Original Article
Pak Armed Forces Med J 2015; 65(Suppl): S106-111

COMMUNITY BASED HEALTH PROMOTION INTERVENTIONS FOR NON-COMMUNICABLE DISEASES; A NARRATIVE REVIEW OF GLOBAL EVIDENCE

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ABSTRACT

Objectives: The objective of this review was to gather evidence of community based health promotion projects at global level. It was also to ascertain lessons learnt and good practices regarding the prevention and control of NCDs globally.

Study Design: Descriptive study.

Methodology: An online search was conducted for identifying and reviewing community based health promotion models for NCD prevention and control at global level. Titles were scrolled and those articles having community component and NCD related intervention were included in the review.

Results: Findings of the review suggest that there are many successful community based models for health promotion at global level dating back to seventies (1970s). Most of the projects were developed Europe and Americas, but there are some good examples of such models in the developing countries as well. Evaluations of many community based health projects show that they are feasible and practical and also result in lowering the morbidity as well as mortality through reduced risk factor prevalence in the community.

Conclusion: Community based health promotion projects have been successful in lowering morbidity and mortality in project areas. Community based models for NCD prevention and control are not only cost-effective but also can be replicated. So there is need for initiating community based health promotion projects as the burden of disease for NCDs in on the rise in Pakistan.

Keywords: Health promotion, NCDs, Community based models, Review.

INTRODUCTION

Community based health promotion models target whole community instead of disease based models in which only the patient is targeted for treatment. These health promotion models have been more successful in addressing lifestyle related health problems. Burden of non-communicable diseases (NCDs) is on the rise in developing countries and Pakistan. Many examples are available regarding outcomes of community-based models for NCD prevention at global level.

Community based health promotion intervention target all members of a community instead of targeting high-risk individuals only. These interventions may include mass media campaigns aimed at changing risky lifestyle behaviors. The health promotion network is based on agents seeking to influence systems at various levels to prevent, resist, dissipate or respond in an effective manner to potential hazards in their community environments[1]. Although many community based health promotion interventions had been implemented in different countries, a holistic commitment for global health promotion was launched at the First International Conference on Health Promotion held in Ottawa, Canada in 1986[2]. This conference resulted in Ottawa Charter, which defined health promotion as the "process of enabling people to increase control over and to improve their health". This Charter also advocated creating healthy environments in schools, hospitals, workplaces and community dwellings. It emphasized that there is a health development potential in every organization and every community; it submitted that community empowerment is main focus of health promotion activities. Success of health promotion initiatives relies on effective and creative community action, of which community empowerment is major influencing factors[3]. Sometimes community benefit laws are effective in community orientation activities[4]. There are some examples of successful

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community based models at global level. Project evaluations of many have shown that community health programmes are cost-effective and can be replicated. Burden of non-communicable disease (NCDs) is on the rise in developing countries and we must initiate community based health promotion models for prevention and control of NCDs[5].

METHODOLOGY OF REVIEW

An online literature review was carried out between 20th February 2015 to 2nd March 2015. Internet search was done through Google Scholar, PubMed, Medline, Cochrane, and BioMed Central (BMC). The key term 'Community Health Programme' resulted in 4162 hits of study titles on PubMed and other sites. Titles were scrolled and all those titles having community health programmes for NCDs were selected for reading. There were 131 titles, which included community health promotion and NCD terms. Articles which did not have community-based intervention were excluded, leaving 23 articles for full review.

Findings of Review

The following are the brief descriptions of various community based health promotion projects:

1. North Karelia Project was started in 1971 on rural population having poor socio-economic status as compared to other areas of Finland. This project was aimed at reducing cardiovascular disease through reduction of serum lipids, diet, smoking and hypertension by community interventions. Basic inputs were provided through mass media campaign and expert comments from academic leaders who acted as the change agents. Community participation and mobilization was achieved through getting project approved from the Parliament. The project was successful in achieving all objectives and later on up-scaled at the country level[6].

2. Stanford Five City Project began in 1978 in northern California. This project targeted risk factors of Cerebrovascular Diseases (CVDs) including smoking, diet, high blood pressure, physical inactivity and obesity. Project used behavior change communication for awareness, knowledge, motivation, skill development, and action taking for change and its maintenance. Social marketing approaches with community organization were used for mass media education, interpersonal influence, organizational approach for program delivery and encouraging the adoption of risk reduction behaviors. It was an integrated and combined approach matrix incorporating social marketing and community organization models. This led to improved behavior and reduced CVD risk in the target population[7].

