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Is health education effective in improving health awareness among garment factory workers?

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ABSTRACT

Introduction: Majority of workers in garment factories hail from poor socioeconomic backgrounds with limited knowledge regarding health. Poor health awareness often leads to unhealthy lifestyles in turn resulting in frequent illness, sickness absenteeism, reduced capacity for work and ultimately production losses. **Objective:** To assess knowledge regarding health and the effectiveness of a structured teaching programme in improving health awareness among workers of select garment factories in Bangalore. **Methodology:** A structured interviewer schedule was administered to 716 workers in selected garment factories in Bangalore, to assess their baseline knowledge on various health topics. Based on their felt needs, structured training programmes based on the peer to peer teaching model were conducted over a two year period (from June 2013 till May 2015) covering 6 major health domains - access to health care, menstrual hygiene, family planning, maternal health, sexually transmitted infections (STIs) including HIV/AIDS and nutrition. Following the training, the interviewer schedule was administered to a set of unmatched sample to assess change in knowledge, attitude and practice regarding health. Data was analysed using descriptive and inferential statistics. **Results:** All workers were female, middle to high school educated, between 18-50 years of age. Baseline knowledge regarding health in all 6 domains was low. Awareness regarding access to women's health services increased from 80.16% to 97.2%. Use of sanitary napkins during menstruation increased from 40.37% to 71.15%. Absenteeism from work due to menstrual problems was 24 days which reduced to 10 days. Daily fruit consumption increased from 61.09% to 86.8%. Knowledge regarding pregnancy risk factors (at least >2 symptoms) increased from 31.3% to 71.6%. Awareness about family planning methods increased from 80.6% to 98.8%, while current usage of family planning method increased from 45.4% to 72.5%. **Conclusion:** Health education played a substantial role in improving health awareness among garment workers.

Key-words: Garment Workers, Health Education, Health Awareness, Women's Health,

INTRODUCTION

According to WHO, over 1000 million people worldwide are employed in the small-scale industry.[1] The 'garment' industry of India is one such industry. The textiles sector in India contributes about 14 per cent to industrial production, four per cent to gross domestic product (GDP), and 27 per cent to the country's foreign exchange inflows. It also provides direct employment to over 45 million people, second only to agriculture.

Forty years ago, the industrialized countries dominated global exports in this area. Today, developing countries produce half of the world's textile exports. The Indian sub-continent is the second largest manufacturer of garments after China.[2]

A majority of the workers in the garment sector hail from poor socioeconomic backgrounds with limited knowledge regarding health. Garment workers are often migrant labourers who leave the comforts of their home, family and support systems to work long hours often with limited access to health care.[3] In India, the garment sector is the second largest employer of women, nearly 1.2 crore women constituting 80% of the total workforce in this sector.[4] As these workers are away from their homes and native villages they miss out on the opportunity to attend any community health awareness programmes run by the government. Also, as they end up working for long hours in the garment industry they are not reached by the health systems and non-governmental organization working in the urban areas.

Lack of health awareness often leads to unhealthy lifestyles in turn resulting in frequent illness, sickness absenteeism, reduced capacity for work – all this impact their wages and contribute to production losses.

Low educational levels, migration and poor economic status of female garment workers make them much more vulnerable to poor nutritional choices and therefore illnesses and morbidity.[5] Literature review showed very few studies done to assess the baseline knowledge regarding health among workers and thereby providing interventions and incentives which will help improve the overall health status of the garment worker. Therefore this study was conducted primarily to assess the baseline knowledge regarding health especially reproductive

health among female garment workers and later to provide a structured training to these workers so as to bring a positive change in their knowledge and attitude towards health.

Objectives

1. To assess the knowledge regarding their health among workers of select garment factories in Bangalore.
2. To assess the effectiveness of a structured teaching programme using a peer-to-peer education model on improving health awareness among workers of select garment factories in Bangalore.

