School based Educational Program - An Effective Approach to Health Care Among Female Adolescents

*Lakshmi Mallik
Department of Social Work, Karnatak University
Dharwad, Karnataka, India

Ravikanth B Lamani
Department of Criminology and Forensic Science
Government College for Women (Autonomous), Mandya, Karnataka, India
*For correspondence (e-mail: lakshmimallik1112@gmail.com)

Abstract
Health is a natural facet of liveliness - both by definition and realization. The Indian rishis (sages and scientists of yore) had attributed the secret of “jivem shardah shatam” - hundred years of vigorous, healthy, happy and creative life - to the total harmony of the mode of living with the Nature and the spiritual inheritance of life. The lifestyle plays an important role in remaining healthy as we recognize the important elements of all health maintenance when it comes to our diet; consuming fresh, whole food and dedication to eliminating high fat and oil food products. In particular, for adolescents who are the future generation, need to be examine their significant aspects of health and healthy lifestyles. Hence, the present study aimed to assess the knowledge and awareness level of the female adolescents studying in Govt Schools of Dharwad city Karnataka who have undergone Kishori Awareness Program training an initiative of Sarva Shikshan Abhiyan implemented from 2005 to 2013, and also including non-participant to measure the effectiveness of programme. Findings have revealed that an average of 88.71 per cent is aware of the importance and sources of nutrients as compared to the untrained respondents (an average of 28.82%). Besides, both the groups of respondents are well aware of the contents of food timings and good healthy eating practices. The overall awareness of the health and nutrition issues in both the groups of respondents is equally high. However, when classified in to High, Average and Low levels of awareness, high percentage of both respondents have figured in the High level awareness level. As health and nutrition are part of their life from birth till death, even the untrained respondents seem to have acquired information from the family and the school curriculum.

Keywords: School based Educational Program, Female Adolescents and Life Style

Introduction
WHO has defined health as, “a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity”. This definition was reported in the KAP training manual and in all probability it must have been explained to the girls who attended the KAP training. Hence, expecting the trainees to have a good knowledge about health, its meaning, the significance it has to them in their growth and development, the researcher probed in to
Accordingly when enquired whether the respondents were aware of the meaning of health, the responses were heartening. A majority of both the trained (98.82%) and the untrained (84.41%) respondents assented stating that they were aware of the meaning of health. Nevertheless, when they were asked to define health, they could only generally describe the concept but none-even the trained-respondents could reproduce the WHO definition of health. This indicates the immaturity of the respondents and the lack of seriousness with which they have attended the training. This casualness among the respondents is also reflected in their understanding of the parameters of health. This is because hardly about 54.11 per cent of the trained respondents could list the correct parameters of health as against 27.64 per cent of the untrained respondents. This percentage appears better than the percentage of the untrained respondents. But within the group of the trained respondents it is just a little more than half of the total percentage. In other words almost 50 per cent of the trained respondents have not been able to identify the correct parameters of health despite their training.

WHO (2006) has stated that the growth in adolescence is faster than any other phase in individual’s life. Adequate nutrition during this phase is vital for physical and cognitive development. Luce and Motil (2013) also endorse this view by stating that sound nutrition plays a vital role in preventing various chronic diseases. Spear (2002) and U.S. Department of Agriculture (2010) have also stated that during adolescence children need an optimal nutritional intake for maximizing the bone density and to restrain the likely chronic diseases in adulthood. For girls, especially, an average of 10 years is considered as nutritionally critical period for many reasons. But the discrimination against girls and a consequent inadequate dietary intake, in countries like India, greatly affect their nutritional status during adolescence. This, obviously, will have several consequences such as retardation of growth, delay in sexual maturation, reduced intellectual capacity, iron deficiency, under nutrition, stunting, eating disorder, obesity, low scholastic achievement, low bone density, etc. To tackle this problem and the diverse needs of adolescents, different strategies and interventions are devised.

With this in the backdrop, the Kishori Awareness Program targeted female adolescents to improve their awareness about the requisite nutrition for adolescent girls besides increasing their knowledge about the nutritional status of girls in the state. The researcher therefore, in an effort to judge the effectiveness of the KAP training, attempted to examine the awareness level of the adolescent girls trained under this program and compare the same with the awareness the untrained girls had about health and nutrition.

