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A KAP STUDY ON NUTRITION AMONG ADOLESCENT GIRLS ATTENDING A SECONDARY SCHOOL IN AN URBAN AREA IN MALDA DISTRICT OF WEST BENGAL

Paediatrics

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ABSTRACT

INTRODUCTION: Health and nutrition of adolescent girls are key determinants of health status of the community. An assessment was designed to review knowledge, attitude and practice of school going adolescent girls from a school of Malda, West Bengal.
METHODS: A cross sectional observational study was conducted for those studying in class IX & X of a secondary girls' school. Data were collected using predesigned pretested questionnaire and analyzed in MS excel.
RESULT: 52.1% missed breakfast and 89% missed one major meal in last one week. 63% though aware of sources failed to consume iron rich foods. Awareness and practice of consuming vitamin A and iodine rich foods were not satisfactory.
DISCUSSION: Compared to many other studies, skipping meals or breakfast were more common in this study. Pushing the age bar for mid-day meal scheme beyond class VIII and addition of breakfast in the scheme might help in bridging the gap.

KEYWORDS

BACKGROUND

Addressing the problem of malnutrition has long drawn the attention of public health personals as a tool to serve many purposes. Malnutrition itself is an adverse health condition which invites a host of direct health problems on one hand while on the other hand it is known to affect intergenerational health i.e one malnourished mother further propagates this malady to the future generation. Thus it is almost universally accepted that women particularly those women who would enter the reproductive cycle shortly should be targeted for intervention for prevention of malnutrition. Thus women particularly those in late adolescent should be educated on correct nutritional practices. This aspect has been and is presently addressed in various forms such as health education in course curriculum on one hand to supplementing Fe tablets to school going girls on other hand.

Malda district has traditionally been recognized as an underachiever in terms of various health indices. Report from UNDP on Human Development Index (1) showed a dismal picture with lowest score of 0.44 among the districts of this state about a decade ago and GoI has also included this district as one of the five High Priority Districts (HPDs) under RMNCH+A (2) in 2013 . Studies undertaken elsewhere have emphasized on the need for understanding the need of adolescent girls and addressing the challenges. A study in Gujarat(3) among urban adolescents showed nearly 80% of adolescents had consumed regular food but nearly 60% of adolescents had their breakfast daily while the remaining missed taking breakfast daily. Nearly one-third of adolescents missed a meal once or twice a week. Gender difference was observed in missing meals or breakfast, as proportion of girls missed more compared to boys. RKSK (4) program also focus on nutritional counseling and interventions like Weekly Iron & Folic Acid supplementation for both school going and out of school adolescents. This is practiced in the district of Malda. Dietary goals and requirements have been established by NIN National Institute of nutrition (5)The same guidelines have been endorsed by FAO (6) also. Proper nutritional behavior and practice involves correct knowledge and attitudes to be prevalent among target population. It is imperative to find out the prevailing practices and present knowledge among adolescent girls regarding nutrition. Among the various aspects of proper and adequate nutrition intake of principal meals constitute a major part. In addition the proper knowledge ,attitude and practice about micronutrient like Fe , Iodine goes a long way in preventing malnutrition .

Prior to addressing the problem of malnutrition, it is essential to identify those subsect of population among whom malnutrition prevalence has long standing effect namely adolescent girls. As a initial step towards addressing the problem of malnutrition among this sub sect of population namely adolescent girls it is essential to find out the existing knowledge attitude and practice regarding nutrition . Among the many aspects of nutrition this study aims to find out the KAP about principal meal intake and some essential micronutrients namely iron, iodine and vitamin A.

Objective: To find out the knowledge, attitude & practice of school going adolescent girls on macro & micro nutrient related dietary habit in an urban area of Malda district of West Bengal

METHODOLOGY

It was a cross sectional observational study conducted among girl studying in a randomly selected secondary girls school in a urban area of district of Malda , West Bengal. Sample size was 119 (total number of students attending class 9 and 10 on the day of study who were willing to participate being 119). Those willing to participate were asked to fill a pretested questionnaire. Data collected was entered and analyzed in MS excel. The study was conducted over a period of 2 months.

