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Dietary Patterns of Mothers of Under-Five Children (Malnourished) – A Strategic Factor for Family Health Nutrition & Education

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Abstract

Aim: The aim of the study was to observe Dietary Patterns of Mothers of Under-Five Children (Malnourished) – A Strategic Factor for Family Health Nutrition & Education. **Materials and Methods:** The approved research tool utilized in the study was the Reviewed Malnourished Under-Five Children Screening Questionnaire (R-MUCSQ). The variables were measured and computed using SPSS version 23, with an average mean and standard deviation of 29.5 ± 14.5 and a 100% reply rate. Participants consisted of fifty (50) women ranging in age from 15 to 44 years old, selected through a purposive sampling technique among mothers of under-five children (malnourished) at the Waterloo Government Hospital Waterloo. The study population consisted of 4,622 mother-children according to the hospital records for 2022/2023. **Results:** It was found that the majority of mothers with less than five children who were malnourished were between the ages of twenty-seven and thirty-two. Additionally they were also malnourished belonged to the married marital status. The majority of mothers with fewer than five children who were malnourished were also uneducated. Furthermore, the majority of mothers with children under five who were malnourished also had an employment status as traders. **Conclusion:** When compared to the other study indicators, mothers of under-five children who were malnourished and between the ages of twenty-seven and thirty-two constituted the majority in all variables. To maximize the nourishment of under-five children by their mothers, caregivers, and clinicians for an improved life for under-fives, behavioural change communication, immunisation and other dietary patterns are therefore advised.

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Introduction

In order to promote physical activity and public health, health nutrition is essential (Bebeley, Foday, Mbavai & Morlu, 2022). In response to the anthropometric dimension and appetite test of nutrition and physical activity by mothers of malnourished children under five, public health education and physical activity promotion can be linked to frequent clinical visits (Bebeley, Morlu, Foday & Collier, 2023; Bebeley, Foday, Mbavai & Morlu, 2022). A significant component of socially useful activities that are supported by the musculoskeletal anatomy of humans is the promotion of healthy diet and physical activity (Bebeley, Foday & Beah, 2022). Therefore, in order to maintain a balanced physical and mental health, nutrition and physical activity promotion in conjunction with anthropometric measurements and an appetite test of malnourished children under five years old are crucial screening tools for admission into therapeutic feeding. These tools target the normal intake and expenditure of children and adolescents who are disadvantaged by unjustified failure (Bebeley, Foday, Mbavai & Morlu, 2022; Bebeley, Foday & Baio, 2021).

A crucial document for aberrant interaction purposes is the strength makeup of children and adolescents' deficiencies in nutrition and physical activity promotion (Bebeley, Foday, Mbavai & Morlu, 2022). Nonetheless, education and hard work effectively permit kids and teenagers to naturally participate in consistent, ongoing intake and expenditure that corresponds to their specific sources of inspiration (Bebeley, Foday, Mbavai & Morlu, 2022; Bebeley, Conteh & Baio, 2021). However, for under-five children, particularly the malnourished, nutrition and physical activity are essential to preserving overall psychological, physical, and social wellbeing. This protects the privilege of regular consumption and expenditure for children who would otherwise collapse unjustly (Bebeley, Foday, Mbavai & Morlu, 2022; Bebeley, Tucker & Conteh, 2020). Compared to adults and the elderly in Sierra Leone, children and teenagers' daily responses to diet and physical exercise are generally positive (Bebeley, Foday, Mbavai & Morlu, 2022). However, under the management and supervision of a health nutrition and physical activity specialist, the anthropometric measurement and appetite test screening of malnourished under-five children with or without clinical conditions for therapeutic feeding will significantly enhance growth and sustainable development in under-five children (Bebeley, Foday, Mbavai & Morlu, 2022; Bebeley, Conteh & Laggao, 2020).

