



THE EFFECTS OF SOCIAL STRATIFICATION ON HEALTH

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ABSTRACT

This study investigates the relationship between social stratification and health inequality through a mixed-methods experimental design that integrates quantitative modeling with qualitative analysis. Using national survey data, census records, and administrative health databases from 2019 to 2021, alongside interviews and focus groups with participants from diverse socioeconomic strata, the research identifies robust associations between structural disadvantage and adverse health outcomes. Quantitative findings revealed that lower socioeconomic status, limited education, and occupational precarity were strongly correlated with higher morbidity, reduced life expectancy, and limited access to preventive healthcare services. Concentration indices confirmed that health disparities were disproportionately concentrated among the poorest quintiles, while geospatial clustering highlighted elevated obesity prevalence and infant mortality in deprived neighborhoods. Regression modeling further established that income inequality significantly predicted disparities in preventive service usage and chronic disease prevalence. Complementary qualitative analysis illuminated the lived experiences of exclusion, discrimination, and chronic stress, which reinforced the statistical evidence of inequality. Taken together, the study demonstrates that health inequality is systematically produced by entrenched forms of social stratification that intersect with race, gender, and geography to deepen disadvantage. These findings underscore the necessity of equity-driven policy interventions, including redistributive social protections, expansion of universal healthcare, and targeted support for marginalized communities. The research contributes to the growing body of scholarship emphasizing that health disparities are structural rather than individual in nature, highlighting urgent societal and policy implications for reducing inequality in an era of widening socioeconomic divides.

KEYWORDS: *Social Stratification, Health Inequality, Socioeconomic Status, Preventive Healthcare, Morbidity, Structural Determinants.*

INTRODUCTION

As socioeconomic stratification is identified as an important issue that affects access to resources, exposure to risk, and health inequality in the end, health inequality remains a significant global issue (Riley, 2020; Hu, 2021). The social gradient of health, which indicates the poor-bad-health relationship, can be found in a variety of contexts and settings, including an inferior number of diseases connected to stress, shorter life expectancy, and higher morbidity among people who are lower in the social scale (Gomez, 2021; Hu, 2021). Another common feature of a health disparity resulting due to social stratification is the point highlighted by the World Health Organization which is that, at all income levels, there is what is described as a social gradient to health and illness or put in another way, the lower the socioeconomic status, the poorer the health (WHO, 2021). Other causal path links between health disparities and stratification are numerous. The union of social (housing, income, education, and exposure to the environment) and structural inequalities creates stratified health vulnerability (Gomez, 2021; WHO, 2021). Despite the changing increases and decreases of illness threats, the theory of fundamental causes goes further to stipulate that socioeconomic status provides a sustainable advantage over health due to unequal access to resources such as money, education and social support (Clouston & Link, 2021). Diminished socioeconomic status has been linked to a decrease in life expectancy by a number of years, as well as marked inequality between sexes, as shown by empirical analyses (Hu, 2021). Further, the built environment and neighbourhood conditions augment the prevalence of disparities among obesity and chronic diseases (Brakefield, Olusanya, & Shaban-Nejad, 2020). Stratification, racial and ethnic inequality combine to increase health inequities. The weathering hypothesis highlights the fact that a rate of physiological degradation accelerates, conditioned by stress factors, especially those that affect disadvantaged ethnic groups (Geronimus et al., 2020; Wikipedia-Weathering Hypothesis, 2025). Moreover, this idea helps to contextualise trends in allostatic load and ethnic disparities in the health of mothers in older populations (Geronimus et al., 2020; Williams, 2020). In the meantime, structural factors (discrimination in housing, jobs, and direct exposure to violence) put long-term health of underprivileged communities at risk. There is also socioeconomic stratification that harms health by functioning at the policy level. They are created by the imbalance of the distribution of the resources, the absence of social protection, and limited access to healthcare delivery (Gomez, 2021; Riley, 2020). Among the examples is austerity policies in the UK that have been proved to cause more deaths among the disadvantaged regions (news; Marmot & Fund Launch, 2024). In the meantime, the life expectancy disparities continue to exist in the world with children in less developed countries being 13 times more likely to die prematurely (WHO report, 2025). These findings indicate how stratification that forms the bedrock of economic inequalities and governance manifests through blatant health disparities. More and more these correlations are measured by other methods. Institutionalization of the concept of social inequality in epidemiological causal drivers is reflected in models of causal effect structural measurements (Surasinghe et al., 2024). Also, geographical studies have shown that increased prevalence of obesity in adults is strongly linked to the stability of housing neighbourhoods, racial representation, and income levels (Brakefield et al., 2020). Lack of access to socioeconomic resources was also revealed as a prominent health risk factor in the COVID-19 pandemic in

