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USE OF FORMATIVE RESEARCH TO OPTIMIZE INFANT AND YOUNG CHILD FEEDING PRACTICES (IYCF) IN DEVELOPING COUNTRIES.

FAHMINA ANWAR*, RATAN.K.SRIVASTAVA** AND S.P.SINGH***

Declaration

The Declaration of the authors for publication of Research Paper in The Indian Journal of Research Anvikshiki ISSN 0973-9777 Bi-monthly International Journal of all Research: We, ***Fahmina Anwar, Ratan.K.Srivastava and S.P.Singh*** the authors of the research paper entitled USE OF FORMATIVE RESEARCH TO OPTIMIZE INFANT AND YOUNG CHILD FEEDING PRACTICES (IYCF) IN DEVELOPING COUNTRIES. declare that , We take the responsibility of the content and material of our paper as We ourself have written it and also have read the manuscript of our paper carefully. Also, We hereby give our consent to publish our paper in Anvikshiki journal , This research paper is our original work and no part of it or it's similar version is published or has been sent for publication anywhere else.We authorise the Editorial Board of the Journal to modify and edit the manuscript. We also give our consent to the Editor of Anvikshiki Journal to own the copyright of our research paper.

Introduction

Optimum nutrition and good feeding of infants and young children are among the most important determinants of their health, growth and development. It prevents malnutrition and Early growth retardation, which is common in developing countries. Inappropriate care and feeding practices are recognized as some of the underlying causes of undernutrition[1]. More specifically, lack of knowledge of optimal feeding practices and cultural beliefs contribute to deteriorating child nutritional status.[2-3] Common inappropriate feeding practices prevalent in developing nations include low rate of exclusive breast feeding practices, introducing foods too early or too late, limiting the diversity of foods, and providing an inadequate quantity of food.[4,5]

In children, positive changes in health and nutrition manifest themselves in many forms, including improvements in growth and development and reductions in morbidity and mortality. Each of these outcome is the result of complex interactions between familial care giving behaviours and the biological underpinnings of health and nutrition. Behaviour change interventions aiming to improve Infant and young child feeding (IYCF) practices and growth are commonly referred to as 'nutrition education' in literature today. Nutrition education in this sense is more than just educating individuals or delivering information about healthy practices. It involves working with communities to understand their perceptions

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and constraints and ultimately identifying solutions for addressing nutritional problems. This may require improving the self-efficacy of caregivers, or changing physical and social environments to support positive behaviour change. The behaviour change strategy should promote the range of practices recommended for specific ages in a culturally appropriate and timely way, targeting not just those who practice the behaviours but those who influence the behaviours in a household and community. The behaviour change program should also seek to achieve the highest coverage possible, maintain regular and frequent contact with target groups, and ensure appropriate targeting and facilitating the adoption of behaviours. It has been found (Caulfield et al.) that clear, age-appropriate and action-oriented messages delivered through multiple contact points and channels are most effective and that visual materials such as posters, counselling cards and take-home brochures can help to promote adoption of behaviors[6].The main objective of this review is to give an insight into formative research (qualitative research) in an area of Infant and young child feeding Practices (IYCF).

Overview of formative research

Formative research is the basis for developing effective strategies, including communication channels, for influencing behaviour change. It helps researchers identify and understand the characteristics - interests, behaviours and needs - of target populations that influence their decisions and actions. It is conducted in the early stages of designing a health communication program to understand the current practices, motivators, and barriers related to ideal behaviours. It also defines the acceptability (willingness to try) and feasibility (ability to perform) of adopting a new behaviour, target audience(s), convincing messages for each audience, the channel, and the ideal frequency of exposure to the message. Formative research is a key component to planning a behaviour change strategy it helps program planners and implementers to identify specific behaviours to promote, identify the knowledge, motivators, and barriers to desired behaviours that messages need to either overcome or strengthen. Trials of improved practices (TIPS) is an important phase of formative research, as a technique it was develop by Manoff Group to test recommendations and determine which ideal/optimum behaviours are possible in certain contexts.

TIPs was first used in the late 1970's and early 1980's in nutrition programming. Over the past decade, TIPs has been applied to other public health issues including HIV/AIDS, school health, infectious disease control, maternal health and family planning. Any public health program can enhance its chances of effectively motivating and facilitating changes in health-related practices by including the groups who will be most involved in the program in testing and defining the practices to be recommended. Using TIPs gives program planners an in-depth understanding of families' preferences and capabilities, as well as the obstacles they face in improving their health and their motivations for trying new behaviours and practices. They are the best way to gauge the acceptability new practices and learn how to promote and support them[7].