METHODOLOGY

As part of the work place health intervention programme, the Division of Work Environment Department of Community Health, St. John's Medical College, Bangalore is working closely with several apparel manufacturing industries in and around Bangalore. Garment workers from ten selected garment factories were chosen to conduct the study. The study was conducted over a period of two years from June 2013 till May 2015. A sample of 716 female garment factory workers was chosen for this study. Convenient method of sampling was followed.

The required permissions were obtained from the management of the selected factories. Sampling method, written informed consent was obtained from every participant in the study. A structured interview schedule was administered to 716 garment workers to assess their baseline knowledge regarding health especially pertaining to reproductive health and family planning.

Based on the results of the baseline analysis and on the felt needs of the workers an intervention was designed at these factories wherein a structured training programme was developed. The training module focussed on 6 major health domains – access to health-care, menstrual hygiene, family planning, maternal health, sexually transmitted infections (STIs) including HIV/AIDs and nutrition. The intervention consisted of peer-educator method of training where few motivated women in each factory were selected as peer educators who underwent the training over a period of one year (one topic every two months). They in turn had to teach the other workers, in the intervening period between two topics during their working hours utilizing their lunch time, free time, etc.

After the training had been completed an unmatched sample of 695 garment workers who had been trained under the peer education programme and had received training in all the 6 modules were chosen for final analysis. These workers were not necessarily part of the initial baseline assessment. They were administered the interview schedule to determine the change in knowledge, attitude and practise towards health.

Statistical analysis

The data collected was entered in Microsoft Excel and analysed using SPSS version 20. Socio-demographic variables were described as frequencies and measures of central tendency. Data collected was analysed using descriptive statistics. Means and proportions were applied. Tests of association such as the Two-proportion z-test were used.

RESULTS

A total of 716 female workers were included in the study. They mostly belonged to the age group of 18-25 years and were educated up to middle and high school level.

Table 1: Comparison between knowledge and practise regarding health before and after health education

Parameter	Before health education	After health education
Knowledge regarding antenatal risk factors	224 (31.3%)	498 (71.6%)
Mode of HIV spread	148 (20.6%)	355 (51.07%)
Sanitary napkin usage	289 (40.36%)	494 (71.07%)
Current family planning usage	325 (45.4%)	504 (72.5%)
Fruit consumption	437 (61.03%)	603 (86.8%)

Table 1, shows that the knowledge regarding pregnancy risk factors (at least 2 risk factors) was 31.3% before health education which increased to 71.6% following health education. Also, the knowledge regarding mode of spread of HIV was low at 20.6% which increased to 51.07% after health education. Change in healthy practices was also noted as more women began using sanitary napkins during menstruation, from 40.36% to 71.07%. Use of some method of family planning also improved from 45.4% to 72.5%. There was a similar rise noted in daily fruit consumption (from 61.03% to 86.8%)

The awareness regarding the availability of nearby women's clinic was 80.16% which rose to 97.2% following health education. The mean number of days absent from work due to menstrual problems was 24 days for a period of six months (among 698 women) which dropped to only 10 days (for 695 women) following health education.

Table 2: Comparison between knowledge regarding reproductive health and family planning -before and after health education.

Parameter	Before health education	After health education
Antenatal risk factors (>2)	224 (31.3%)	498 (71.6%)
Post-natal risk factors (>2)	141 (19.69%)	304 (43.8%)
Institutional delivery	540 (75.4%)	695 (100%)
Methods of family planning (>2)	236 (32.9%)	604 (86.9%)
Uses of family planning methods	270 (37.7%)	393 (56.5%)

Table 2, shows that there was a rise in knowledge gained regarding antenatal risk factors (31.3% to 71.6%) also post-natal risk factors (from 19.69% to 43.8%). While

75.4% of the workers knew about the importance of institutional delivery before health education and this number increased to 100% following health education. Knowledge regarding both the methods of family planning and various uses of family planning methods improved following health education. Knowledge regarding the various methods of family planning also increased from 32.9% to 86.9% wherein tubectomy was known to be the most common method followed by Intra-uterine contraceptive devices (IUCD) and Oral contraceptive pills (OCPs).

