C., Boateng, D., & Meeks, K. (2023). Cultural beliefs, food practices, and child nutrition in sub-Saharan Africa. Public Health Nutrition, 26(4), 987–995. https://doi.org/10.1017/S136898002300021X
2. Akpan, G. E. (2018). Nutrition education and early childhood development in sub-Saharan Africa. African Journal of Educational Studies, 12(2), 45–58.
3. Akpan, G. E. (2019). Educational inequality and child nutrition in rural communities. Journal of African Development Studies, 14(1), 66–79.
4. Alemu, Z., & Mekonnen, A. (2022). Caregiver nutrition training and dietary change in Ethiopia. BMC Public Health, 22, Article 1145. https://doi.org/10.1186/s12889-022-13456-7
5. Apple, M. W. (2019). Ideology and curriculum (4th ed.). Routledge.
6. Bain, L. E., Awah, P. K., & Geraldine, N. (2020). Barriers to nutrition education in low-income settings. Nutrition Reviews, 78(5), 401–410.
7. Bandura, A. (1977). Social learning theory. Prentice Hall.
8. Black, M. M., Pérez-Escamilla, R., & Rao, S. F. (2022). Integrating nutrition and early childhood development interventions. The Lancet Child & Adolescent Health, 6(7), 464–476. https://doi.org/10.1016/S2352-4642(22)00121-4
9. Bronfenbrenner, U. (1979). The ecology of human development. Harvard University Press.
10. Bryman, A. (2021). Social research methods (6th ed.). Oxford University Press.
11. Bundy, D. A. P., de Silva, N., & Horton, S. (2024). School feeding and child development outcomes. World Bank Research Observer, 39(1), 1–19.
12. Chisango, T. (2021). Health education practices in Zimbabwean ECD centres. Zimbabwe Journal of Educational Research, 33(2), 89–102.
13. Creswell, J. W., & Poth, C. N. (2018). Qualitative inquiry and research design (4th ed.). Sage.
14. Denzin, N. K., & Lincoln, Y. S. (2019). The Sage handbook of qualitative research (5th ed.). Sage.
15. Ertan, M., & Balcı, F. (2023). Gendered roles in early childhood education and care. Early Childhood Education Journal, 51(3), 421–430.
16. FAO. (2022). The state of food security and nutrition in the world. Food and Agriculture Organization of the United Nations.
17. FAO. (2024). School-based nutrition education programmes: Global review. Food and Agriculture Organization of the United Nations.
18. Gelli, A., Neeser, K., & Drake, L. (2023). Multi-sectoral approaches to child nutrition. Food Policy, 113, Article 102364. https://doi.org/10.1016/j.foodpol.2022.102364
19. Gibson, E. L., Kreichauf, S., & Wildgruber, A. (2020). A narrative review of nutrition education in early childhood. Appetite, 149, Article 104634.

20. Gómez-Pinilla, F. (2023). Nutrition, brain development, and learning. Nature Reviews Neuroscience, 24(6), 371–383.
21. Gonzalez, R., Smith, J., & Patel, K. (2022). Preschool nutrition education and obesity prevention. Journal of School Health, 92(4), 310–318.
22. Grantham-McGregor, S., Cheung, Y. B., & Cueto, S. (2023). Nutrition and child development in lowincome countries. The Lancet, 401(10378), 1224–1236.
23. Guloba, M. (2021). Teacher preparedness and nutrition education in Kenya. African Journal of Early Childhood Education, 5(1), 23–37.
24. Hawkes, C., Ruel, M. T., & Salm, L. (2021). Double-duty actions for nutrition and education. The Lancet, 397(10282), 1941–1953.
25. Hendricks, K., Briefel, R., & Novak, T. (2023). Early nutrition education and long-term health outcomes. Journal of Nutrition Education and Behavior, 55(2), 112–120.
26. Johansson, L., Eriksson, M., & Sundqvist, J. (2021). Teacher influence on children's food choices in Sweden. Public Health Nutrition, 24(8), 2134–2142.
