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Original Research Article

A pilot study to assess the knowledge, attitude and utilization of Kishori Balika Yojana among adolescent girls (14-18yrs) at rural mahasamund, Chhattisgarh

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ABSTRACT

Background: Adolescent girls face risks including injuries, reproductive and sexual health issues, nutritional and emotional problems, and abuse. In response, the Government of India launched the Adolescent Girls' Scheme in 2000 under the Integrated Child Development Scheme, aiming to enhance nutrition, health, and empowerment among adolescent girls.

Aims: A community-based cross-sectional descriptive study was carried out in rural Mahasamund to evaluate the knowledge, attitudes, utilization of the Kishori Balika Yojana (KBY), and nutritional status of adolescent girls.

Materials and Methods: A simple random sampling technique was used to selected a sample of 35 adolescent girls. Data collection involved a structured knowledge questionnaire (20 items), a Likert scale (18 items), a checklist (7 items), and a nutritional assessment checklist.

Results: Among the 35 adolescent girls, 5 (14.2%) were school dropouts, and 16 (45.7%) were undernourished. Most participants 27 (77.2%) had moderately adequate knowledge, while 7 (20%) had inadequate knowledge. Perception towards KBY services was neutral for 33 (94.2%) and unfavorable for 2 (5.8%). All 35 girls visited the Anganwadi center; 32 (91.4%) utilized supplementary nutrition services, 33 (94.2%) received iron and folic acid tablets, 22 (62.8%) participated in health checkups, and 17 (48.6%) attended health education sessions. Only 2 (5.7%) were aware of life skills education, and none participated in vocational training services.

Conclusion: The study found moderately adequate knowledge, neutral perceptions, and good utilization of supplementary nutrition and iron-folic acid supplementation among the girls. However, participation in health checkups, nutrition and health education, life skills education, and vocational training was limited. Educational interventions and modules on KBY services could enhance knowledge, foster favorable perceptions, and improve utilization of KBY services.

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1. Introduction

Adolescence is a pivotal stage in a woman's life, marking the transition from childhood to adulthood. This period is critical for mental, emotional, and psychological well-being. The holistic development of children is incomplete

if adolescent girls are not included in programs aimed at human resource development. The World Health Organization (WHO) defines adolescents as individuals aged 10 to 19. Globally, this age group comprises approximately 1.2 billion people, or one-sixth of the world's population.¹

Although adolescents are generally considered healthy, many faces premature deaths due to preventable or treatable

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causes. Females, often labeled as the weaker sex, frequently encounter significant discrimination, affecting their access to education, nutrition, and overall health. This societal behavior poses severe risks to adolescent girls' health. Ensuring their health and well-being is crucial for reducing future health issues and enhancing the country's overall development and prosperity.²

In response, the Government of India has initiated several programs to improve adolescent health. One such program is the Kishori Shakti Yojana, which has been renamed Kishori Balika Yojana since March 2022. This scheme, particularly active in aspirational districts and eastern states of India, targets adolescents aged 14-18. It aims to enhance nutritional and health status, raise awareness about health, hygiene, and nutrition, support educational opportunities, and help adolescents develop life skills and make informed decisions to contribute positively to society.^{3,4}

Despite these efforts, many government schemes, including Kishori Balika Yojana, fail to reach their intended beneficiaries due to issues like lack of awareness, unfavorable attitudes, and poor utilization of services. This has prompted the investigation into the knowledge, attitudes, and utilization of Kishori Balika Yojana among adolescent girls, to identify gaps and implement effective interventions to ensure these girls benefit from the scheme.⁵

2. Objectives

1. To evaluate the knowledge, attitudes, and utilization of Kishori Balika Yojana among adolescent girls aged 14-18 years.
2. To assess the nutritional status of adolescent girls within the same age group
3. To determine the relationship between the levels of knowledge, attitudes, and utilization concerning Kishori Balika Yojana among adolescent girls aged 14-18 years.
4. To examine the association between knowledge, attitudes, and utilization of Kishori Balika Yojana and selected demographic variables among adolescent girls.