Some Recent Applications of the Formative research (TIPs Methodology) :

Location	Health Care Issues	Target Behaviours	Year
Kentucky, Mississippi, California	Healthy lifestyles for primary school-age children	Multiple behaviors related to physical activity, eating and drinking	2006
Mozambique and Zambia	Injection safety practices	Multiple behaviors with different providers related to prescribing, injecting and waste disposal	2004
Malawi	Schistosomiasis, malaria, HIV/AIDS prevention, and hygiene behaviour	Multiple behaviors, including using insecticide-treated cloths for sleeping; abstinence, condoms, income-generation for girls, parents talking to young children about HIV/AIDS prevention; basic	2002-2003

		hygiene in schools and at home	
Dominican Republic, Nicaragua, Peru	Basic hygiene (hand-washing, consuming clean water, safe feces disposal)	Individual and family practices in home and environment, also purchasing subsidized essential hygiene products	2001-2003
Dominican Republic, El Salvador (CHANGE Project)	Dengue	Family actions to avoid mosquito breeding in household water containers	2001-2003
South Africa	Indoor air pollution	Repairing stoves, improving ventilation, shortening burning time, keeping young children away from smoke	2002
Dominican Republic	Young child feeding	Focus on calories and nutrient content in normal times and when children are sick or recovering	2001
Pakistan	Men's role in family planning decision making	Discussing with spouse, learning about methods, making joint decision, starting a modern method	2000
Zambia	Insecticide-treated bed nets	Obtaining and appropriate use of treated bed Nets	1997

TIPs is normally the second phase of the formative research process. The first phase consist of various qualitative and quantitative methods such as review of existing data ,in depth interview (IDIs), focus group discussion (FGDs),observations, dietary recall and positive deviances inquiry(PDI).A mixed method approach in health research can bring together the strengths of both qualitative and quantitative approaches and address the complex factors that influence health [8]. Experience has shown that individual counselling with messages tailored to the specific situation coupled with adequate support leads to behaviour change [9,10] and is more effective than group education [8]. Individual counselling is beneficial in that it allows for unhurried time with the caregiver. Negotiating behaviour change with caregivers based on their situation rather than giving general instructions is a key component to its success. However, this is not always possible given the skill and time requirements. Successful counselling—and negotiated behaviour change—is dependent on the counselling skills of the worker and routine follow-up visits with the caregiver [11]. In Peru, choosing a few key, age-appropriate messages proved to be more practical, as it lessoned demands on health clinic workers [12]. One of the strengths of behaviour change communication is working with communities to use their own resources to address problematic feeding practices. In most cases, the proportion of families for which behaviour change interventions are unable to address problems leading to mild and moderate malnutrition is approximately 20 percent [13]. While not in all interventions, there have been examples of 'educational' interventions without food supplementation in impoverished settings that were effective in improving child growth.[14-15]

In spite of some very successful use of TIPs, this approach is not widely used, perhaps due to lack of understanding of the methodology. Common misconceptions are that the sample size must be statistically significant and randomly chosen, and that TIPs must be conducted by outside (unbiased) researchers. In reality, TIPs requires a sample of only about fifty, and that can be a convenience sample as long as those included are very representative of the rest of the population that will eventually be targeted. The methodology lends itself very well to being conducted by existing field staff, and in fact, serves as a learning experience to help them understand behaviour change. The PAHO IYCF guidance called PROPAN is doing much to disseminate the concept of TIPs to MOH personnel in Latin America and the Caribbean. The SARA Project is using TIPs in their HIV work in Mozambique. CARE has used TIPs with good results in India in a large project covering 7 states, in a child survival project in Niger, and in a national anaemia project in Tajikistan.

T A B L E 2 *shows some of the Infant and young child feeding behaviour change communication interventions using formative research techniques and interventions have shown to have a modest impact on growth.*

Location	Situation analysis/formative research	Communications strategy		
		Messages deliverd	Materials, channels, activities	Effect size*
China	Earlier needs Assessment	Breastfeed exclusively for the first 4-6 months; initiate breastfeeding right after birth; bottle-feeding can be dangerous and breastfeeding is free; give breastmilk on demand; first complementary food should be egg yolk with breastmilk in the beginning, thereafter give thickened rice porridge and other foods for growth; baby needs breastmilk through the first year and other foods daily after 4-6 months to grow well and be healthy; use home-produced foods and the family diet as the basis for complementary feeding, along with breastmilk after 4 months; promoted animal-source foods.	Growth monitoring and promotion, home counseling, village nutrition educators, feeding guidebook, growth chart.	+0.76 WAZ +0.64 HAZ
Peru	Formative research	Three key messages delivered by all health center staff to caregivers of young children: □ Puree satisfies and nourishes the baby; at each meal, give the thick food first. □ Add a special food to the baby's serving (chicken liver, eggs, fish). □ Teach your child to eat with love, patience, and humor.	Home and clinic visits, cooking/feeding demonstrations, field workers, health clinic providers, flipcharts, recipe flyers.	+0.194 WAZ* +0.272 HAZ*
India	Formative research (household trials)	Start complementary foods at 6 months, specific foods, meal frequency and amounts to be fed at different ages while continuing breastfeeding, ways to encourage children to eat more, handwashing before a meal, continuing feeding during illness.	Home and clinic visits, community volunteers, midwives, health clinic providers, community meetings, cooking/feeding demonstrations, village rallies, school debates, street plays, nutrition fairs, posters, flipcharts, feeding guide, counseling guide.	+0.32 cm, mean length

