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ORIGINAL ARTICLE

Perception and Health Seeking Behaviour of People Regarding Anaemia: An Experience from Odisha in Eastern India.

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Abstract

Introduction: Anaemia is considered as a silent epidemic because it affects half the population irrespective of age and sex groups. The socioeconomic impact of anaemia is huge considering the proportion of population it affects. Various programs had been launched to combat anaemia. National Iron Plus Initiative (NIPI) and Anaemia Mukt Bharat (AMB) were implemented nationwide in recent years. This study highlights the perception and heath seeking behaviour of beneficiaries regarding anaemia in Odisha.

Material & Methods: A cross sectional study was conducted between April – July 2016 in four districts of Odisha, the districts representing different zones of the state. Beneficiaries were interviewed using predesigned, pretested questionnaire about knowledge, perception of anaemia and the health seeking behaviour. A sample size of 800 respondents was calculated in each beneficiary group considering prevalence of anaemia as 50 per cent. Informed consent was taken and confidentiality was maintained. Qualitative study (FGD) was also conducted among purposefully chosen beneficiaries.

Results: Less than 20 % of beneficiaries knew about anaemia. Majority of beneficiaries, 86-97 % preferred Government health sector for treatment of anaemia.

Conclusion: Social mobilisation and community awareness can bring out change in perception of health seeking behaviour of people in desired direction. Important points which need focus for creating awareness and thereby success of anaemia control program are, demand for IFA/albendazole tablet, hygiene promotion and improvement in dietary practices.

Key words: Anaemia, knowledge, health seeking behaviour, NIPI

Introduction

Anaemia is a widely prevalent disorder in which red blood cells have fewer haemoglobin molecules than normal, or fewer red blood cells resulting in less ability to carry oxygen to tissues in the body. The word anaemia derives from ancient Greek meaning "Lack of blood" [1]. Anaemia causes fatigue and low productivity and adversely affects cognitive and motor development. It contributes to over 100,000 maternal and almost 600,000 perinatal deaths worldwide each year. It also increases the risk of pre-term delivery and low birth weight in newborns and results in reduced cognitive development and school performance in children [1]. These in turn lead to social and economic losses, the latter amounting to about 4% of GDP globally [3]. India is a country with very high prevalence of anaemia. Nutritional anaemia which is primarily caused by iron deficiency anaemia is mostly prevalent among vulnerable groups like children < 5 years (59%), pregnant women (50%), non-pregnant and non-lactating women (53%) [4]. As per the reports of NFHS-3 and National Nutritional Monitoring bureau survey (NNMBS), anaemia prevalence among

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adolescent girls was alarming (55%) and mostly 15-19 age groups of boys (30%) were found to be anaemic [5,6]. More or less, anaemia is found in all age groups. Hence various schemes and strategies have been adopted by Government of India to curb the problem of anaemia in the community like Integrated Child Development Scheme (ICDS), National programme of nutritional support to primary education, Sabla and National Iron Plus Initiative (NIPI) etc focussing not only on medical and nutritional interventions but also behavioural change communication [6].

The NIPI programme was designed to weave together the previous schemes to control anaemia according to a comprehensive strategy across the life cycles (children under 5 years, young school children, adolescents in and out of school, pregnant and lactating women, and women in reproductive age-group who are not pregnant or lactating). NIPI also incorporates both preventive and therapeutic approaches to controlling anaemia. The main components of this initiative are administering the IFA supplements and administering the deworming medicine. Two set of behaviours are also related to the NIPI programme; increasing hygienic practices to prevent worms and dietary practices to enhance iron intake. Hence this study was undertaken to study the perception among people regarding anaemia, its signs and symptoms and health seeking behaviour of people based on their perceptions.