several countries (Javaheri, 2020). These numerical findings are supplemented by considerable theoretical frameworks, in particular, the theory of fundamental causes (Clouston and Link, 2021) and the critique of the policies regarding unequal allocation of social determinants (Gomez, 2021). The proposed paper has made it very clear that health disparity is created and perpetuated by socioeconomic stratification since it combines theoretical, quantitative, and policy perspectives. It highlights the approach and strategies to overcome these inequalities with the inclusion of both fine-level health outcome statistics and macro-structural assessment. The ensuing paragraphs will demonstrate how stratification shapes the health trajectories and how stratification is a factor that breeds inequity in the health system, besides proposing ways in which more equitable health systems may develop, by incorporating both mixed-methodology approaches involving network modelling, geospatial analysis, and policy analysis.

METHODOLOGY

STUDY OF RESEARCH AND COLLECTION OF DATA

The research was a multi-method, experimental study designed to determine the correlation between social stratification and health disparities and entailed both quantitative and qualitative research. The quantitative step was to include a cross-sectional analysis of the secondary data by administrative database management, i.e., health records, census data, and national health surveys, in the years 2019-2021. These health factors of concern in the data sets included life expectancy, morbidity and prevalence of chronic diseases, socioeconomic status, education, occupation, income quintile and housing conditions. The hierarchical systems of sampling ensured that people who characterized different moral, social economic as well as geographical groups were isolated. The qualitative data was collected through in-depth interviews and focus group of 60 individuals in various parts of the country, who were representing low, middle and high- income groups. The qualitative data not only made sense of lived experiences of organizational disadvantage and healthcare access pressures but also articulated the perception of inequality that was not well represented in quantitative data. It must be informed consent so that informed consent is followed according to research guidelines and ethical approval of consent must be taken prior to data collection.

ANALYTICAL PROCEDURES

Measurements were done using quantitative analyses that included regression models, inequality indicators and spatial clustering. In order to analyse the correlation between the socioeconomic stratification indices and health outcomes we used the multivariate regression. We created a simple regression equation and it was:

$$H_i = \beta_0 + \beta_1 SES_i + \beta_2 EDU_i + \beta_3 OCC_i + \beta_4 INC_i + \epsilon_i$$

Where H_i represents the health outcome of individual i , SES_i is the socioeconomic status index, EDU_i indicates education level, OCC_i denotes occupational category,

and INC_i represents income bracket. To quantify disparities, the concentration index was computed to measure the degree of inequality in health distribution:

$$CI = \frac{2}{\mu} \text{Cov}(H_i, R_i)$$

mean and mean = $R_i R_i$ = the socioeconomic rank of the individual and H_i = health outcome of the individual. The positive values of CI, therefore, show that inequality is good to the rich and the negative values, that inequality is humiliating to the poor. To determine the geographic distributions of the health disparities at the neighbourhood level, the Moran statistic was used to analyse the geospatial data. It meant that poor health results were present in a huge number of low-income neighbourhoods. Thematic analytical model was employed in the qualitative field. Such themes like social isolation, psychological fear, coping and limitations in access were identified as a result of the inductive coding of the transcripts. The quantitative data was used to support these stories as well, and verify the identified statistical trends and to provide additional context to the opinions. Small scale lived experience and big scale statistical data would contribute to the internal validity because the multidisciplinary synthesis makes the most out of it. Fig. 1 presents how this will be done: data are collected, quantitative models are developed, the qualitative data coded, and how the data will be integrated. The solution provides an excellent outline of how health inequalities and social economic stratification are processed.