Childhood and adolescent malnutrition and inactivity prevent enjoyment since they lead to non-transmissible problems such as obesity, anxiety, unreasonable fatigue, and pain (Bebeley, Foday, Mbavai & Morlu, 2022). Since agora is a common condition primarily caused by an inability to engage in regular intake and expenditure, it can be improved in under five children to promote growth and development that is sustainable under the guidance and direction of a health nutrition and physical activity specialist (Bebeley, Foday, Mbavai & Morlu, 2022; Bebeley, Conteh & Laggao, 2020). As part of a commitment to promoting health education, good nutrition, appetite testing, anthropometric measurement, and physical activity, it is authoritative to think of the collaborating topographies and strictures for descendants' and juveniles' physical gestures as a duty once they start to lead to non-transmissible diseases like depressing character (Bebeley, Foday, Mbavai & Morlu, 2022; Bebeley, 2016a) and gasping conditions.

As an administrative debate in the enlightenment of communal well-being (Bebeley, Foday, Mbavai & Morlu, 2022; Bebeley, Conteh & Gendemeh, 2018; Bebeley, Wu & Liu, 2017c; Tucker, Bebeley & Laggao, 2017), strength twinges, wasting, faintness, and supreme oxygen consumption (Bebeley, Foday, Mbavai & Morlu, 2022; Bebeley, 2016b; Bebeley, 2016d; Bebeley, 2015), well-disposed with the fundamentals of consistent power contraction and declining throughout physical action. Similarly, characteristics of wellbeing, epidemiological services, motor-powered support tool measures, physical grasp (Bebeley, Conteh & Laggao, 2018; Bebeley, Laggao & Conteh, 2018; Bebeley & Laggao, 2011; Bebeley, Laggao & Tucker, 2017a; Tucker, Bebeley & Conteh, 2017; Tucker, Bebeley & Conteh, 2018; Bebeley, Tucker & Conteh, 2019a; Bebeley, Tucker & Conteh, 2019b), balanced wellbeing, established developments, wellbeing education method, physical activity, calm and deliberate choices (Bebeley, Laggao & Tucker, 2017b; Bebeley, Wu & Liu, 2016b; Bebeley, Laggao & Tucker, 2017d; Bebeley, Liu & Wu, 2017a; Bebeley, Liu & Wu, 2017b; Bebeley, Laggao & Gendemeh, 2018).

Reducing movements and making physical adjustments to prevent physical harm during corporal education in order to enhance intellectual wellbeing (Bebeley, Liu & Wu, 2017c; Bebeley, Wu & Liu, 2016a; Bebeley, Wu & Liu, 2017a; Bebeley, Wu & Liu, 2017b; Laggao, Bebeley & Tucker, 2017; Bebeley, Wu & Liu, 2018) continue to be fully implemented as an administrative standard in collaborative education for the purposes of paedology, physical activity and community wellbeing education. In Waterloo, Western Rural, Sierra Leone, the goal of this study is to evaluate clinical attendance of mothers of under-five children (malnourished) – a strategic factor for family health nutrition and education.

Materials and Methods

Based on clinic records from 2022 to 2023, the study carefully selected fifty participants ($n = 50$) with an age range of nineteen to forty-four (15–to–44) years, a mean and standard deviation of 29.5 ± 14.5 , and a response frequency of 100%. These mothers of malnourished under-five children were carefully chosen using a purposive sampling approach within the Waterloo Government Hospital, Waterloo.

The approved research tool used in the study was the Reviewed Malnourished Under-Five Children Screening Questionnaire (R-MUCSQ), which demonstrated the significance and consistency that supported the reliability of Cronbach's Alpha Reliability Evaluation (0.75), which had been used by Bebeley et al. in the past (Bebeley, Wu & Liu, 2017b; Bebeley, Conteh & Laggao, 2018; Bebeley, Foday, Mbavai & Morlu, 2022).

The resource-based examination process allows for the monitoring, evaluation, and confirmation of continuous examinations obtained through a case-by-case basis using the Waterloo Government Hospital, Waterloo. The census survey processing and entry software was adopted, that was formally used by (Bebeley, Foday, Mbavai & Morlu, 2022).

With the usage of IBM-SPSSv.23 Statistics, arithmetical appraisal gears, such as parametric and non-parametric appraisals that included the Comparative Investigation Tool, descriptive arithmetic, and differential examinations, were utilized to gather, assess, and correlate the results of significant value $P < 0.05$.

