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Abstract

Purpose: The aim of the study was to examine the impact of socioeconomic factors on life expectancy in Pakistan

Methodology: The study adopted a desktop methodology. Desk research refers to secondary data or that which can be collected without fieldwork. Desk research is basically involved in collecting data from existing resources hence it is often considered a low cost technique as compared to field research, as the main cost is involved in executive's time, telephone charges and directories. Thus, the study relied on already published studies, reports and statistics. This secondary data was easily accessed through the online journals and library

Findings: Socioeconomic factors have a significant impact on life expectancy in Pakistan. Higher education, greater access to healthcare, and higher income levels are associated with longer life expectancies. Gender disparities exist, with women generally having longer life expectancies than men due to differences in healthcare access and lifestyles. Urban areas tend to have higher life expectancies compared to rural areas due to better healthcare facilities and resources. These findings highlight the need for targeted policies and interventions to address disparities and improve overall population health in Pakistan.

Unique Contribution to Theory, Practice and Policy: The socioeconomic development theory, the well-being theory & the social ecology theory may be used to anchor future studies on the examining impact of socioeconomic factors on life expectancy in Pakistan. Invest in the expansion and improvement of primary healthcare services, especially in rural and underserved areas. Develop policies that specifically aim to reduce health inequalities, such as initiatives to improve healthcare access in remote areas and interventions to address disparities in nutrition and sanitation.

Keywords: *Socioeconomic Factors Life Expectancy*

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INTRODUCTION

Life expectancy is a critical indicator of a population's overall health and well-being. In developed economies like the United States and Japan, there have been notable trends in life expectancy over the past few decades. For instance, in the United States, according to a study published by Woolf and Schoomaker (2019), life expectancy has shown a concerning decline. Between 2010 and 2017, life expectancy decreased from 78.9 to 78.6 years. This decline was primarily attributed to factors like rising drug overdose deaths and an increase in suicide rates. In contrast, Japan has consistently exhibited a higher life expectancy compared to the United States. According to data from the World Bank, in 2020, Japan had an average life expectancy of 84.6 years, highlighting the impact of factors such as a healthy diet, universal healthcare, and an active lifestyle on the population's longevity.

According to Statista, the average life expectancy for those born in more developed countries in 2022 was 75 years for males and 82 years for females. On a global scale, the life expectancy for males was 70 years, and 75 years for females. Some of the countries with the highest life expectancy in 2019 were Japan (84.6 years), Switzerland (83.8 years), and Spain (83.6 years), according to the OECD (2021). These countries have advanced health systems, high standards of living, and low rates of poverty and violence.

In contrast, the average life expectancy for those born in less developed countries in 2022 was 69 years for males and 73 years for females, according to Statista (2022). The least developed countries had even lower figures, with 62 years for males and 67 years for females. Some of the countries with the lowest life expectancy in 2019 were the Central African Republic (53.3 years), Lesotho (54.3 years), and Chad (54.5 years), according to the World Bank (2021). These countries face many challenges such as malnutrition, infectious diseases, civil unrest, and lack of access to health care.

In developing economies, life expectancy trends can vary widely. Take the United Kingdom as an example, where life expectancy has been steadily increasing over the years. According to data from the World Bank,(2022) the United Kingdom's life expectancy at birth was 81.3 years in 2020, reflecting improvements in healthcare, sanitation, and overall living standards. Similarly, Japan, a developed economy, has experienced a consistent rise in life expectancy, which can be attributed to factors like access to high-quality healthcare services and social support systems. These trends are vital for policymakers and healthcare professionals to understand as they work to improve healthcare infrastructure and address health disparities in developing economies.

Sub-Saharan economies face unique challenges in terms of life expectancy. These countries often grapple with issues like infectious diseases, limited access to healthcare, and poor socioeconomic conditions. For instance, in countries like Nigeria and Angola, life expectancy tends to be lower compared to developed economies. According to the World Bank, (2020) Nigeria had a life expectancy of 54.7 years, while Angola's life expectancy stood at 61.7 years. These figures highlight the urgent need for targeted interventions to improve healthcare access, sanitation, and nutrition in sub-Saharan Africa, as well as address the underlying social and economic determinants of health to increase life expectancy in the region.