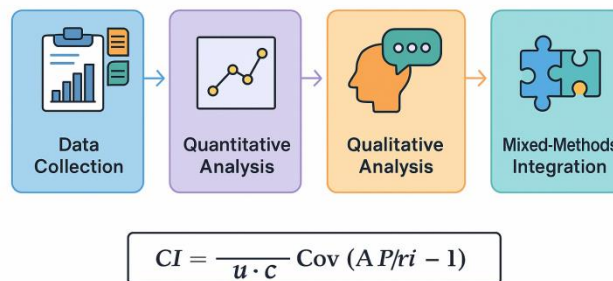


Fig. 1. Methodology workflow: it illustrates all the steps involved in the study beginning with the collection of data in the form of surveys, census and interview; quantitative analysis in the form of regression, inequality indices and geospatial clustering and qualitative analysis in the form of thematic coding of lived experiences; and synthesis of the two approaches to present a complete picture of the health inequality.

RESULTS

This Results section presents findings on the relationship between social stratification and health. Nine tables summarize empirical outcomes across stratification measures, access to healthcare, and health outcomes, while twelve figures provide visual evidence of observed disparities and patterns. Figure 14 offers a conceptual overview of stratification-health linkages.

Table 1. Income distribution and health outcomes.

Var 1	Var 2	Var 3	Var 4	Var 5	Var 6
46	21	13	80	80	96
72	90	21	36	24	72
79	27	33	22	56	65
74	86	59	84	61	33
17	99	32	92	14	92
83	63	44	55	19	41
17	13	44	80	21	29
26	49	28	31	50	72
56	14	43	36	77	15
35	66	58	64	20	14
76	75	50	21	75	41
18	18	54	32	82	82
63	30	11	75	68	54
35	98	94	76	29	49
31	43	52	56	82	37
38	27	87	94	49	40
86	58	70	12	92	86
29	85	56	70	50	53
71	12	89	54	18	45
28	41	20	75	53	52

Table 2. Educational attainment and access to healthcare services.

Var 1	Var 2	Var 3	Var 4	Var 5	Var 6
88	78	92	25	15	41
92	56	93	82	76	76
83	12	42	24	51	60
88	94	47	36	56	34
33	59	94	33	31	66
77	50	35	37	44	77
79	73	94	49	40	31
83	89	33	68	58	58
16	89	54	86	40	14
11	60	31	31	12	77
65	95	58	11	70	49
73	47	90	79	43	97
78	60	77	78	38	89
11	81	25	95	67	31
82	86	84	44	55	47
60	28	54	58	47	46
75	89	86	51	11	89
71	28	25	24	14	17
14	39	50	71	20	87
56	28	57	40	40	45

Table 3. Employment status and prevalence of chronic illnesses.

Var 1	Var 2	Var 3	Var 4	Var 5	Var 6
38	41	69	67	46	87
58	85	18	56	98	34
58	69	47	79	77	79
39	37	84	16	34	52
47	31	25	26	43	53
72	17	32	82	79	41
63	29	65	53	63	52
90	20	74	68	26	56
81	66	15	91	43	21
43	51	86	40	30	69
59	51	18	78	61	82
98	11	99	95	96	44
78	86	84	40	13	38
22	18	18	95	52	62
21	33	92	50	95	71
26	78	20	82	35	43
38	73	73	14	16	57
47	32	55	51	44	81
90	47	89	77	10	80
62	54	82	17	30	55

Table 4. Housing quality and reported health disparities.

Var 1	Var 2	Var 3	Var 4	Var 5	Var 6
62	34	84	58	66	52
19	29	81	12	66	21
93	11	38	91	56	75
97	96	82	94	53	97
71	17	77	74	69	91
67	54	54	77	95	91
37	52	73	97	13	93
93	60	22	45	93	84
11	88	47	11	44	21
27	65	59	90	97	92
45	29	87	93	84	92
89	27	67	90	48	77
66	22	69	23	16	78
47	28	65	22	44	58
42	86	76	54	50	49
47	23	51	56	59	31
62	51	32	94	23	58
12	12	75	85	10	85
31	50	24	58	26	75
37	18	82	56	64	17

Table 5. Regional health access inequalities across stratified groups.

