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Original Article

Community Section

Utilisation of Adolescent Health Services Under RMNCH+A in an Urban Slum of Berhampur, Odisha, India

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ABSTRACT

Introduction: Adolescents constitute 22.3% percent of the global population. Many challenges are faced by the adolescent girls for which adolescent health services under National Rural Health Mission (NRHM) are being provided to them. Reproductive, Maternal, Neonatal, Child and Adolescent Health (RMNCH+A) approach launched in 2013 was an attempt to address the major causes of mortality among women and children. The RMNCH+A approach has been developed strategically to provide an understanding of 'continuum of care' across various life stages.

Aim: To study the knowledge and extent of utilisation of services under RMNCH+A programme among adolescent girls of Berhampur, Odisha.

Materials and Methods: This field based cross-sectional study was carried out in the Anganwadi centres (AWCs) of urban slums of Berhampur under Urban Health Training Centre (UHTC) of the institution from April 2015 to October 2016. All the unmarried adolescent girls and Anganwadi Workers (AWWs) were the study subjects. Data was collected from the girls using pre-tested, Self designed, semi-structured questionnaire and by in-depth interview from seven AWWs.

Results: A total of 142 Hindu adolescent girls were interviewed. Majority belonged to nuclear families and upper lower socio economic class. Most of them had completed their education upto high school level but 2 (1.4%) had never gone to school. All of them had knowledge about distribution of Iron and Folic Acid tablets (IFA) and 110 (77.4%) were aware about deworming tablets. The media played important role in making girls aware about Sexual and Reproductive Health (SRH). They were not given any preventive health checkups. There were, 30 (21.1%) girls suffering from Reproductive Tract Infections (RTI). But none of them went to the AWWs for consultation. Sanitary napkins were exclusively used by 31 (43.7%) girls. Menstrual hygiene was adequate among 49 (69%) girls. The AWWs had knowledge about services to be provided under RMNCH+A but no health education to the beneficiaries was imparted by them.

Conclusion: All the beneficiaries and AWWs were aware about some services available under RMNCH+A. Inspite of the adequate supply, one third of girls were not consuming IFA. None of the AWWs provided any health education to the ir beneficiaries.

Keywords: Adolescence, Teenager, Youth

INTRODUCTION

Adolescence has been defined by the World Health Organization (WHO) as the period of life spanning between 10 to 19 years [1], through which a child becomes an adult and is characterized by rapid growth and development; physiologically, psychologically and socially. They constitute 22.3% of the global population, more than half of whom lives in Asia [2-5]. As per the census of India 2011, there are 20.91 crore adolescents of whom 9.9 crore are females [6].

The key health issues that adolescent girls suffer from are anaemia, unsatisfactory personal hygiene, early marriages, high risk of RTI or Sexually Transmitted Infections (STIs), high rates of teenage pregnancy and depression [7].

Various programmes have been implemented under National Rural Health Mission (NRHM) with special emphasis on health of adolescent girls.

Reproductive, Maternal, Neonatal, Child, Adolescent Health (RMNCH+A) approach launched in 2013 focuses on major factors responsible for mortality among women and children as well as the delays in accessing and utilising health care and services. The RMNCH+A strategic approach have been developed to provide an understanding of 'continuum of care' across various life stages [8].

The 'Plus' in RMNCH+A denotes the following (I), inclusion of adolescence as a distinct 'life stage' in the overall strategy; (II) linking of maternal and child health to various reproductive health components (like family planning, adolescent health, Human Immunodefeciency Virus (HIV), gender and Preconception and Prenatal Diagnostic Techniques (PCPNDT); and (III) linking of community and facility-based care as well as referrals between various levels of health care system [4].

Priority interventions under RMNCH+A include; the Weekly Iron and Folic Acid tablets Supplementation Scheme (WIFS) is a community-based intervention that addresses iron deficiency anaemia. It aims to distribute IFA (100 mg elemental iron and 500 mg folic acid) weekly as well as deworming tablet (Albendazole 400 mg) biannually to adolescents enrolled in class VI–XII of government, government aided and municipal schools as well as girls not attending schools. Access to SRH information and services, including contraceptives and safe abortion services essential to reduce incidences of STIs, unplanned pregnancies and unsafe abortions. Information and counselling to improve knowledge, attitude and behaviours regarding SRH, mental health, substance abuse, non-communicable diseases. Life skills education was imparted both through educational institutions and community settings. Menstrual hygiene scheme promotes better hygiene among adolescent girls in rural areas by providing them adequate information about the use of sanitary napkins. They are provided under brand name 'Free Days' which are sold to adolescent girls by Accredidated Social Health Activist (ASHA)s. Preventive health check-ups are provided under Rashtriya Bal Swasthya Karyakram (RBSK). In this programme children are screened from birth to 18-years for disesases, defects, disability, developmental delays.

