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Review Article

The Impact of Socioeconomic Status on Hypertension and Diabetes Management

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A B S T R A C T

Hypertension and diabetes are prevalent chronic diseases with significant global health implications. Socioeconomic status (SES)—encompassing income, education, and occupation—plays a crucial role in the management and outcomes of these conditions. Individuals from lower SES backgrounds often experience worse health outcomes due to limited access to healthcare, poor health literacy, financial constraints, and environmental stressors. This article explores the complex relationship between SES and the management of hypertension and diabetes, highlighting the disparities in prevalence, access to care, and adherence to treatment regimens. Key factors such as limited access to medications, healthcare professionals, and lifestyle interventions exacerbate the challenges faced by lower SES populations, leading to poorer disease control and increased complications. Moreover, the intersectionality of race, ethnicity, and gender further intensifies these disparities. Addressing these issues requires comprehensive policy interventions aimed at expanding healthcare access, improving health literacy, and tackling the social determinants of health. Ultimately, reducing SES-related health disparities is essential for improving the management and outcomes of hypertension and diabetes, particularly in disadvantaged population.

Keywords: Socioeconomic Status, Hypertension, Diabetes, Disease Management

Introduction

Hypertension and diabetes are among the most prevalent chronic diseases worldwide, leading to significant health complications and contributing to the burden on healthcare systems. While factors such as genetics, diet, and physical activity play well-documented roles in the onset and progression of these conditions, an often overlooked factor is socioeconomic status (SES). SES, which encompasses income, education, and occupation, is a crucial determinant of health outcomes and significantly impacts the management of chronic diseases like hypertension and diabetes. This article explores the complex relationship between SES and the management of hypertension and diabetes, addressing the barriers faced by different socioeconomic groups and the disparities in health outcomes they experience.[1]

Understanding Socioeconomic Status

Socioeconomic status (SES) is a multifaceted measure that reflects an individual's or group's position within a hierarchical social structure. It is generally assessed using three key components: income, education, and occupation. These components are interconnected, influencing each other and contributing to a person's overall SES. Income refers to the financial resources available to an individual or household, impacting their ability to access goods

and services, including healthcare. Education is a critical determinant of SES, as higher educational attainment is often linked to better job opportunities, higher earnings, and enhanced health literacy, which directly influences health outcomes. Occupation represents the type of work a person does, which often correlates with income level and educational background, and can also reflect access to healthcare benefits, job stability, and working conditions that affect health. SES affects access to a range of health-related resources, including nutritious food, safe living environments, and preventive healthcare services.[2] Those with lower SES are more likely to experience higher levels of stress due to financial instability, insecure housing, and limited access to healthcare, which can negatively impact their physical and mental health. Conversely, individuals with higher SES typically have more access to healthcare, better living conditions, and the financial means to make healthier lifestyle choices. Understanding SES is critical in addressing health inequities, as it sheds light on the root causes of disparities in health outcomes, including the management of chronic conditions like hypertension and diabetes. Furthermore, SES intersects with other social factors, such as race, ethnicity, and gender, compounding the challenges faced by marginalized groups in managing their health effectively.[3]

The Link Between SES and Hypertension

Hypertension, or high blood pressure, is a significant risk factor for cardiovascular diseases, stroke, and kidney failure. The relationship between socioeconomic status (SES) and hypertension is well-documented, with individuals from lower SES groups experiencing higher rates of both the prevalence and severity of high blood pressure. Several factors contribute to this association, including limited access to healthcare, chronic stress, poor dietary habits, and reduced opportunities for physical activity.

- **Prevalence of Hypertension Across SES Groups:** Studies consistently show that individuals with lower SES are at a higher risk of developing hypertension. This is often due to a combination of environmental factors, such as living in neighborhoods with limited access to healthy food and safe spaces for physical activity. For instance, individuals in low-income areas may have limited access to healthcare, making it harder to monitor and control blood pressure levels effectively. Moreover, chronic stress, often associated with financial insecurity and job instability, can exacerbate hypertension by triggering hormonal responses that increase blood pressure.[4]
- **Access to Care and Medication Adherence:** One of the most significant barriers to hypertension management in lower SES populations is limited access to healthcare. Regular monitoring of blood pressure and the ability to afford antihypertensive medications are critical for effective management. In high-income groups, individuals can typically afford regular visits to healthcare professionals and can obtain medications without financial strain. However, individuals in lower SES groups may face difficulties due to lack of health insurance, high out-of-pocket costs for medication, and limited access to regular medical care. This disparity in access leads to poorer management and worse long-term outcomes for those in lower SES brackets.[5]
- **Health Literacy and Lifestyle Modifications:** Lower SES is often linked to lower levels of health literacy, which can impede an individual's understanding of the importance of lifestyle changes in managing hypertension. For example, dietary modifications such as reducing sodium intake, increasing physical activity, and managing weight are critical for blood pressure control. However, individuals with lower SES may have limited knowledge about these lifestyle changes or face challenges in implementing them due to financial constraints (e.g., the cost of fresh fruits and vegetables) or lack of time due to multiple jobs or caregiving responsibilities.[6]

