

Review Article

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Effect of health promotion programs and home visits on chronic diseases

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ABSTRACT

Evidence shows that the management of chronic disorders is associated with massive expenditure and increased utilization of healthcare resources. Therefore, innovative management approaches to these conditions are encouraged to overcome these burdens and enhance the quality of care for the affected patients. Home visits and health promotion programs have been described in this context with favorable outcomes over individuals and communities. We have discussed the efficacy of home visits and health promotion programs on the outcomes of patients suffering from chronic disorders. Our findings indicated the validity of these approaches in enhancing the quality of care for patients with chronic conditions. Adequately applying these outcomes can be associated with enhanced quality of life for patients. Besides, estimates also showed that they can reduce the number of visits to the emergency department and the frequency of hospital admissions. Health promotion programs can also reduce the utilization of the different healthcare resources including medication use and the availability of healthcare providers. However, the current evidence lacks validation by proper investigations. Accordingly, we encourage further studies to be conducted to enhance the current findings adequately.

Keywords: Chronic disease, Management, Health promotion, Home visits, Primary care, Quality of life

INTRODUCTION

Chronic disorders are associated with significant burdens over the affected patients and relevant healthcare settings. They can remarkably deteriorate the affected patient's

quality of life, leading to disabilities and significant morbidities. Chronic diseases are noncommunicable disorders that usually progress slowly and last for long durations. Estimates showed that the prevalence of having multiple chronic disorders among Americans was

31.5%.^{1,2} Furthermore, cost-analysis of health-related expenditure in 2010 showed that 86% of these costs are directed to managing patients with multiple morbidities.^{1,3} Moreover, it has been reported that exacerbations of chronic diseases contribute to 60% of hospital admissions and around two-thirds of emergency room visits.³⁻⁵

Furthermore, evidence showed that the management of these disorders was associated with massive expenditure and increased utilization of healthcare resources. Therefore, innovative management approaches to these conditions were encouraged to overcome these burdens and enhance the quality of care for the affected patients. Home visits and health promotion programs have been described in this context with favorable outcomes over individuals and communities.⁶ Therefore, the present study aimed to discuss the efficacy of home visits and health promotion programs on chronic disorders.

Methods

To retrieve relevant studies, we conducted an extensive literature search of the Medline, Cochrane and EMBASE databases which was performed on 27 October 2021 using the medical subject headings (MeSH) or a combination of all possible related terms, according to the database. To avoid missing potential studies, a further manual search for papers was done through Google Scholar, while the reference lists of the initially included papers. Studies discussing effect of health promotion programs and home visits on chronic diseases were screened for useful information, with no limitations posed on date, language, age of participants or publication type. Only Saudi-based studies were included.

DISCUSSION

Emotional support and encouragement to comply with the management modalities were described in the literature for patients suffering from chronic conditions. These studies indicated that applying these approaches was significantly associated with enhanced parameters in the quality of life and improved health outcomes related to the patients and their chronic conditions.⁷⁻¹¹ Furthermore, following participation in the community-based educational programs, evidence indicates that participants with chronic health conditions reported a significant increase in support and guidance and a reduced feeling of isolation.^{4,5,10} This showed the benefits of these modalities as practical approaches that can be used for the management and intervention against chronic diseases.

Previous studies also demonstrated that conducting home visits can effectively enhance the quality of care of chronic diseases.^{4,7,8,11-14} This can significantly improve the quality of life of the affected patients, secondary to improving the clinical and prognostic outcomes of the chronic condition. In addition, several investigations also demonstrated that specific aspects of quality of life parameters were enhanced based on conducting home

visits.^{8,11,12,14} This had been well-evidenced previously among investigations that reported implying various community-based healthcare programs were significantly associated with improved parameters in the quality of life.^{8,11,12,14} These studies said that conducting home visits was one of the main approaches involved in these modalities. However, it should be noted that different parameters were assessed under the umbrella of quality of life. Moreover, the assessment of these parameters was mainly based on self-reports from the included patients. Anxiety, depression, role adaption, physical performance, symptomatic management of the disease, support and finance were the included measures in assessing the quality of life-related to conducting home visits for optimizing the quality of care of chronic diseases.^{8,11,12,14} Furthermore, among elderly ill patients with critical conditions secondary to chronic diseases, evidence showed that reduced frequency of hospitalization significantly decreased among these patients secondary to conducting home visits as part of the provided care to their conditions.^{4,7,11,13} This had been indicated in the different investigations including a study of Brazil's national family health program ($p<0.001$), another of a senior outreach program ($p=0.02$) and a third one of the care advocate program ($p<0.001$), with statistically significant benefits.^{7,11,13} Besides, in the study of the promoting access, transition, health (PATH) program, it had been concluded that home visits by primary healthcare practitioners were significantly associated with a remarkable reduction in utilizing healthcare resources, including medication use.¹⁴

Reduced utilization of healthcare resources and improved clinical outcomes of chronic diseases were also reported among participants in these programs.^{8,11} This occurred secondary to having the willingness and ability to cooperate with their partners and healthcare providers in optimizing their quality of care. Another investigation by Alkema et al also concluded that participation in community-based home programs was associated with an excellent benefit for the participants with chronic diseases.⁷ This was due to making them more aware of the different means that can help them manage the disease and gain more access to the diverse healthcare parameters. Moreover, among the various studies in the literature, many of them elaborated on different approaches that can help participants in health promotion programs to have more engagement and emotional support. Home visits, telephonic telehealth and internet-based supporting groups were the primary modalities that were described in the literature in this regard. These modalities can be approached by a combination of healthcare professionals including medical assistants, social workers, pharmacists and registered nurses.^{4,5,7,10,11,15}

Some studies also reported that multidisciplinary coordination of care and management was associated with many advantages regarding disease outcomes and subsequent quality of care.^{8,11,13,16} Some of the included

investigations suggested that the registered nurse can be the overall coordinator of care and program manager for the included patients in such programs.^{8,11,16} For example, a previous study by Boyd et al demonstrated the benefits of conducting the guided care program.⁸ The authors reported that the program urged participants with chronic diseases to have adequate contact with their registered nurses before visiting the emergency department and hospital admissions. Furthermore, it had been reported that the role of registered nurses was to coordinate the different aspects of care of the different diseases and conditions to improve the different parts of disease management.