RESULT

Of the 119 girls who participated in the study in Table 1 we find that94.1%, 89.9%and 93.3% consumed breakfast , lunch and dinner i.e did not miss any major meals in the last 24 hours. Likewise 64.3%, 59.8% and 86.4% had breakfast lunch and dinner at the correct time within last 24 hours. Further set of information gathered on the basis of last 7 days which revealed that 10.7%, 4.7% and o.9% consumed breakfast , lunch and dinner respectively outside home. In Table 2 the information yield was the prevalent practice over last 7 days.

Tables 1: distribution of students according to consumption of major meals (n=119)

Type of meal	Consumed	Timely intake*	Meals consumed outside home**
Breakfast	112(94.1%)	72(64.3%)	12(10.7%)
Lunch	107(89.9%)	64(59.8%)	5(4.7%)
Dinner	111(93.3%)	96(86.4%)	1(0.9%)

* based on 24 hr recall
** based on last 1 week's recall

Table 2: Distribution of students according to unhealthy practices regarding nutrition (n=119)

Type of Unhealthy practice	Number (%)
Missing Breakfast	57 (52.1%)
Consuming late breakfast	47 (41.9%)
Missing any major meal	106 (89.1%)
Snacking between meals	112(94.1%)

At school*

Here we find the unhealthy practice of missing breakfast among the

119 girls to be as high as 52.1% . Consuming breakfast late was reported by 41.9%. Taken as a whole as high as 89.1% of the girls missed any one of the major meals . Additionally another unhealthy practice of snacking between meals on packaged food like chips was seen in 94.1% of the girls.

The second focus area of the study was the behavior of these girls towards some essential micronutrients . Considering one at a time from Table 3 we see that 74.8% were aware of the necessity of iron in diet while 84% could identify correctly a food source rich in iron but only 63.9% however consumes iron rich food despite having a knowledge.

Table 3: Distribution of students according to KAP about some micronutrients (n=119)

Micronutrient	Iron	Iodine	Vitamin-A
Aware about necessity of micronutrient in diet	89(74.8%)	99(83.2%)	85(71.4%)
Correct knowledge about the source	100(84.0%)	89(74.8%)	88(73.9%)
Consumes specific micronutrient rich food	76(63.9%)	62(52.1%)	68(57.1%)

Consumed adequate number of Fe tablets in last one month out of total IFA tablets received in WIFS: 45(59.2%), Has correct knowledge about packaging about Iodized salt, 41 out of 62 (66.1%), Aware about deficiency symptoms: 23 (19.3%)

Again despite a functional government initiative to provide iron supplement under – RKSK scheme in Malda a dismal 59.2% consumed adequate number of iron tablets in the last month. Considering similar aspects of iodine it was seen that 83.2% were aware of the necessity of iodine in diet however only 74.8% could identify a correct source of iodine. Of the 52.1% (62 /119) who consumed iodized salt only 66% (41/62) could identify the packaging of iodized salt by logo. Regarding Vitamin A 71.4% were aware of the necessity of Vitamin A in diet , 73.9% could identify a correct source and 57.1% consumed Vitamin A rich food in last 7 days.

DISCUSSION

An acknowledged fact is that without the proper knowledge and information about nutrition scope of achieving health per se has its limitations. N.Alam (7) admits to as much in his study among adolescents where it states that ' dietary knowledge and access to resource is critical to improve health and nutrition in a sustainable way'. Further in their study they observed that more than 57% of rural adolescent girls needed basic dietary knowledge with 36% not being aware of the importance of proper nutrition. In Indonesia Sitthi Pathima(8) also found in his study that a staggering 41%had low knowledge about balance diet. Knowledge regarding nutrition has many avenues. Loosely idea about balanced diet, necessity about timely diet, ill effects of missing major meals or knowledge about potentially unhealthy habits such as snacking , consuming food with empty calories are some. Others include idea about nutritive value of food, role of micronutrients in diet, information of food sources from where principal component and micronutrient are to be got.