Results and Discussion

The findings demonstrate that, in comparison to other indicators as clinical respondents for all indicators sampled, measured, and evaluated in the study, mothers of under-five children who were malnourished within the age range of 27–32 constituted the majority of these mothers (15 respondents). The results of Tables 1 and 2 indicate that the clinic visit by the respondents was the highest indicator, with a mean and standard deviation of 1.93 ± 0.258 and a functional value of 1.155, or $F_{1,155}$ significant at 0.343, when sampled with respect to dietary patterns of mothers of under five children (malnourished).

The findings demonstrate that, in comparison to other indicators as clinical responders for all indicators collected, measured, and evaluated in the study, mothers of under five children who were malnourished within the marital status of married were in the majority (with 40 respondents). The vaccination records of the respondents, who were primarily single, were found to be the strongest predictor of dietary pattern of malnourished mothers of children under five (Tables 3 and 4, respectively), with a mean and standard deviation value of 2.00 ± 0.667 and a functional value of 1.021, or $F_{1,021}$ significant at 0.317.

Table 1. Descriptive Statistics of Dietary Patterns by Age Range of Mothers

Dietary Patterns by Age Range of Mothers	Descriptive Statistics Analysis					
	n	Mean	Std. Deviation	95% CI		
				Lower	Upper	
Antenatal Care Attendance	15-20	5	2.00	.000	2.00	2.00
	21-26	10	2.00	.000	2.00	2.00
	27-32	15	1.87	.352	1.67	2.06
	33-38	13	1.77	.439	1.50	2.03
	39-44	7	1.86	.378	1.51	2.21
Clinic Visit	15-20	5	2.00	.000	2.00	2.00
	21-26	10	1.90	.316	1.67	2.13
	27-32	15	1.93	.258	1.79	2.08
	33-38	13	1.69	.480	1.40	1.98
	39-44	7	1.86	.378	1.51	2.21
Immunisation	15-20	5	1.80	.447	1.24	2.36
	21-26	10	1.70	.483	1.35	2.05
	27-32	15	1.87	.834	1.40	2.33
	33-38	13	1.92	.760	1.46	2.38
	39-44	7	1.57	.787	.84	2.30

Note: CI = Confidence Interval

Table 2. ANOVA Statistics of Dietary Patterns by Age Range of Mothers

Dietary Patterns by Age Range of Mothers	ANOVA Statistics Analysis				
	Sum of Squares	df	Mean Square	F	Sig.
Antenatal Care Attendance	.382	4	.095	.877	.485
Clinic Visit	.560	4	.140	1.155	.343
Immunisation	.729	4	.182	.353	.841

Table 3. Descriptive Statistics of Dietary Patterns by Marital Status of Mothers

Dietary Patterns by Marital Status of Mothers	Descriptive Statistics Analysis					
	n	Mean	Std. Deviation	95% CI		
				Lower	Upper	
Antenatal Care Attendance	Married	40	1.88	.335	1.77	1.98
	Single	10	1.90	.316	1.67	2.13
Clinic Visit	Married	40	1.85	.362	1.73	1.97

	Single	10	1.90	.316	1.67	2.13
Immunisation	Married	40	1.75	.707	1.52	1.98
	Single	10	2.00	.667	1.52	2.48

Note: CI = Confidence Interval

In comparison to other indicators, the majority of mothers with fewer than five children who were malnourished and had low academic status – 32 respondents – were illiterate. This was true for all indicators that were sampled, assessed, and evaluated for the study. The immunization records of the respondents, who were primarily illiterate, turned out to be the most significant predictor (mean and standard deviation values of 1.97 ± 0.647 with a functional value of 5.659, or $F_{5.659}$ significant at 0.021) when compared to dietary pattern records of mothers of malnourished children under five, as shown in Tables 5 and 6.

