

PJN

ISSN 1680-5194

PAKISTAN JOURNAL OF
NUTRITION

ANSI*net*

308 Lasani Town, Sargodha Road, Faisalabad - Pakistan
Mob: +92 300 3008585, Fax: +92 41 8815544
E-mail: editorpjn@gmail.com

Encouraging Appropriate Infant Feeding Practices in Slums: A Positive Deviance Approach

Vani Sethi¹, Sushma Kashyap¹, Veenu Seth¹ and Siddharth Agarwal²

¹Department of Foods and Nutrition, Lady Irwin College, New Delhi, India

²Environment Health Project - USAID, India

E-mail: vani_sethi@hotmail.com

Abstract: Nutritional Positive Deviant (PD) infants grow 'bigger' and 'faster' than other infants living in a similarly socio-economically deprived environment. Certain positive feeding and care giving practices adopted by mothers of PD infants enable them rear better nourished and active infants. Limited data is available on using PD mothers as counselors encouraging appropriate and feasible infant feeding practices (IFP) in India. Hence, the present study was undertaken. The study was conducted in a slum of Delhi (India). Twenty-Five infants aged 6-12 months were weighed. Three infants with normal weight for age status (as per Gomez classification) were classified as PD infants. A PD inquiry (PDI) was conducted on current IFP in these families to identify PD behaviours adopted and determinants for the same. PD behaviours identified included: feeding modified family pot (energy dense) complementary food at least two times a day, supervised bowl feeding by the mother and father support to the mother in infant feeding and care giving. Two, of these three PD mothers volunteered to discuss the benefits of PD behaviours they had been practicing with the other 22 members of the group. The strategy promoted collective dialogue and discussion to try the PD behaviours through weekly group discussions over a period of four weeks. After four weeks, feeding modified family pot food with addition of 1 teaspoon of ghee (milk fat) in food (10/22), feeding an extra mid-day cereal snack (12/22) were PD behaviours adopted by other members of the group (22). It can be concluded that i) behaviours requiring least preparation time were easily adopted and ii) PD mothers can be effective counselors to encourage appropriate IFP.

Key words: Positive Deviants, complementary food, infant feeding practices

Introduction

It is often seen that in communities throughout the world there are a few 'deviant' individuals whose uncommon behaviours or practices enable them to outperform or find better solutions to their pervasive problems than their neighbours with whom they share the same resources. We call these individuals "positive deviants" and their behaviour has led to a new development paradigm called "positive deviance".

Extending positive deviance to nutrition and infant growth, nutritional positive deviant (PD) infants grow 'bigger' and 'faster' than the growth norm of infants living in a similarly socio-economically deprived environment. One factor that could confound the proposed definition and identification of nutritional PD infants is inherent genetic variation within the population (Lowentin, 1974). However, in populations living in poor environmental conditions where growth does not approach the expression of full genetic potential, differences in growth mainly attributable to environmental influences rather than to genetic potential (Habicht *et al.*, 1974; Stephenson *et al.*, 1983).

Thus, if there are mothers who can cope and manage to rear better-nourished and active infants where a majority of infants suffer from growth retardation and yet belong

to the same community (Greaves, 1979), their "maternal technology" (infant feeding and care giving practices) and determinants behind their success despite hardship would be worth exploring, analyzing and sharing with others (Mata, 1980). Also, if these PD feeding and care giving practices are shared with others these practises would be more likely to be feasible, culturally acceptable and adopted because these PD practices are indigenous rather than extraneously derived (Wishik, 1976; Sternin *et al.*, 1998).

Positive deviance as an inherent tool in nutrition education behaviour change interventions is currently being successfully implemented in community-based programs in some of the poorest countries in the world: Vietnam, Haiti, Nepal, Bangladesh, and Mozambique (Sternin, 1998). In India, however, positive deviance studies have been limited to identifying the PD behaviours and their determinants. These have been conducted in Tamil Nadu, West Bengal and Bombay (Graves, 1976; Shekar *et al.*, 1992; Shameera and Shobha, 1997). Since, there is no data on use of these PD mothers as counselors to encourage other families to practice PD behaviours therefore the present study was undertaken. In this communication we would like to share the field stories of our experience of using PD mothers as counselors to encourage appropriate infant

feeding practices (IFP).