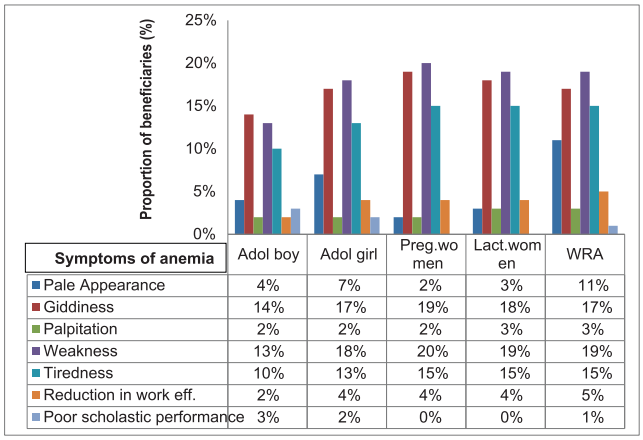
Methodology

Odisha is one of the twenty-nine states of India situated in the eastern border consisting of 30 districts. A cross-sectional study was conducted between April-July, 2016 among beneficiaries regarding their knowledge on anaemia, their perception on its signs and symptoms and health seeking behaviour in four districts of Odisha. Districts for the study were chosen according to their performance in NIPI in 2015-2016 as assessed indirectly by the department of Health according to the extent of reporting of IFA tablet and syrup consumptions by the Health, ICDS and Education Departments. The respondents included in the study were adolescent boys and girls, women in the reproductive age group (WRA), mothers of less than five-year-old children and pregnant and lactating women. Accordingly, four districts namely Jagatsinghpur as good-performing, Bhadrak and Kalahandi as poor-performing, and Keonjhar as average-performing districts were chosen. A 'Good-Performing' district was defined as one from which reports of IFA consumption were consistently received, 'Poor-Performing' in which reports were consistently missed, and 'Average-Performing' lies in between good and poor performing districts. Two blocks each were chosen from Keonjhar (Harichandanpur and Banspal) and Jagatsinghpur District (Raghunathpur and Kujang). Interviews were also planned in two blocks each in Bhadrak and Kalahandi, but limited to one block as no new information were being gleaned from the interviews. Hence, Bhandari Pokhari Block in Bhadrak District and Lanjigarh Block in Kalahandi district were selected for the study. A line list of all the subcentres from within the selected 6 blocks in 4 districts was prepared. 50 sub-centres were selected from these blocks using probability proportionate to size (PPS) sampling method. A sample size of 800 respondents was calculated for cross-sectional studies assuming prevalence of anaemia as 50%, taking design effect of 2 and 4% non-response rate. For choosing respondents within each sub-centre, the sample of 800 was divided among 50 subcentres. Hence, 16 respondents were drawn from each subcentre. If there were eight villages in a subcentre, two girls from each village were chosen. For random sampling of households 'Spin the bottle' method was adopted. Households with one adolescent girl were selected. If there were more than two adolescents in the same house, KISH method was used to select one. The same process was adopted for adolescent boys and WRA, whereas pregnant and lactating women were chosen randomly from the line list available from the frontline worker of that village. A predesigned and pretested questionnaire was used for data collection. Additionally, a qualitative study was also conducted among thirty-four purposefully chosen beneficiaries. A focussed group discussion was conducted in local language (Odia) on community awareness on anaemia and NIPI. Ethical approval was taken from ethical committee of AIIMS Bhubaneswar. Informed consent was taken from all the study participants and confidentiality was maintained. Quantitative data were analysed using Microsoft Excel and presented as frequencies. For the qualitative survey, most interviews were tape recorded and the electronic audio file labelled with date, time, position (e.g., Block Programme Manager, ASHAs, teachers), place and type of interview (FGD). The analysis was largely descriptive, reviewing text by theme for patterns, consistencies and inconsistencies. When required for clarity, responses by category were counted, and reported as '**Most, Many, Some'**.

Results

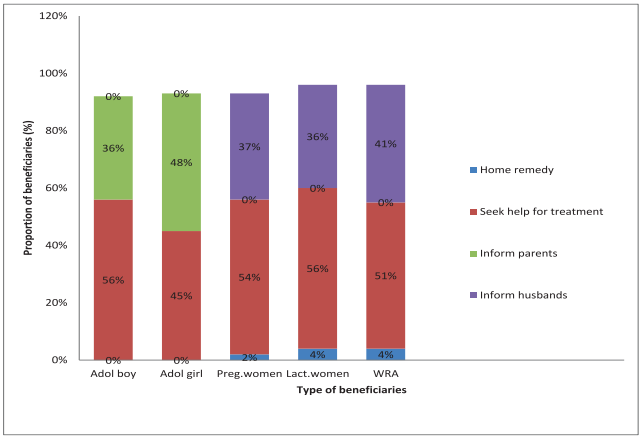
A quantitative study was conducted to assess awareness, perception and health seeking behaviour regarding anaemia among pregnant women (786), women belonging to reproductive age group (800), lactating mothers (788), adolescent girls (800) and adolescent boys (800).

In the quantitative study beneficiaries were asked whether they had heard about anaemia. Those who answered positively were then asked about the symptoms of anaemia.