Another investigation by Prior et al also confirmed the efficacy of having access to the different community-based primary care approaches.¹¹ In addition, it had been further shown that providing a team approach for identifying and evaluating the various chronic diseases, prevention and treatment were all valid and efficacious modalities to achieve optimal care for the affected patients.^{8,11,13,16} Finally, evidence also showed that another method for optimizing chronic disease management was the coordination of care and communication between healthcare providers and patients.^{11,13,16} Nurses and primary care physicians were reported among the different studies in the literature as identified healthcare disciplines. The quality of life for patients with chronic disorders was also significantly impacted by different changes in the financial and economic parameters, pharmacy and social work-related care disciplines. These parameters can positively impact the quality of care, providing efficacious support to patients in these programs.^{8,11,13,16} Based on these findings and conclusions, each participant in the health promotion programs should get recent updates about the current guidelines and management protocols. For instance, registered nurses and multidisciplinary team members should be aware of different expert committees and consensus recommendations, like the case management society of America's standards of practice. Accordingly, by doing this, the best management essentials will be provided for patients with chronic disorders. Therefore, this can decrease the rates of hospital admissions and associated increased healthcare-related expenditure.⁶

Different related aspects to healthcare promotion programs were also described among some studies. For instance, depression was reported to be an associated manifestation among patients with chronic disorders.^{5,11,14} Therefore, planning the optimal management of these diseases should involve managing depression and associated characteristics as reported by previous studies in the literature. Furthermore, participation in health promotion programs by patients with chronic conditions was significantly associated with a remarkable reduction in depression symptoms. This had been indicated by the student-facilitated health promotion interventions in the senior outreach program, with estimated statistical significance for reducing depression manifestations

($p=0.010$ and 0.024 , respectively), as reported in the previous study by Prior et al.¹¹

Moreover, the authors of this study concluded that reduced rates of hospital admissions and visits to the emergency departments were also observed among the included participants following decreasing rates of chronic disease-related depression symptoms.^{11,17-20} Another reported benefit for conducting health promotion programs for patients with chronic disorders includes educational reinforcement of the included participants. These approaches can enhance knowledge and attitude towards providing adequate management of their conditions, subsequently enhancing the quality of care and associated outcomes.^{10,14,15} Luptak et al also described the enormous benefits of conducting the care coordination telehealth project, associated with enhanced levels of providing fruitful educational content and answering health-related questions.¹⁰ The program was primarily achieved through an LCD screen installed at the homes of the included participants to enable them to adequately interact with the healthcare providers for education and follow up purposes. A previous study also reported that participants were eventually aware of the vast advantages of educational reinforcement about the potential benefits of the outcomes related to their chronic disorders. In addition, participants in such programs were more aware of the potential benefits of reduced hospitalization rates following the application of these interventions.¹⁴ Similar conclusions were also reported in a previous review by Vandiver et al.⁶ Another meta-analysis was also conducted to identify whether home care was associated with enhanced management outcomes of chronic disorders. The authors estimated that performing home care for these patients was associated with reduced all-cause mortality and hospitalization rates among the included patients by 12%. Moreover, fewer hospitalization rates and visits to the emergency department were reported among patients receiving home care.²¹ Evidence indicated that the participants in such programs reported enhanced daily activities including feeding, toileting, showering, grooming and dressing. These results cumulatively suggested that participants in health promotion programs significantly benefitted from these campaigns with enhanced aspects of the health-related quality of life.

Although our review provided solid evidence regarding the significant benefits of approaching the management of chronic disorders with home visits and health promotion programs, we suggested that further studies should be conducted to provide additional evidence to the current literature. As a result of the emerging medical and technological advances and looking at the recent pandemics' circumstances, which limited the ability to seek health-related care, patients with chronic disorders were urged to individualize their self-care to enhance disease outcomes. Enhanced self-care can remarkably alleviate the quality of management of these disorders and intervene against the development of negligence-

related complications. Conducting future investigations was also suggested by the current studies in the literature to furtherly understand the efficacy of these programs in improving health-related outcomes and quality of life for adult patients with chronic disorders.^{4,6,11,16} Studies should also focus on the cost-benefit analysis as an additional validation parameter of the health promotion programs and home visits conducted to optimize the management of chronic diseases. Furthermore, in their study, Marek et al concluded that providing adequate resources should be achieved to enhance the quality of health promotion programs for patients with chronic disorders.¹⁶ For instance, the authors suggested that delivering a registered nurse as a healthcare manager who can conduct short and long-term healthcare-related services was an available solution that should be further validated in future investigations.^{4,6,11,16} However, some factors might limit the current study. At first, the sample size of the included studies in the literature review might not be adequate to formulate solid evidence regarding the recent outcomes. Some of the mentioned approaches in the present study were reported as trends in management that need to be further validated by additional research.

CONCLUSION

Adequately applying these outcomes can be associated with enhanced quality of life for patients. Besides, estimates also show that they can reduce the number of visits to the emergency department and the frequency of hospital admissions. Health promotion programs can also reduce the utilization of the different healthcare resources, including medication use and the availability of healthcare providers. However, the current evidence lacks validation by proper investigations. Accordingly, we encourage further studies to be conducted to enhance the current findings adequately.

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