Materials and Methods

Identifying PD infants and PD mothers: The study was conducted in a slum of Delhi (India). Twenty-five infants aged 6-12 months were identified purposively through domiciliary visits. These infants were weighed utilizing standardized techniques and precautions (Jelliffe, 1966). Infants were classified as per Gomez classification for weight-for-age. Those infants in the normal category (i.e. weight-for-age > 90% of the National Council of Health Statistics) (NCHS) median were classified as PD infants (Gopaldas and Seshadri, 1987). A qualitative PD inquiry (PDI) was conducted with the mothers of these PD infants on current IFP adopted by them and determinants of the same through home visits. PD behaviours pertaining to IFP included: i) Three mothers fed modified family pot (energy dense) complementary food at least two times a day, the meal generally comprising of a cereal (generally rice) and pulse; they also fed biscuit and banana as snack foods and took extra initiative to prepare and feed energy dense foods in addition to family pot to their infants in between meals. These energy dense foods comprised suji in milk, bajra/wheat roti cooked in pulse/milk. ii) Of the above, supervised bowl feeding was adopted by two of the families and iii) father of an infant took extra initiative in feeding and care-giving his infant.

Role of the Researcher: Realizing that these behaviours were most close to the emphasis behaviours pertaining to IFP any nutrition education package would promote, these three families were visited and after detailed interaction with these families it was observed that positive past experiences after adopting these practices served as antecedents and strengthened their belief that these practices were beneficial for their infants. In addition, the mothers-in-law in these families were very supportive of the PD behaviours the mothers were practicing. This encouragement from the mother in law enhanced the mother's self-efficacy to practice the PD behaviours.

Informal discussions with these families were used to motivate these PD mothers to participate in a nutrition education program as counselors to encourage the remaining 22 mothers to practice the PD behaviours. Of the three, two PD mothers volunteered to be counselors and facilitated weekly (one hour) group discussions over a period of four weeks. The strategy promoted PD mothers to engage in collective dialogue and discussion of their past experiences and benefits of practicing these PD behaviors, and in turn motivating the remaining twenty-two mothers to try these PD behaviours. The first session (1st week) was an interaction session to discuss the current IFP, subsequently, two sessions (2 weeks) were used to motivate the mothers to practice

the PD behaviours and the fourth session (after 2 weeks) was used to evaluate the program. The role of the researcher was to only initiate a discussion. Emphasis was laid on the mothers coming out with solutions themselves, dialogue and discussion to try and adopt the PD behaviours they had been practicing.

Results and Discussion

Field Experiences: Some of the field stories of how PD mothers motivated and played the role of counselors are given below:

Farida, mother of a 6-month infant made a thick "roti", cut the center and cooked it in 'pulse'. She fed this thick gruel to her infant twice a day in between meal timings. She mentioned that "this keeps the baby's stomach full and so he cries less". Through a food demonstration in session two she tried to convince other members that this exercise was neither very difficult nor time consuming. She was able to convince 4 mothers to cook and feed this gruel to their infants, who continued to practice this behaviour till the fourth session. However 2 mothers tried this behaviour after the second session, but at the third session they mentioned that they discontinued practicing the PD behaviour. They mentioned that their mother in laws discouraged this practice as they felt that "this would lead to diarrhea as this gruel is very heavy for the infant's stomach" and "food should be fed only after the infant completes his/her first birthday". This finding suggests that MIL should also be encouraged to attend nutrition education sessions and be convinced of the PD behaviours to allow more number of mothers to practice PD behaviours.

