



Child Bearing Women's Knowledge and Attitude Toward Health Implications of Child Binge Eating in A Nigerian Rural Community

Yahaya Jafaru ^{1,*}

¹ Department of Nursing Science, College of Health Sciences, Federal University Birnin-Kebbi, Kebbi State, Nigeria

*Corresponding author: Yahaya Jafaru, Department of Nursing Science, College of Health Sciences, Federal University Birnin-Kebbi, Kebbi State, Nigeria. E-mail: Jafaruyahaya2015@yahoo.com, Jafaru.yahaya@fubk.edu.ng

DOI: 10.29252/anm-29918

Submitted: 13-04-2020

Accepted: 11-05-2020

Published: 15-07-2020

Keywords:

Attitude
Child Bearing Women
Child Binge Eating
Implications
Knowledge

© 2020. Advances in Nursing and Midwifery

How to cite:

Yahaya Jafaru. Child Bearing Women's Knowledge and Attitude Toward Health Implications of Child Binge Eating in A Nigerian Rural Community. *Adv Nurs Midwifery*. 2020;29(3):1-6. doi: 10.29252/anm-29918

Abstract

Introduction: The prevalence of eating disorders in the general population appears to be on the rise. Binge eating disorder (BED) is characterized by frequent consumption of unusually large amounts of food. Child binge eating is an important aspect of children, now getting researchers and treatment professionals' attention. The study was aimed at assessing the child bearing women's knowledge and attitude toward health implications of child binge eating in a Nigerian rural community.

Methods: The research was descriptive study that employed cross sectional design. Cluster method was used as a sampling procedure, and Census sampling was employed in selecting the entire child bearing women in the four selected clusters. The ethical approval for the research was obtained from Kebbi State Health Research Ethical Committee. The instrument for data collection was researcher constructed, structured, self-administered questionnaire. Data were presented in frequency and percentages. Fisher's exact test statistical analysis was used for inferential analysis at 99% Confidence Interval.

Results: Majority of the respondents were knowledgeable on health implication of child binge eating in most of the questions. The questions in which majority demonstrated lack of knowledge were questions 1, 2 and 4 (67.6%, 66.9%, and 50.8%) respectively. Majority of the respondents were having negative attitude toward health implication of child binge eating. There was no statistical significant association between all the respondents' demographic variables and the respondents' attitude toward health implication of child binge eating; $P > 0.01$.

Conclusions: Child binge eating as one of the factors that contribute to the development of chronic, psychological, sociological and mental diseases need to be given more attention,, and awareness about it be given to the people. Healthcare workers should provide approaches by which the attitude of child bearing women toward child binge eating will be changed to positive.

INTRODUCTION

The state of children's malnutrition in the 21st century is described by UNICEF as "more children and young people are surviving, but far too few are thriving" [1]. There is an increase in the prevalence of nutritional related chronic diseases (NRCDS) like obesity, cardiovascular diseases, diabetes and even some form of cancers [2]. Under-nutrition, hidden hunger and overweight are the three strands of malnutrition. They are interwoven and can be found among children, families and communities together. Also, the situation is associated with profound consequences to child's own prospects, national economic development and the Sustainable Development Goals (SDGs) attainment [1].

Eating Disorders (EDs) are serious and highly complex illnesses, occurring most often among adolescents, but can affect any age. They can lead to a significant negative impact on physical, psychological, social and cognitive aspects of health [3]. The prevalence of EDs in the general population appears to be on the rise [4]. The pre-school children EDs are common to the extent that researchers and clinicians often consider them as developmentally normal [5]. For untreated cases of EDs, a total of 20% will die, while with treatment, it will reduce to between 2-3% [6]. The cause of EDs constitutes variety of factors, including genetics low self-esteem, perfectionism, anxiety disorders, previous obesity, past substance abuse or a family history of

substance abuse, and external pressure to a particular body shape [7].

Binge eating disorder (BED) is an eating disorder characterised by frequent consumption of unusually large amounts of food. The individual takes no actions to prevent weight gain; the feature that differ it from bingeing and purging [8]. According to Montano et al. about 50% of people with BED are clinically obese [9]. The fifth edition of diagnostic and Statistical Manual of Mental Disorders (DSM-5) recognized binge eating as eating disorder [10]. For BED to be diagnosed, the condition must exist for three months with episodes occurring at least once in a week and associated with any three or more of the following: eating until uncomfortably full, abnormally rapid eating, eating food in large amounts while not feeling hungry, eating alone due to embarrassment on eating large amount of food, oneself feeling of disgust, depression, or very guilty afterwards [10].