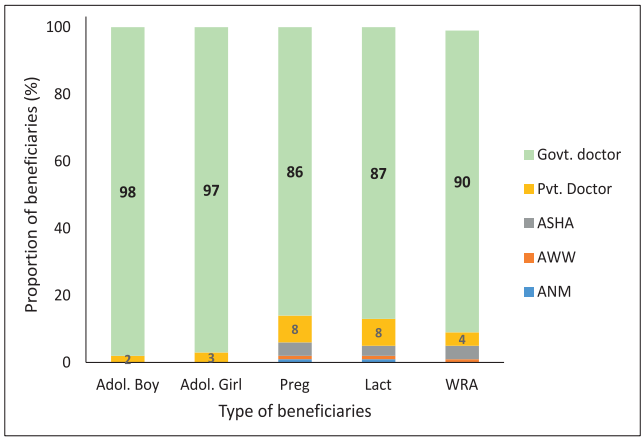


Symptoms of anemia	Adol boy	Adol girl	Preg.women	Lact.women	WRA
Pale Appearance	4%	7%	2%	3%	11%
Giddiness	14%	17%	19%	18%	17%
Palpitation	2%	2%	2%	3%	3%
Weakness	13%	18%	20%	19%	19%
Tiredness	10%	13%	15%	15%	15%
Reduction in work eff.	2%	4%	4%	4%	5%
Poor scholastic performance	3%	2%	0%	0%	1%

Less than 20% of these respondents reported knowing the symptoms of anaemia. Most of the beneficiaries who knew about anaemia felt that the most common manifestations of anaemia were giddiness, weakness or tiredness. Hardly any beneficiaries could relate poor scholastic performance with anaemia.



Regarding health-seeking behaviour, 36% - 48% of respondents said they would inform either their parents, if adolescents, or their husbands, when they suspected anaemia-related symptoms (Figure II), suggesting parents and husbands are key targets for Information, Education and Communication (IEC) on anaemia.



Beneficiaries' preferred providers are shown in Figure III. Those who said they would seek treatment were asked who they would seek it from. The vast majority said they preferred a government doctor in a health centre (86-98%), while only a few said they preferred a private doctor (2-9%). Very few reported preferring frontline workers like ASHA, ANM, or AWW (5-6%).

On conducting a focussed group discussion on knowledge regarding anaemia as a health condition, most of the respondents replied as a shortage of blood or bloodlessness. However, few adolescent school going boys could describe anaemia elaborately. Few groups of mothers though were aware of taking IFA tablets by pregnant ladies and IFA syrup given to children in the community by ASHA workers but had no knowledge about anaemia and the importance of IFA tablets/ syrups. Regarding signs and symptoms, beneficiaries who were aware of anaemia also knew that tiredness and pale colour of eyelids, tongue, nails and skin are symptoms of anaemia. Few of them also mentioned swelling and tingling sensations of face, feet, hands are associated with anaemia.

The most common causes of anaemia identified by beneficiaries were inadequate diet and worm infestation. Malaria and blood loss due to menstruation and during

Table 1: Beneficiaries for Focus Group Discussion

	Keonjhar		Jagatsinghpur		Bhadrak	Kalahandi	Total
	Harichandanpur	Banspal	Raghunathpur	Kujang	Bhandari Pokhari	Lanjigarh	
Mother with <5yrs child	2	1	1	1		2	7
Preg./lact./women in reproductive ages	1	1	1	1	1	1	6
Out of school Adolescent girls	2	1	1	2	1	1	8
Adolescent girls in school	1	1	1	2	1	1	7
Adolescent boys in school	1	1	1	1	1	1	6
Total	**7**	**5**	**5**	**7**	**4**	**6**	**34**

delivery was also considered as one of the causes of anaemia by few beneficiaries. Early marriages and pregnancy were cited as a contributing factor for the development of anaemia.

Knowledge regarding sources of iron rich food for prevention of anaemia revealed that beneficiaries most commonly consider green leafy vegetables, pulses, milk and eggs whereas few of them also mentioned mutton, fruits and jaggery to be rich in iron. Importance of IFA supplementation and deforming tablets were known by most of the beneficiaries. Though beneficiaries were aware of maintenance of hygiene to avoid worm infestation and malaria and diet diversification to combat anaemia, but their consistent practice in the community was not reported.

The main source of information about anaemia in the community was during interpersonal communication. Women and out of school adolescent girls basically drew information about anaemia from field level workers like AWWs, ANMs and ASHAs. Whereas the main source of information among school going adolescent boys and girls were teachers and RBSK teams which visited all secondary schools once a year and four times a year in SC/ST residential schools. It was reported that few adolescent girls and mothers had heard about anaemia from television whereas students of one school learned about anaemia from weekly Meena radio programme. However, none of the beneficiaries mentioned print media as the source of information.