27. Kirkpatrick, S. I., & Tarasuk, V. (2020). Food insecurity and educational outcomes. Canadian Journal of Public Health, 111(2), 251–258.
28. Kvale, S., & Brinkmann, S. (2019). Inter Views (3rd ed.). Sage.
29. Lemke, M., Mohr, S., & Johnson, K. (2021). Teaching aids in early childhood nutrition education. Early Years, 41(4), 394–408.
30. Mashau, T. S., & Nyawo, J. C. (2022). Challenges of nutrition education in South African schools. South African Journal of Education, 42(1), 1–10.
31. Maslow, A. H. (1943). A theory of human motivation. Psychological Review, 50(4), 370–396.
32. Merriam, S. B., & Tisdell, E. J. (2021). Qualitative research (4th ed.). Jossey-Bass.
33. Mikkelsen, B. E., Rasmussen, V. B., & Young, I. (2020). School gardens and food education. Health Education, 120(2), 131–145.
34. Mikkelsen, B. E., et al. (2021). Early food education and cognitive outcomes. International Journal of Behavioral Nutrition and Physical Activity, 18, Article 45.
35. Ministry of Health and Child Care. (2023). Zimbabwe national nutrition strategy. Government of Zimbabwe.
36. Moore, L. L. (2019). Nutrition education in early childhood settings. Annual Review of Nutrition, 39, 259– 276.
37. Moore, L. L., et al. (2021). Teacher perspectives on nutrition education. Journal of School Health, 91(5), 377–385.
38. Moyo, S., & Chirwa, E. (2023). Sociocultural perspectives on early childhood learning in Zimbabwe. Journal of African Education Studies, 18(2), 55–69.
39. Muzondo, T., Muchengetwa, S., & Chikuni, O. (2018). Nutrition education and child health in Zimbabwe. African Journal of Health Sciences, 31(3), 201–209.
40. Mwaniki, E. W., Makokha, A., & Onyango, A. (2022). Cultural norms and child feeding practices. Maternal & Child Nutrition, 18(4), e13418.
41. Nyakudya, M. (2022). Early childhood nutrition challenges in Kwekwe District. Zimbabwe Journal of Social Sciences, 10(1), 88–101.
42. Ochieng, J., Afari-Sefa, V., & Lukumay, P. J. (2020). School-based nutrition education in Kenya. Food Security, 12(3), 673–685.
43. Patton, M. Q. (2020). Qualitative research and evaluation methods (4th ed.). Sage.
44. Pelto, G. H., Levitt, E., & Thairu, L. (2020). Improving feeding practices through culture-sensitive approaches. Maternal & Child Nutrition, 16(2), e12907.
45. Piaget, J. (1952). The origins of intelligence in children. International Universities Press.
46. Ruel, M. T., Alderman, H., & Maternal and Child Nutrition Study Group. (2022). Nutrition-sensitive interventions. The Lancet, 399(10331), 1125–1137.
47. Sallis, J. F., Owen, N., & Fisher, E. (2023). Ecological models of health behavior. Health Behavior: Theory, Research, and Practice, 465–485.
48. Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research. Education for Information, 22(2), 63–75.
49. Taba, H. (2020). Curriculum development: Theory and practice. Harcourt Brace.
50. Tandon, P. S., et al. (2022). Nutrition education and school readiness. Pediatrics, 149(2), e2021054267.
51. UNESCO. (2022). Early childhood care and education global report. UNESCO.

52. UNICEF. (2022). Child nutrition report: Zimbabwe. UNICEF.
53. UNICEF. (2023). Improving early childhood nutrition through education. UNICEF.
54. Wamani, H., et al. (2017). School nutrition programmes in Uganda. BMC Public Health, 17, Article 433.
55. WHO. (2021). Nutrition actions in schools. World Health Organization.
56. WHO. (2023). School feeding and child development. World Health Organization.
57. World Bank. (2024). Investing in early childhood nutrition. World Bank.
58. Yin, R. K. (2020). Case study research and applications (6th ed.). Sage.
59. Zimbabwe National Nutrition Survey. (2022). National nutrition report. Government of Zimbabwe.