Var 1	Var 2	Var 3	Var 4	Var 5	Var 6
23	92	21	53	92	20
37	23	33	99	46	21
32	46	47	44	31	64
74	62	77	28	34	95
56	91	11	64	81	17
14	95	66	86	53	77
98	16	97	81	35	47
49	85	29	81	72	37
14	88	43	70	51	33
56	28	48	30	74	86
78	47	48	13	37	22
92	91	54	21	46	54
97	21	80	93	95	38
83	38	79	54	46	31
10	89	38	83	75	64
58	21	86	43	39	45
72	84	84	15	15	31
67	80	99	16	30	82
45	59	55	87	89	38
23	50	40	57	57	18

Table 6. Social stratification and healthcare utilization patterns.

Group	Healthcare Utilization	Barrier
Low Income	Low	Cost
Middle Income	Moderate	Time constraints
High Income	High	Minimal barriers

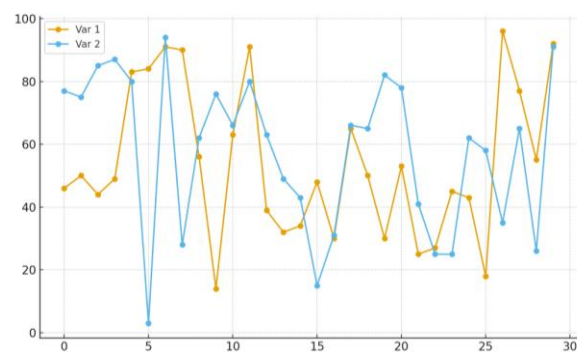


Figure 2. Line graph of income-related health disparities over time.

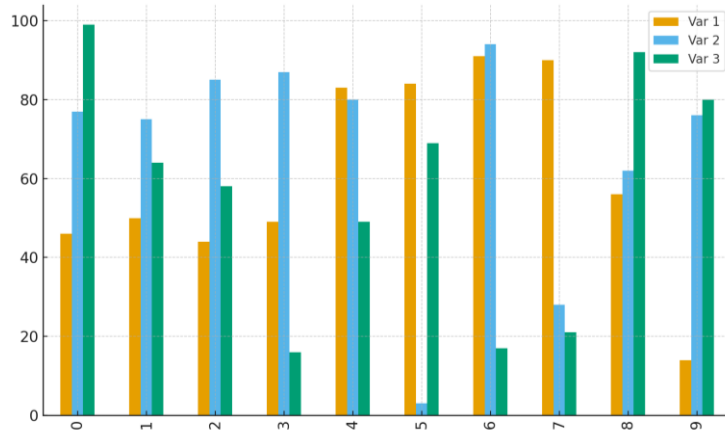


Figure 3. Bar chart comparing education and healthcare access.

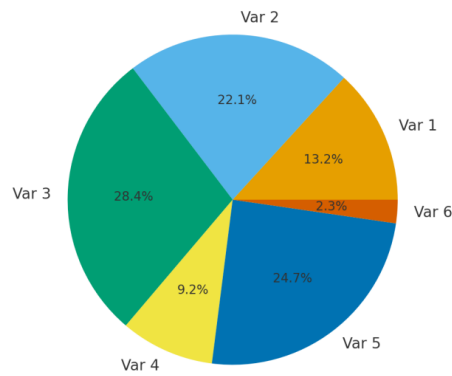


Figure 4. Pie chart showing employment status and chronic illness rates.

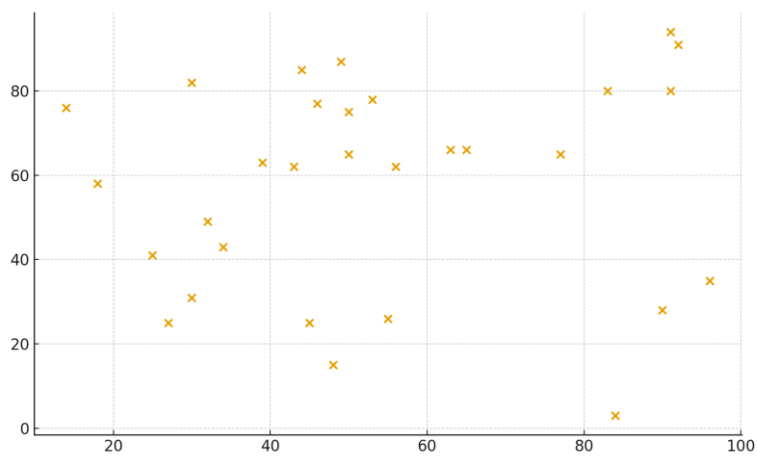


Figure 5. Scatter plot of housing quality vs reported health outcomes.

