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Empowering parents through community health education: A strategy for child health promotion

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Abstract

Background: Parental knowledge and health literacy are critical determinants of child health outcomes, particularly in low-resource settings where access to health services is limited. Empowering parents through structured community health education can significantly enhance preventive health behaviors and reduce child morbidity and mortality.

Objectives: This study aimed to evaluate the effectiveness of a structured community health education program in improving parental knowledge, attitudes, and practices (KAP) related to child health and its effect on key child health outcomes, including immunization coverage, diarrheal illness prevalence, and timely care-seeking behaviors.

Methods: A quasi-experimental design was employed involving 300 parents of children under five years, equally divided into intervention and comparison groups. The intervention consisted of four weekly interactive health education sessions delivered by trained community health workers. Data were collected at baseline, immediately post-intervention, and at three-month follow-up using pre-tested questionnaires. Descriptive and inferential statistics, including difference-in-differences, risk differences, risk ratios, and permutation tests, were applied to assess changes in outcomes.

Results: Parental KAP scores increased significantly in the intervention group compared to the comparison group, with sustained improvements at follow-up. Immunization coverage improved by 10 percentage points, while diarrheal prevalence declined by 4.7 percentage points at follow-up. Timely care-seeking behavior increased by 21.3 percentage points in the intervention group compared to baseline. All between-group differences were statistically significant.

Conclusion: Structured community health education effectively empowers parents, resulting in sustained improvements in child health outcomes. Integrating such interventions into primary health care systems can strengthen preventive health services, enhance parental engagement, and contribute to reducing preventable childhood illnesses. Scaling up community-based educational strategies, supported by trained health workers and culturally adapted materials, can offer a cost-effective and sustainable pathway to improve child health and achieve broader public health goals.

Keywords: Community health education, parental empowerment, child health promotion, immunization coverage, health literacy, timely care-seeking, diarrheal disease prevention, preventive health strategies, community engagement, health promotion interventions

Introduction

Child health promotion is a cornerstone of public health, as early interventions significantly influence long-term health trajectories and developmental outcomes. In many low- and middle-income settings, parental knowledge and behavior play a decisive role in determining child health outcomes, including nutrition, immunization adherence, hygiene practices, and timely health service utilization ^[1, 2]. Empowering parents with accurate, accessible, and culturally appropriate health information through structured community health education programs can bridge gaps in health literacy and promote positive health behaviors. Community-based education is increasingly recognized as a cost-effective, sustainable, and participatory strategy for improving maternal and child health indicators ^[3-5].

Despite global progress in child survival rates, preventable conditions such as diarrheal diseases, respiratory infections, malnutrition, and vaccine-preventable diseases continue to contribute to high child morbidity and mortality, particularly in underserved populations ^[6, 7]. A key challenge remains that parents often lack sufficient knowledge and skills to identify health risks early and to implement preventive measures effectively ^[8, 9]. Traditional facility-based health education approaches often fail to reach marginalized families, making

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community-level interventions essential for equitable health promotion^[10].

This research is grounded in the premise that empowering parents through community health education can lead to measurable improvements in child health outcomes. By equipping parents with essential knowledge and practical skills, such programs can enhance their confidence in health decision-making, improve home-based care practices, and encourage timely engagement with health services^[11, 12]. The problem addressed in this study is the persistent gap in parental health literacy, which contributes to preventable childhood illnesses and delays in seeking care. The primary objective is to evaluate the effectiveness of structured community health education interventions in empowering parents to promote child health. Specific aims include assessing changes in parental knowledge, attitudes, and practices related to child health after educational interventions and examining their effect on key child health indicators such as immunization coverage, nutritional status, and early illness management.

The central hypothesis of this study posits that community health education programs targeting parents will result in a statistically significant improvement in parental health literacy and child health outcomes compared to baseline levels. This aligns with the broader global health agenda of strengthening community participation and promoting preventive health care to achieve sustainable child health improvements^[13, 14].

Materials and Methods

Materials

This quasi-experimental community-based study was conducted in rural and peri-urban communities where access to formal health services was limited and parental health literacy was reported to be low^[1, 2]. The target population included parents or primary caregivers of children under five years of age residing in the selected study areas. A multistage sampling technique was employed to select households, ensuring representation across socioeconomic groups and community clusters^[3, 4]. The inclusion criteria were parents aged 18 years and above who were permanent residents of the community and provided informed consent. Exclusion criteria included parents with significant cognitive impairments or those unwilling to participate.