3. Materials and Methods

3.1. Sample setting

The study was conducted in five Anganwadi centers located in Barondabazar, Bamhni, and Parasati villages in the Mahasamund district.

3.2. Methodology

A community-based descriptive cross-sectional study was performed in April 2024 to evaluate knowledge, attitudes, and utilization of Kishori Balika Yojana among adolescent girls in Mahasamund district, Chhattisgarh.

3.3. Study population and sampling

The study targeted adolescent girls aged 14-18 years residing in rural Mahasamund district, Chhattisgarh. A simple random sampling method was employed to select a sample of 35 girls within this age group.⁶

3.4. Ethical considerations

Ethical approval was obtained from the Institutional Ethics Committee (Letter No.: 4303/IEC-AIIMSRRP/2024). Written consent was secured from parents, and assent was obtained from participants. A structured, validated questionnaire was administered after explaining the study's purpose.

3.5. Tools and techniques

Data collection occurred at Anganwadi centers from April 1 to April 6, 2024. The data collection tools included:

1. Demographic proforma with 19 items.
2. Structured knowledge questionnaire with 20 items across three domains (reliability coefficient, $r=0.8$).
3. A Likert scale with 18 items across two domains (reliability coefficient, $r=1.0$) to assess perceptions.
4. A checklist with 8 items (reliability coefficient, $r=0.9$) to evaluate utilization of Kishori Balika Yojana.
5. A Nutritional Assessment checklist, divided into two parts: Part 1 - Anthropometric assessment with 3 items, and Part 2 - Clinical Examination with 17 items.

3.6. Data analysis

Data were compiled in Microsoft Excel and analyzed using SPSS version 22.0. Descriptive statistics, including means (standard deviations) for continuous variables and frequencies (percentages) for categorical variables, were reported. Karl Pearson correlation coefficients were used to examine relationships between knowledge, attitudes, and utilization of Kishori Balika Yojana. Chi-square tests were applied to identify associations between different variables.

4. Results

4.1. Section A, Part 1: Demographic Characteristics of Adolescent Girls

A total of 35 adolescent girls participated in the study. Their ages ranged from 14 to 18 years, with 18 girls (51.4%) in the 14-15 years age group and 17 girls (48.6%) in the 16-18 years age group. Most girls (30 or 85.7%) lived in joint families, while 5 girls (14.3%) lived in nuclear families.

A similar study conducted by Kowli S et al.⁷ reported Majority of adolescent girls 360 (95.7%) were Muslims by religion but in our study All participants 35 (100%) were Hindu.

Regarding socio-economic status, 22 girls (62.9%) were from the upper-lower class, and 10 girls (28.6%) were from the lower-middle class, 3(8.5%) were from upper lower class, according to the modified Kuppusamy classification. In terms of sanitation, 25 girls (71.5%) used household latrines, 9 girls (25.7%) used Sulabh Shauchalaya, and 1 girl (2.9%) used open fields.

Housing conditions showed that 22 girls (62.9%) lived in pucca houses, 8 girls (22.9%) in semi-pucca houses, and 5 girls (14.3%) in kutchra houses. For water supply, 34 girls (97.1%) drank tap water, while 1 girl (2.9%) drank borewell water.

Regarding parental education, among mothers, 7 mothers (20%) were illiterate, while 28 mothers (80%) were literate, with 7 (25%) having primary education, 12 (40%) secondary education, and 9 (34.3%) collegiate education. Among fathers, 4 (11.4%) were illiterate, and 31 (88.6%) were literate, with 4 (11.4%) having primary education, 15 (42.9%) secondary education, 9 (37.1%) collegiate education, and 3 (8.6%) technical education.