The most common reported ED is binge eating [11]. Globally, BED is more prevalent than bulimia nervosa and anorexia nervosa [12]. Hudson et al. asserted that about 78.9% of individuals with BED met the criteria for at least one other mental health disorder [13]. Sheehan and Herman pointed out that binge eating can significantly increase the risk of medical and psychiatric comorbidity [14]. These complications are more salient to the patients and thus they are the driving force for seeking medical help [9]. Moreover, lack of knowledge and negative attitudes toward eating disorders are recognised as likely reasons for failure in detection and delayed treatment [15, 16]. In rural communities women are largely in charge of children care; therefore, nutritional and child eating knowledge and attitude among them is highly influential to children health.

Child BED is an important aspect of children, now getting researchers and treatment professionals' attention [17]. However, there are few studies on prevalence of and attitude to eating disorders in Nigeria [18]; and Ehimigbai and Otakpor opined that research studies on eating disorders are lacking in Nigeria, except for a few case reports, all of which are from large treatment centers, pointing to the need of community based studies [19]. Moreover, academia is well poised to assist society; and in order to render a more strongly constructed role, universities and colleges must address persistent cultural barriers [20], especially to the neighbouring communities. General public's knowledge about EDs could be an important contributor to public awareness and reduction in barriers to early recognition and treatment [21, 22]. This study serves as an impetus

in understanding a rural community neighbouring University and College of Health Sciences; and as baseline data for development of positive change. It was aimed at assessing the child bearing women's knowledge and attitude toward health implications of child binge eating in a Nigerian rural community.

METHODS

The research was descriptive study that employed cross sectional design to assess the child bearing women's knowledge and attitude toward health implications of child binge eating. The study was conducted in Kalgo town, a Local Government Headquarters of Kalgo Local Government Area of Kebbi State, Nigeria. One stage cluster method was used as a sampling procedure, in which Kalgo community was divided into seven clusters, out of which four clusters were randomly selected. In one-stage cluster sampling some clusters are selected from the list of all the clusters that form the population, usually using simple random sampling; and all units in the sampled clusters are selected for the survey [23]. The included respondents were women of reproductive age having or had at least one child, and the child passed 6 month old. Women of reproductive age that never had a child or never had a child that passed 6 month old; and those that could not answer the questionnaire due to conditions like severe illness, and or mental disorder were excluded from the study. The participants from the four selected clusters were 317. This includes 77 from cluster A, 72 from cluster B, 88 from cluster C and 80 from cluster D. However, after administering and retrieval of the questionnaires, the analysable questionnaires were 299.

The instrument for data collection was researcher constructed, structured, self-administered 19 items questionnaire, developed through a thorough literature review. However interviewer-administered method was used for the respondents that could not read. The instrument comprises three sections: Section A assessed the socio-demographic variables, section B assessed the knowledge of child binge eating health implications, and section C assessed the attitude toward child binge eating health implications. Face and content validity of the instrument was ascertained using three experienced scholars that vetted the questionnaire. The instrument was translated to the common local language, after which the reliability was tested. Section B had the reliability of 0.870 and section C had reliability of 0.655 using Cronbach's Alpha respectively. The scoring method for section B was 1 = Yes and 2 = No; the scoring method for section C was 1.0-1.4 = excellent attitude,

1.5-1.9 = very good attitude, 2.0-2.4 = good attitude, and ≥ 2.5 = poor attitude.

Three research assistant were trained on the nature of the research, the questionnaire, the method of questioning and child binge eating and its health implications. All the research assistants were health workers of the Primary Health Center of the Kalgo community, and the training took place within two days. Data were collected using house to house visit within the period of one week. The questionnaire was administered, completed and retrieved at a time when it was administered; also interviewer-administered method was used for respondents that could not read. These, together with translating the questionnaire to common local language were aimed at controlling confounding variables like asking other people on the option to choose and or making a choice without understanding the question. Data were presented in frequencies and percentages. Fisher's exact test was used for inferential analysis at 99% Confidence Interval. This is because there were over 20% of cells with expected count of less than 5. The ethical approval for the research was obtained from Kebbi State Health

Research Ethical Committee. Respondents involved in the study deliberately after thorough explanation given to them on the purpose of the study. After the data collection information was passed to the respondents on child binge eating and its implication to their health.

