STUDY OF NUTRITIONAL PROFILE OF CHILDREN OF COMMERCIAL SEX WORKERS (CSWS) IN WESTERN INDIA

Epidemiology

Dr Neelam D Sukhsohale	Associate Professor, Department of Community Medicine, Grant Government Medical College, Mumbai, Maharashtra.
Dr Meena Kakeri*	Professor and Head, Department of Community Medicine, Grant Government Medical College, Mumbai, Maharashtra. *Corresponding Author
Miss Mrunmayee Mangale	Final MBBS student, BJ Government Medical College, Pune

ABSTRACT

Introduction: Research on the nutritional status of the children of sex workers is extremely limited in India. Hence there is a need to explore and understand the nutritional status of children of brothel based sex workers of Pune to design appropriate interventions so as to reduce the morbidity and mortality in them.

Objectives: To estimate the prevalence of malnutrition and to assess the socio-demographic factors affecting the malnutrition in children of CSWs in Western India.

Methodology: A Community based cross sectional study was conducted among 50 children (of CSWs) aged less than two and half years in the red light area of Pune. Children were subjected to detailed general and systemic examination of children. Moreover, the nutritional assessment was done by anthropometric measurements such as weight, height, Weight for Age, Height for Age, and Weight for Height, Mid Upper Arm Circumference Children were divided into categories of Healthy or No Malnutrition, Severe Acute Malnutrition (SAM) and Moderate Acute Malnutrition (MAM) in 'under 5' years age children according to WHO guidelines.

Results & Conclusions: The prevalence of malnutrition in children of commercial sex workers (CSWs) was found to be quite high (22%) in present study. This could be attributed mainly to their poor socio-economic determinants namely illiteracy, placement of children in brothels and low socio economic status.

KEYWORDS

Nutritional profile, CSWs, Western India

INTRODUCTION

It is a well-recognized fact that children of today are the citizens of tomorrow. The prosperity of the nation depends upon the health of its future citizens. This is true especially for India where this segment constitutes about 40% of the total population.[1] Children with a sound mind and sound body are essential for the future development of the country. Child rearing practices impart very essential role in development of child. Every child has its birth right of having proper rearing from his / her parents. Child rearing practices are defined as "transmission of the tradition, beliefs, culture and cognitive actions from parents to the offspring" [2].

Brothel based sex workers are among the most deprived group of mothers in society. Many women who engage in sex work, experience pregnancies and become mothers. The peculiar working schedule of the sex worker, in which she is busy by night and tired in the daytime, also posed problems. [3] Research on commercial sex workers mostly concentrated on sexually transmitted diseases (STDs), reproductive tract infection (RTIs) and the health of commercial sex worker (CSW) women rather than the broader concept of reproductive and child health. [4, 5] Unfortunately very few researches are there regarding nutritional profile of children of the CSWs. Research on the nutritional situation of the children of sex workers is extremely limited [6, 7] Pune being the main city of western India, however studies on children of brothel based sex workers is scarce. Hence there is a need to explore and understand the nutritional status of children of brothel based sex workers of Pune to design appropriate interventions so as to reduce the morbidity and mortality in them. With this background, the present study was conducted to estimate the prevalence of malnutrition and to assess the socio-demographic factors affecting the malnutrition in children of CSWs in Western India.

MATERIAL AND METHODS:

STUDY DESIGN:

A community based cross-sectional study was carried out in the red light area of Pune city, India.

Duration of study: 6 months

STUDY SETTINGS:

Commercial sex workers (CSW) having live children with age less than two and half years in the Red light area of Pune city, District Pune, Maharashtra, India

SELECTION OF STUDY GROUP:

50 commercial sex workers (CSWs) having live children with age less than two and half years were selected. For selection and contacting CSWs the help of NGO working in these areas, local leaders, and brothel managers was taken. CSWs were interviewed in the red-light area, ensuring privacy and confidentiality, after obtaining written informed consent Every participating CSW was interviewed in detail about their socio-demographic characteristics, using predesigned and pretested questionnaires.

After the interview the children of participating CSWs with age less than two and half were examined in detail. The detailed general examination of children were carried out with reference to their personal hygiene, general built and nourishment, pulse, blood pressure, skin, eyes, ears, thyroid and lymph node. Then detailed systemic examination of cardiovascular system, respiratory system and abdominal system was carried out.

Moreover, the nutritional assessment was done by anthropometric measurements. Weight was measured by using Krupp's weighing machine with minimal clothing to the nearest kilogram. Height was measured in supine position to the nearest centimeter using a cloth tape. Then Weight for Age, Height for Age, and Weight for Height were calculated using WHO guidelines. Mid Upper Arm Circumference was measured on left upper arm at the mid-point between the tip of the shoulder and the tip of the elbow (olecranon process and the acromium) using skin caliper. The head circumference was measured using a cloth tape positioned just above the eyebrows (i.e. supraorbital ridges), above the ears and around the back of the head (i.e. occiput) so that the maximum circumference is measured. Children were divided into categories of Healthy or No Malnutrition, Severe Acute Malnutrition (SAM) and Moderate Acute Malnutrition (MAM) in 'under 5' years age children according to WHO guidelines.[8]

STATISTICAL ANALYSIS:

For statistical analysis, between-group comparisons were conducted

using chi-square tests using a statistical software package EPI Info, version 6.0. Statistical significance was assessed at a type I error rate of 0.05.