Shanti, mother of a 6-month infant had exclusively breast-fed her infant, on the advice of her mother in law (MIL). The father took special interest in ensuring complete immunization of the infant by the required age. MIL initiated 'Khichri' made of pulse, rice and ghee at six months. The child was bathed daily, clad and mother and grandmother actively and patiently fed the child. The influential role of grandmothers/MIL as protagonists in Maternal Child health issues have been documented by other studies from Africa (Mukuria, 1999; Aubel *et al.*, 1991). Our study used the grandmother's knowledge as an asset. Our aim was to motivate and encourage her along with the PD mother to promote the PD behaviours among other mothers. This enthused MIL with her daughter-in-law (DIL) started facilitating the value of PD behaviour her family had been practicing to the rest. At the fourth session, this PD (MIL-DIL) pair was able to motivate 10 mothers to prepare 'khichri' of cereal + pulse combination, 1 tsp of ghee (milk fat) to increase the energy density of food and 12 others to increase the frequency of feeding from twice a day to four times a day. All these behaviours were practiced after the second session and maintained till the fourth session. The

reasons for most mothers to adopt the behaviours suggested by this pair of MIL-DIL brings out a pertinent finding i) behaviours promoted by elders women as mentors/counselors in a community are accepted and adopted faster and ii) the dynamism and motivating skills of the PD counselor play a pertinent role in adoption and maintenance of PD behaviours.

Conclusion: Such field experiences help one understand the human psyche around adoption of appropriate behaviours by families living in resource poor conditions and determinants of the same. While an experience like this on a small sample of twenty-five for a short duration does not represent a statistically significant evidence of results, however, it does help us to understand the psychosocial environment that effects behaviour change and the valuable role of self efficacious PD mothers/family members as counselors. More research initiatives with a larger sample size for longer duration would be of utmost value to reveal the determinants behind adoption, maintenance, and dropout of the PD behaviours once tried.

References

- Aubel, J., E. H. M. Alzouma, I. Djabel, S. Ibrahim and B. Coulibaly, 1991. From Qualitative Community Data Collection to Program Design: Health Education Planning in Niger International Quarterly of Community Health Education, II: 345-369.
- Gopaldas, T. and S. Seshadri, 1987. Interpretation of anthropometric standards and classification in use. IN: Nutrition monitoring and assessment. Oxford University Press, 185-87.
- Graves, P. L., 1976. Nutrition, infant behaviour and maternal characteristics: a pilot in West Bengal, India. Am. J. Clin. Nutr., 29: 305-319.
- Greves, J. P., 1979. Nutrition delivery systems. Ind. J. Nutr. Diet., 16: 75-82.
- Habicht, J. P., C. Yarbrough, M. Malina and R. E. Klein, 1974. Height and weight standards for preschool children: how relevant are ethnic differences in growth potential?. Lancet, 1: 611-615.
- Jelliffe, B. D., 1966. Direct nutritional assessment of human groups. In: The assessment of nutritional status of the community. World Health Organization Press, 64-69.
- Lowentin, R. C., 1974. The analysis of variance and analysis of causes. Am. J. Human Genet., 26: 400-11.
- Mata, L. J., 1980. Child malnutrition and deprivation-observations in Guatemala and costarica. Food Nutr., (Rome) 6: 7-14.
- Mukuria, A. G., 1999. Exclusive Breast-feeding and the role of social support and Social networks in a Low Income Urban Community in Nairobi, Kenya, Ph.D. Dissertation, Baltimore, Johns Hopkins University, School of Hygiene and Public Health.
- Shameera, S. M. and A. Shobha, 1997. Positive and negative deviance in growth of urban slum children in Bombay. Food and Nutr. Bull., 18: 15-37.
- Shekar, M., J. P. Habicht and M. C. Latham, 1992. Use of positive negative deviant analysis to improve programme targeting and services: example from the Tamil Nadu Integrated Nutrition Project. Int. J. Epidemiol., 2: 707-713.
- Stephenson, L., M. C. Latham and A. Jansen, 1983. A comparison of growth standards: similarities between NCHS, Harvard. Denver and Privileged African children and differences with Kenyan rural children. Cornell International Nutrition Monograph Series. No 12. Ithaca, NY, USA: Cornell University.
- Sternin, M., J. Sternin and M. David, 1998. Overview of the hearth nutrition model. In: Designing a community based nutrition program using model and positive deviance approach- a field guide. Save the children, 13-19.
- Wishik, S. M. and S. V. D. Vynck, 1976. The use of nutritional "Positive deviants" to identify approaches for modification of dietary practices. Am. J. Public Health, 66: 38-42.