Occupationally, 19 mothers (54.3%) were homemakers, and 11 mothers (31.4%) worked in agriculture. For fathers, 28 (80%) worked in agriculture. Most adolescent girls (29 or 82.9%) were non-vegetarians, while 6 girls (17.1%) were vegetarians. Regarding meal frequency, 18 girls (51.4%) had two meals per day, and 17 girls (48.6%) had three meals per day. Among the girls, 5 (14.2%) were school dropouts due to financial constraints, while 30 girls (85.7%) were still attending school. A similar study conducted in Uttarakhand reported 41(400) 10.1% girls had dropped out from school.⁸

4.2. Section A, Part 2: Kishori Balika Yojana-Related Variables

Regarding participation in nutrition and health education programs or training, 18 girls (51.5%) attended such programs, primarily through school education (100%). The remaining 17 girls (48.6%) did not attend any programs.

In terms of health check-ups, 26 girls (74.2%) had undergone health check-ups previously. The main sources for these check-ups were schools (69.2%) and other sources (30.8%). The frequency of health check-ups varied, with 17 girls (65.3%) having them every three months, 11 girls (42.3%) annually, and 9 girls (25.7%) never had a health check-up.

For guidance or counseling on Adolescent Reproductive and Sexual Health (ARSH), 14 girls (40%) received it, mainly from schools (57.1%) and health workers (37.1%). The remaining 21 girls (60%) did not receive any guidance.

Regarding life skills training, 30 girls (85.7%) did not attend any programs, while 5 girls (24.3%) did, with schools being the sole source (100%). None of the girls received vocational training.

The results showed that the average score for perception of Kishori Balika Yojana services was 61.4. This indicates

that most participants 33 (94.2%) had a neutral perception, while 2 girls (5.8%) had an unfavorable perception of the services. study interpreted that majority (94.2%) of the subjects had neutral perception towards KBY (Kishori Balika Yojana) Services. A study conducted in Mangalore that study interpreted that majority (71%) of the subjects had unfavorable perception towards KSY Services.⁹

4.2.1. The results revealed the following

1. Visits to Anganwadi Centre: All 35 girls (100%) visited the Anganwadi centre. Among them, 22 girls (62.5%) visited once a week, 10 girls (28.5%) visited twice a week, and 3 girls (8.5%) visited once a month
2. Participation in Supplementary Nutrition Programme: Out of 35 girls, 32 (91.4%) participated in the supplementary nutrition programme. Of these, 20 girls (80%) received take-home rations once a week, 10 girls (31.2%) received them twice a week, and 2 girls (6.2%) received them once a month
3. Iron and Folic Acid Supplementation Programme: A total of 33 girls (94.2%) received iron and folic acid tablets. Of these, 28 girls (84.8%) received the tablets from school, while 5 girls (15.1%) received them from the Anganwadi centre. Among those who received the supplements, 28 girls (84.4%) got them weekly, 4 girls (12.1%) received them monthly, and 1 girl (3%) received them every 2-3 months.
4. Participation in Health Check-ups: Out of 35 girls, 22 (62.8%) participated in health check-ups. Among these, 15 girls (68.2%) had check-ups every three months, 3 girls (13.6%) had them monthly, 3 girls (13.6%) had them annually, and 1 girl (4.5%) had them every six months.
5. Participation in Nutrition and Health Education Programmes: Out of 35 girls, 17 (48.6%) participated in nutrition and health education programmes. Of these, 14 girls (77.7%) attended these programmes every three months, 2 girls (11.1%) attended monthly, and 1 girl (5.5%) attended weekly.
6. Participation in Life Skills Education Sessions: Only 2 girls (5.7%) participated in life skills education sessions, and both attended these sessions every three months.
7. Participation in Vocational Training Programme: None of the girls participated in vocational training programmes.