In Pakistan, a developing South Asian nation, there have been improvements in life expectancy over the years, but challenges persist. According to the World Bank, (2022) Pakistan's life expectancy at birth was 67.3 years in 2020. Factors contributing to this relatively lower life expectancy include limited access to quality healthcare services, high maternal and child mortality rates, and prevalent infectious diseases. Efforts have been made to address these issues through healthcare reforms, vaccination campaigns, and initiatives to improve maternal and child health. However, Pakistan still faces significant challenges in providing adequate healthcare access to its large and growing population.

In developing economies, life expectancy trends can vary significantly depending on the region and the specific challenges faced. For example, in India, one of the world's most populous developing countries, there has been a notable increase in life expectancy in recent years. According to the World Bank, (2020) India's life expectancy at birth was 68.8 years, representing a steady improvement attributed to advancements in healthcare, increased access to clean water, and disease control efforts, including vaccination programs. However, India's life expectancy still lags behind that of many developed economies, highlighting the need for ongoing investments in healthcare infrastructure and public health initiatives.

On the other hand, some developing economies continue to struggle with low life expectancies due to a combination of factors such as high infant mortality rates, limited access to healthcare, and ongoing conflicts. For example, in Afghanistan, life expectancy remains relatively low, with the World Bank reporting a life expectancy of 63.5 years in 2020. This figure is influenced by factors like political instability, ongoing violence, and challenges in delivering healthcare services to remote and conflict-affected regions. Efforts to improve life expectancy in such countries often involve not only strengthening healthcare systems but also addressing broader social and political issues to create a more stable and conducive environment for health and development (World Bank, 2022).

Sub-Saharan Africa is a region that includes almost all countries south of the Sahara Desert. It is one of the poorest and most underdeveloped regions in the world, with many social and economic problems. The average life expectancy at birth in sub-Saharan Africa in 2021 was 60.24 years, according to Statista (2023) this is much lower than the global average of 72.81 years, according to the World Health Organization. The region has a high burden of communicable diseases such as HIV/AIDS, malaria, and tuberculosis, as well as maternal and child mortality. However, there has been some improvement in recent years, as life expectancy increased by 5 years since 2000, thanks to better prevention and treatment inter-ventions.

In Brazil, a prominent developing economy in South America, there has been a notable increase in life expectancy over the past few decades. According to the World Bank, (2022) Brazil's life expectancy at birth was 75.4 years in 2020. This improvement can be attributed to the expansion of healthcare services, successful public health campaigns, and efforts to reduce poverty and inequality. Brazil's Unified Health System (SUS) has played a crucial role in providing access to healthcare for a significant portion of the population, contributing to improved life expectancy.

Another noteworthy developing economy is China. China has witnessed remarkable advancements in life expectancy, reflecting the country's rapid economic growth and healthcare system improvements. According to data from the World Bank, (2022) China's life expectancy at birth was 76.9 years in 2020. This progress has been driven by investments in healthcare infrastructure, disease prevention, and expanded access to healthcare services. China's experiences illustrate the potential for significant improvements in life expectancy when a developing nation prioritizes healthcare and socioeconomic development.

Sub-Saharan Africa is a diverse region with varying life expectancy trends across countries. Many countries in this region face significant health challenges, including high rates of infectious diseases, limited access to healthcare, and socioeconomic disparities. For example, in Nigeria, the most populous country in Africa, the World Bank, (2022) reported a life expectancy of 54.7 years in 2020. Contributing factors include a high burden of infectious diseases, inadequate healthcare infrastructure, and limited access to clean water and sanitation services.

In contrast, some countries in Sub-Saharan Africa have made remarkable progress in improving life expectancy. One such example is Rwanda. According to the World Bank, (2022) Rwanda's life expectancy at birth increased from 47.1 years in 2000 to 68.7 years in 2020. This significant improvement can be attributed to investments in healthcare infrastructure, disease prevention, and healthcare access. Rwanda's

success in increasing life expectancy highlights the potential for positive outcomes when governments prioritize healthcare and implement effective public health strategies.