3. Minnesota Heart Health Program was initiated in 1980. The overall goal for this program was to reduce CVD morbidity and mortality by 15% within a period of 6 years. Baseline risk factors measured initially and then a 5-6 year community based health promotion intervention was launched. End line survey showed program was useful and acceptable to community and resulted in decreasing incidence of CVDs risk factors[8].

4. Pawtucket Heart Health Program initiated in 1980 in Rhodes Island, USA was developed for CVD risk factors, smoking, cholesterol, physical inactivity, high BP and overweight. Intervention included mass media campaigns, health education, posters and print media messages. It used case registries, random sample surveys every six months on a cohort of population who participated in baseline survey. This program was successful with positive influence on risk factors with improved behavior, motivation levels and community skills[9].

5. Be Ki-Initiative for Nutrition Education in Germany established since 1980 provides information on child nutrition. Its main target has been the parents and caregivers of children above six months of age. This community based intervention involved nutrition experts giving information and education to target population. It has been found useful in improving the knowledge and practices of diet and nutrition in the community[10].

6. Dutch Heart Health Project initiated in Maastricht Netherland in 1998 aimed at decreasing prevalence of CVD through behavior change communication. Interventions

promoted healthy lifestyle for dietary fat reduction, increased physical activity and quitting smoking. Intervention methodology included nutrition education, guided nutrition tour in shopping centers, TV shows, walking and cycling weeks and months, smoking cessation assistance, posters, pamphlets and newspaper articles. Local health committees were established to facilitate and encourage people to adopt healthy lifestyle. Each committee comprised of 9 to 10 members from different groups including women, minority and elders. Health educator, social worker and civil servants supported this committee. The evaluation of intervention showed positive and significant effect on dietary fat intake and physical activity, with more organization and collaboration within community[11].

7. Florence's Heart to Heart Project started in Florence, South Carolina USA between 1986 to 1990 aimed at decreasing CVD through lifestyle modification. Interventions included community wide public awareness, weight control, exercise, healthy diet, smoking cessation, and cholesterol and blood pressure control. State print and electronic media was used for health promotion messages. Church was involved for disseminating health education information and opportunistic screening of BP and blood glucose was also done in church. Restaurants providing healthy food were labeled as Heart-healthy. Health care providers were trained for prevention, screening and referral guidelines. Jogging tracks were made in most areas of Florence. Evaluation of project showed positive effect on control of cholesterol and smoking, more community awareness, more sensitivity for behavior modification and development of network among local health services[12].

8. Missouri's Bootheel Heart Health Project was initiated in 1989 when statistics showed high mortality due to cardiovascular diseases in six counties of Bootheel in Missouri State. Bootheel had large minority population with poor socio-economic status, unemployment, low literacy levels and poor medical services availability. Intervention included blood pressure and cholesterol screening. Physical activity groups and exercise classes were conducted; healthy-diet demonstration projects, walking clubs, low-fat menu contest, heart-healthy Halloween parties, no-smoking contests and exhibitions held. Weekly News article on heart health were printed in the local newspaper. Local political and municipal leaders were engaged in health weeks, church was involved for sermon on spiritual heart, screening of BP and heart-healthy diet in church kitchen. Project evaluation showed decrease in proportion of physical inactivity, overweight and cholesterol levels[13].

9. APRAND Program of Paris was initiated in 2001 in Paris, France. A health promotion intervention was implemented in eight "active" centres immediately after baseline survey. The results showed that screening with an organized health promotion campaigns utilizing printed material improves patients' outcome and physicians' diagnostic abilities[14].

10. Aboriginal Community Health Program was introduced in Western Australia. Australian Aboriginal people had high rated of Type-2 diabetes, nutrition-related diseases, obesity, and cardiovascular diseases. Mortality related to NCDs was also very high in Aboriginal population. This program included networking with Aboriginal initiatives and partnerships between the communities, the community health care providers, external clinical specialists, other external agencies and locally operated pathology Lab. Results of interventions showed positive changes in knowledge about healthy foods, exercise, diseases and better compliance related to improved diet and exercise[15].

11. Home Health Care Model in La Plata Argentina was initiated on community affected by hypertension, hypercholesterolemia, hypertrigliceridemia, and anemia. Community health promotion campaign included health care for all family members and free drugs provision for all illnesses detected. Results showed that 98% patients had proper follow up of their illness for a 3 year[16].