The mean score of utilization for Kishori Balika Yojana services is 4.65, indicating that over 75% of participants engaged in the Supplementary Nutrition and Iron Folic Acid Supplementation programmes. However, very few participants attended life skills education sessions, and none participated in vocational training.^{1,10}

Table 1: Analysis of knowledge of adolescent girls regarding Kishori Balika Yojana Services:

Level of Knowledge	Frequency	Percentage
Adequate (More than 75 %)	01	2.8
Moderately adequate (51 to 74 %)	27	77.2
Inadequate (Less than 50 %)	07	20
Overall	35	100

Table 2: Mean, Median, Mode, standard deviation and Range regarding awareness of Kishori Balika Yojana among adolescent girls (14-18 yrs) at Anganwadi centre. N=35

S.No.	Statement	Max. score	Mean	Median	Mode	Standard Deviation	Range
1	Awareness about Kishori Balika Yojana and its services	20	11.4	12	13	2.18	09

Table 3: Analysis of perception of adolescent girls regarding Kishori Balika Yojana Services:

Level of Attitude	Frequency	Percentage
Favourable perception-68 to 90 (More than 75 %)	0	0
Neutral perception-46 to 67 (51 to 74 %)	33	94.2
Unfavourable Perception - <45 (Less than 50 %)	02	5.8
Overall	35	100

Table 4: Mean, Median, Mode, standard deviation and Range regarding perception of Kishori Balika Yojana among adolescent girls (14-18 yrs) at Anganwadi centre. N=35

S.No.	statement	Max. score	Mean	Median	Mode	Standard Deviation	Range
1	Perception about Kishori Balika Yojana and its services	90	61.4	62	63	4.37	17

Table 5: Analysis of utilization of adolescent girls regarding Kishori Balika Yojana Services

S.No	Services of Anganwadi availed by adolescent girl	Frequency	Percentage
1	Adolescent girl visiting Anganwadi centre	35	100
2	Participated in Supplementary Nutrition Programme	32	91.4
3	Participated in Iron Folic Acid Supplementation Programme	33	94.2
4	Participated in health checkup	22	62.8
5	Participated in Nutrition and Health Education Programmes	17	48.5
6	Participated in Life Skills Education session	02	5.7
7	Participated in Vocational Training programme	0	0

Table 6: Mean, Median, Mode, standard deviation and Range regarding utilization of Kishori Balika Yojana among adolescent girls (14-18 yrs) at Anganwadi centre. N=35

S.No.	Statement	Max. score	Mean	Median	Mode	Standard Deviation	Range
1	Utilization of Kishori Balika Yojana services	07	4.65	4	4	1.6	5

Table 7: Analysis of nutritional status assessment among adolescent girls Part 1 -Anthropometric assessment

S.No	BMI categories	Frequency	Percentage
1	Undernourished (< 18.5 kg/m ²)	16	45.7
2	Normal (18.5-24.9 kg/m ²)	16	45.7
3	Overweight and obese (>25 kg/m ²)	03	8.5

Table 8: The result re-affirms the relationship between knowledge attitude and utilization with Kishori Balika Yojana as shown in Table

Variable	Correlation coefficient	P-Value
Knowledge-Attitude	0.644	<0.05
Knowledge-Utilization	0.51	<0.05
Attitude- Utilization	0.19	<0.05

5. Discussion

5.1. Section I: Demographic characteristics of adolescent girls

The study found that over half (51.4%) of the adolescent girls were aged 14-15 years, and all participants were Hindu. Most of the girls (85.7%) lived in joint families. A majority (62.9%) belonged to the upper-lower socio-economic class according to the modified Kuppusamy scale. Most girls (71.5%) used household latrines, lived in pucca houses (62.9%), and drank tap water (97.1%). Educationally, 80% of mothers and 88.6% of fathers were literate. The predominant occupation for mothers was homemaking (54.3%), while for fathers; it was farming/agriculture (80%). Most of the adolescent girls (82.9%) consumed non-vegetarian food, and over half (51.4%) had two meals a day. A significant majority (85.7%) of the girls attended school, with only 14.2% being school dropouts. Additionally, 51.5% of the girls attended nutrition and health education programs, and 74.2% had undergone health check-ups previously.