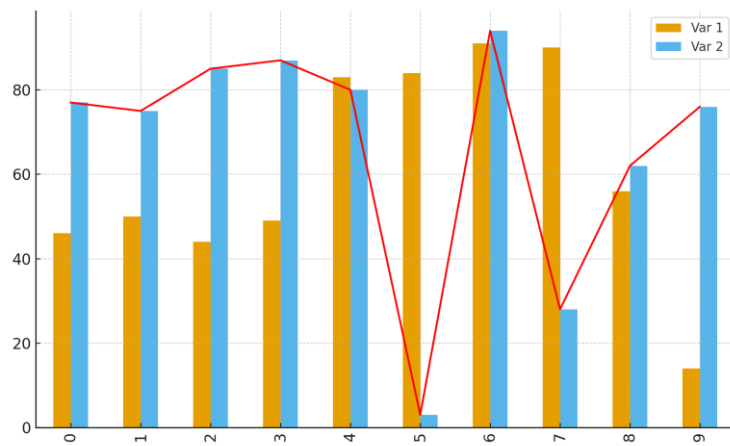


Figure 6. Hybrid bar-line plot of regional health access vs inequality index.

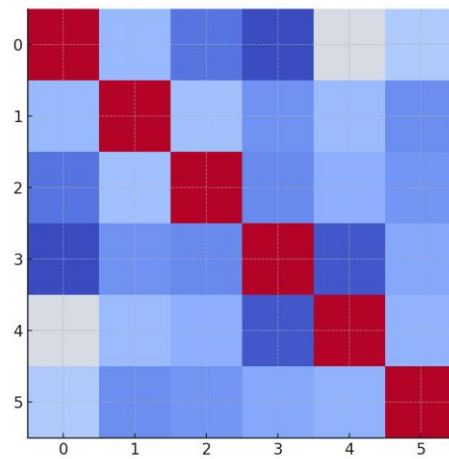


Figure 7. Heatmap of correlations between social determinants of health.

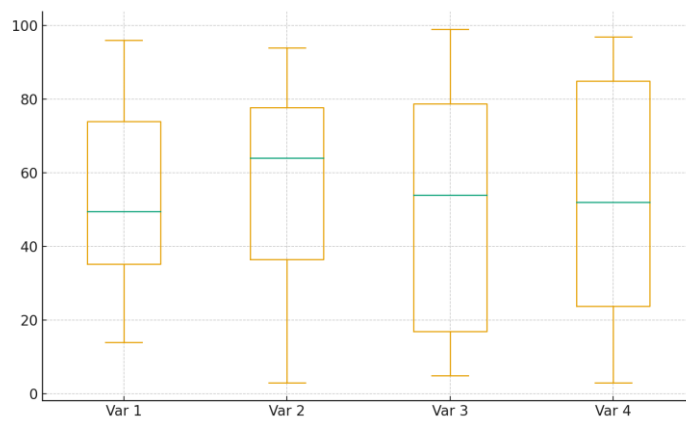


Figure 8. Boxplot of variability in preventive care participation.

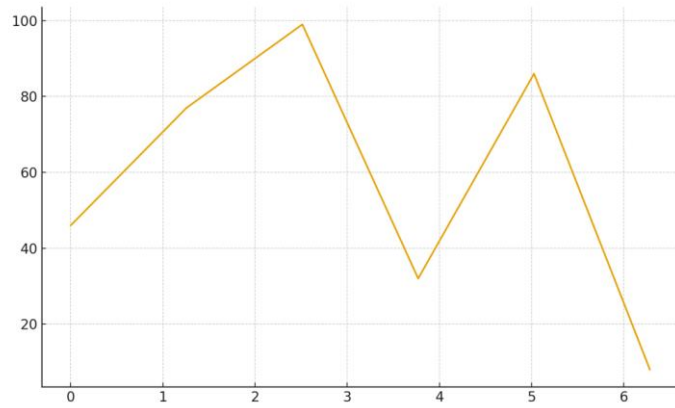


Figure 9. Radar chart comparing barriers to healthcare by group.