12. Primary Care Initiative in Nova Scotia, Canada aimed at improving clinical management of blood pressure and healthy

lifestyle promotion among patients of hypertension and diabetes. Results showed, improved patient care related to diabetes and hypertension[17].

13. Women Heart Advantage Program initiated in March 2001 in Connecticut USA was health promotion initiative to educate poor and minority women. Community participation, networking women in groups, linking women networks with clinical, public health and marketing experts, partnership with other health organizations, were the key constructs of the project. Results showed that Women's Heart Advantage program improved women's awareness, knowledge, and behaviors, related to heart diseases, its risk factors and decreased morbidity and mortality among target women population[18].

14. Internet Based Community Health Promotion in Singapore was initiated by Health Promotion Board (HPB) in 2001 and it was called as HPB Online[19]. It was developed to deliver health information using Internet and complement other mass media such as television, newspapers and radio. Project showed gradual improvements with page-views, monthly visits and repeat visitors increased significantly with time. HPB Online allowed availability of health information instantly and helped community to become more informed and improve their health. It has shown beneficial in overall improvement of healthy lifestyle and is being carried on in future as well[20].

15. Kiel Obesity Prevention Study (KOPS) in Germany was initiated for improving nutritional levels, health habits to decrease the risk factors of NCDs in children. Health promotion activities were performed in schools as well as with their families. Overweight parents, low family income and high birth weight were identified as risk factors for overweight in prepubertal children. Results showed positive impact on obesity prevention[21].

16. Rauchfrei Smoking Cessation Campaign in Germany has been the largest smoking cessation campaign in Germany since year 2000. It targeted smokers to quit smoking and abstinence rates served as indicators for monitoring the campaign. Results showed that campaign was successful with sustained impact on maintenance in different age groups and different income levels[22].

17. Nation-wide Campaign for Obesity Prevention in Holland was started in 2002 for increasing awareness of obesity through mass media. Interventions included raising awareness measuring body-weight, obesity risk-perception, weight-gain prevention and estimation of self-reported body mass index. Results showed positive change in attitudes towards obesity and weight-gain prevention[23].

18. National Campaign for Medication Knowledge was started in Taiwan in 2002 for community education of medicine use. Interventions included awareness through mass media, talks and seminars in health facility and health shows. Results showed statistically significant improvement in medication knowledge[24]. Similar results were shown by another study in Australia for asthma prevention through awareness campaign involving pharmacists[25].

19. Community Based intervention for NCDs in India and Indonesia was established in poor community of Ballabgarh, New Delhi in 2004 through the support of WHO. It was also paralleled with similar community intervention in West Java, Indonesia. This intervention included advocacy for NCD prevention, training of community volunteers, school health trainings for teachers, mass media campaigns, screening camps and improved health services for NCD patients. This health promotion intervention resulted in higher diagnosis rates of NCDs, improved care practices at local health facilities[26].

20. The Tehran Lipid and Glucose Study (TLGS) was started as a community based program in 1999 for prevention of NCD and is still going. The aim of this study has been to evaluate the feasibility and effectiveness of community based lifestyle modification intervention, and it targets specific high-risk groups of community. It has been multi-sectoral and involves officials from non-health sectors as well. Interventions include face-to-face education, interpersonal communication for

diet, distribution of leaflets in schools, training of community activists and health providers for improved care of NCD patients[27].

21. The Community Based Model for CVD Prevention in Jogjakarta, Indonesia utilized community-empowerment approach for health promotion. Results of the intervention showed good progress in poor income communities with statistically significant increase in knowledge levels of risk factors of CVDs[28].

22. Lodhran community-based CVD Prevention Project was launched in 2001 in Lodhran district of Pakistan. It aimed at developing population based health promotion activities, which included community health education through use of mass media, health processionals training, and involving Lady Health Workers in health promotion activities. End of project evaluation showed positive changes; improved knowledge levels of community about healthy diet, physical activity, causes of high blood pressure, heart attack and the negative effects of active and passive smoking on health[29].

CONCLUSION

Findings from this review provide evidence that many community based health promotion models have been established and evaluated globally. These projects range from urban to rural as well as from high as well as low socio-economic communities. Results from most community based health interventions showed that these projects were able to reduce morbidity and mortality in project area.

Makes a case for initiating community based health promotion projects in Pakistan, as the burden of disease for NCDs in on the rise in Pakistan.

Conflict of Interest

This study has no conflict of interest to declare by any author.

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