5.2. Section II: Analysis of knowledge regarding KBY services

The mean awareness score for Kishori Balika Yojana (KBY) services was 11.4, indicating that most participants (77.2%) had moderately adequate knowledge. However, 20% of the subjects had inadequate knowledge about KBY services. This finding is consistent with a similar study by Swathi S. Aithal et al., where only 32.7% of participants were aware of KSY (Kishori Sakthi Yojana) services

5.3. Section III: Analysis of perception regarding KBY services

The study revealed that the majority of participants (94.2%) had a neutral perception of KBY services.

5.4. Section IV: Utilization of KBY services

In this study, all 35 adolescent girls (100%) visited the Anganwadi center, with the majority (62.5%) attending weekly. A total of 32 girls (91.4%) participated in the supplementary nutrition program under KBY, and among them, 20 (80%) received take-home rations weekly. Additionally, 33 girls (94.2%) received iron and folic acid (IFA) tablets, with 28 (84.8%) getting them from school and 5 (15.1%) from the Anganwadi center. More than half of the participants (62.8%) engaged in health check-ups, with 15 (62.8%) attending every three months. Regarding health education programs, 17 girls (48.6%) participated, with 14 (77.7%) attending monthly. Only 2 girls (5.7%) were aware of life skills education, and none had participated in vocational training services.

5.5. Section V: Nutritional Status Assessment among Adolescent Girls

According to the WHO classification of BMI categories, this study found that 16 girls (45.7%) were undernourished, 16 girls (45.7%) had a normal BMI, and 3 girls (8.5%) were classified as overweight or obese. The mean BMI of the participants was 19.4 kg/m². Additionally, 17 girls (48.5%) showed paleness in the face, and 8 girls (22.8%) had dull, dry hair and hair sparseness.

5.6. A similar study was conducted to assess the nutritional status among adolescent girls in India

Venugopal's Study on nutritional Status among adolescent girls (Chhattisgarh): The study found that the prevalence of undernutrition was 64.7% overall. Specifically, girls aged 12 had the highest rate of undernutrition, at 37.8%.¹¹ study conducted by Bharti kumar m, prasad p. Out of 300 AGLs from SABLA of 50 Rural AWCs, 79 per cent are underweight whereas 67 per cent stunted. The nutritional status of 85 per cent is undernourished i.e. according to the BMI only 15 per cent girls are in normal range. 78 per cent AGLs are anaemic in which 24 per cent moderate and 9 per cent are severe anemic i.e. Hb level.¹² A study conducted by Pratibha Patanwar regarding Nutritional Status of Kurmi Adolescent Girls of Raipur City Chhattisgarh; the study found that 53.8% of the adolescent girls were thin (BMI ≤ 18.5). The prevalence of chronic energy deficiency based on BMI (grade I, II and III) were 26.0%, 14.4%, and 13.4 % respectively. None of the girls was found to be obese. Only 3.6 percent girls were overweight and 42 percent girls were found normal¹³. Chandrakumari et al. (Rural Tamil Nadu): Anemia Prevalence: The overall prevalence of anaemia was 48.63% among 124 girls. Anaemia was notably higher at 52.24% among late adolescents and those from low socioeconomic backgrounds.¹⁴

Table 9: Associations between level of knowledge, attitude and utilization with selected demographical variables related Kishori Balika Yojana among adolescent girls (14-18 yrs) at Anganwadi centre.