It is however seen that among the trained respondents who have listed the parameters of health, while the fresh air, clean and peaceful environment, physical activities, and entertainment figure at the top of the list in order of importance, among the untrained respondents entertainment, potable drinking water, and fresh air top the list. None of these respondents have accorded importance to the balanced diet. This is little surprising because, during adolescence girls do need balanced diet, and this aspect has been included in the training manual. Despite that, trained respondents do not seem to have understood the importance of diet in their growth and development. The same casualness is not observed as far as listing the healthy habits they are aware of. While 96.52 per cent of the trained respondents have listed all the healthy habits such as brushing teeth and bathing daily; washing hair once a week at least; cutting nails regularly; washing hands before food; gargling after food; washing hands after using toilet; washing clothes of daily use every day; keeping shoes, socks clean; participating in physical activities regularly; etc., 83.85 per cent of the untrained respondents also have listed them except the habit of keeping their shoes and socks clean. This is because less percentage of untrained respondents seems to be aware of this habit regularly as compared to the trained respondents.
Review of Literature

Nevertheless it is an undeniable fact that for healthy physical growth, good dietary habits have to go hand in hand with hygienic practices. Cevizci et al., (2014) have stated that personal hygiene practices and protective health services reduce various infections. This statement of theirs endorses the view held World Health Organization’s observation which goes to state that basic hygiene behaviour as washing hands, removing stools safely and using clean water determine good health. A number of researchers have therefore examined the hygiene behaviour of people in India. Manna et al., (2014) in their study found that oral hygiene was poor in India because of improper habits of brushing, rinsing and washing mouth after food and having sweets, addiction and consumption of junk food. The results of the present study show that the respondents—both trained and untrained—seem to be better informed and accord importance to their personal hygiene. Further the results of this study did concur with the results of one of the earlier studies by Vivas, Gelaye, Aboset, Kumie, and Berhane (2010) who had concluded in their study that the most common hygiene practices, in order of rank, were washing feet (97.4%), brushing teeth (89.2%), and changing clothes (84.9%). While Begum (2001) considers malnutrition as an impairment of the health caused by the deficiency or excess of nutrition in the body, Jelliffee and Jelliffee (1989) consider it as an ecological problem and an end result of the multiple, overlapping and interacting factors such as physical, biological, social, environmental, cultural and economic.

Respondents’ Awareness about Nutrition and its Importance

Bardrialaily (2008) has rightly stated in his thesis that adequate nutrition is a very important for the optimal growth and development throughout the life. Especially in their early life children and adolescents need adequate quantity and quality of food to meet the nutrient requirement for their physical as well as psychological development. The KAP training therefore included information on nutrition, nutrients and eating habits etc., to create awareness among adolescent girls about these aspects. The researcher when probed and enquired how important was nutrition for growth, less than 50 per cent of the respondents stated that it is very important and a little more than 1/3rd of the respondents considered it important. This clearly shows that the respondents are aware of the importance of nutrition for their growth. However, the trained respondents seem to be better informed of this fact because, a higher percentage of them consider nutrition to be very important than the untrained respondents. Further, the ignorance about its significance seems to be more in the untrained respondents (see Table No 01).

Table No 1 Distribution of Respondents by their Opinion about Importance of Nutrition

| Sl. No. | Respondents | Very Important | Important | Not Important | Don't know | Total |
|---------|-------------|----------------|-----------|---------------|------------|-------|
| 01      | Trainees N=170 | 110 (64.70%) | 57 (33.52%) | 02 (01.17%) | 01 (0.58%) | 170 (100) |
| 02      | Untrained N=170 | 38 (22.35%) | 65 (38.23%) | 01 (0.58%) | 66 (38.82%) | 170 (100) |
| Total   | N=340        | 148 (43.52%) | 122 (35.88%) | 03 (0.88%) | 67 (19.70%) | 340 (100) |

A further probe in this regard has shown that a large percentage of the trained respondents (an average of 88.71%) are also aware of the sources of nutrients as compared to the untrained respondents (an average of 28.82%). This clearly shows the inadequate information about nutrients.
among the untrained respondents. The better awareness among the trained respondents can be attributed to their KAP training. This result concurs with that of Ramrao’s (2013) study which stated that the School Based Health Intervention Program significantly helps in improving knowledge of nutrition in the trainees.

Table No 2 Distribution of Respondents by their Awareness about the Nutrients

| Sl. No. | Respondents   | Vitamins | Fat/Oil | Proteins | Calcium | Carbohydrates | Iron |
|---------|---------------|----------|---------|----------|---------|---------------|------|
| 01      | Trainees N=170| 161      | 152     | 162      | 153     | 150           | 137  |
|         |               | (94.70%) | (89.41%)| (95.29%) | (90.00%)| (88.23%)      | (80.58)|
| 02      | Untrained N=170| 71       | 39      | 82       | 76      | 41            | 07   |
|         |               | (41.76%) | (22.94%)| (48.23%) | (44.70%)| (24.11%)      | (04.11)|
| Total   | N=340         | 232      | 191     | 244      | 229     | 191           | 144  |
|         |               | (68.23%) | (56.17%)| (71.76%) | (67.35%)| (56.17%)      | (42.35)|

All the same, for improving the nutritional status of the adolescent girls, convincing them about the significance of nutrition is not enough. They should also be informed about the nutrients and the calories intake. According to Nordqvist (2017) calories refer to the energy people get from the food and drink which they consume. Though everyone does not need the same amount of calories, one cannot survive without adequate amount of calories. Too much or too less calories intake is not good for one’s health. Hence one should know the correct intake of calories. With this in mind, the respondents were asked whether they had any idea about the average calories intake required for women. The data revealed that the trained respondents had a better information than the untrained respondents, because, 71.17 per cent of the trained respondents have answered this question correctly.