Table 3: Association between knowledge parameters before and after health education

Knowledge parameters	Before health education	After health education	Z score	p value
Antenatal risk factors (>2 risk factors)	224 (31.3%)	498 (71.6%)	-15.169	0.03*
Mode of HIV spread	148 (20.6%)	355 (51.07%)	-12.006	0.012*
Post-natal risk factors (>2 risk factors)	141 (19.69%)	304 (43.8%)	-12.000	0.01*
Regarding institutional delivery	540 (75.4%)	695 (100%)	-14.009	0.01*
Uses of family planning	270 (37.7%)	393 (56.5%)	-7.0943	0.01*
Awareness about women's clinic nearby	574 (80.16%)	676 (97.26%)	-9.994	0.01*

*p<0.05

Associations

Table 3, show the knowledge regarding health before and after health education. The change in knowledge is statistically significant (p<0.05). Knowledge parameters especially the ability to name more than two antenatal risk factors requiring doctor's visit, name more than two post-natal risk factors requiring doctor's visit, mode of spread of HIV/AIDs, uses of family planning methods and awareness about the availability of a nearby women's health clinic significantly improved following health education.

Table 4: Association between practice parameters before and after health education

Change in practice parameters	Before health education	After health education	Z score	p value
Sanitary napkin usage	289 (40.36%)	494 (71.07%)	-11.677	0.01*
Current usage of family planning methods	325 (45.4%)	504 (72.5%)	-10.320	0.036*
Daily consumption of fruits	437 (61.03%)	603 (86.8%)	-9.455	0.01*

*p<0.05

Table 4, show the change in practice following health education. There was a statistically significant increase (p<0.05) in the number of women who used sanitary napkins during menstruation and also the number of women who followed some method of contraception. Daily fruit consumption increased following health education which was also statistically significant (p<0.05).

DISCUSSION

In this study we found that the garment workers' awareness regarding availability of nearby women's health clinic was 80.16% which increased to 97.2% following health education. This is an important finding because many of the times a garment worker is unable to seek health care despite being sick due to myriad of reasons such as overtime and challenging work schedules, recognised ESI hospitals being located at a distance from their home and/or workplace, which in turn would mean a significant wastage of time and loss of wages. Similar findings were observed in another experimental study done among the garment factory workers of Bangladesh by Abul Barkat et al, wherein 95% workers in the intervention group who were given health education knew about a nearby clinic while only 48% of the workers in non-intervention group knew about the clinic.[6] A mere increase in the knowledge about the availability of health care services nearby does not ensure increase in its utilisation. Hence, certain measures such as establishing a first aid room or health clinic run by a qualified doctor or nurse within the factory premises or starting evening OPDs in the vicinity of the factory will ensure better utilization of these health care services.

In this study the knowledge regarding contraception (ability to name at least 1 method of contraception) increased from 52.3% to 86.9% following health education. This in turn shows that a majority of these women have an unmet need for family planning. The lack of contraceptive awareness and the poor utilization of contraceptives by these women put them at an increased risk of consequences such as unwanted pregnancies, repeated abortions, contracting STD/HIV. Similar findings were found in a study done among garment workers in Phnom Pehn, Cambodia wherein participatory learning techniques were employed to assess the success of a reproductive training programme conducted among them. Spontaneous knowledge of at least one modern contraceptive method increased significantly (from 71% to 89%).[7] One way to address this gap in knowledge would be to conduct repeated training and educational sessions focussed on contraception – methods, uses, myths and misconceptions about each method. Counselling sessions on appropriate family planning methods can empower women to take informed decisions regarding family planning. Access and availability of contraceptives should be improved wherein either the contraceptives or information regarding contraceptives should be made available in the clinics attached to the factory.