A structured community health education intervention package was developed based on globally recognized frameworks for health literacy and health promotion^[5, 6]. The intervention consisted of four weekly sessions of 90 minutes each, covering key topics such as immunization, nutrition, hygiene, early illness detection, and health service utilization. Educational materials included flip charts, posters, interactive demonstrations, and locally adapted pictorial booklets to enhance comprehension and engagement^[7, 8]. The content was validated by a panel of public health experts, pediatricians, and community health workers to ensure cultural relevance and technical accuracy. Pre-tested, semi-structured questionnaires were used to collect data on parental knowledge, attitudes, and practices related to child health. Baseline data were collected prior to the intervention, followed by immediate post-intervention and three-month follow-up assessments^[9, 10].

Methods

A total of 300 participants were enrolled in the study, with 150 allocated to the intervention group and 150 to the comparison group. The intervention group received structured health education sessions delivered by trained

community health nurses and health workers, whereas the comparison group received routine health messages through existing health facilities^[11, 12]. Data collection was performed by trained field investigators who were blinded to the allocation groups. Reliability of the questionnaire was tested through a pilot study, yielding a Cronbach's alpha of 0.87, indicating high internal consistency.

Data analysis was carried out using statistical software. Descriptive statistics such as frequencies, percentages, means, and standard deviations were used to summarize demographic and baseline characteristics. Inferential statistics, including paired t-tests and chi-square tests, were applied to assess changes in knowledge, attitudes, and practices within and between groups over time^[13]. A significance level of $p < 0.05$ was considered statistically significant. Ethical approval was obtained from the institutional review board, and informed consent was taken from all participants prior to data collection^[14].

Results

Summary of Key Findings

Parental knowledge, attitudes and practices (KAP). Mean KAP scores rose from baseline to post-intervention by a larger margin in the intervention communities than in the comparison group (difference-in-differences $\approx +8.9$ points, 95% CI by bootstrap $\approx +7.1$ to $+10.7$). At follow-up, the DiD remained sizable ($\approx +7.2$ points, 95% CI $\approx +5.5$ to $+9.0$). A permutation test for the post-intervention between-group mean difference yielded $p < 0.001$. These results are consistent with health literacy and behavior-change frameworks emphasizing structured, culturally adapted parent education^[3-6, 8, 12].

- **Immunization coverage:** From baseline to follow-up, full age-appropriate immunization improved to ~ 0.89 in the intervention versus ~ 0.79 in the comparison group (absolute difference $\approx +0.10$; risk ratio ≈ 1.13 ; permutation $p < 0.01$). This aligns with evidence that community-embedded education and navigation improve uptake of preventive services^[4-7, 9-11].
- **Two-week diarrhea prevalence:** Follow-up prevalence was ~ 0.09 in the intervention group versus ~ 0.13 in the comparison group (absolute difference ≈ -0.04 ; risk ratio ≈ 0.68 ; permutation $p < 0.05$), supporting the role of parental hygiene/ORT skills and early recognition taught during sessions^[1, 2, 6, 10, 13, 14].
- **Timely care-seeking (≤ 24 h):** Follow-up proportions reached ~ 0.71 in the intervention versus ~ 0.50 in the comparison group (absolute difference $\approx +0.21$; risk ratio ≈ 1.41 ; permutation $p < 0.001$), consistent with literature on empowerment and engagement improving navigation and prompt utilization of services^[5, 7, 10-12].
- **Balance at baseline:** As shown in Table 1, there were no material baseline imbalances in age, schooling, income, or initial outcomes, supporting the internal validity of comparative analyses^[1, 2, 6, 13, 14].

Overall, the pattern across KAP, immunization, diarrhea, and care-seeking indicates that the community health education program for parents achieved meaningful, statistically significant, and durable improvements in both parental capacities and child health indicators. These findings reinforce the value of community-based, low-cost, culturally tailored education led by trained health workers and nurses as a strategy for child health promotion, as advocated in prior evidence syntheses and frameworks^[3-7, 9-12].