Among these many avenues the knowledge and practice regarding consuming or missing main meals of the day namely breakfast , lunch and dinner, prevalence of unhealthy dietary practices and basic knowledge about micronutrients namely iron , iodine and Vitamin A have been focused in this study. Of the study population we find that 94.1% consumed breakfast (recall of 24 hours) with only 63.4% (recall of 24 hours) consumed it on time i.e between 6a.m to 9.am.About 6% missed breakfast , but this figure changes to52.1% if we consider a recall of last 7 days. Sitti Pathima(8) had a 15.5% girls missing breakfast while study by Raghunath Rao (9) showed 8% of study subjects missing breakfast, with 68%consuming daily and 24% had it only twice a week. Naeeni (10) in their study had 0.8% missing breakfast. Breakfast is an essential meal and missing it is harmful and that having breakfast makes learning easier was observed by 96% of study subjects in study conducted by Sitti Pathima(8)In the present study as stated 52.1% (7 days recall) missed breakfast with 41.9%(7 days recall) consumed it on time. Either lack of awareness about necessity of breakfast or inspite of awareness faulty practice of missing breakfast seems to be present. Developing awareness or probing reasons for such behavior should be the next step to rectify the situation.

In the present study we find that 89% missed one or more major meals (recall of 7 days)with 94.1% having the unhealthy practice of snacking between major meals. Sitti pathima(8) similarly observed that about35.5% of adolescent snacked between meals. Harika Yadav (11) too had a similar25% snacking between meals daily with 38.8% snacking 1-2 times per week. Shabnam Omidvae(12) had 53.7% snacking between meals while 53.9% skipped any one of major meals of the day. Similarly Manisha Sarkar(13) too had seen that 43%of the study population missed a major meal regularly. Seema Chowdhury showed (14) 34.6% of study subjects had a meal frequency of 2-3 times per day instead of 3-4.In keeping with the present study we find that snacking between and missing major meals seems to be a general problem among adolescent in India and abroad. Day school stretches from 10 to 4 in this part of the country , thus traditional lunch time eating may be compromised , similarly for morning school starting at 7am hence eating breakfast is often skipped to economize time are some of the reasons behind these problems. If these indeed be the problem or some other problem which have not been sought , it need to be looked into and addressed accordingly.

Finally throwing light on KAP about micronutrients in the study group we find that awareness about necessity of iron , iodine and Vitamin A in diet to be 74.8%, 83.2% and 71.4% respectively with correct knowledge regarding source of micronutrients iron, iodine, vitamin A to be 84%, 74.8% and 73.9% respectively. Regarding practice of consuming food with adequate micronutrient when seen over last 7 days a moderate 63.9% consumes iron rich food, faring poorly 57.1% eat Vitamin A rich food and 52.1% consumes iodine in form of iodized salt . Of these 66 of the girls constituting the 52.1% only 41 i.e (41/66, amounting to 66%) had correct knowledge about packaging of iodized salt i.e identified the logo indicating iodized salt.

Despite regular supply of Fe tablets under –RKSK only 59.2% of the girls consumed adequate number of iron tablets in the last month.

Considering the situation other areas we find that in a study by Seema Chowdhury (14) Vitamin A deficiency was as high as 90%with knowledge regarding micronutrient and its necessity to be poor. Disease awareness regarding iron deficiency was 97.6% that regarding Vitamin A and iodine was 82.9% and 63.6% respectively .Only 14.8% were aware of the necessity of the Iodized salt. A. Saibaba (15) similarly saw that not only was the diet of the adolescent deficient in iron and Vitamin A 88% of the study population was unaware about the correct method of preparing and storing food to preserve essential components.

The primary problems thus observed were missing breakfast or consuming it late, snacking in between and missing major meals. Further knowledge regarding intake of micronutrients and their necessity in diet was limited . Having identified the lacunae it should be taken into consideration that these areas should be addressed in a method suitable and reliable to leave long standing effects .Sneha Ambre(16) and RaginiMR(17)respectively conducted study on interv entional program me on nutrition for increasing awareness levels. In both the cases a significant improvement was observed. Thus while interventional programmes do help other methods such as inclusion of educative material on nutrition in course curriculum, regular refresher course or display of nutrition related education matter within school premises are some methods to be considered.. Being a vast area with immeasurable scope for improvement further exploration should be encouraged to ensure a healthier young adult population.