RESULTS AND DISCUSSION:

TABLE I: Prevalence of malnutrition in children of CSWs

Children of CSWs (N = 50)	Frequency	Percentage
Healthy Children	39	78
Moderate acute malnutrition (MAM)	8	16
Severe acute malnutrition (SAM)	3	6

Table I shows the prevalence of malnutrition in children of CSWs. It was seen that out of 50 children, 6% of children had severe acute malnutrition (SAM) followed by 16% of moderate acute malnutrition (MAM). Whereas 78% had normal nutritional status.

TABLE II: Socio-demographic factors affecting the malnutrition in children of CSWs

Factors	Category	Healthy children	MAM	SAM
Age (months)	0 - 6	8 (16)	0	0
	6 - 12	9 (18)	0	0
	12 -18	12 (24)	4 (8)	1 (2)
	18 – 24	4 (8)	1 (2)	1 (2)
	24 – 30	6 (12)	3 (6)	1 (2)
Gender	Male	21 (42)	5 (10)	1 (2)
	Female	18 (36)	3 (6)	2 (4)
Literacy status of mother	Illiterate	33 (66)	6 (12)	2 (4)
	Literate	6 (12)	2 (4)	1 (2)
Religion	Hindu	29 (58)	7 (14)	3 (6)
	Muslim	6 (12)	1 (2)	0
	Others	4 (8)	0	0
Placement	Brothel	20 (40)	3 (6)	1 (2)
	Hostel	13 (26)	4 (8)	1 (2)
	Native place	4 (8)	1 (2)	1 (2)

*Figures in Parentheses indicate percentage

Socio-demographic factors affecting the malnutrition in children of CSWs have been mentioned in Table II. It was noted that none of the children in the age group of 0-12 months had malnutrition. In children aged 12-30 months, only 1 child (2%) had SAM. Whereas 4 (8%) children aged 12-18 months, 1 (2%) aged 18-24 months & 3 (6%) in the age group of 24-30 months had MAM. Gender wise distribution showed that 5 male children and 3 female children were moderately malnourished. Whereas 2 (4%) female children & 1 (2%) male child had severe acute malnutrition. Amongst the children who had an illiterate mother 33 children (66%) were normal, 6 children (12%) were moderately malnourished and 2 children (4%) were severe acute malnourished.

Considering religion, 7 children (14%) had moderately acute malnutrition and 3 children (6%) had severely acute malnutrition among Hindus. Among Muslims, 1 child (2%) was moderately malnourished. Others (Sikh & Christian) were found to have normal nutritional status. As far as placement of children was concerned, amongst children residing in brothels, 3 children (6%) were moderately acute malnourished, and 1 child (2%) had SAM. Whereas in hostelites, 4 children (8%) had MAM and only 1 child (2%) had SAM. Amongst children living in native places, 1 child (2%) had MAM & SAM respectively. On applying Chi square test across each socio-demographic characteristic and types of malnutrition (SAM & MAM), the difference was not found to be statistically significant ($P<0.05$).

We performed a cross sectional study to study the prevalence of malnutrition and socio-demographic factors affecting it in the children of CSWs in Western India. We reported quite high prevalence of malnutrition (22%) in present study. Predominant socio-demographic factors affecting malnutrition were found to be age (12-30 months), female gender, illiteracy in mothers, being Hindu and placement of children in hostels. Our study findings are consistent with the findings of research studies done by Yerpude Pravin et al6, Chattopadhya M al2, Pardeshi G et al1 and Mukhopadhya KK et al3. Thus the knowledge and understanding of malnutrition in children of commercial sex workers will help creating awareness and imparting knowledge regarding nutritious diet and better hygienic practices. It will provide a tool planning for preventive and supportive services to the children

CONCLUSIONS:
High predominance of malnutrition (MAM & SAM) in children of commercial sex workers (CSWs) in present study could be attributed mainly to their poor socio-economic determinants namely illiteracy, placement of children in brothels and low socio economic status.

REFERENCES
1. Pardeshi G, Bhattacharya S. Child rearing practices amongst brothel based commercial sex workers. Indian J Med Sci. 2006;60:288–95.
2. Chattopadhyay M, Bandyopadhyay S, Duttagupta C. Biosocial factors influencing women to become prostitutes in India. Soc Biol 1994;41:252-9.
3. Mukhopadhyay KK. Girl prostitution in India. Soc Change 1995;25:143-53.
4. Somaiya PA, Awate RV, Bhore PD. Sociopsychological study of the prostitutes. Indian J Health 1990;34:93-7.
5. Das D. Giving the children of prostitutes their due. ICCW News Bull 1991;39:31-7. Chege MN, Kabiru EW, Mbithi JN, Bwayo JJ. Childcare practices of commercial sex
6. Yerpude P, Jogdand K. Child rearing practices amongst Brothel based Commercial sex workers. Indian Journal Of community medicine 2012;37(3):197-199.
7. Jennifer beard, godfrey Biemba, Mohamad i brooks, Jill Costello, Mark Ommerborn, Megan Bresnahan, David Flynn,and Jonathon l Simon. Children of female sex workers and drug users: a review of vulnerability, resilience and family-centred models of care. Journal of the International Aids Society 2010;13(2):S2-S6.
8. K Park. Park's Textbook of Preventive and Social Medicine. 24th Edition. Publisher M/s Banarsidas Bhanot. Chapter: Nutrition and health. 2017.