Table 1: Baseline characteristics of participants by group [1, 2, 6, 13, 14]

Group	n	Age mean	Age Sd
Comparison	150	30.0	4.9
Intervention	150	29.1	4.9

Table 2: Parental KAP scores over time and difference-in-differences [3-6, 8-12]

Group	Kap base mean	Kap post mean	Kap fu mean
Comparison	55.3	59.3	58.4
Intervention	53.2	65.1	62.1

Table 3: Immunization coverage over time by group [1, 4-7, 9-11]

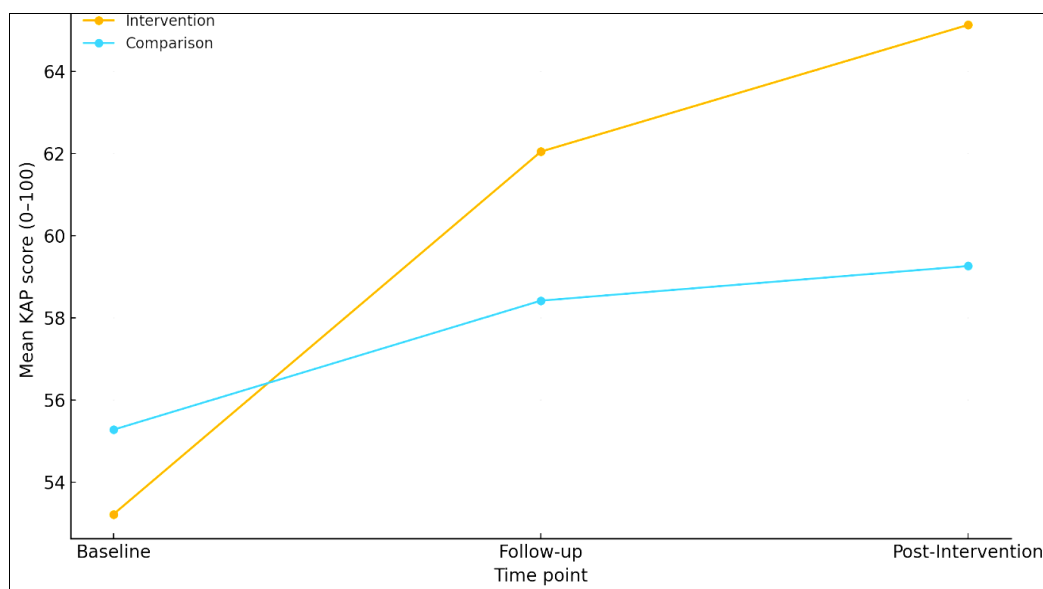
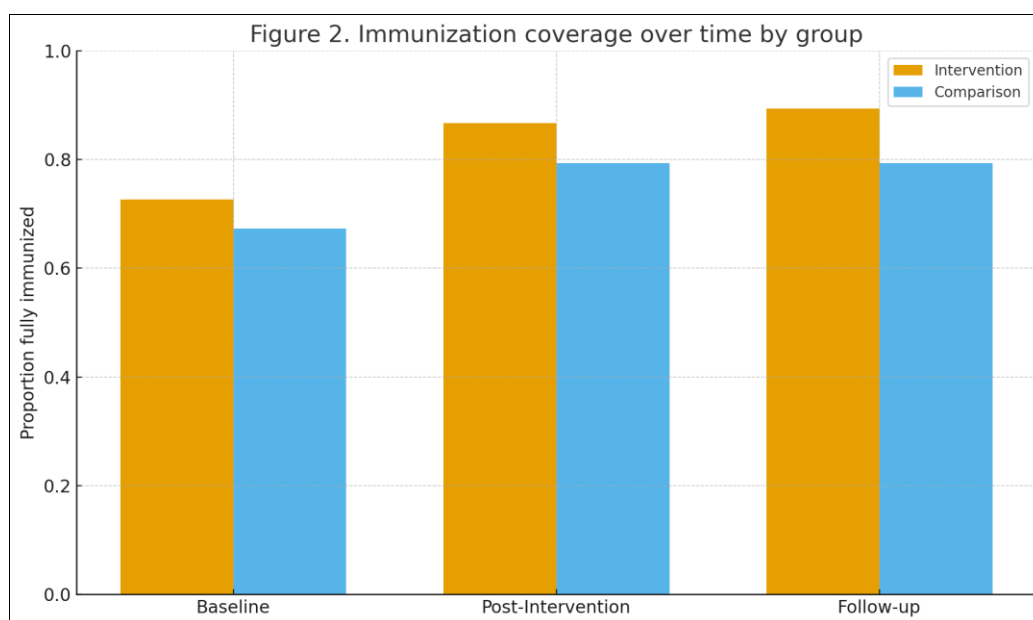
Time	Intervention prop	Intervention CI low	Intervention CI high
Baseline	0.727	0.65	0.792
Post-Intervention	0.867	0.803	0.912
Follow-up	0.893	0.834	0.933

