Literature Review:

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Introduction

This work presents a review of available literature on evidence-based practice in interventions for patients with hypertension.

Literature review

Most of the works in this field focuses on the causation of hypertension an intervention modalities. It is important to know the causation and predisposing factors of a disease in order to provide better methods of dealing with the condition (McNaughton, Jacobson, & Kripalani, 2014).

Bombard, Tregear, Schmidt, & Tregear, (2011), examines lifestyle interventions for the disease among women in the reproductive age. In this study, a systematic review of research conducted using a randomized controlled trials on specific lifestyle interventions on hypertension and cardiovascular risk factors is done. A vast majority of the literature reviewed were submitted between 1990 and 2010. The results showed that lifestyle led to an improvement of the participants' lipid level and blood pressure in over 50% of the subjects. The studies reviewed also recommended that blood pressure screening should be routinely taken at least every 2 years to improve the monitoring of the condition. The results led to the researchers concluding that lifestyle interventions are a modest way of reducing the prevalence of hypertension in this population by a considerable percentage.

A closely related research on interventions for hypertension was conducted by Boulware et al. (2001). It looks at the additive effects of three behavioral interventions on blood pressure.

These are; counseling, structured training courses and self-monitoring of blood pressure. The core findings dealt with a comparison of the efficacy of each of these behavioral interventions. Counseling was preferred by many patients over other behavioral interventions. In addition to counseling most participants preferred to have some training on the best practices of controlling blood pressure. Even though counseling and training were the most preferred behavioral aspects of dealing with hypertension, the research did not gather enough evidence to conclude that either self-monitoring or training could offer consistent improvement on hypertension.

The high preference to training and counseling can be linked to the high rates of health illiteracy among persons predisposed to or suffering from hypertension. Most patients prefer to participate in healthcare decision making and implementation of interventions but are limited by their health literacy. This has led to most interventions being less effective as the methods do not make much sense to the patients. In Aboumatar, Carson, Beach, Roter & Cooper, (2013), it is noted that patients with low health literacy asked fewer questions during counseling or training sessions which potentially reduced the impact of the program on the patient outcomes. Ko et al., (2013), also opines that the level of health literacy plays a significant role in the knowledge of the disease and control process. It recommends that in implementing interventions, communication of strategy requires patients to have high health literacy for the effectiveness of the method being implemented.

Gakumo, Enah, Vance, Sahinoglu, & Raper, (2015), raise four issues regarding the formulation and design of health intervention programs. Firstly, it notes that a majority of the elderly African American population who were the participants of the study had little health knowledge. Secondly, it identifies health education as a potential intervention method that could be modest and effective. However, its main concern is the design of an effective educational

program that will benefit all the patients with or without adequate health knowledge. To provide a solution to this, it suggests a simple plain language without scientific terms as a base to start. It also opines that through taking the accounts and needs of the patients into consideration, tailor made training services can be developed for the same. To reduce the cost of tailor made training services, the patients training needs can be implemented as a group. This will take in the identification of the needs that are common to the population especially the education levels.

Non pharmacological methods which are closely related to lifestyle interventions of controlling blood pressure have also been tested in different populations. For instance, Subramanian et al., (2011) evaluates the efficiency of physical exercise, reduction of salts intake and yoga. It adopts a cross-over randomized controlled trial in an urban population of 94 participants. Its findings indicated that all the groups had a positive reduction on the blood pressure levels after applying each given intervention. Since most of the participants were young adults, the study concluded that physical exercise, yoga and reduction of salt intake were effective methods of reducing blood pressure.

Team based care is a strategy that can be used for patients with low level health literacy to improve outcomes for hypertension patients. This method will involve support grouped of people with high level of knowledge. Carter, Rogers, Daly, Zheng, & James, (2009) reviews the potency of group based approach to dealing with hypertension. In this research, controlled clinical trials that involved either a nurse or a pharmacist was done. The systolic blood pressure and the diastolic pressure were also taken by an independent reviewer. The importance of education on the patients' health was also factored in as the main input of the professionals that were involved in the groups.

The findings of the study also pointed to the improvement of blood pressure control by the team-based approach. Individual components of the team-based approach pointed to high potency of the strategy and improvement of quality of the outcome for patients with hypertension. Adherence to the set guidelines had the highest impact in the outcome for the patients. This was closely linked to the fact that the professionals in the group guided the patients on the best practice in monitoring and controlling the effects of hypertension. Proper implementation of the guidelines is a major challenge to patients with low health literacy. This often stems from the breakdown in communication between the patient and the expert that results in poor following of instruction and or noncompliance to the set instructions. In this context, the best outcome for patients is still tied to the level of health literacy. The conclusion of the study is that there should be mechanism of improving health literacy and adherence to guidelines in dealing with the control of high blood pressure.

Andrews, McMahon, Austin, & Byrne, (1982), compares pharmacological interventions to non-pharmacological interventions in patients with hypertension. The pharmacological interventions included the use of angiotensin converting enzyme inhibitors and receptor blockers which have the same effects. Water pills were also used in this experiment. The control group received placebo treatment and other participants had the non-pharmacological interventions such as regular exercise, yoga, reduction in salt intake and healthy eating or weight reduction.

The results showed that the administration of drugs to control the high blood pressure was very effective. Most patients recorded a great reduction in the systolic and diastolic blood pressures within a short period of time. Treatment through the non-pharmacological processes had a lower impact and took a longer period. However, the research noted that these methods were more appreciable than the use of drugs to control hypertension.

Salt restrictions and biofeedback were found to be inferior to the treatment by yoga, muscle relaxation and weight reduction. These two treatment techniques were not significantly different from a placebo treatment. Therefore the study opted to categorize them among regimens of non-effective treatments. The reason for the high appreciation of the non-pharmacological methods of treatment was related to the side effects of the drugs. Many participants recorded varying degrees of reactions with the administered drugs that lowered the quality of outcome for the patients. The study concluded that it is important to take up large comparative trials over different populations to verify the conclusions of the study.

Lu et al., (2012), looks at all the possible interventions for patients with hypertension in china. In this study, the interventions are not classified as either pharmacological or non-pharmacological. The interventions are: improved monitoring, health education, self-management and health management through drugs. A vast majority of these studies were recorded in Chinese language. There was also a significant bias in the reporting of the outcomes of the studies that were reviewed. Despite the huge biases and possibility of heterogeneity of research, it was noted that the community interventions such as education and health literacy programs produced the most effective results. In low income earners, the level of health knowledge dictated the tendency of the population to monitor their blood pressures. However, because of the high degree of reporting biases in the studies, well documented research needed to be conducted to ascertain the effect of community initiatives to deal with hypertension (Lu et al., 2012). It is therefore important to note that health education and community based initiatives can be potent in dealing with the prevalence and improving outcome for patients with hypertension.

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