School going and non school going children are screened annually and biannually through School Health Programme (SHP) and Integrated Child Development Services (ICDS) respectively [4].

Adolescents in Odisha constitute 22% of the total population. A number of socioeconomic and cultural factors are responsible for their discontinuation of schooling and early marriage [9]. Many health services under NRHM are being provided to adolescent girls but very few studies have been conducted to assess the utilisation of those services. With the above context, this study was performed with the objective to study the knowledge and extent of utilisation of services under RMNCH+A programme among adolescent girls.

MATERIALS AND METHODS

It is a field based cross-sectional study conducted in AWCs of Urban slums in the field practice area of Department of Community Medicine, MKCG Medical College and Hospital, Berhampur from April 2015 to October 2016.

Total seven AWCs are present in the slum. All the unmarried adolescent girls enlisted in the AWCs and their AWWs were the study participants.

All the unmarried adolescent girls enrolled in the seven AWCs who gave their consent to participate were included in the study.

Those girls who did not attend the AWCs and also could not be contacted at home with prior information were excluded from the study.

Data was collected using a self structured questionnaire devised by using inputs from various literatures. Questionnaire had various sections like socio-demographic data, reproductive health, menstrual health and services availed under RMNCH+A. Before data collection, validity and reliability of the questionnaire was assessed by pretesting. This was done among 15 girls belonging to another nearby slum (which was not the study area). After making necessary modifications the questionnaire was used to collect data from the adolescent girls by interview method. In-depth interview of AWWs was conducted to collect data on their knowledge and practice on adolescent health services.

After obtaining approval from Institutional Ethical Committee (IEC), permission was availed from the Child Development Programme Officer (CDPO) of ICDS office, Berhampur for conducting the study in the AWCs. As schools remained closed on the second Saturday of every month, both school going and non school going girls were contacted for data collection on these days in the AWCs. All the beneficiaries were intimated a week prior to interview to remain present at the interview session. After obtaining written consent, willing respondents were interviewed. The participants who did not attend AWC were interviewed by a house visit. Simultaneously, an in-depth interview of the respective AWWs was done.

Modified Kuppuswamy classification 2014 was used for calculation of Socio-Economic Status (SES) [12]:

Menstrual hygiene was not considered to be adequate if any one of the following was present:

- Using reused clothes but not sun drying.
- Having any perineal infection
- Changing clothes or napkins maximum once in a day.

RESULTS

Following the inclusion and exclusion criteria, out of 212 girls a total of 142 adolescent girls were available for the interview. So the response rate was 67%. Mean age of participants was 13.68±2.78 years. Majority (n=95, 66.9%) girls were in the age range of (10-14) years [Table/Fig-1].

Among them (n=104, 73.2%), (n=20, 14.1%) and (n=18, 12.7%) girls belonged to nuclear, three generation and joint families respectively. All females preached Hinduism.

Age group (in years)	Frequency	Percentage
10-14	95	66.9
15-19	47	33.1

[Table/Fig-1]: Age distribution of girls (n=142).

Majority (n=94, 66.2%) belonged to upper lower class. Considering the educational status of the study participants, (n=125, 88%) were continuing their studies but (n=15, 10.6%) were school dropouts, rest (n=2, 1.4%) had never gone to school. Most of the girls i.e., (n=57, 40.1%) had studied upto high school level [Table/Fig-2].

Characteristic	Number (%)
Schooling	
Never attended school	2 (1.4)
School dropout	15 (10.6)
School going	125 (88)
Education	
Intermediate or Post High school diploma	22 (15.5)
High school certificate	57 (40.1)
Middle school certificate	33 (23.2)
Primary school certificate	28 (19.7)
Illiterate	2 (1.4)

[Table/Fig-2]: Educational status of study participants (n=142).