Discussion

This study highlights the awareness, different perception of people regarding anaemia and their health seeking behaviour in this regard.

Most of the beneficiaries in quantitative study, who knew about anaemia felt that the most common manifestations of anaemia were giddiness, weakness or tiredness but could not relate poor scholastic performance with anaemia. In focussed group discussion few adolescent school going boys could describe anaemia elaborately. Many preferred govt. or private doctors (86-97 %) over frontline workers like ASHA, ANM, or AWW (5-6 %). Though the reported median distances of these government centres are around 5km from their residences (2-10 km), while the offices of private doctors were even further, around 8 km (1-22 km). Hence improvement in training and elevation in status of frontline workers to gain trust and acceptance in community regarding anaemia along with enhanced IEC activities are needed to create complete awareness on anaemia.

In a qualitative study, (FGD and Non-participant observation) conducted by Arun Seth et al among lay health workers perceptions of an anaemia control intervention in Karnataka showed that pre-implementation training modules, intervention simplicity and ability to incorporate the intervention into the routine work schedule facilitated its implementation in the community [7].

Few groups of mothers in the FGDs in the current study were aware of taking IFA tablets by pregnant ladies and IFA syrup given to children in the community by ASHA workers but had no knowledge about anaemia and the importance of IFA tablets/ syrups. This incomplete information can act as hindrance for anaemia control strategies in the community as iron supplementation can effectively control and prevent anaemia. This is supported by Dongre AR etal in a participatory action research in twenty-three villages of Wardha district of Maharashtra showed that the community-led initiative for once weekly iron supplementation for adolescent girls and iron prophylaxis for children, in addition to nutritional education had improved the haemoglobin status of children between 6 to 35 months of age and unmarried rural adolescent girls between 12 to 19 years of age [8].

Though beneficiaries in the current study as observed in FGDs, were aware of maintenance of hygiene to avoid worm infestation and malaria and diet diversification to combat anaemia, but their consistent practice in the community was not reported. Hence along with IFA tablets focus should also be given to hygiene promotion and sanitation as these factors cannot be ignored.

Findings suggested by Baranwal etal in their study were, the occurrence of childhood anemia was higher in the North Eastern and Eastern regions compared to all other regions of India due unclean fuel use, poor toilet facilities, staying in non-concrete house and exposure to smoking. Whereas clean drinking water, maintenance of sanitation, and hygiene practices contributed towards reducing anemia by reducing parasitic infections among children [9].

Social mobilisation and community awareness for IFA/ albendazole intake, hygiene promotion and improvement of dietary practices are important for success of any anaemia control strategy to combat anaemia. Similar findings were reported by an interventional study by Chakma t. etal regarding factors associated with high compliance during iron and folic acid supplementation among adolescent age group in a tribal area of Madhya Pradesh, that counselling and factors like social mobilization, timely supply of tablets, quality of tablets (blister pack) and availability of teachers and anganwadi workers were associated with the good compliance with consumption of IFA tablets [10].

Recommendations and Conclusions

Social mobilisation and community awareness and change in perception and health seeking behaviour of people are required for IFA/albendazole intake, hygiene promotion and

improvement of dietary practices which will in turn impact the success of NIPI to combat anaemia. The overall recommendation is to prioritise social mobilisation and develop communication (IEC) strategy to raise the demand for IFA, iron-rich diet, deworming and hygiene among the beneficiaries. Enhancing the awareness regarding anaemia among beneficiaries should be focussed. Targeted audiences like family members, community leaders such as the Sarpanch, BDO, SHG and SMC, should be persuaded for social mobilisation so that they can support NIPI and other anaemia control strategies. RBSK Teams should educate students and teachers by allowing more time at schools. Awards, competitions, events and media should be utilised to create awareness and increase the reach of the NIPI programme, including sensitising media actors on anaemia, and expanding messages through radio shows and public service announcements, through scripts of existing TV serials and TV advertisements, through local drama as entertainment, or through a campaign. For this a coordinated effort by different health departments, levels of stakeholders and field workers are required to create awareness about different aspects of anaemia and enhance health seeking behaviour of people thereby eliminate resistance to NIPI in the community.

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Ethics:	There is no ethical violation as it is based on voluntary anonymous interviews
Funding:	UNICEF Odisha
Guarantor:	Dr. Swayam Pragyan Parida will act as guarantor of this article on behalf of all co-authors.

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