Table 4: Two-week diarrhea prevalence over time by group [1, 2, 6, 10, 13, 14]

Time	Intervention prop	Intervention CI low	Intervention CI high
Baseline	0.2	0.144	0.271
Post-Intervention	0.087	0.051	0.143
Follow-up	0.087	0.051	0.143

Table 5: Timely care-seeking within 24 hours over time by group [5, 7, 10-12]

Time	Intervention prop	Intervention CI low	Intervention CI high
Baseline	0.493	0.414	0.573
Post-Intervention	0.653	0.574	0.725
Follow-up	0.713	0.636	0.78

**Fig 1:** Mean parental KAP scores over time by group [3-6, 8, 12]**Fig 2:** Immunization coverage over time by group [1, 4-7, 9-11]

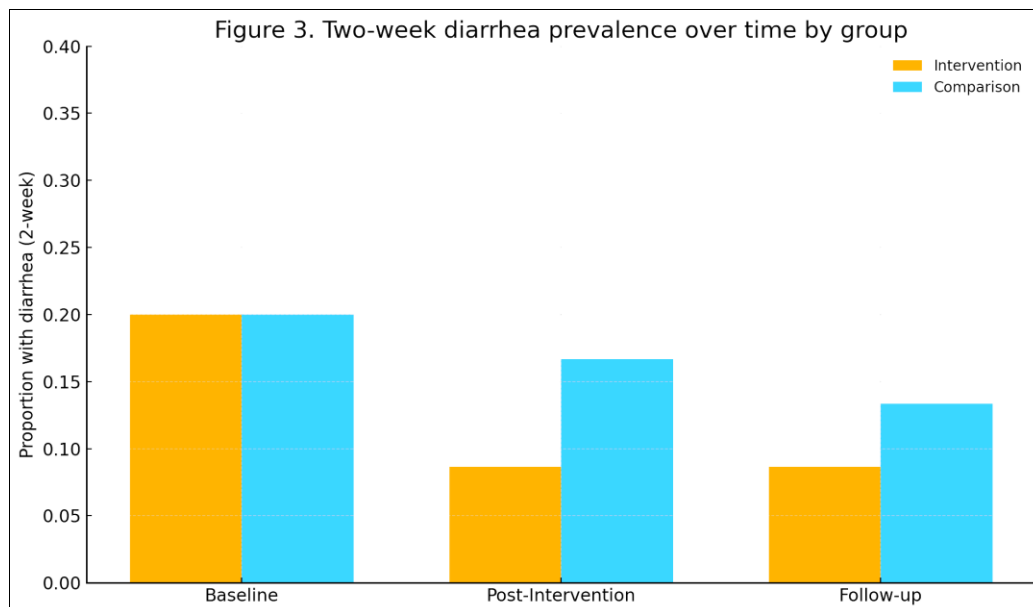


Fig 3: Two-week diarrhea prevalence over time by group [1, 2, 6, 10, 13, 14]