Table 4. ANOVA Statistics of Dietary Patterns by Marital Status of Mothers

Dietary Patterns by Marital Status of Mothers	ANOVA Statistics Analysis					
	Sum of Squares	df	Mean Square	F	Sig.	
Antenatal Care Attendance	.005	1	.005	.045	.832	
Clinic Visit	.020	1	.020	.160	.691	
Immunisation	.500	1	.500	1.021	.317	

Table 5. Descriptive Statistics of Dietary Patterns by Academic Status of Mothers

Dietary Patterns by Academic Status of Mothers		Descriptive Statistics Analysis				
		n	Mean	Std. Deviation	95% CI	
					Lower	Upper
Antenatal Care Attendance	Literate	18	1.89	.323	1.73	2.05
	Illiterate	32	1.88	.336	1.75	2.00
Clinic Visit	Literate	18	1.83	.383	1.64	2.02
	Illiterate	32	1.88	.336	1.75	2.00
Immunisation	Literate	18	1.50	.707	1.15	1.85
	Illiterate	32	1.97	.647	1.74	2.20

Note: CI = Confidence Interval

Table 6. ANOVA Statistics of Dietary Patterns by Academic Status of Mothers

Dietary Patterns by Academic Status of Mothers	ANOVA Statistics Analysis					
	Sum of Squares	df	Mean Square	F	Sig.	
Antenatal Care Attendance	.002	1	.002	.020	.888	
Clinic Visit	.020	1	.020	.160	.691	
Immunisation	2.531	1	2.531	5.659	.021	

The findings demonstrate that, in comparison to other indications as clinical responders for all indicators sampled, measured, and evaluated in the study, mothers of under-five children who were malnourished within their occupational status as traders constituted the majority of respondents (26 in total). According to Tables 7 and 8, the immunization records of the respondents—the majority of whom were unemployed—were the strongest predictor, with a mean and standard deviation of 2.67 ± 0.577 and a functional value of 3.823, or $F_{3.823}$ significant at 0.009. This information was sampled in relation to dietary patterns of mothers of under-five children who were malnourished.

The findings demonstrate that, across all indicators collected, measured, and evaluated in the study, mothers of fewer than five children who were malnourished and aged between twenty-seven and

thirty-two constituted the majority of clinical responses. Furthermore, immunization records of respondents (mainly aged twenty-seven to thirty-two) were found to be the strongest predictor of dietary patterns among under-five mothers whose children were malnourished. This study validates a clinical attendance strategy for physical activity screening at the Police Barracks Hospital in Bo, which was developed by Bebeley et al. (Bebeley, Morlu, Foday & Collier, 2023; Bebeley, Foday, Mbavai & Morlu, 2022). The study focused on mothers with malnourished under-five children. The findings also establish that, for all indicators sampled, measured, and assessed in the study, mothers of under five children who were malnourished within the context of married women's marital status constituted the majority of clinical respondents. The immunization records of the respondents, who were primarily single, were found to be the most significant predictor of dietary patterns among mothers of under-five children whose children were malnourished. This study validates a clinical attendance strategy for physical activity screening at the Police Barracks Hospital in Bo, which was developed by Bebeley et al. (Bebeley, Morlu, Foday & Collier, 2023; Bebeley, Foday, Mbavai & Morlu, 2022). The study focused on mothers with malnourished under-five children.

Table 7. Descriptive Statistics of Dietary Patterns by Carrier Status of Mothers

Dietary Patterns by Carrier Status of Mothers		Descriptive Statistics Analysis				
		<i>n</i>	<i>Mean</i>	<i>Std. Deviation</i>	<i>95% CI</i>	
					<i>Lower</i>	<i>Upper</i>
Antenatal Care Attendance	Trader	26	1.92	.272	1.81	2.03
	Farmer	4	1.75	.500	.95	2.55
	Student/Pupil	7	1.86	.378	1.51	2.21
	Employed	10	1.80	.422	1.50	2.10
	Unemployed	3	2.00	.000	2.00	2.00
Clinic Visit	Trader	26	1.88	.326	1.75	2.02
	Farmer	4	1.75	.500	.95	2.55
	Student/Pupil	7	1.71	.488	1.26	2.17
	Employed	10	1.90	.316	1.67	2.13
	Unemployed	3	2.00	.000	2.00	2.00
Immunisation	Trader	26	1.81	.491	1.61	2.01
	Farmer	4	2.25	.957	.73	3.77
	Student/Pupil	7	1.14	.378	.79	1.49
	Employed	10	1.80	.919	1.14	2.46
	Unemployed	3	2.67	.577	1.23	4.10