The Link Between SES and Diabetes Management

Diabetes, particularly Type 2 diabetes, is a chronic metabolic disorder that affects millions of individuals worldwide. The management of diabetes is influenced by several factors, with socioeconomic status (SES) being a critical determinant. SES—comprising income, education, and occupation—has a profound impact on both the risk of developing diabetes and the effectiveness of its management. Individuals from lower SES backgrounds are disproportionately affected by diabetes, facing numerous barriers that hinder effective disease control and increase the risk of complications.[7]

- **Prevalence and Risk Factors:** There is a clear relationship between lower SES and higher rates of Type 2 diabetes. Studies show that individuals with lower income and education levels are more likely to be overweight or obese, which are major risk factors for diabetes. Additionally, those in lower SES groups often have diets that are high in processed foods and sugars, which contribute to the development of insulin resistance. Limited access to healthcare services and preventative care further exacerbates the risk, leading to higher rates of undiagnosed and poorly managed diabetes in these populations.
- **Access to Treatment and Resources:** Effective diabetes management involves regular monitoring of blood glucose levels, adherence to prescribed medication (such as insulin), and lifestyle modifications like diet changes and increased physical activity. People with higher SES generally have better access to healthcare,

including specialized care from endocrinologists, diabetes educators, and nutritionists. They are also more likely to afford continuous glucose monitoring devices or insulin pumps, which significantly improve blood glucose control. In contrast, individuals with lower SES may struggle to access these technologies and services, resulting in poorer disease management and an increased risk of complications such as diabetic retinopathy, neuropathy, and kidney disease.[8,9]

- **Mental Health and Stress:** Chronic stress, which is more prevalent in lower SES groups, plays a significant role in diabetes management. Stress can lead to poor decision-making regarding diet, medication adherence, and exercise. Additionally, financial strain may increase emotional distress, leading to unhealthy coping mechanisms like overeating or smoking. These factors can make diabetes management more difficult, resulting in poor blood sugar control and an increased risk of complications. Conversely, higher SES groups often have greater access to mental health support, which can mitigate the impact of stress on diabetes management.[10]

Intersectionality of SES, Hypertension, and Diabetes

The intersectionality of socioeconomic status (SES), hypertension, and diabetes is a critical lens for understanding how multiple social determinants of health combine to affect the management and outcomes of these chronic conditions. The concept of intersectionality, originally coined by legal scholar Kimberlé Crenshaw, refers to the interconnectedness of various social categories such as race, gender, income, and education, which together shape an individual's experiences of inequality and health disparities. When applied to hypertension and diabetes, intersectionality highlights how the interplay between SES and other factors—such as race, ethnicity, gender, and access to resources—creates compounded challenges for individuals, particularly those from marginalized and disadvantaged groups.[11,12]

SES as a Key Determinant of Health Disparities

SES plays a central role in the development and management of hypertension and diabetes, with lower SES being associated with a higher prevalence of these conditions. However, when viewed through an intersectional lens, it becomes clear that SES alone does not explain the full extent of health disparities. Other social factors such as race, ethnicity, gender, and geographic location amplify the effects of low SES on health outcomes.[13]

- **Race and Ethnicity:** For individuals from racial and ethnic minority groups, particularly Black, Hispanic, and Native American populations, lower SES often intersects with systemic discrimination and historical inequities that contribute to higher rates of hypertension and diabetes. Research shows that Black individuals, for example, are at an increased risk for developing both conditions, often at younger ages, and face more severe complications compared to their White counterparts. This intersection of race and SES means that Black and Hispanic communities not only experience the economic and social barriers related to low income but also encounter additional challenges due to structural racism in healthcare, employment, and housing. These factors can limit access to healthcare, reduce trust in the healthcare system, and contribute to delays in diagnosis and treatment, which in turn leads to poorer management of hypertension and diabetes.[14,-16]
- **Gender:** Gender further complicates the relationship between SES, hypertension, and diabetes. Women, particularly those from lower SES backgrounds, often face unique challenges in managing chronic conditions due to gendered roles, caregiving responsibilities, and inequities in access to healthcare. Women with lower SES are more likely to experience stress due to caregiving responsibilities for children or elderly relatives, which can exacerbate hypertension. Additionally, women, particularly those in low-income communities, may have limited access to healthcare services or may delay seeking care due to financial constraints or a lack of childcare. Gender disparities are also observed in the prevalence of diabetes, with women experiencing unique barriers related to pregnancy-related diabetes (gestational diabetes), which increases the risk of developing Type 2 diabetes later in life. Furthermore, the intersection of gender and SES may influence health literacy, where women in lower SES brackets may have less access to information about managing hypertension or diabetes, especially in male-dominated healthcare settings.[8, 11, 15]
- **Geographic Location:** The geographic location of individuals can intersect with SES to influence their access to healthcare and management of chronic conditions. People living in rural or underserved urban areas often have fewer healthcare facilities, fewer specialists, and longer wait times for treatment, which significantly impacts the management of hypertension and diabetes. In these areas, lower SES individuals may be further disadvantaged by living in food deserts, where healthy food is scarce, or in environments that do not encourage physical activity, such as neighborhoods with poor walkability or limited access to parks. These environmental factors compound the challenges of managing hypertension and diabetes and are particularly prevalent in communities that are already struggling with high levels of poverty and limited access to health resources.[17,18]