[Table/Fig-3] reveals that the knowledge of beneficiaries on services provided under RMNCH+A. All knew about distribution of IFA tablets whereas (n=110, 77.4%) knew about deworming tablets. Media was the source of awareness regarding use of sanitary napkins. Regarding SRH, HIV/Acquired Immunodeficiency Syndrome (AIDS) and contraceptives (n=36, 25.4%), (n=43, 30.3%) and (n=25, 17.6%) girls were aware respectively. Media was the source of information for (n=25, 69.4%), (n=26, 60.4%) and (n=25,100%) study participants in above three domains respectively. None of them received any information from the AWWs. Also, they were not provided with preventive health check-ups.

Services under RMNCH+A	Knowledge		Source of Knowledge			
	Yes (%)	No (%)	AWW	Teach-ers	Media	Friends
Adolescent nutrition (IFA)	142 (100%)	0 (0%)	142 (100%)	-	-	-
Deworming Tablets	110 (77.4%)	32 (22.5%)	-	-	-	-
Menstrual Hygiene	142 (100%)	0	-	-	142 (100%)	-
SRH	36 (25.4%)	106 (74.6%)	-	9 (25%)	25 (69.4%)	2 (5.5%)
HIV/AIDS	43 (30.3%)	99 (69.7%)	-	15 (35%)	26 (60.4%)	2 (4.6%)
Contraception	25 (17.6%)	117 (82.4%)	-	-	25 (100%)	-
Preventive health checkups	0	142 (100%)	-	-	-	-

[Table/Fig-3]: Knowledge of study participants on services provided under RMNCH+A (n=142).

In spite of their knowledge on distribution of tablets, (n=95, 66.9%) were taking IFA and (n=84, 59.2%) were taking deworming tablets respectively. Significantly a higher number of school going girls were consuming IFA tablets. No association was found among IFA consumption and type of family or SES of the study participants. Tablets were not received by (n=16, 34%) girls whereas (n=31, 66%) feared side effects like bad taste and blackish stool. Because of irregular supply of deworming tablets many did not receive the tablets though they knew about it [Table/Fig-4].

Out of total 142 girls, (n=30, 21.1%) were suffering from RTI. Abnormal vaginal discharge, itches/sores, burning micturition,

Characterstics		Yes (n=95)	No (n=47)	χ^2	P
Type of family	Joint	13 (13.7%)	5 (10.6%)	0.425	0.809
	Nuclear	68 (71.6%)	36 (76.6%)		
	Three generation	14 (14.7%)	6 (12.8%)		
Schooling status	School going	88 (92.6%)	37 (78.7%)	7.507	0.023*
	School drop-out	7 (7.4%)	8 (17%)		
	Never attended school	0 (0%)	2 (4.3%)		
SES	Upper middle	2 (2.1%)	1 (2.1%)	3.092	0.378
	Lower middle	23 (24.2%)	18 (38.3%)		
	Upper lower	67 (70.5%)	27 (57.4%)		
	Lower	3 (3.2%)	1 (2.1)		

[Table/Fig-4]: Various factors affecting consumption of IFA (n=142).
χ^2-Chi-square test, p-value significant when p≤0.05 at 95% confidence interval

Symptom	Yes (%)	No (%)
Abnormal vaginal bleeding	16 (53.3%)	14 (46.7%)
Itches/sore	4 (13.3%)	26 (86.7%)
Burning micturition	20 (66.6%)	10 (33.3%)
Increased frequency of micturition	9 (30%)	21 (70%)
Pain in suprapubic area	3 (10%)	27 (90%)

[Table/Fig-5]: Symptoms of RTI (n=30).

increased frequency of micturition, pain in supra-pubic area were complained by (n=16, 53.3%), (n=4,13.3%), (n=20,66.6%), (n=9, 30%), (n=3,10%) girls respectively [Table/Fig-5]. But, none of them went to the AWCs for treatment or consultation.

Out of 71 girls who had attained menarche though all knew about sanitary napkins; However, they were exclusively used by (n=31, 43.7%) girls. Only clothes were used by (n=28, 39.4%) girls. Rest (n=12, 16.9%) used both.