RESULTS

Table 1 revealed that the mean age (in years) of the respondents was 33.7. The highest level of education among the respondents was secondary education and most of the respondents were house wife. However, the mean number of children among the respondents was approximately 5 children.

Table 2 shows majority of the respondents were knowledgeable on health implication of child binge eating in most of the questions. The questions in which majority demonstrated lack of knowledge were questions 1, 2 and 4 (67.6%, 66.9%, and 50.8%) respectively; in which majority of the respondents did not know child binge eating is a disease, child binge eating is not a child's choice, and child binge eating is harmful to child's psychological health respectively.

Table 1. Socio-Demographic Variables of the Respondents, N = 299

Variables	Frequency	Percentage
Age (Years)		
15-24	80	26.8
25-34	80	26.8
35-44	73	24.4
45-55	66	22.1
Level of education		
Tertiary	60	20.1
Secondary	103	34.4
Primary	42	14.0
Non-formal	94	31.4
Occupation		
Civil servant	66	22.1
Business	38	12.7
Artisan	80	26.8
House wife	115	38.5
Number of children		
1-3	131	43.8
4-6	101	33.8
7-9	35	11.7
10-12	32	10.7

Table 2. Child Bearing Women's Knowledge of Health Implication of Child Binge Eating N=299

Questions	Correct, Freq. (Percent)	Wrong, Freq. (Percent)
1. Are recurrent episodes of eating unexpected large amounts of food by a child a disease?	97(32.4)	202(67.6)
2. Are recurrent episodes of eating unexpected large amounts of food a child's choice?	99(33.1)	200(66.9)
3. Can you identify when eating episodes and amounts of food eaten by your child are beyond normal?	253(84.6)	46(15.4)
4. Do recurrent episodes of eating unexpected large amounts of food by a child harmful to his/her psychological health?	147(49.2)	152(50.8)
5. Do recurrent episodes of eating unexpected large amounts of food by a child harmful to his/her physical health?	236(78.9)	63(21.1)
6. Do recurrent episodes of eating unexpected large amounts of food by a child harmful to his/her sociological health?	254(84.9)	45(15.1)
7. Can recurrent episodes of eating unexpected large amounts of food by a child lead to fatal disease conditions?	174(58.2)	125(41.8)
8. Can a child with recurrent episodes of eating unexpected large amounts of food be taken to hospital for treatment?	187(62.5)	112(37.5)

Table 3. Child Bearing Respondents' Attitude toward Health Implication of Child Binge Eating N = 299

Attitudes	1 F(P)	2 F(P)	3 F(P)	4 F(P)
1. I do not worry if my child has recurrent episodes of eating unexpected large amounts of food	45 (15.1)	56 (18.7)	149 (49.8)	49 (16.4)
2. I do not see it as a problem if my child has recurrent episodes of eating unexpected large amounts of food	40 (13.4)	61 (20.4)	118 (39.5)	80 (26.8)
3. Frequent eating of unexpected large amount of food by a child is a pleasure	61 (20.4)	55 (18.4)	119 (39.8)	64 (21.4)
4. A child with recurrent episodes of eating unexpected large amounts of food need not to be taken to the hospital	40 (13.4)	53 (17.7)	151 (50.5)	55 (18.4)
5. Recurrent episodes of eating unexpected large amounts of food by a child resolve on its self	34 (11.4)	44 (14.7)	131 (43.8)	90 (30.1)
6. Is not mother's concern to understand when her child is having recurrent episodes of eating unexpected large amounts of food	25 (8.4)	31 (10.4)	153 (51.2)	90 (30.1)
7. Is not good to limit a child from having recurrent episodes of eating unexpected large amounts of food	43 (14.4)	69 (23.1)	95 (31.8)	92 (30.8)

*1, strongly disagree, 2, disagree, 3, agree, 4, strongly agree. F, frequency; P, percentage

Table 4. Levels of Respondents' Attitude toward Health Implications of Child Binge Eating