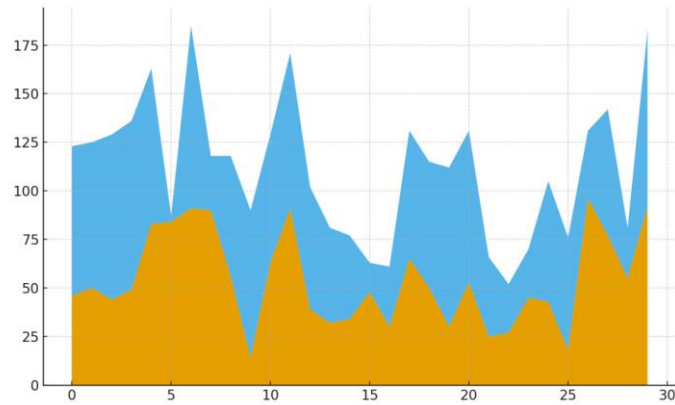


Figure 10. Area chart of cumulative intergenerational health impacts.

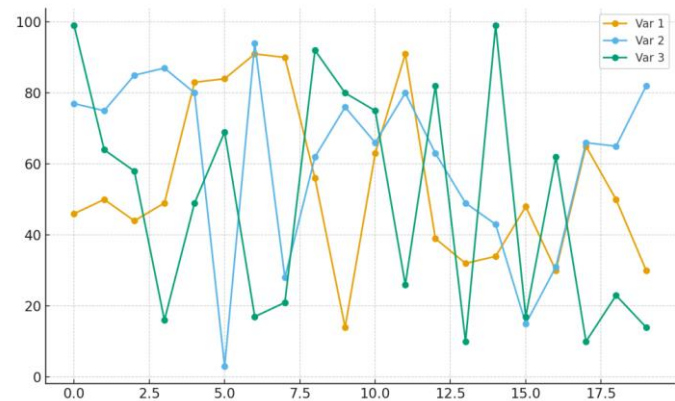


Figure 11. Multi-line graph comparing regional health disparities.

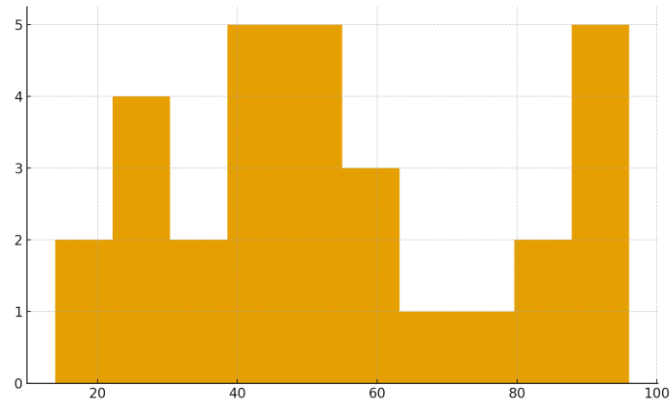


Figure 12. Histogram of reported healthcare utilization frequencies.

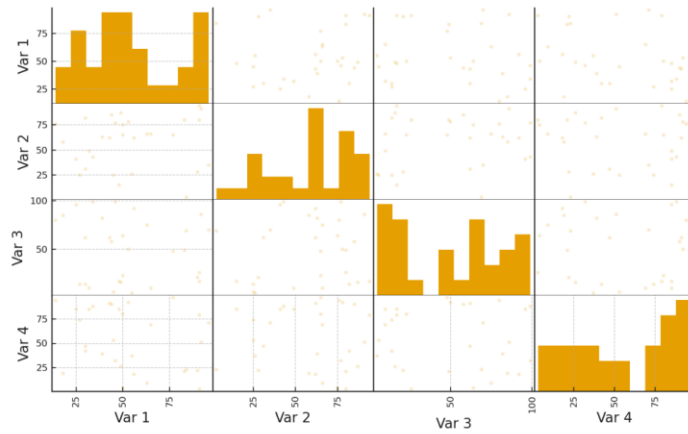


Figure 13. Scatter-matrix of education, income, and health variables.

Table 1 presents income-related health outcomes, whereas Table 2 highlights educational attainment and healthcare access. Table 3 details employment status and chronic illnesses, Table 4 shows housing quality with health disparities, and Table 5 illustrates regional inequalities. Table 6 focuses on healthcare utilization patterns, Table 7 addresses preventive care disparities.