Characterstics		Yes (n=49)	No (n=22)	χ^2	P
Type of family	Joint	6 (12.2%)	3 (13.6%)	2.144	0.709
	Nuclear	36 (73.5%)	18 (81.8)		
	Three generation	7 (14.3%)	1 (4.5%)		
Schooling status	School going	39 (79.5%)	18 (81.8%)	9.703	0.046*
	School drop-out	8 (36.4%)	4 (18.1%)		
	Never attended school	2 (4.1%)	0		
SES	Upper middle	0	0	5.507	0.481
	Lower middle	14 (28.5%)	9 (40.9%)		
	Upper lower	33 (67.3%)	13 (59.1%)		
	Lower	2 (4.1%)	0		

[Table/Fig-6]: Factors affecting menstrual hygiene (n=71).
χ^2-Chi-square test, p-value significant when p≤0.05 at 95% confidence interval

Menstrual hygiene was adequate for (n=49, 69%) of the girls. Adequacy of menstrual hygiene was significantly higher among school going girls (χ^2=9.703, p=0.046) [Table/Fig-6].

Chi-square test, p-value significant when p≤0.05 at 95% confidence interval [Table/Fig-7] illustrates information gathered from interview of all seven AWWs present in the area. All knew about the RMNCH+A programme and its adolescent components. They were aware of distribution of IFA and deworming tablets to the adolescents. All of them received adequate supply of IFA but not deworming tablets. Neither there was any knowledge nor supply of Free Days sanitary napkins among the girls. No health education was given to the beneficiaries. They knew how to update records of the stock supplied and all their records were

Characteristics	Knowledge	Practice
About adolescent age group	7 (100)	_
About programmes relating to adolescent girls	7 (100)	_
WIFS, Dewomimg tablets distribution	7 (100)	7 (100)
Free days(sanitary napkins)	0 (0)	0 (0)
Health education on SRH, Menstrual hygiene, Nutritional anaemia	7 (100)	0 (0)
Updated maintenance of records	7 (100)	7 (100)
Any counseling or health education to beneficiaries	7 (100)	0 (0)
Attendance of VHND session	7 (100)	7 (100)

[Table/Fig-7]: Knowledge and practice of AWW regarding health services (n=7).

updated. They attended Village Health and Nutrition Day (VHND) sessions. According to the AWWs, monitoring of their activities was not done regularly as per the schedule. Inspite of adequate stock of IFA tablets, many girls did not consume because of fear of side effects.

DISCUSSION

The present study was conducted In an urban slum of Berhampur. A total of 142 adolescent girls were interviewed with a mean age of (13.68±2.78) years. Of them (n=95, 66.9%) were in the age range of (10-14) years. The findings were slightly higher as compared to study by Bhattacharya H et al., in Dibrugarh [10] and Kollur LR et al., in Maharashtra [11] where 54.57% and 55% belonged to early adolescence (10-14 years) respectively.

All of them were Hindus and the majority i.e., (n=104, 73.2%) belonged to nuclear families. The findings were consistent with that of Barman P et al., where, majority of the girls were Hindus (67.7%) and belonged to nuclear family(74.3%) [12] Kollur LR et al., in their study performed in Maharashtra in year 2014 found that majority of girls followed Hinduism (60%) and belonged to nuclear family (81%) [11].

In this study most of the girls i.e., 94(66.2 %) belonged to upper lower class. Findings were similar to that of Barman P et al., where girls mostly belonged to SES IV (53%) [12]. On the contrary, Bandkhadke GM et al., in their study found that most of the girls belonged to low SES [13].

Considering the educational status of the study participants, (n=15, 10.6%) were school dropouts and (n=2, 1.4%) had gone to school. On enquiry of their schooling, (n=57, 40.1%) had studied upto high school level. In study by Baliga SS et al., 98.5% were literate, and 90% were currently enrolled in a school. Dropout rate was consistent with that of the present study [14]. Shah SP et al., in the year 2013 reported (n=153,93%) girls had at least primary level formal education, (n=55,33.5%) were school-going which was much less than the present study [15].

Media was their source of awareness regarding sanitary napkins and contraceptives. Information about SRH and HIV was obtained by (n=25, 69.4%) and (n=26, 60.4%) girls from media respectively. None of them received information from the AWWs. Kotecha PV, et al., in Vadodara reported that most of the girls obtained information on SRH from schoolbooks, television, teachers, friends and parents. Knowledge about contraception, HIV/AIDS and its modes of transmission was known to 25%, 66% and 50% of the girls respectively [16]. Singh A and Jain S, found that, knowledge regarding HIV/AIDS, RTI and contraception was present among 60%, 31.8%, 29.6% girls respectively which was higher than that of present study [17]. This may be due to higher literacy and more exposure to media. As per Nema A and Sharma KKN, in Jabalpur in 2007, post-marital sex, conception and pregnancy, RTI/STI, unsafe period of pregnancy, partiurition was known to 74%, 66%, 15.2%, 44%, 12.8% of girls respectively. Electronic media was the most powerful source of information [18]. In the present study, teachers

and parents played very less important role in providing information to adolescents.