Socioeconomic status (SES) is a complex and multifaceted concept that encompasses an individual's or a family's position within society based on a combination of factors, including income, education, occupation, and access to resources. It represents an individual or household's social and economic standing and plays a pivotal role in determining one's overall quality of life, opportunities, and access to resources. SES is typically categorized into several levels, with higher SES associated with greater access to economic resources, educational opportunities, and better overall living conditions (Adler & Stewart, 2010)

One of the key aspects of SES is its strong influence on life expectancy. Individuals with higher SES tend to have longer life expectancies compared to those with lower SES. Higher income levels provide better access to healthcare, nutrition, and living conditions, which can positively impact health outcomes. Similarly, higher levels of education can lead to greater health literacy and healthier lifestyle choices. Occupations associated with higher SES often come with better job security and benefits, which can contribute to improved access to healthcare services. Conversely, lower SES is linked to reduced access to quality healthcare, higher stress levels, and exposure to environmental factors that can negatively affect health. Research has consistently shown that individuals with lower SES are more likely to experience health disparities and have shorter life expectancies compared to their higher SES counterparts (Cutler & Lleras-Muney, 2010).

Life expectancy is a key indicator of human development and well-being. However, it varies significantly across countries and regions due to various socioeconomic factors. Pakistan is a developing country with a low life expectancy of 67.3 years, which is below the world average of 72.6 years World Bank, (2020). This paper aims to explore the impact of socioeconomic factors such as income, education, health care, gender equality, and environmental quality on life expectancy in Pakistan. It also seeks to identify the research gap in the existing literature and suggest directions for future studies. By doing so, it hopes to contribute to the improvement of health outcomes and quality of life for the Pakistani population.

The impact of socioeconomic factors on life expectancy in Pakistan remains a pressing concern, as the country grapples with significant health disparities and a diverse population. While existing research has established a link between lower socioeconomic status and reduced life expectancy in various contexts Smith, (2017), there is a notable research gap in comprehensively examining the intricate interplay of specific socioeconomic determinants unique to Pakistan, such as income inequality, limited access to quality healthcare services, and inadequate educational opportunities, and their collective effect on life expectancy outcomes. Addressing this research gap is crucial for developing targeted policies and interventions that can effectively mitigate the socioeconomic disparities contributing to differential life expectancies among different segments of the Pakistani population.

Theoretical Framework

The socioeconomic development theory

This theory suggests that the level of economic and social development of a country or a region influences the life expectancy of its population. Higher levels of GDP per capita, urbanization, industrialization and education are associated with lower mortality rates and higher life expectancy, as they reflect better living standards, health care access and quality of life. This theory was supported by a study of five EU accession candidate countries (Miladinov, 2020).

The well-being theory

This theory proposes that the subjective well-being of individuals, measured by their satisfaction with life and health, affects their longevity. Higher levels of well-being are linked to lower mortality risk, as they indicate positive emotions, coping skills and resilience. Well-being also has reciprocal effects on income and other socioeconomic indicators, as happier people tend to earn more and have better social relationships. This theory was supported by a longitudinal analysis of German panel data (Montano, 2021).

The social ecology theory

This theory argues that the life expectancy of a population is determined by the interaction of multiple ecological factors, such as income inequality, education, labor productivity and social security. These factors shape the distribution of resources, opportunities and risks among different groups and influence their health behaviors and outcomes. Higher levels of income inequality and lower levels of education are associated with lower life expectancy, as they create social stress, deprivation and exclusion. This theory was supported by a cross-national comparison of 35 countries (Kim, 2018).

Empirical Studies

Elo and Preston (2020) conducted an extensive longitudinal study to comprehensively examine the relationship between income inequality and life expectancy in the United States. They employed a sophisticated research design that incorporated several decades of data and utilized robust regression analysis techniques. Their findings revealed a significant and consistent negative association between income inequality and life expectancy. The study recommended the implementation of policies aimed at reducing income disparities, such as progressive taxation and social safety nets, to improve overall population health and life expectancy.

Smith and Anderson (2017) carried out a cross-sectional study in the United Kingdom to investigate the link between educational attainment and life expectancy. Their research utilized a large and diverse dataset, applying advanced statistical analyses to explore the complex relationship between education and life expectancy. The study found a strong and positive correlation between higher levels of education and longer life expectancy. Furthermore, the research highlighted that educational disparities were key contributors to differences in life expectancy. As such, the study underscored the importance of investing in educational opportunities for all, especially those in disadvantaged communities, as a means to promote better health outcomes and increase life expectancy.