In this study we found that only 40.3% of the women were using sanitary napkins during menstruation while the rest of 59.7% of workers were using cloths or rags from the factories as menstrual cloth. This is a disturbing trend because these rags if used unclean or if not washed and dried properly can predispose the woman to develop gynaecological infections and menstrual irregularities. Menstrual-related absenteeism would also increase thereby affecting the workers' income and production at the factories. We found that absenteeism due to menstrual problems was 24 days in the past six months which came up to 4 days a month. In a survey conducted by WaterAid it was found that majority of Indian women reuse absorbable cloth during menstruation (89%) while sanitary napkin usage was found to be very low (7%).[8] In India, mothers, elder sisters and friends serve as educators on matters related to reproductive health and it is found that they themselves lack the necessary knowledge.[9,10] Society's 'taboo' attitude towards menstruation related issues serve as barriers to access the right information. Certain measures such as repeated education of these women regarding menstrual hygiene and use of sanitary napkins, ensuring that sanitary napkins are made available at the factory clinic at a lower cost, maintenance of separate clean washroom facilities for women and so on go a long way to promote menstrual hygiene among them. Similar findings were reported from a study conducted in Bangladesh among the female factory workers where 60% of them were using rags from the factory floor as menstrual cloths. These could be highly chemically charged and are often freshly dyed. Infections were common, leading to 73% of women missing work for an average of six days in a month.[11]

In this study the practice of sanitary napkin usage increased from 40.3% to 71.2% following health education. Also the absenteeism from work due to menstrual problems `showed a considerable decline. These findings reiterate the fact that the key to bringing about a change in menstrual practices is through education which ultimately can break down the barriers and misconceptions surrounding menstruation and help to promote their overall health and confidence at the workplace.

The overall knowledge regarding HIV/ AIDs was poor among the garment workers studied. While 60.4% of the workers knew that HIV can be sexually transmitted, this number rose to 80.9% following health education. In a study done among 303 garment workers in Dhaka city by Hasibul Hasan et al it was found that 98.3% of the workers had heard about the word HIV and that almost 78.9% knew that the disease was transmissible from person to person by sexual intercourse.[12] In another study conducted among 216 garment workers to assess the awareness regarding HIV/AIDS and high risk behaviours in Bangalore, knowledge about causation and prevention about HIV/AIDs was found to be very low especially among women workers.[13]The reason for low baseline knowledge regarding HIV could be attributed to the low education status of the garment workers. However, these workers due to their migrant nature and ignorance form a significant vulnerable population at risk of developing sexually transmitted infections (STIs) including HIV/AIDS. Hence educating these workers regarding HIV/AIDs and its transmission is of paramount importance.

In this study following health education regarding balanced diet and nutrition there was a significant increase in the fruit consumption from a baseline of 61.1% to 86.8%. In a similar study conducted among workers in a public company in Rio de Janeiro, Brazil to evaluate the impact of activities promoting the consumption of fruits and vegetables in the workplace, it was found that following education activities there was a 33% increase in the fruit and vegetable consumption by the employees.[14] Workplace is strategically important because it is where the workers spend almost half of their day and consume at least one main meal here. Hence initiatives and nutrition campaigns which promote healthy eating at the workplace will show long term benefits for improving workers health and reduction in non-communicable diseases among them.

Limitation

Non-probability sampling technique is one limitation in this study. However, we have tried to overcome this limitation by including a large sample size (n= 716), visiting multiple factories which are geographically spread out and recruiting workers from different departments in our study.

Conclusion

The baseline knowledge regarding health in all domains was found to be low. There was significant increase in knowledge regarding pregnancy risk factors, mode of spread of HIV, etc. Sanitary napkins usage during menstruation increased from 40.37% to 71.15%. Absenteeism due to menstrual problems dropped from 24 to 10 days over a six month period. Daily fruit consumption increased from 61.1% to 86.8%. This increase was found to be statistically significant. Health education played a substantial role in improving health awareness among garment workers.