Location	Situation analysis/formative research	Communications strategy		Effect size*
		Messages	Materials, channels, activities	
Nicaragua	Not available	Maintaining/Improving growth, breastfeeding, child feeding, illness care, hygiene, taking into account the age of the child, if the child gained weight the previous month, and if the child had been ill.	Growth monitoring and promotion, clinic visits, educational workshop, nurse, doctor, food security transfer.	+0.13 HAZ
Bangladesh	Formative research (focus group discussions)	Importance of food security, caring practices, personal hygiene, and disease control for child nutrition; benefits of enriched dishes.	Group education, posters, pictures, leaflets, growth monitoring and promotion card, cooking/feeding demonstrations, nutritionist.	+0.28 WAZ (education group only)
Iran	Preliminary studies	Environmental health, personal hygiene, ways to obtain clean drinking water, effective use of vaccination programs, appropriate use of the child growth chart, daily intake of all food groups as stated in the food pyramid, appropriate food preparation, essential foods during pregnancy and lactation.	Group education, literate daughters, female volunteers.	+0.80 WAZ +0.97 HAZ
Bangladesh	Formative research (focus group discussions) and preliminary studies	Using the UNICEF model: □ Prevention, recognition, and control of diarrhea and acute respiratory infections. □ Quantity and quality of foods. □ Interaction with children in an affable manner and increasing verbal communication.	Group education, cooking/feeding demonstrations, community meetings, community health workers, teaching manuals, flipcharts.	+0.66 WAZ +0.23 HAZ
Vietnam	Positive deviance Inquiry	UNICEF's 'Facts for Life', including recommendations on breastfeeding, food variety, complementary feeding, and health care.	Growth monitoring and promotion, nutrition education and rehabilitation program sessions, home visits, community volunteers.	+0.20 WAZ†

* Adjusted for birth weight and socioeconomic factors.

Review of Formative research

Review of study indicates that when context-specific infant feeding messages promoting the use of local foods are delivered directly to mothers through counselling, significant improvements in complementary feeding practices and dietary intake are possible [16]. Providing clear and motivating information about the benefits of modifying feeding behaviours can be sufficient for facilitating adoption of improved practices [9]. In the Bangladesh Integrated Nutrition Project, despite widespread food insecurity, mothers were able to provide the recommended complementary foods from their own resources, as they were highly motivated by the nutrition education [17].

Development of intervention through formative research for Promotion of exclusive breastfeeding until age 6 months in a developing country through existing primary health-care services was feasible. It reduces the risk of diarrhoea, and does not lead to growth faltering Nita Bhandari et.al (2003) [18]. A recent review of complementary feeding programs provides evidence that BCC programs can be effective in reducing child malnutrition in a variety of contexts (Caulfield, Huffman, and Piwoz 1999). In rural Zimbabwe ,Paul KH et.al (2012) [19] conducted two rounds of Trials of Improved Practices (TIPs) among mothers of infants aged 6-12 months to assess the feasibility of improving infant diets using only locally available resources and locally available resources plus 20 g of LiNS as Nutributter®/day. While provision of LiNS was crucial to ensure adequate intakes of iron and zinc, Educational messages that were barrier-specific and delivered directly to mothers were crucial in improving the underlying diet of infants. The majority of interventions targeting complementary feeding carried out formative research to design their programs[18, 14, 20, 21, 22,23]. In Indonesia, market, anthropological, and nutrition techniques were used to identify current infant feeding practices and local resources, as well as motivations for behaviour change.[23]

Recipe trials (participatory cooking sessions) conducted with small groups of mothers and their children with the aim of developing special complementary foods for infants and young children are also a part of formative research. Specifically, special recipes are proposed, prepared, tasted, and discussed to evaluate their acceptability, feasibility, and affordability for including them in the diets of young children (Dickin, Griffiths, and Piwoz 1997). This technique of developing enriched complementary foods that are based on locally known recipes as well as local ingredients has been used in a number of countries with adaptations to each context (Bentley et al. 1991; Kanashiro et al. 1991; Piwoz 1994). Clinical trials should also be encouraged to incorporate formative research into their protocol design to ensure participant understanding of the research, safeguard them, and to increase feasibility and acceptance of the clinical research in the community. Corneli AL et.al (2007).[24]

Conclusion

Several of the interventions integrated in Using existing facilities and health workers or community volunteers already closely engaged with the community contributes to the sustainability of an intervention. Furthermore, programs have the potential to be sustainable when households are encouraged to optimize use of existing community and family resources toward improving nutrition. On the basis of supportive evidence, it can be concluded that feeding behaviour change programs without external food support can result in improved child nutritional status. While interventions have shown to have a modest impact on growth, further research is needed to identify behaviour change approaches that would have an even larger impact on growth. Part of this may include increasing the frequency of support so that when a feeding problem occurs, it can be resolved immediately. Increased support—whether through an individual or group approach—will depend on interventions that can be sustained at the community level.

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