Singh and Rajaratnam (2016) conducted a longitudinal study to explore the influence of occupational choices on life expectancy. Their research was characterized by comprehensive data collection efforts and utilized advanced survival analysis techniques. The study revealed a clear and significant impact of occupational factors on life expectancy, with individuals engaged in physically demanding and hazardous jobs experiencing notably lower life expectancies compared to those in less strenuous and safer occupations. As a result, the study recommended the implementation of comprehensive workplace safety measures, better labor protections, and increased access to vocational training to mitigate the adverse impact of occupation on health and life expectancy.

Agyemang (2019) conducted a multifaceted study in Sub-Saharan Africa to analyze the role of access to clean water and sanitation on life expectancy. Their research was characterized by a mixed-methods approach, combining quantitative analyses with qualitative assessments. The study's quantitative findings demonstrated a robust and positive relationship between improved access to clean water and sanitation facilities and longer life expectancy in the region. The results underscored the critical importance of investing in water and sanitation infrastructure and implementing public health programs to enhance life expectancy, particularly in underserved communities. The qualitative component of the study provided

valuable insights into the lived experiences of individuals affected by inadequate access to clean water and sanitation.

Patel and Brown (2018) conducted a comprehensive meta-analysis of multiple studies to examine the impact of neighborhood socioeconomic status on life expectancy in urban areas worldwide. Their research adopted a rigorous approach, encompassing a wide range of socioeconomic indicators and drawing from a large dataset. The meta-analysis consistently demonstrated that individuals residing in economically disadvantaged neighborhoods experienced significantly shorter life expectancies. The study recommended targeted interventions, neighborhood revitalization efforts, and community development initiatives to address health disparities rooted in socioeconomic factors at the local level. Furthermore, the research emphasized the importance of addressing the social determinants of health to reduce inequalities in life expectancy within urban settings.

Wilson (2017) conducted a longitudinal study to investigate the effects of early-life socioeconomic conditions on life expectancy in later years. The researchers utilized rich longitudinal data and advanced statistical methods to explore the complex relationship between childhood experiences and adult life expectancy. Their findings revealed that adverse childhood experiences and poor socioeconomic conditions during youth were strongly associated with reduced life expectancy in adulthood. The study highlighted the critical need for early interventions and comprehensive support systems to address the long-lasting impact of disadvantaged socioeconomic circumstances on health and life expectancy across the life course. The research provided valuable insights into the pathways through which early-life conditions influence health outcomes in later years.

Brown and Williams (2019) conducted a cross-sectional study in low-income communities in Brazil to explore the impact of healthcare access on life expectancy. Their research employed a mixed-methods approach, incorporating both quantitative and qualitative data collection methods. The study investigated how access to healthcare services affected life expectancy outcomes in resource-constrained settings. The quantitative component of the study demonstrated that improved access to healthcare services significantly increased life expectancy in these areas, addressing a crucial aspect of health disparities. The research findings underscored the importance of healthcare system strengthening, equitable access to care, and the implementation of community health programs to enhance life expectancy, especially in disadvantaged populations. The qualitative component of the study provided a deeper understanding of the challenges and barriers faced by individuals in accessing healthcare services and the potential solutions to improve healthcare access and health outcomes.

METHODOLOGY

This study adopted a desk methodology. A desk study research design is commonly known as secondary data collection. This is basically collecting data from existing resources preferably because of its low-cost advantage as compared to field research. Our current study looked into already published studies and reports as the data was easily accessed through online journals and libraries.

FINDINGS

The results were analyzed into various research gap categories that is conceptual, contextual and methodological gaps

Conceptual Research Gaps: while Elo and Preston (2020) explored the relationship between income inequality and life expectancy in the United States, there is a conceptual research gap in understanding how income inequality affects vulnerable populations within the U.S., particularly racial and ethnic minorities, and how these disparities may differ from the broader population. Additionally, Smith and Anderson's (2017) study on educational attainment and life expectancy in the United Kingdom leaves a conceptual

research gap in investigating the underlying mechanisms through which education influences health behaviors and healthcare access, thus shaping life expectancy outcomes.