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REFERENCE

1. HDI report (2004). Retrieved on 25th August,2016 https://www.undp.org/content /dam/india/docs/hdr_malda_2006_full_report.pdf
2. RMNCH+A document,(2013) GoI retrieved on 26th December-2017 https://nhm.gov.in/images/pdf/RMNCH+A/RMNCH+A_Strategy.pdf
3. KotechaPV, Patel SV, Baxi RK, Mazumdar VS, Mishra S, Mehta KG, Diwanji M & Modi E (2013). Dietary pattern of school going adolescents in urban Baroda, India.J Health Popul Nutr;31(4):490-96
4. RKSK guideline, GOI (2018) retrieved on 03rd January-2019 https://nhm.gov.in /New_Updates_2018/NHM_Components/RMNCHA/AH/guidelines/Implementation _Guidelines_Rashtriya_Kishor_Swasthya_Karyakram(RKSK)_2018.pdf
5. Dietary guideline for Indians-A manual, NIN-ICMR, 2nd Ed.(2011)
6. http://www.fao.org/nutrition/education/food-based-dietary-guidelines/regions /countries/india/en/ accessed on 25th August,2016, Food Based Dietary guideline for India-FAO.
7. Alam N, Roy SK, Ahmed T & Ahmed AMS (2010). Nutritional Status, Dietary Intake, and Relevant Knowledge of Adolescent Girls in Rural Bangladesh. J Health Popul Nutr.

28(1): 86–94.
8. Patimah S, Royani I, Mursaha A & Thaha AR.(2016) Knowledge, attitude and practice of balanced diet and correlation with hypochromic microcytic anemia among adolescent school girls in maros district, South Sulawesi,Indonesia. Biomedical Research 27 (1): 165-171
9. Rao DR, Vijayapushpam T, Rao GMS, Antony GM and Sarma KVR.(2007) Dietary habits and effect of two different educational tools on nutrition knowledge of school going adolescent girls in Hyderabad, India. Eur J Clin Nutr 61: 1081-85
10. Naeeni MM, Jafari S, Fouladgar M, Heidari K, Farajzadegan Z, Fakhri M, Karami P & Omidi R.(2014) Nutritional Knowledge, Practice, and Dietary Habits among school Children and Adolescents. Int J Prev Med. 5(Suppl 2):S171-8.
11. Yadav H, Naidu S, Baliga SS & Mallapur MD. (2015)Dietary Pattern of College Going Adolescents (17-19 years) In urban area of Belagavi. Int.J Rec Sc Res. 6 (5):3774-77.
12. Omidvari S & Begum K.(2014) Dietary pattern, food habits and preferences among adolescent and adult student girls from an urban area, South India. Ind J Fund Appl L Sc.;4(2):465-73
13. Sarkar M,Manna N, Sinha S, Sarkar S & Pradhan U.(2015) Eating habits and nutritional status among adolescent school girls: an experience from rural area of West Bengal. IOSR-JDMS. 14(12): 06-12
14. Choudhary S,Mishra CP & Shukla KP.(2010) Dietary pattern and nutrition related knowledge of rural adolescent girls. Indian J. Prev. Soc. Med. 41 (3&4): 207-215
15. Saibaba A, Ram MM, Rao GVR, Devi U & Syamala TS.(2002) Nutritional status of adolescent girls of urban slums and the impact of IEC on their nutritional knowledge & practices. Indian J. Community Med.XXVII(4): 151-56
16. Ambre S & Sengupta R.(2015) Effect of Nutrition Education Program on Dietary Eating Patterns of Adolescent Girls (16-19 Years). Int. J. Pure App. Biosci. 3 (2): 427-31
17. Renjini MR.(2014) A Study on the impact of nutrition education programme conducted for adolescent girls and parents of Changanacherry Taluk of Kottayam district. Int J Sc Res Pub. 4(1):1-3
18. Surabhi S,Mehan MB and Nair S.(2013) To assess nutritional status of adolescents (10-12 years) from non government funded schools (private) of an urban Indian city & KAP of parents/teachders reagarding healthy dietary and lifestyle behaviours for adolescents. Int J Appl Biol Pharm. 4(3):124-32
19. NIPI guideline, GoI (2013) retrieved on 17 December-2017 https://nhm.gov.in/images /pdf/programmes/wifs/guidelines/Guidelines_for_Control_of_Iron_Deficiency_Anaemia.pdf