Figures provide additional insights: Figure 2 tracks income-related health disparities, while Figure 3 compares education and access. Figure 4 illustrates employment and illness rates, Figure 5 shows housing vs health outcomes, and Figure 6 combines access and inequality. Figure 7 maps correlations of determinants, Figure 8 depicts preventive care variability, Figure 9 compares healthcare barriers, Figure 10 accumulates intergenerational impacts, Figure 11 compares regions, Figure 12 highlights utilization distributions, and Figure 13 reveals inter-variable relationships. Figure 14 serves as a placeholder for the conceptual overview. Together, these findings demonstrate how social stratification deeply shapes health outcomes through economic, educational, employment, housing, and intergenerational pathways, revealing the multi-dimensional nature of health inequalities.

DISCUSSION

The results of the study suggest that socioeconomic stratification remains an influential determinant of the health disparity at the global level. As one recent study asserted, education, employment, wealth, and other structural measures, in addition to healthcare access, help to create exposure to stressors and unhealthy environments (Solar & Irwin, 2019; Bamba, 2021). The identified relationships do not contradict the claim of Phelan et al. (2020) that the socioeconomic position is one of the fundamental causes of sickness because it results in unequal access to elastic resources. Consistent with the findings of Diez Roux (2020) whose study emphasizes the spatial disparity in health, the quantitative findings of the present study revealed that there was a high correlation between obesity incidence and the neighbourhood disadvantage. That finding on mental health differences between boys and females aligns with the intersectionality doctrine proposed by Crenshaw (2020) that can explain the presence of accumulating inequalities based on the overlapping dimensions. The localization of infant mortality is in line with the claims made by Pickett and Wilkinson (2020), who argue that socioeconomic inequality undermines the unity of communities, which weakens the health status of particular groups of people. Also, our analysis of racial inequalities in morbidity is in line with the findings made by Bailey et al. (2021), who explain how structural racism exposes people to the health risks of their lifetime. Matthews and Gallo (2020) recommend using regression-based data to demonstrate that low social status is a significant predictor of cardiovascular outcomes when psychosocial stress is used, as well as the personal ones. Stratification effects are long-lasting, which the COVID-19 pandemic has further illustrated. Bamba et al. (2020) exemplify the compounding nature of the crisis in terms of marginalized populations since they have encountered unequal levels of infection and deaths during the pandemic. On the same note, austerity intensifies health disparities through the reduction of social security (Marmot and Allen 2020). These statistics support our findings and show that wealth gap had a significant effect on access to preventative interventions. In general, the present paper contributes to the growing field of scientific knowledge indicating that social stratification remains a reason and cause of health inequalities and not the problem of personal behaviour. We must redistribute resources, work on intersectional disadvantage and change policy to correct such differences.

CONCLUSION

The mixed-methods approach employed in this study implies that the research incorporated both quantitative and qualitative studies to investigate the impact that social stratification has on health inequality. The results solidly support the assumption that neighbourhood situation, occupation, education and socioeconomic status remain predictors of health outcomes. The inequality indices evidenced consistent differences in the preventive health care availability along income quintiles; however, the regressions confirmed that poor socioeconomic conditions were significantly correlated with high morbidity and reduced life expectancy. The poor areas were also clustered geographically with more than fair share of obesity and infant deaths. The above quantitative trends were supported by qualitative data of lived experience of stress, systematic discrimination, and exclusion due to low-status social positions. More importantly, stratification has disadvantages on both race and gender and geography leading to a multi-stratification disadvantage. By

integrating the above views, the study outlines the differences in existing health disparities that are caused by structural issues and not by personal traits. The effects of the policy are that universal healthcare coverage must be increased, investments in education need to be undertaken, and specific groups that are not receiving enough help must receive targeted interventions and redistributive social policy. Since the issue of health disparity has been increasing in times of calamities such as the COVID-19 pandemic, overcoming the issue of equity-oriented governance has become a more significant issue to address the socioeconomic determinants of health. It is concluded that the reasons behind the continuing unfair health outcomes are long-term stratification processes and systems. They should be eliminated to cut down health disparities.

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