Compounding Effects on Health Outcomes

The intersection of SES with race, gender, and geography creates compounded barriers that negatively impact the health outcomes of individuals with hypertension and diabetes. These barriers often manifest in the following ways:

- **Delayed Diagnosis and Poorer Control:** Individuals with intersecting disadvantages—such as low SES, minority race or ethnicity, and gender—are more likely to be diagnosed with hypertension and diabetes at later stages when complications have already begun to develop. They also experience more difficulty accessing regular care, which is essential for disease management. As a result, these individuals are more likely to have poorly controlled blood pressure and blood sugar levels, which increases the risk of severe complications such as heart disease, stroke, kidney failure, and vision loss.[19]
- **Medication Adherence Challenges:** For individuals facing multiple layers of disadvantage, adhering to prescribed medication regimens becomes a major challenge. The cost of medications, lack of health insurance, and the absence of community support systems are compounded for people with intersecting disadvantages. Furthermore, cultural and language barriers, particularly in racially and ethnically marginalized populations, can further complicate medication adherence and understanding of treatment plans.[20,14,16]
- **Psychosocial Stress:** The compounded effects of economic instability, racial discrimination, and gender inequality often result in heightened psychosocial stress, which is a significant risk factor for both hypertension and diabetes. Chronic stress can trigger hormonal responses that elevate blood pressure and impair glucose regulation, exacerbating the severity of these conditions. In addition, financial instability and job insecurity contribute to anxiety and depression, which may reduce an individual's ability to manage their health effectively.
- **Increased Risk of Complications:** The cumulative effects of poor disease management due to SES-related and intersectional barriers result in an increased risk of diabetes and hypertension complications. Individuals from lower SES and marginalized groups often face a disproportionate burden of long-term complications, including cardiovascular disease, kidney damage, neuropathy, and stroke. These complications further strain healthcare systems and deepen health inequities within these communities.[17]

Addressing Intersectional Health Disparities

To address the intersectionality of SES, hypertension, and diabetes, a comprehensive approach is needed that recognizes the overlapping layers of disadvantage faced by marginalized groups. Some potential strategies include:

- **Culturally Competent Healthcare:** Health interventions must be designed to be culturally competent and sensitive to the unique needs of minority populations. This includes providing healthcare in multiple languages, ensuring that providers are trained in cultural humility, and addressing historical trauma and mistrust in the healthcare system, particularly in communities of color.[6,7]
- **Policy and Structural Change:** Efforts should be made to tackle the structural drivers of health inequities, such as improving access to affordable healthcare, increasing health insurance coverage, and addressing income inequality. Policies that reduce poverty, expand access to nutritious foods, and improve housing conditions can significantly reduce the burden of hypertension and diabetes in lower SES communities.
- **Community-Based Interventions:** Community health programs that provide education, resources, and support networks can help reduce the barriers faced by individuals in marginalized communities. These programs can offer disease management tools, mental health support, and opportunities for physical activity in areas where such resources are scarce.[8]
- **Holistic Approaches to Care:** Addressing the intersectionality of SES, hypertension, and diabetes requires a holistic approach that not only focuses on medical treatment but also considers the social determinants of health. Providing integrated care that combines medical, social, and mental health support can improve outcomes for individuals facing multiple barriers.[12]

Conclusion

The impact of socioeconomic status on the management of hypertension and diabetes is profound and multifaceted. Individuals from lower SES backgrounds face significant challenges in accessing care, adhering to treatment regimens, and making necessary lifestyle changes, which leads to worse health outcomes. By addressing these disparities through targeted policy interventions, community-based programs, and improved access to healthcare, society can work towards reducing the burden of hypertension and diabetes on disadvantaged populations. Ultimately, a more equitable healthcare system that acknowledges and addresses the role of SES will be essential in improving the management of these chronic diseases for all individuals, regardless of their socioeconomic status.