Variables	N (35)	Knowledge Chi square test %		Attitude Chi square test %		Utilization Chi square test %	
		X2	P value	X2	P value	X2	P value
Age in yrs.							
14-15	18	c2=2.88	p=0.534(NS)	c2=3.445	p= 0.064 (NS)	c2=2.246	p=0.228(NS)
16-18	17						
Religion							
Hindu	35						
Muslim	0	No statistics	No statistics				
Christian	0						
Type of family							
Nuclear Family	05	c2=1.45	p= 0.303(NS)	c2=1.906	p= 0.186(NS)	c2= .354	p= 0.731 (S)
Joint family	30						
Extended Family	0						
Socio – Economic status of family							
Upper class	0	c2=2.04	p=0.359(NS)	c2=.062	p= 0.969 (S)	c2= 1.253	p= 0.534(NS)
Upper Middle class	01						
Lower Middle class	10						
Upper Lower class	22						
Lower class	2						
Type of House							
Kutchra	5	c2=0.73	P=0.692 (NS)	c2=1.415	P=0.492 (NS)	c2=7.159	P=0.027(NS)
Pucca	22						
Semi-pucca	8						
Open field	1						
Mode of defecation							
Open field	1	c2=2.18	p=0.33 (NS)	c2=1.925	p=0.381 (NS)	c2= 8.485	p= 0.014 (NS)
House hold Latrine	25						
Sulabh Shauchalaya	9						
Have you attended School?							
Yes	30	c2=.000	p=0.744(S)	c2=6.176	p=0.019 (NS)	c2=6.176	p= 0.731(NS)
No	5						
Type of water supply							

<i>Table 9 continued</i>							
Well water	0						
Tap Water	34						
Pond	0	c2=.25	p=0.8(S)	c2=1.090	p=0.485(NS)	c2= 16.98	p=0.057(NS)
Bore well	1						
Educational status of mother							
Illiterate	07						
Literate	28						
a) Primary Education	14						
b) Secondary Education	12	c2=.365	p=0.484(S)	c2=.008	p=0.620 (S)	c2=.886	p=0.620(NS)
c)Collegiate Education	02						
d)Technical Education	0						
Educational status of father							
Illiterate	04						
Literate	31	c2=1.17	p=0.378 (NS)	c2=.016	p=0.652 (S)	c2= .283	p= 0.775 (S)
b) Secondary Education	15						
c)Collegiate Education	19						
d)Technical Education	03						
Occupation of Mother							
Home Maker	19						
Farmer/Agriculturjgvv ,l	14						
Self -employee-Business	01	c2=1.259	p=0.738 (NS)	c2=4.866	p= 0.181 (NS)	c2=1.591	p=0.661 (NS)
Employee	01						
Occupation of Father							
Unemployment	0						
Farmer/Agriculture	28						
Self -employee-Business	4	c2=.848	p=0.488 (NS)	c2=1.878	p=0.391 (NS)	c2=4.729	p=0.094 (NS)
Employee	3						
Type of diet							
Vegetarian	06						
Non-Vegetarian	29	c2=.050	p=0.655(S)	c2=.949	p=0.300 (NS)	c2=.439	p=0.682 (S)
Eggetarian	0						
Number of meals per day							
2 times in a day	17						
3 Times in a day	17						
4Times in a day	01	c2=4.853	p=0.088(NS)	c2=1.561	p=0.458 (NS)	c2=2.246	P=0.325 (NS)
5Times in a day	0						