Attitude levels	Variables					P
	Age (Years)					
	15-24 F(P)	25-34 F(P)	35-44 F(P)	≥45 F(P)	Total F(P)	
Poor attitude	54 (67.5)	54 (67.5)	52 (71.2)	51 (77.3)	211 (70.6)	0.685*
Good attitude	22 (27.5)	22 (27.5)	20 (27.4)	11 (16.7)	75 (25.1)	0.685*
Very good attitude	3 (3.75)	3 (3.75)	1 (1.4)	2 (3.0)	9 (3.0)	0.685*
Excellent attitude	1 (1.25)	1 (1.25)	0 (0)	2 (3.0)	4 (1.3)	0.685*
Total	80 (100)	80 (100)	73 (100)	66 (100)	299 (100)	0.685*
	Level of Education					
	Tertiary F(P)	Secondary F(P)	Primary F(P)	Non-Formal F(P)	Total F(P)	
Poor attitude	53 (88.3)	66 (64.1)	26 (61.9)	66 (70.2)	211 (70.6)	0.018*
Good attitude	6 (10)	31 (30.1)	14 (33.3)	24 (25.5)	75 (25.1)	0.018*
Very good attitude	0 (0)	5 (4.9)	2 (4.8)	2 (2.1)	9 (3.0)	0.018*
Excellent attitude	1 (1.7)	1 (0.9)	0 (0)	2 (2.1)	4 (1.3)	0.018*
Total	60 (100)	103 (100)	42 (100)	94 (100)	299 (100)	0.018*
	Occupation					
	Civil Servant F(P)	Business F(P)	Artisan F(P)	House Wife F(P)	Total F(P)	
Poor attitude	57 (86.4)	22 (57.9)	55 (68.75)	77 (67)	211 (70.6)	0.030*
Good attitude	9 (13.6)	12 (31.6)	23 (28.75)	31 (27)	75 (25.1)	0.030*
Very good attitude	0 (0)	3 (7.9)	1 (1.25)	5 (4.3)	9 (3.0)	0.030*
Excellent attitude	0 (0)	1 (2.6)	1 (1.25)	2 (1.7)	4 (1.3)	0.030*
Total	66 (100)	38 (100)	80 (100)	115 (100)	299 (100)	0.030*
	Number of Children					
	1-3 F(P)	4-6 F(P)	7-9 F(P)	≥10 F(P)	Total F(P)	
Poor attitude	89 (67.9)	77 (76.2)	24 (68.6)	21 (65.6)	211 (70.6)	0.514*
Good attitude	34 (26)	22 (21.8)	11 (31.4)	8 (25)	75 (25.1)	0.514*
Very good attitude	5 (3.8)	2 (2)	0 (0)	2 (6.3)	9 (3.0)	0.514*
Excellent attitude	3 (2.3)	0 (0)	0 (0)	1 (3.1)	4 (1.3)	0.514*
Total	131 (100)	101 (100)	35 (100)	32 (100)	299 (100)	0.514*

*Fishers exact test (Monte Carlo), 99% Confidence Interval. F, frequency P, percentage

Table 3 shows majority of the respondents were having negative attitude toward health implication of child binge eating. Across all the negative attitude statements about the health implications of child binge eating, majority of the respondents either agree or strongly agree with them.

Table 4 shows that generally, majority (70.6%) of the respondents had poor attitude, and 25.1% had good attitude. Likewise, majority of the respondents across all the variables had highest percentage in poor attitude and least percentage in excellent attitude.

DISCUSSION

Majority of the respondents of this research were having knowledge on most of the questions on health implications of child binge eating. This finding is in

accordance with a finding of a research by Yabancı, Kısacık and Karakuş, that majority of the mothers have higher nutritional knowledge level [24]. However most of the respondents of this research could not identify child binge eating as being a disease. Instead, majority recognised it as a child's choice. Thus, the respondents did not take the child binge eating to be a problem to the health of a child at the time when it is occurring. This corresponds with their consideration of binge eating not harmful to the child's psychological health. The respondents therefore, considered child binge eating as a pleasure to the child, but consider it a problem to the physical and sociological health. This could mean that the respondents acknowledge child binge eating as a phenomenon that could cause physical and sociological problems, but psychologically pleasurable to the child.

The attitude of the respondents toward health implications of child binge eating is not encouraging. This is evident in table 3 in which majority of the respondents either agree or strongly agree with the negative statement made about child binge eating attitude. Generally, over 70% of the respondents were having poor attitude, and the least attitude was excellent attitude. This is the same across all the variables of the respondents. Most of the respondents therefore, were having negative attitude toward health implications of child binge eating. Since majority of the respondents were knowledgeable about health implications of child binge eating in most of the knowledge questions asked; it could be deducted from the result that knowledge does not guarantee a positive attitude. This is in line with a study conducted in Nepal to assess knowledge, attitude and practice on diet and physical activities among mothers with young children, and it was found that 57% had good knowledge, and 45% had good attitude. The attitude of the respondents is lower than their knowledge [25].