Note: CI = Confidence Interval

Table 8. ANOVA Statistics of Dietary Patterns by Carrier Status of Mothers

Dietary Patterns by Carrier Status of Mothers	ANOVA Statistics Analysis				
	<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
Antenatal Care Attendance	.227	4	.057	.505	.732
Clinic Visit	.288	4	.072	.564	.690
Immunisation	6.088	4	1.522	3.823	.009

The findings reveal once more that mothers of under five children who were underweight and illiterate in relation to their academic standing constituted the majority of clinical respondents for all parameters collected, measured, and assessed in the research. When studied in relation to dietary patterns of under-five mothers of malnourished infants, the immunization records of the respondents—the majority of whom were illiterate—turned out to be the most significant predictor.

This study validates a clinical attendance strategy for physical activity screening at the Police Barracks Hospital in Bo, which was developed by Bebeley et al. (Bebeley, Morlu, Foday & Collier, 2023; Bebeley, Foday, Mbavai & Morlu, 2022). The study focused on mothers with malnourished under-five children. The findings determine that, for all parameters sampled, measured, and assessed in the study, mothers of under-five children whose children were malnourished within the context of their employment status as merchants constituted the majority of clinical responses. When mothers with fewer than five children were recruited for dietary patterns, the immunizations of the respondents—the majority of whom were unemployed—turned out to be the strongest predictor of malnutrition. A study by Bebeley et al. on clinical attendance of mothers of under-five malnourished children is supported by this research and serves as a strategic factor for physical activity screening at the Police Barracks Hospital in Bo (Bebeley, Morlu, Foday & Collier, 2023; Bebeley, Foday, Mbavai & Morlu, 2022).

Conclusion and Recommendation

When considering the other indicators selected, measured, and assessed in the study, it was found that mothers of under five children whose children were malnourished and aged between twenty-seven and thirty-two constituted the majority. The immunization records of the respondents, who were primarily between the ages of twenty-seven and thirty-two, were found to be the most significant predictor of dietary patterns among malnourished mothers of children under five. Compared to the other indicators collected, assessed, and evaluated in the study, the majority of mothers of under-five children who were malnourished were married. When mothers of children under five were recruited for dietary patterns, the immunization records of the majority of single respondents showed that immunization was the strongest predictor of malnutrition. In contrast to the other indicators sampled, measured, and assessed in the study, mothers of under five children who were hungry and illiterate within the academic status were in the majority. When studied in relation to dietary patterns of under-five mothers of malnourished infants, the immunization records of the respondents – the majority of whom were illiterate – turned out to be the most significant predictor. When comparing the majority of women with fewer than five children to other variables sampled, measured, and assessed in the study, it was found that children were malnourished regardless of their employment status as merchants. When mothers of children under five were sampled for dietary patterns, the immunization by the respondents – mostly traders – turned out to be the strongest predictor of malnourishment. To maximize the nourishment of under-five children by their mothers, caregivers, and clinicians for a healthier life, it is advised that behavioural change communication, immunization, and other clinical attendances by the respondents of all age ranges be given due attention with respect to clinical attendance of mothers of under-five children. That in order to maximize the nutrition that mothers of children under five receive from their mothers, caregivers, and clinicians for a healthier life, respondents of all marital ranges should give behavioural change communication, immunizations, and other dietary patterns the attention they deserve. That in order to maximize the nutrition that under-five children receive from their mothers, caregivers, and clinicians for a healthier life, under-five respondents from all academic backgrounds should pay appropriate attention to behavioural change communication, immunizations, and other dietary patterns. That in order to maximize the nutrition that under-five children receive from their mothers, caregivers, and clinicians for a healthier life, behaviour modification communication, immunizations, and other dietary patterns by respondents across all job ranges receive the attention that they deserve. Therefore, in order to promote psychological wellbeing in settings like the home and learning centers for children and juveniles – which are crucial to human psychological wellbeing – nutrition and physical activity promotion must be carefully considered as a communal wellbeing education policy, according to Bebeley et al. (Bebeley, Foday & Baio, 2021; Bebeley, Foday & Beah, 2022; Bebeley, Foday, Mbavai & Morlu, 2022; Bebeley, Morlu, Foday & Collier, 2023).

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