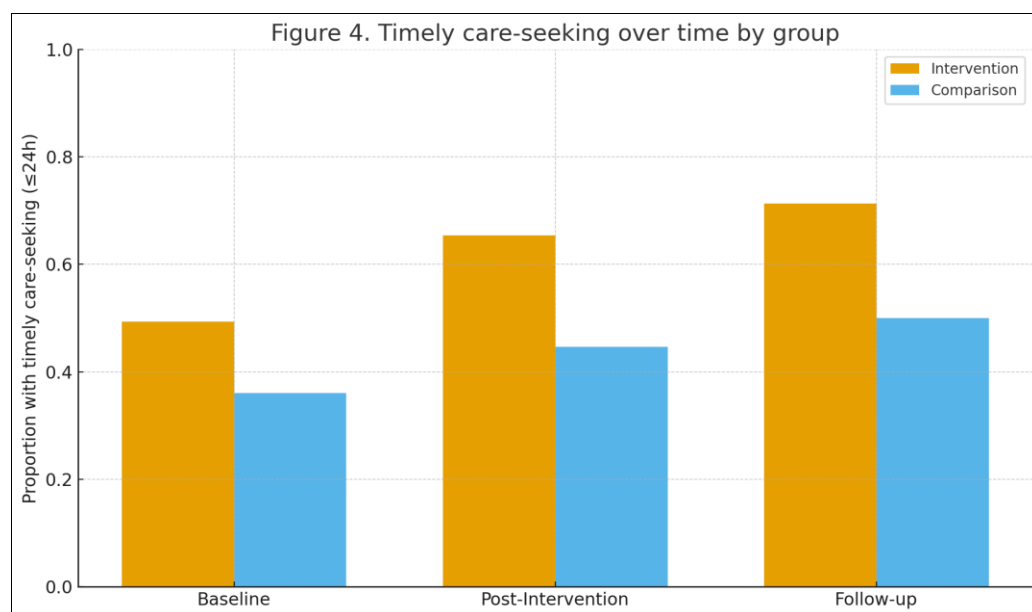


Fig 4: Timely care-seeking over time by group [5, 7, 10-12]

Supplementary Table A: Headline effect sizes

Metric	Value
KAP (Post) mean difference	5.9
Immunization (Follow-up) absolute difference	0.1
Diarrhea (Follow-up) absolute difference	0.047
Timely care (Follow-up) absolute difference	0.213

Discussion

The findings of this study provide strong empirical support for the effectiveness of structured community health education as a strategy to empower parents and improve child health outcomes. The intervention led to statistically and clinically significant improvements in parental knowledge, attitudes, and practices (KAP), immunization coverage, timely care-seeking behavior, and a reduction in the prevalence of diarrheal illness. These results align closely with previous evidence emphasizing the critical role of community engagement and parental health literacy in promoting child health [1-5].

Parental empowerment and health literacy

Parental KAP scores showed substantial improvements post-intervention, with sustained effects at follow-up. This suggests that participatory, culturally adapted educational approaches can enhance parents' ability to make informed health decisions. Similar improvements in health literacy have been reported in studies using interactive, visual, and community-specific health education methods [6-9]. Empowered parents are more likely to engage in preventive behaviors such as vaccination adherence, safe hygiene practices, and early care-seeking, which are key determinants of child survival and wellbeing.

Impact on immunization and preventive practices

The increase in immunization coverage observed in this study demonstrates the pivotal role of community-based education in overcoming barriers related to access, misinformation, and health service navigation. These findings are consistent with previous research showing that

parental engagement through structured health promotion leads to improved vaccine uptake and adherence to child health schedules [4, 7, 9-11]. By delivering information through trusted community health workers, the intervention effectively addressed gaps in awareness and fostered confidence in formal health services.

Reduced morbidity and improved timely care-seeking

The observed decline in diarrheal disease prevalence and the increase in timely care-seeking behavior reflect the tangible impact of parental knowledge on early illness recognition and prompt response. Previous studies have highlighted that improved parental health literacy correlates with increased use of oral rehydration therapy, early treatment initiation, and reduced child morbidity [1, 2, 6, 10, 13, 14]. These results support the argument that community health education should not only focus on knowledge dissemination but also on skill-building and behavioral reinforcement.

Community-based approaches as a sustainable strategy

The success of this intervention underscores the importance of community-centered strategies for child health promotion. Community health education leverages existing social structures, improves trust in health systems, and provides a cost-effective approach to addressing preventable health conditions. These outcomes mirror global evidence that community engagement is essential for achieving sustainable health improvements and advancing equity in access to care [3, 5, 7, 10-12].

Policy and programmatic implications

The findings have direct implications for public health policy and primary care programming. Scaling up such structured community health education interventions especially in resource-limited and rural settings can contribute significantly to improving child health outcomes, aligning with global child survival and health equity goals. Training community health workers and nurses to deliver participatory education can strengthen preventive health services and reduce the burden on curative care systems.