The result of this study has shown no statistical association between all the variables (age, level of education, occupation and number of children) with the respondents' attitude toward child binge eating health implications. The result therefore indicates that variables - age, level of education, occupation and number of children- did not statistically relate to the attitude of the child bearing women toward child binge eating health implications. This is contrary to a study by El-Nmer, Salama and Elhawary on nutritional knowledge, attitude, and practice of parents and its impact on growth of their children in Bialla district of Kafr-Elsheikh governorate, Egypt; where it was found that there was a significant relationship between parent parameters such as parents education and children nutritional practice ($P = 0.023$ and 0.018 , for mothers and fathers respectively) [26].

CONCLUSIONS

The burden of some chronic diseases could be minimised if tackled from the early stage of life. Child binge eating is an important factor that contribute immensely to the development of childhood and adulthood diseases including chronic diseases. In this respect public awareness about factors contributing to

chronic diseases is paramount important. Child binge eating as one of the factors contributing to the development of chronic, psychological, sociological and mental diseases need to be given more attention, and awareness about it be passed to the public. In rural community, child bearing women are particularly important to be educated about child binge eating as they carry out most of the responsibilities of child caring. Healthcare workers should provide an avenue by which the attitude of child bearing women toward child binge eating will be change to positive. This would be more effective with the provision of social, physical, and political support from the policy makers, community leaders, and community social groups.

STRENGTH AND LIMITATION

This research study is one of the few community based surveys on eating disorders in Nigeria. It also serves as baseline information for further action to bring community positive changes. Its limitations include limited area of the study and not covering the practice of child binge eating prevention measures among women.

Conflict of Interest

There was no conflict of interest with this research

Acknowledgement

The researcher will like to appreciate the officer in-charge of Primary Health Center Kalgo and all the research assistants for their immense contribution in clustering and data collection. The researcher also thanks all the participants for spending their time to answer the questionnaire.

Author's Contribution

J.Y. contributed to the entire development of the research topic, literature review, design and method, instrument for data collection, as well as data collection and analysis, drafting and revision of the manuscript.

Funding/Financial Support

The research was not funded or financially supported by any individual, governmental or nongovernmental organization. Ethical Approval The Kebbi State Health Research Ethical Committee gave full ethical approval for the research to be conducted, with assigned number:105: 2/2020

REFERENCES

1. UNICEF. The state of the world's children 2019. Children, food and nutrition. Growing well in a changing world. 2019.
2. Sahoo K, Sahoo B, Choudhury AK, Sofi NY, Kumar R, Bhadoria AS. Childhood obesity: causes and consequences. *J Family Med Prim Care*. 2015;4(2):187-92. doi: 10.4103/2249-4863.154628 pmid: 25949965
3. National Eating Disorders Collaboration. Eating Disorders. The Way Forward. An Australian National Framework. 2010.
4. Winer MH. Knowledge of And Attitudes Towards Eating Disorders Of Undergraduate Nutrition Majors At Three Colorado Universities. A thesis submitted to Colorado State University. 2014. Available from: https://mountainscholar.org/bitstream/handle/10217/88615/Winer_colostate_0053N_12794.pdf?sequence=1.