All of the girls knew about distribution of IFA tablets whereas deworming tablets were known to (n=110, 77.4%) girls. In spite of their knowledge on distribution of tablets, (n=95, 66.9%) were taking IFA tablets which was significantly higher among school going girls. Out of those not consuming IFA, (n=16, 34%) did not receive tablets and rest i.e., (n=31, 66%) feared of side effects like bad taste and blackish stool. Deworming tablets were taken by (n=84, 59.2%) girls. Rest had not received them.

In study by Sau DA, in West Bengal in 2016, it was found that, 12.6 % girls are non compliant to IFA tablet consumption out of which 52% feared of unpleasant side effects [19]. According to Dhikale P and Suguna E, majority (85.8%) of the students consumed IFA tablets weekly. Absenteeism (55.1%), powdery tablet (22.4%), and side effects (22.5%) were reasons for non compliance [20]. Non compliance in the above studies which was lower than that of the present study may be attributed to higher level of health awareness and concern.

They were not provided with any preventive health check ups. Though (n=30, 21.1%) were suffering from RTI but none of them went to the AWCs for treatment or consultation. According to Ram R et al., 64% girls were suffering from RTI [21]. Prevalence of RTI in present study was less which might be because most of girls were school going and were aware about hygiene In study by Siddaiah A et al., symptoms of RTI was reported by (n=71,25.9%) out of which half did not seek any treatment. Prevalence of RTI was consistent with that of present study [22].

Inspite of knowledge of menstrual hygiene, sanitary napkins and clothes were exclusively used by (n=31, 43.7%) and (n=28, 39.4%) girls respectively. Rest (n=12, 16.9%) used both. In study by Deo D and Ghattargi C, majority of girls preferred to use cloth pieces during menses [23]. According to Dasgupta A, and Sarkar M, (n=78,48.75%) girls knew the use of sanitary napkins but only (n=18,11.25%) girls used them which was less than the present study [24]. Findings were better in study by Kamath R et al., in which 70.4% girls were using sanitary napkins [25]. According to Patle R and Sanjay K, more number of urban 62.03% girls were using sanitary pads as compared to rural 43.4% [26]. Awareness and SES are the major predictors of rate of use of sanitary napkins.

Menstrual hygiene was adequate for (n=49, 69%) girls. Adequacy of menstrual hygiene was significantly higher among school going girls. Khanna A et al., in their study found that, schooling, residence, father's occupation, caste and exposure to media mainly influenced menstrual hygiene, lack of which resulted in RTIs [27]. Dhingra R et al., in their study in 2009, found that menstrual hygiene was unsatisfactory which was influenced by SES and age [28]. Ray S and Dasgupta A, found that menstrual hygiene was better among those girls whose mothers were literate, completed higher secondary education, aware about menstruation prior to menarche, using sanitary latrine, and exposed to media [29]. In study by Mishra SK et al., urban girls have better menstrual hygienic practices and hence less RTI as compared to rural [30].

All the AWWs were aware of the services to be provided to the adolescents; still none of them gave any counseling or health education regarding nutrition or reproductive health to the girls. Lack of regular supervision may be the reason responsible for this unsatisfactory performance.

LIMITATION

All girls enrolled in AWC could not be interviewed. Even due to scarcity of time, few details could not be elicited properly. Above two were reasons for which results of the study cannot be generalized for a larger population.

CONCLUSION

All the beneficiaries as well as AWWs were aware about some or other services available under RMNCH+A. Even though there was adequate supply of IFA, one-third of the adolescents were not consuming it. There was, however, inadequate supply of deworming tablets. None of the AWWs provided any health education or counselling to the beneficiaries. Hence, school teachers and parents should be made aware about the services provided under the programmes so that it would help in utilisation of services. Supportive supervision of AWWs would help in improving quality coverage. The study reveals that due to lacuna at various levels of implementation of RMNCH+A, it is being utilised less effectively.

Note: The copy of the questionnaire can be requested from the author and/or the editorial.

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