Continued on next page

Table 9 continued

Have you attended any nutrition and Health education programmes / training							
Yes	18						
No	17	c2=.461	p=0.397 (NS)	p=0.458 (NS)	p=0.0005 (NS)	c2=2.519	p=0.201(NS)
If Yes sources,							
a.National health programme							
b. School Education	18						
c.Mass Media	0	c2=1.071	p= 0.270(NS)	c2=8.407	p=0.004(NS)	c2=3.182	p=0.152(NS)
d. Others	0						
Have you undergone health checkup previously							
Yes	26						
No	09	c2=1.129	p= 0.391 (NS)	c2=1.005	p= 0.323 (NS)	c2=.274	p= 0.781(S)
16 a) If Yes, then where did you go health check up							
a.School	13						
b.Anganwadi	10						
c.Health Workers	04	c2=1.250	p=0.869(NS)	c2=6.910	p= 0.140 (NS)	c2=5.303	p= 0.257 (NS)
d. Others-	04						
16 b) How frequently you are undergone health check up							
a.3 Months	11						
b.1<Months	1						
c.1yrs	09	c2=2.364	p=0.500(NS)	c2= 2.109	p=0.550(NS)	c2= 17.53	p= 0.0005 (NS)
d.> 1 yrs	03						
17) Have you attended guidance/counselling regarding ARSH							
Yes	14						
No	21	c2=1.071	p= 0.270 (NS)	p=0.07(NS)	c2=1.071	c2=3.182	p= 0.152
17 a) Yes, If yes, Source of Guidance/Counselling							
School	07						
Anganwadi	05						
Health Workers	01	c2=8.571	p= 0.07(NS)	c2= 8.407	p= 0.004 (NS)	c2=8.485	p=0.075(NS)
Vocational traning programme	01						
18) Have you attended any training/programme related to life skill?							
			No statistics		No statistics		No statistics
19) Have you received vocational training?							
			No statistics		No statistics		No statistics

5.7. Section VI: Correlation between knowledge, attitude, and utilization scores

The correlation analysis revealed significant positive linear relationships: knowledge and attitude ($r=0.644$), knowledge and utilization ($r=0.51$). There was also a weak positive correlation between attitude and utilization ($r=0.19$).

5.8. Section VI: Association between Level of Knowledge, Attitude, and Utilization with Selected Demographic Variables Related to Kishori Balika Yojana among Adolescent Girls (14-18 Years) at Anganwadi Centres

5.8.1. Section VI-a: Association of knowledge scores with demographic characteristics

The study found no significant association between the knowledge scores of adolescent girls regarding Kishori Balika Yojana (KBY) services and various demographic characteristics. Specifically, there was significant association with school attendance ($\chi^2=0.000$, $p=0.744$), type of water supply ($\chi^2=0.25$, $p=0.8$), educational status of the mother ($\chi^2=0.365$, $p=0.484$), or type of diet ($\chi^2=0.050$, $p=0.655$). A similar study conducted by Thakur A, et al. in selected schools of Palampur in 2015 where the results revealed that there were significant association of age and the source of knowledge with knowledge level of adolescent girls regarding KSY (Kishori Shakti Yojana)¹⁵

5.8.2. Section VI-b: Association of Perception Scores with Demographic Characteristics

The study indicated significant association between the perception scores of adolescent girls regarding KBY services and their socio-economic status ($\chi^2=0.062$, $p=0.969$), the educational status of their mothers ($\chi^2=0.008$, $p=0.620$), or the educational status of their fathers ($\chi^2=0.016$, $p=0.652$).

5.8.3. Section VI-c: Association of Utilization Scores with Demographic Characteristics

The study revealed, significant association between the utilization scores of adolescent girls regarding KBY services and demographic factors such as the type of family ($\chi^2=0.354$, $p=0.731$), educational status of the father ($\chi^2=0.283$, $p=0.775$), type of diet ($\chi^2=0.439$, $p=0.682$), or whether they had undergone a health check-up previously ($\chi^2=0.274$, $p=0.781$).

6. Conclusion

This study found that adolescent girls had moderately adequate knowledge, neutral perceptions, and good utilization of supplementary nutrition and Iron Folic Acid (IFA) supplementation. However, their participation

in health check-ups was average, and the utilization of nutrition and health education, life skills education, and vocational training was poor. Providing educational interventions such as information booklets, teaching programs, and modules on KBY services could enhance their knowledge, foster a more favorable perception, and improve utilization of KBY services, ultimately contributing to better overall health outcomes.

7. Source of Funding

None.

8. Conflict of Interest

None.

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