5. Zucker N, Copeland W, Franz L, Carpenter K, Keeling L, Angold A, et al. Psychological and Psychosocial Impairment in Preschoolers With Selective Eating. *Pediatrics*. 2015;136(3):e582-90. **doi:** 10.1542/peds.2014-2386 **pmid:** 26240213
6. Marlborough K. Eating Disorder Statistics, EzineArticles.com. 2006. Available from: http://EzineArticles.com/?expert=Ken_Marlborough.
7. Rosen DS, American Academy of Pediatrics Committee on A. Identification and management of eating disorders in children and adolescents. *Pediatrics*. 2010;126(6):1240-53. **doi:** 10.1542/peds.2010-2821 **pmid:** 21115584
8. Barna M. What is binge eating disorder? 2019. Available from: <https://riseandshine.childrensnational.org/what-is-binge-eating-disorder/>.
9. Montano CB, Rasgon NL, Herman BK. Diagnosing binge eating disorder in a primary care setting. *Postgrad Med*. 2016;128(1):115-23. **doi:** 10.1080/00325481.2016.1115330 **pmid:** 26592916
10. American Psychiatric Association (APA). Diagnostic and Statistical Manual of Mental Disorders. 2013; 5th ed. Arlington, VA, USA: American Psychiatric Publishing.
11. Supina D, Herman BK, Frye CB, Shillington AC. Knowledge of binge eating disorder: a cross-sectional survey of physicians in the United States. *Postgrad Med*. 2016;128(3):311-6. **doi:** 10.1080/00325481.2016.1157441 **pmid:** 26906042
12. Kessler RC, Berglund PA, Chiu WT, Deitz AC, Hudson JI, Shahly V, et al. The prevalence and correlates of binge eating disorder in the World Health Organization World Mental Health Surveys. *Biol Psychiatry*. 2013;73(9):904-14. **doi:** 10.1016/j.biopsych.2012.11.020 **pmid:** 23290497
13. Hudson JI, Hiripi E, Pope HG, Jr., Kessler RC. The prevalence and correlates of eating disorders in the National Comorbidity Survey Replication. *Biol Psychiatry*. 2007;61(3):348-58. **doi:** 10.1016/j.biopsych.2006.03.040 **pmid:** 16815322
14. Sheehan DV, Herman BK. The Psychological and Medical Factors Associated With Untreated Binge Eating Disorder. *Prim Care Companion CNS Disord*. 2015;17(2). **doi:** 10.4088/PCC.14r01732 **pmid:** 26445695
15. Doley JR, Hart LM, Stukas AA, Petrovic K, Bouguettaya A, Paxton SJ. Interventions to reduce the stigma of eating disorders: A systematic review and meta-analysis. *Int J Eat Disord*. 2017;50(3):210-30. **doi:** 10.1002/eat.22691 **pmid:** 28230911
16. Puhl R, Suh Y. Stigma and eating and weight disorders. *Curr Psychiatry Rep*. 2015;17(3):S52. **doi:** 10.1007/s11920-015-0552-6 **pmid:** 25652251
17. Southard A. Binge Eating Disorder in Children: What to Look for and How to Help. A new beginning. 2017. Available from: <https://anewbeginning.com/binge-eating-disorder-in-kids/>.
18. Fadipe B, Oyelohunnu MA, Olagunju AT, Aina OF, Akinbode AA, Suleiman TF. Disordered eating attitudes: demographic and clinico-anthropometric correlates among a sample of Nigerian students. *Afr Health Sci*. 2017;17(2):513-23. **doi:** 10.4314/ahs.v17i2.27 **pmid:** 29062348
19. Ehimigbai M, Otakpor AN. Prevalence Of Eating Disorders Among School-Attending Adolescents In Benin City, Nigeria. *J Innovative Res Advance Stud (IJIRAS)*. 2017;4(3):353.
20. Wowk K, McKinney L, Muller-Karger F. Evolving academic culture to meet societal needs. *Palgrave Commun*. 2017;3(35). **doi:** 10.1057/s41599-017-0040-1
21. Mond JM. Eating disorders "mental health literacy": an introduction. *J Ment Health*. 2014;23(2):S1-4. **doi:** 10.3109/09638237.2014.889286 **pmid:** 24689662
22. Jorm AF. Mental health literacy: empowering the community to take action for better mental health. *Am Psychol*. 2012;67(3):231-43. **doi:** 10.1037/a0025957 **pmid:** 22040221
23. Ahmed S. Methods in Sample Surveys: Cluster Sampling. Johns Hopkins University. 2009. Available from: <http://ocw.jhsph.edu/courses/StatMethodsForSampleSurveys/PDFs/Lecture5.pdf>.
24. Yabancı N, Kısaç I, Karakuş SS. The effects of mother's nutritional knowledge on attitudes and behaviors of children about nutrition. *Procedia Soc Behav Sci*. 2014;116:4477-81.
25. Oli N, Vaidya A, Pahkala K, Eiben G, Krettek A. Knowledge, attitude and practice on diet and physical activity among mothers with young children in the Jhaukel-Duwakot Health Demographic Surveillance Site, Nepal. *PLoS One*. 2018;13(7):e0200329. **doi:** 10.1371/journal.pone.0200329 **pmid:** 29985946
26. El-Nmer F, Salama AA, Elhawary D. Nutritional knowledge, attitude, and practice of parents and its impact on growth of their children. *Menoufia Med J*. 2014;27:612-6. **doi:** 10.4103/1110-2098.145529