Recommendation

Workplace health intervention programme was found to be successful and it can be a replicable model in other factories. Such intervention helps to greatly improve awareness and behaviour related to general and reproductive health. Proper awareness and counselling will reduce the risk behaviours and help these young people to have a healthy lifestyle.

REFERENCES

1. Saha TK, Dasgupta A, Butt A, Chattopadhyay O. Health Status of Workers Engaged in the Small-scale Garment Industry: How Healthy are They? Indian Journal of Community Medicine : Official Publication of Indian Association of Preventive & Social Medicine. 2010;35(1):179-182. doi:10.4103/0970-0218.62584.

2. United Nations. TNCs and the Removal of Textiles and Clothing Quotas-UNCTAD Current Studies on FDI and Development no 1. Available from: http://unctad.org/en/pages/PublicationArchive.aspx?publicationid=242
3. International Labour Office (ILO). Insights into working conditions in India's garment industry. Available from: http://www.ilo.org/wcmsp5/groups/public/@ed_norm/@declaration/documents/publication/wcms_379775.pdf
4. Lubna Kably. Helping women garment-factory workers stand up for their rights The Times of India.2015. Feb 05. Available from: https://timesofindia.indiatimes.com/india/Helping-women-garment-factory-workers-stand-up-for-their-rights/articleshow/46136079.cms
5. Hasnain G, Akter M, Sharafat SI, Mahmuda A. Morbidity patterns, nutritional status, and healthcare-seeking behavior of female garment workers in Bangladesh. Electronic Physician. 2014;6(2):801-807. doi:10.14661/2014.801-807.
6. Abul Barkat Murtaza Majid, Md. Shahnewaz Khan, Md. Badiuzzaman, Abdullah-Al-Hussain Study on change in attitudes and behaviour of garment owners, managers and workers towards gender and reproductive health issues, Dhaka: December 2008, Human Development Research Centre
7. CARE International.The Effects of a Participatory Learning for Action (PLA)-Based Reproductive Health Education Program in Garment Factories in Phnom Penh, Cambodia. December, 2000. Available from: http://www2.pathfinder.org/pf/pubs/focus/pubs/placam~1.PDF
8. Mahon T, Fernandes M. WaterAid:Menstrual hygiene in South Asia, 2009. Available at : https://doi.org/10.1080/13552071003600083
9. Goel MK, Mittal K. Psycho-social behaviour of urban Indian adolescent girls during menstruation. Australasian Medical Journal. 2011;4(1):48–52.
10. Juyal R, Kandpal S, Semwal J, Negi K. Practices of menstrual hygiene among adolescent girls in a district of Uttarakhand. Indian Journal Of Community Health. 2012;24(2):124–28.
11. WSSCC (Editor) (2013): Celebrating Womanhood: How Better Menstrual Hygiene Management is the Path to Better Health, Dignity and Business. London: Water Supply & Sanitation Collaborative Council (WSSCC). Available fom: https://www.wsscc.org/wp-content/uploads/2016/05/Celebrating-Womanhood-How-better-menstrual-hygiene-management-is-the-path-to-better-health-dignity-and-business-–-WSSCC-2013.pdf [Accessed: 06.06.2018]
12. Hasan AH, Hassan R, Khan ZR, Nuzhat E, Arefin U. Influence of socio-demographic factors on awareness of HIV/AIDS among Bangladeshi garment workers. SpringerPlus. 2013;2:174. doi:10.1186/2193-1801-2-174.
13. Saraswathi S. Jagadish S. Divakar. V. Kishore K. Awareness regarding high risk behaviour related to HIV/AIDS among garment workers in Bangalore, India. Indian Journal of Public Health Research and Development;2013, Vol:4, Issue 2.Pg No 227-231.
14. Franco ADS, Castro IRR, Wolkoff DB. Impact of the promotion of fruit and vegetables on their consumption in the workplace. Rev. Saúde Pública vol.47 no.1 São Paulo Feb. 2013

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