Anyways for adequate amount of calories intake one has to consume a balanced diet. The researcher therefore attempted to examine whether the respondents were aware of balanced diet or not. The data again showed that very few of the untrained respondents (13.52%) had any knowledge about balanced diet, while a majority of the trained respondents (91.76%) knew about it. However the researcher’s further probe about the sources of Carbohydrates, Fat/Oil, Calcium, and Iron, showed that the response rate of the respondents was quite poor. More over a majority of the respondents have not been able to identify and list the food items which are the sources of these nutrients.

Respondents’ Awareness about Healthy Eating Practices

According to the Kishori Awareness Manual, to keep a healthy and fit body, consuming food for three times a day is the best menu plan for adolescents. This includes breakfast, lunch and dinner with little snacks in the evening. The manual also commented on the essentiality of consuming breakfast with necessary nutrients and a balanced diet. It stated that the breakfast should never be skipped. Further about lunch timings Kishori Awareness Manual suggested it to be eaten between 1p.m. and 2p.m. with chapatti/roti, one bowl of rice, green salad and fruit; and dinner to be eaten between 8p.m and 9p.m with chapatti/roti, Dal, one bowl of rice and buttermilk. It also suggested lighter food for the dinner menu, as people have less physical activity in the night. Keeping this in mind the researcher attempted to find out the awareness of the respondents about healthy eating practices.
The response rate in both the groups of respondents was good and also that the respondents irrespective of their training status were found to have possessed sound knowledge about the number of times they have to consume food every day. 91.76 per cent of the trained respondents mentioned it as three times a day and another 8.23 per cent mentioned it as four times a day, including a little snack consumed in the evening. Among the untrained respondents 82.94 per cent stated it as three times, 12.35 per cent mentioned it as four times and another 04.70 per cent mentioned it as five times. All the same, their knowledge about the frequency of eating seems good too. Further, the awareness about the best timings proposed for eating their lunch or dinner also seemed very good in both the groups of respondents. A majority of the trained and untrained respondents’ answers concur with the timings suggested by the KAP training manual. Besides, both the groups of respondents are well aware of the contents of food that adolescents are advised to eat.

Respondents’ Awareness about the Problems associated with Nutrition and Health

It is a known fact that the inadequate or imbalanced diet causes health issues such as physical weakness, malnutrition, anaemia, obesity, etc. In adolescence, since the girls have sexual maturation and consequent spurt of growth, they need adequate nutrition to facilitate their healthy growth. But in our society today, the most common problem observed is malnutrition. Hence, the KAP focused on this important issue and tried to create awareness among the girls about the seriousness of this problem and the need to prevent it. The researcher therefore enquired the respondents whether they were aware of this problem and if so, how did they perceive it. The data clearly showed that the trained respondents were better informed about it and viewed it as a problem caused by lack of or inadequate food intake, or even consumption of unhealthy food lacking nutrients. Among the untrained respondents 41.76 per cent were aware of this and also viewed it as a health issue caused by the inadequate or inappropriate food intake. All these respondents are aware that it severely impacts the growth and development of adolescents. Majority of the trained respondents are also aware that it may have an impact on their physiological growth and delay menstruation/sexual maturation, stunt the growth, result in anemia, weaken bones, and cause heart-related problems and obesity, besides resulting in the lack of ability to work with energy.

Further, the respondents also seem to be well informed about the water borne diseases. While 87.06 per cent of the trained respondents could name the diseases, 81.18 per cent of the untrained respondents could also list them out. Sreedevi, et al (2016) stated that Vector-Borne Diseases (VBDs) accounted for 17 per cent of the estimated global burden of all infectious diseases and the most deadly VBD—malaria—caused an estimated 6.27,000 deaths in 2012. The world’s fastest growing VBDs are dengue, malaria, cholera, etc. The study also maintained that their intervention resulted in an enhanced behavioral change among the village beneficiaries. Hence they suggested for educational intervention as it had a greater impact on beneficiaries. This observation does not seem to hold good in the present study because, the researcher found little difference in the awareness level of the two groups of the respondents.
Table No 3 Distribution of Respondents by their Overall Knowledge about Health and Nutrition

| Sl. No | Respondents | Level of Awareness |         |         |         | Total |
|--------|-------------|--------------------|---------|---------|---------|-------|
|        |             | Low                | Average | High    |         |       |
| 01     | Trained     | 10 (05.88%)        | 64 (37.65%) | 96 (56.47%) | 170 (100) |
|        | Untrained   | 12 (07.01%)        | 63 (37.1%)  | 95 (55.9%)  | 170 (100) |
|        | Total       | 22 (06.5%)         | 127 (37.4%) | 191 (56.2%) | 340 (100) |