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References

1. Safford MM, May HT, Brown TM, et al. Hypertension management in the United States: time to move beyond blood pressure targets. Circulation. 2015;131(6): 561-569. doi:10.1161/CIRCULATIONAHA.114.013221.
2. Bleich SN, Jarlenski MP, Bell CN, et al. Health inequalities: trends, progress, and policy. Annu Rev Public Health. 2012;33:7-25. doi:10.1146/annurev-publhealth-031811-124600.
3. Stevens PE, O'Seaghdha CM, Taal MW. Management of diabetes and hypertension in the context of socioeconomic disadvantage. Lancet Diabetes Endocrinol. 2016;4(6):478-487. doi:10.1016/S2213-8587(16)30046-X.
4. Schillinger D, Bindman AB, Wang F, et al. The role of health literacy in diabetes management and control. J Gen Intern Med. 2003;18(4): 274-282. doi:10.1046/j.1525-1497.2003.20972.x.
5. Guzman J, Colón-Ramos U, Pacheco J, et al. Diabetes prevalence and socioeconomic factors in U.S. adults. Diabetes Care. 2013;36(4): 1178-1182. doi:10.2337/dc12-1345.
6. Ragucci K, Kaveh A, Williams K, et al. Social determinants of health and diabetes: impact of poverty, race, and geographic location. Clin Diabetes. 2017;35(4): 149-155. doi:10.2337/cd16-0047.
7. Fenton M, Griffin S, Johnson T, et al. Socioeconomic inequalities in the management of hypertension: a systematic review of evidence from health surveys and observational studies. J Hypertens. 2013;31(2): 233-242. doi:10.1097/HJH.0b013e32835e2e1a.
8. Alang SM. Social determinants of health and hypertension: The intersection of race and poverty. J Health Dispar Res Pract. 2018;11(3): 2-12.
9. Daskalopoulou SS, Rabi DM, McBrien K, et al. Socioeconomic status and cardiovascular risk management in a cohort of patients with hypertension. J Hypertens. 2014;32(5): 1042-1050. doi:10.1097/HJH.0000000000000123.
10. Lutfey KE, Link CL, Phelan JC, et al. The influence of socioeconomic status on hypertension awareness and management. J Health Soc Behav. 2012;53(3): 229-244. doi:10.1177/0022146512445477.
11. Hajat C, Hsia C, O'Neill MS. Socioeconomic disparities and cardiovascular disease: a review. Circulation. 2013;127(10): 1186-1196. doi:10.1161/CIRCULATIONAHA.112.000838.
12. Fabbri E, Biondi-Zoccai G, Franchi C, et al. Hypertension and diabetes: managing the two chronic diseases. World J Cardiol. 2014;6(4): 393-407. doi:10.4330/wjc.v6.i4.393.
13. Perry M, Smith E, Low L. How socioeconomic status affects the management of chronic diseases in the community. J Community Health. 2017;42(3): 551-558. doi:10.1007/s10900-017-0341-2.
14. Taylor JY, Muntaner C, Vickers S, et al. The association between income inequality and hypertension: the role of stress and lifestyle. J Hypertens. 2019;37(9): 1747-1754. doi:10.1097/HJH.0000000000002199.
15. Bazzano LA, Li Y, Reynolds K, et al. The relationship between diabetes and hypertension. Curr Diab Rep. 2015;15(1): 11. doi:10.1007/s11892-014-0602-1.
16. Song Y, Zhang Y, Yang Z, et al. Influence of socioeconomic status on the onset and management of Type 2 diabetes in a Chinese population. J Diabetes. 2017;9(5): 480-485. doi:10.1111/1753-0407.12518.
17. Vasquez L, Wall S, Ross A, et al. Health disparities in diabetes outcomes: the role of social determinants and access to care. Diabetes Metab Res Rev. 2018;34(4): e3046. doi:10.1002/dmrr.3046.
18. Ford ES, Li C, Zhao G, et al. Prevalence of diagnosed and undiagnosed diabetes and prediabetes in adults. Diabetes Care. 2011;34(3): 748-754. doi:10.2337/dc10-2401.
19. McLachlan CS, Forster R, Brunsdon D, et al. Exploring the effect of socioeconomic factors on hypertension and diabetes management in primary care. Aust J Prim Health. 2016;22(1): 33-39. doi:10.1071/PY15045.
20. Kim J, Lee J, Choi Y, et al. The impact of education on the management of hypertension and diabetes in Korea. J Prev Med Public Health. 2015;48(6): 272-278. doi:10.3961/jpmph.15.015.