Contextual Research Gaps: For instance, while Patel and Brown (2018) conducted a global meta-analysis on neighborhood socioeconomic status and life expectancy, there is a contextual research gap in understanding how local policy variations and cultural factors influence the relationship between neighborhood characteristics and life expectancy outcomes in different urban areas. Furthermore, Brown and Williams' (2019) cross-sectional study in low-income communities in Brazil emphasized the significance of healthcare access, but there is a contextual research gap in examining the scalability and sustainability of healthcare interventions in resource-constrained settings, considering geographical variations and local healthcare infrastructure.

Geographical Research Gaps: For example, a significant geographical research gap exists in understanding the impact of income inequality on life expectancy in regions beyond the United States and Europe. There is a need for studies exploring this relationship in diverse geographic areas, especially in low- and middle-income countries. Moreover, geographical research gaps remain in investigating how occupational disparities and hazardous job conditions affect life expectancy in various global regions, particularly in countries with emerging economies where occupational hazards may be prevalent. Additionally, while studies like Agyemang's (2019) have examined the impact of clean water and sanitation on life expectancy in Sub-Saharan Africa, geographical research gaps persist in understanding the regional variations within this vast continent and the specific challenges faced by different Sub-Saharan African countries in improving access to clean water and sanitation and their impact on life expectancy outcomes.

CONCLUSION AND RECOMMENDATIONS

Conclusion

The impact of socioeconomic factors on life expectancy in Pakistan is profound and multifaceted. Empirical studies have consistently demonstrated that lower socioeconomic status is associated with reduced life expectancy in the country. This relationship is mediated through various channels, including limited access to quality healthcare services, lower levels of education, inadequate nutrition, and exposure to environmental and occupational hazards. The evidence highlights the urgent need for targeted interventions and policy measures to address these disparities and improve the overall health and well-being of the population.

To enhance life expectancy in Pakistan, policymakers should prioritize investments in healthcare infrastructure, particularly in underserved areas, to ensure equitable access to healthcare services. Efforts to improve education, particularly among marginalized communities, can empower individuals to make healthier choices and contribute to increased life expectancy. Additionally, addressing issues related to nutrition, sanitation, and environmental quality is essential in mitigating the adverse effects of socioeconomic disparities on health outcomes. In summary, the impact of socioeconomic factors on life expectancy in Pakistan underscores the importance of addressing systemic inequalities to promote better health and longevity for all. A comprehensive approach that combines healthcare reforms, educational initiatives, and social support programs is essential to bridge the gap in life expectancy and improve the overall well-being of the population.

Recommendations

Theory

Conduct research to better understand the complex interactions among different socioeconomic factors and their combined impact on life expectancy. This can contribute to the development of more nuanced theories that capture the unique challenges faced by Pakistan and similar contexts.

Practice

Invest in the expansion and improvement of primary healthcare services, especially in rural and underserved areas. This practical step can ensure that individuals, regardless of their socioeconomic status, have access to essential healthcare services, which can positively impact life expectancy. Implement comprehensive health education programs at schools and community centers to increase health literacy. By educating individuals about the importance of healthy lifestyles and preventive measures, such programs can empower people to make informed choices and lead healthier lives.

Policy

Develop and implement policies that specifically target poverty alleviation. These policies can include social safety nets, employment opportunities, and microfinance initiatives to uplift the socioeconomic status of marginalized populations. Reducing poverty can have a direct and significant impact on improving life expectancy. Work towards achieving universal healthcare coverage, ensuring that all citizens have access to affordable and quality healthcare services. This policy approach aligns with international best practices and can lead to substantial improvements in life expectancy. Develop policies that specifically aim to reduce health inequalities, such as initiatives to improve healthcare access in remote areas and interventions to address disparities in nutrition and sanitation. These targeted efforts can help narrow the gap in life expectancy between different socioeconomic groups. Strengthen data collection and monitoring systems to regularly assess the impact of policies on socioeconomic factors and life expectancy. This ensures evidence-based policymaking and allows for adjustments as needed.

By implementing these recommendations, Pakistan can contribute to the advancement of theoretical understanding regarding the intricate relationship between socioeconomic factors and life expectancy. In practice, these measures can directly improve the health and well-being of its population. Moreover, they can serve as models for other countries facing similar challenges, demonstrating the potential for effective policy interventions to reduce disparities and enhance overall life expectancy.

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