Table No 04 Comparison of Level of Awareness about Health and Nutrition among Trained and Untrained Respondents

| Sl. No | Group     | Mean     | SD      | MIN | MAX | X² | DF  |
|--------|-----------|----------|---------|-----|-----|----|-----|
| 01     | Trained   | 25059    | .60810  | 1.00 | 3.00|    |     |
| 02     | Untrained | 24882    | .62718  | 1.00 | 3.00| 0.195 | 2   |
| Overall|           | 24971    | .61686  | 1.00 | 3.00|    |     |

Respondents’ Overall Knowledge of Health and Nutrition and Comparison of the same between the two groups

The overall awareness of the health and nutrition issues in both the groups of respondents is equally high. However, when classified in to High, Average and Low levels of awareness, high percentage of both respondents have figured in the High level awareness level. As health and nutrition are part of their life from birth till death, even the untrained respondents seem to have acquired information from the family and the school curriculum. The researcher therefore had hypothetically presumed that there is no significant difference in the knowledge of the two groups. The findings of the descriptive statistics and the inferential statistics confirmed it and revealed that this presumption of the researcher is correct. From these findings it can be inferred that health and nutrition being the integral part of one’s living, even without training about their importance, the untrained respondents have acquired.

Conclusion

Adolescents are a unique population with specific health concerns and needs. Adolescence is the peak age of onset for serious mental illness like depression and psychosis. Over load of stress from physical, emotional, social and sexual change makes adolescents overloaded with stress which can result in anxiety, withdrawal, aggression, poor coping skills and actual physical illness. Based on the findings, it is necessary to prioritize implementing of health related educational programs in order to changing and modification of unhealthy life style related factors, with focus on sport activities as well as health and nutrition. Also it is needed to provide special facilities to select healthy living behaviors among adolescents.
References

1. Golmakani, N., Naghibi, F., Moharari, F., & Esmaily, H. (2013). Health promoting Life style and its Related Factors in Adolescent Girls. Journal of Midwifery and Reproductive Health. 1(1):42-49.

2. Jelliffe, D. B., & Jelliffe, E.F.P. (1989). Community Nutritional Assessment: With Special Reference to Less Technically Developed Countries, 5(4), 170-17, Oxford University Press, Retrieved from https://doi.org/10.1177/089033448900500403

3. Luce, D.D., Motil, L. D. K. & Middleman, A. B. (2010). Adolescents Eating Habits. Retrieved from http://www.uptodate.com/contents/adolescent-eating-habit.

4. Nordqvist, C. (2017). Health: What does good health really mean? Medical times today.

5. Retrieved from https://www.medicalnewstoday.com/articles/150999.php

6. Qidwai1, W., Ishaque, S., Shah, S., & Rahim. M. (2010). Adolescent Lifestyle and Behaviour: A Survey from a Developing Country Plus one 5(9). Retrieved from www.plosone.org

7. Spear (2002) & U.S. Department of Agriculture (2010). Report on Adolescent Nutrition

8. Sreedevi, S., Aarthi, V & Saraswathi. K. (2016). Co-infection of HBV in HIV Patients Attending the ICTC of Santhiram Medical College, Nandyal, Andhra Pradesh, India, 5, (10).523-526. Retrieved from https://www.ijcmas.com/5-10-2016/S.%20Sreedevi,%20et%20al.pdf

9. Vivas, A.P., Gelaye, B., Aboset, N., Kumie, A., Berhane, Y., & Williams. M.A. (2010). Knowledge, attitudes and practices (KAP) of hygiene among school children in Angolela, Ethiopia. Journal Prev Med Hygiene.; 51(2):73-9. Retrieved from https://pubmed.ncbi.nlm.nih.gov/21155409/

10. Sreedevi, S., V. Aarthi and Saraswathi, K. (2016). Co-infection of HBV in HIV Patients Attending the ICTC of Santhiram Medical College, Nandyal, Andhra Pradesh, India. Int.J.Curr. Microbiol.App.Sci. 5(10): 523-526. doi: http://dx.doi.org/10.20546/ijcmas.2016.510.057

11. WHO (2006) Report on Adolescents.