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Impact of Adult Daycare Attendance on Hypertension: A Review

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ABSTRACT

Hypertension is a significant public health concern affecting millions of older adults worldwide. Adult daycare services offer structured programs that provide social interaction, physical activity, and health monitoring, which may positively influence blood pressure (BP) management among older adults. This review examines the impact of adult daycare attendance on hypertension, focusing on factors such as stress reduction, physical activity, medication adherence, and social support. The findings suggest that adult daycare attendance can contribute to improved hypertension outcomes in older adults, potentially lowering BP levels and reducing the risk of hypertension-related complications.

Keywords: Hypertension, Adult Daycare Attendance, medications.

1. Introduction

Hypertension, commonly known as high blood pressure, is one of the leading risk factors for cardiovascular diseases. The current definition of hypertension (HTN) is systolic blood pressure (SBP) values of 130 mm Hg or more and/or diastolic blood pressure (DBP) of more than 80 mm Hg. Hypertension ranks among the most common chronic medical condition characterized by a persistent elevation in arterial pressure.

Hypertension has been among the most studied topics of the previous century and has been one of the most significant comorbidities contributing to the development of stroke, myocardial infarction, heart failure, and renal failure. The definition and categories of hypertension have been evolving over the years, but there is a consensus that persistent BP readings of 140/90 mm Hg or more should undergo treatment with the usual therapeutic target of 130/80 mm Hg or less. Most cases of hypertension are idiopathic, which is also known as essential hypertension. It has long been suggested that an increase in salt intake increases the risk of developing hypertension(1). One of the described factors for the development of essential hypertension is the patient's genetic ability to salt response(2),(3). About 50% to 60% of the patients are salt sensitive and therefore tend to develop hypertension (4). More than one billion adults worldwide have hypertension, with up to 45% of the adult populace being affected by the disease(5). The high prevalence of hypertension is consistent across all socio-economic and income strata, and the prevalence rises with age, accounting for up to 60% of the population above 60 years of age (5). Older adults, in particular, have a higher prevalence of hypertension due to age-related changes in vascular function and lifestyle factors. Managing hypertension in this

population requires a multifaceted approach that includes lifestyle modifications, stress management, and regular monitoring (6).

Adult daycare centers, which provide a supportive environment for older adults during the day, offer opportunities for social interaction, physical activity, mental stimulation, and medical monitoring. This environment may positively impact hypertension management by addressing social, psychological, and physical factors associated with BP control (7). This review explores how adult daycare attendance can benefit hypertensive older adults, focusing on stress reduction, improved physical activity, medication adherence, and enhanced social support.

2. Stress Reduction

Stress is a known contributor to elevated blood pressure, and chronic stress can lead to long-term hypertension (8). Adult daycare centers provide a structured routine and reduce the isolation and loneliness that often contribute to stress in older adults. Studies have shown that social interactions and engaging activities in adult daycare settings can reduce stress and promote relaxation, both of which are essential for BP management(9). The availability of trained staff also ensures that older adults receive emotional support, which can further mitigate stress levels and reduce BP(10).

3. Increased Physical Activity

Regular physical activity is one of the most effective non-pharmacological interventions for managing hypertension, as it helps improve vascular function and reduce systolic and diastolic BP (11). Many adult daycare centers incorporate physical activities, such as walking, stretching, or low-impact exercises, which are suitable for older adults. These programs encourage consistent participation in physical activity, leading to better cardiovascular health and potentially lower BP levels(12). Older adults who engaged in daily physical activity programs at adult daycare centers showed improved BP control compared to those who were less active.

4. Medication Adherence and Monitoring

Adherence to antihypertensive medications is critical for managing hypertension, but older adults often face challenges with medication adherence due to memory issues, complex regimens, or lack of understanding of the importance of regular medication(13). Adult daycare centers offer medication management services, including reminders and assistance with medication intake, which can significantly

improve adherence (14). The presence of healthcare staff in some adult daycare facilities also allows for regular BP monitoring, which can help in adjusting treatment plans and ensuring BP targets are achieved (15).

5. Social Support and Mental Wellbeing

Social support plays an essential role in the management of chronic diseases, including hypertension. Adult daycare attendance provides older adults with an opportunity to engage with peers and build social networks, which can alleviate feelings of loneliness and depression often associated with increased BP (16). Social interactions and emotional support from both peers and staff can reduce the psychological burden of managing a chronic condition like hypertension, thereby positively influencing BP levels (17,18). Furthermore, participating in group activities and forming friendships within adult daycare centers can enhance self-esteem and provide a sense of belonging, contributing to overall mental wellbeing.

6. Improved Dietary Habits

Many adult daycare centers provide meals and snacks that adhere to dietary guidelines, which can be beneficial for hypertensive patients. Dietary modifications, such as reducing sodium intake and increasing potassium-rich foods, are effective strategies for BP management (19). Studies have found that older adults who attend daycare centers often consume more balanced meals compared to those who live independently, which can help in lowering BP levels(9). Programs that educate participants on heart-healthy diets and encourage dietary compliance further contribute to hypertension control.

7. Evidence from Recent Studies

Several studies have highlighted the potential benefits of adult daycare attendance on hypertension management among older adults. A study examined the health outcomes of hypertensive older adults attending adult daycare centers and found that regular attendance was associated with lower BP and improved medication adherence compared to non-attendees. Another study demonstrated that adult daycare programs incorporating stress-reduction techniques and physical activities had a significant impact on reducing BP in older adults.

A study also reported that older adults engaged in physical activities within daycare settings showed better BP control than those with minimal activity(20). These studies indicate

that adult daycare attendance, particularly in programs that emphasize physical activity, social interaction, and stress reduction, can contribute positively to hypertension management.

8. Limitations and Future Directions

While the current evidence suggests that adult daycare attendance may benefit hypertensive patients, further research is needed to quantify the long-term effects and identify specific program elements that are most effective. Longitudinal studies examining the impact of continuous adult daycare attendance on hypertension outcomes would provide valuable insights. Additionally, more research on the role of individualized interventions within daycare settings could help optimize BP management for older adults.

9. Conclusion

Adult daycare attendance can be a valuable component of hypertension management for older adults, offering a supportive environment that promotes physical activity, reduces stress, enhances medication adherence, and provides social support. The benefits of adult daycare centers in managing hypertension are supported by various studies, though more research is needed to fully understand the extent of these benefits. As the prevalence of hypertension among older adults continues to rise, incorporating adult daycare services into comprehensive hypertension management strategies may offer a promising avenue to improve cardiovascular health outcomes in this population.

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