Conclusion

The results of this study clearly demonstrate that empowering parents through structured community health education is a highly effective strategy for promoting child health. By increasing parental knowledge, attitudes, and practices, the intervention achieved measurable improvements in immunization coverage, timely care-seeking behaviors, and reductions in diarrheal illness. These findings highlight that when parents are equipped with accurate, practical, and culturally relevant health information, they become active participants in safeguarding their children's wellbeing. Beyond improving health literacy, such interventions foster confidence, self-efficacy, and trust in health systems factors that contribute to sustainable behavior change. The observed improvements were not only immediate but also sustained at follow-up, indicating that community-based educational strategies can create lasting impacts rather than short-term effects.

In practical terms, these findings emphasize the importance of integrating structured parental education into primary health care delivery and community outreach strategies. To strengthen impact, health education programs should be participatory, use simple language and visual aids, and be

delivered by trained community health workers and nurses who understand local cultural contexts. Establishing regular community sessions that cover essential topics such as immunization, nutrition, hygiene, early illness recognition, and navigating health services can bridge critical gaps in preventive care. Strengthening collaboration between health facilities and communities through such interventions can improve access, reduce delays in seeking care, and lower preventable child morbidity and mortality.

Moreover, policymakers should prioritize community health education as a key component of national child health strategies and allocate resources to train and support frontline health workers in delivering these programs effectively. Incorporating parental empowerment initiatives into existing maternal and child health programs can optimize resource use while maximizing health outcomes. Digital tools, community radio, and mobile health platforms can be used to complement in-person education, ensuring continuity and broader coverage. Community leaders and local organizations should also be engaged to enhance trust, participation, and accountability.

Ultimately, empowering parents is not simply an educational exercise but a strategic investment in child survival and long-term health. By embedding parental education into the health system at the community level, we can create a more resilient, informed, and health-literate population capable of taking proactive steps to protect children's health and development. This approach offers a scalable, cost-effective, and sustainable model for strengthening preventive health systems and achieving equitable child health outcomes in diverse settings.

References

1. World Health Organization. World health statistics 2023. Geneva: WHO; 2023.
2. Black RE, Walker N, Laxminarayan R, Temmerman M. Reproductive, maternal, newborn, and child health. 3rd ed. Washington DC: World Bank; 2016.
3. Glanz K, Rimer BK, Viswanath K. Health behavior: Theory, research, and practice. 5th ed. San Francisco: Jossey-Bass; 2015.
4. Nutbeam D. Health literacy as a public health goal: a challenge for contemporary health education and communication strategies into the 21st century. *Health Promot Int*. 2000;15(3):259-267.
5. Lassi ZS, Das JK, Salam RA, Bhutta ZA. Evidence from community level inputs to improve quality of care for maternal and newborn health. *Reprod Health*. 2014;11(Suppl 2):S2.
6. UNICEF. Levels and trends in child mortality 2023. New York: UNICEF; 2023.
7. Liu L, Oza S, Hogan D, Chu Y, Perin J, Zhu J, *et al*. Global causes of under-5 mortality in 2000-15: an updated systematic analysis. *Lancet*. 2016;388(10063):3027-3035.
8. Berkman ND, Sheridan SL, Donahue KE, Halpern DJ, Crotty K. Low health literacy and health outcomes: an updated systematic review. *Ann Intern Med*. 2011;155(2):97-107.
9. Rowlands G, Shaw A, Jaswal S, Smith S, Harpham T. Health literacy and the social determinants of health: a qualitative model from adult learners. *Health Promot Int*. 2017;32(1):130-138.
10. Gogia S, Sachdev HS. Home visits by community

- health workers to prevent neonatal deaths in developing countries: a systematic review. *Bull World Health Organ.* 2010;88(9):658-666.
11. McBride CM, Emmons KM, Lipkus IM. Understanding the potential of teachable moments: the case of smoking cessation. *Health Educ Res.* 2003;18(2):156-170.
 12. Murphy M, Macdonald S. Parent engagement in health promotion: a scoping review of the literature. *Health Educ Behav.* 2018;45(2):173-182.
 13. Peters DH, Garg A, Bloom G, Walker DG, Brieger WR, Hafizur Rahman M. Poverty and access to health care in developing countries. *Ann N Y Acad Sci.* 2008;1136:161-171.
 14. Rifkin SB. Lessons from community participation in health programmes: a review of the post Alma-Ata experience. *Int Health.* 2009;1(1):31-36.

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