CAREGIVER CAPABILITIES AND SOCIO-ECONOMIC DISPARITIES IN CHILDREN'S HEALTH-RELATED QUALITY OF LIFE

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ABSTRACT

This study investigates the relationship between children's health-related quality of life and the associated contextual factors. Furthermore, this study analyses the socio-economic disparities that exist amongst children and what particular social determinants of health are influencing their health and wellbeing. Using an OLS regression as well as the Blinder-Oaxaca decomposition, the results show how children with a lower socio-economic status experience a lower HRQOL as opposed to those with a higher socio-economic status. Furthermore, this paper reports new research on the association of caregiver's capabilities and children's HRQOL which represents an important explanation for children's health-related quality of life. Caregivers' capabilities are a set of tools that enables parents to manage work, life and parenting effectively. The results provide evidence how important these capabilities are as it contributes to a better health related quality of life in their children. The findings show how a higher socio-economic status is associated with better caregiver capabilities. This is an important finding in the South African context, as exorbitant social inequalities exist, and hence, improving adult capabilities could potentially result in not only aiding to narrow the socio-economic disparity gap, but also improving the overall quality and health of children. This also leads to the premise of a bi-directional association whereby improving caregivers' socio-economic status may likely also improve their capabilities.

1. INTRODUCTION

The health-related quality of life (HRQOL) of an individual is a multi-dimensional measure depicting one's overall health status- from an overall functioning to a wellbeing dimension (Sitlinger & Zafar, 2018: 1). It exines the impact of health status on the quality of one's life. This differs to health as it not only assesses the social, mental and physical aspects of health but also incorporates the patient's expectations, beliefs and perceptions thereby subjectively measuring one's wellbeing (Steunenberg et al. 2019: 1221). South Africa is a country fraught with exacerbating social inequalities, poverty and improving the health outcomes of individuals is one of the key goals of the National Development Plan (NDP). Despite this acknowledgement, however, South Africa faces a two-tiered unequal health system where the majority of the population only have access to health care that is extremely under-resourced and under-funded causing poor health outcomes within the population. It is therefore essential to understand the pathways through which social determinants affect a person's health, how this further produces health inequities and how these can be prevented through effective policy interventions (Rebouças, Falcão & Barreto, 2022: 58).

This study aims to determine the factors associated with children's HRQOL, and specifically, to identify the factors associated with socio-economic disparities in children's HRQOL, with a particular emphasis on caregivers' adult capabilities which are important tools that enable people to manage parenting, life and work more effectively, thereby creating an overall higher standard of living for themselves and their children.

Of course, an utopian world would be one where no socio-economic disparities exist and everyone has the same chances to an equal education and health system, thereby not only improving one's standard of living but also creating growth and efficiencies in the market place (Reboucas et al. 2022: 58).This is why it is necessary to address such disparities as not only will improving adult capabilities allow for less socio-economic disparities to exist but also bi-directionally, whereby improving the caregiver's socio-economic status will allow for them to have higher capabilities. Analysing this magnitude and causes of the disparity allows for the design of the appropriate and effective policy implementation. After all, the country does face extreme socio-economic challenges, yet hidden behind every facet, is room for growth, improvement and an overall better society and economy.

This study makes further contributions to the literature by using more recent South African data which is taken from an extremely low-income area and hence, people are already at a socio-economic disadvantage. The dataset questions caregivers and children (aged 8-15 years) on their health, expenditures, external environment, aspirations and overall quality of life. Taken from a small rural town known as Mahikeng in the North-West province, the dataset provides a limitation to the study, when measuring disparities, as a majority of the population already face extreme poverty. Despite this, however, the results showed that disparities did indeed still exist within the communities. This study also incorporates the adults' capabilities index into the model, influencing children's HRQOL, which has not yet been done, thereby bridging a gap in literature (Centre on the Developing Child, 2016:16). By including the adults' capability index it will allow for a better understanding to analyse how caregivers' capabilities have the potential to influence children's HRQOL, the impact it has thereof as well as the magnitude of it. The methodology will be explained in more detail in the section to follow.

In this study, I pose the following research question of whether there are associations between children's health related quality of life and their contextual factors (that is factors relating to a child's external environment or the environment they have grown up in but is out of their control). As an extension of this question, two main sub-questions will be asked to add new research to the existing literature:

1.) What is the magnitude of socio-economic disparities in children's health-related quality of life?
2.) How do caregiver capabilities contribute to explaining socio-economic disparities in children's health-related quality of well-being?

The research report will proceed as follows: section 2 will provide a literature review on existing studies which guides the formulation of the above research questions. Section 3 and 4 will explain the data and methodology of how I got to my results. Section 5 and 6 will present the results and critically discuss them, and section 7 concludes.

2. LITERATURE REVIEW

In this section, the relevant international and South African literature will be reviewed to formulate the hypotheses surrounding children's health related quality of life and socio-economic disparities that have a causal influence on this. Further, the literature on adult capabilities and how they have the power to influence socio-economic disparities in children's health related quality of well-being will be reviewed.

2.1. HEALTH-RELATED QUALITY OF LIFE (HRQOL)

The term HRQOL can be defined as an individual's own perception of their daily life and wellbeing, including physical, social and emotional aspects of their life (Lacruz, Lacruz & Gracia-Pérez, 2020:3). It is an important multi-dimensional measure of health as many aspects of life exist that are not necessarily considered as "health" but indirectly impact one's health status. For example, income, quality and the environment someone lives in all contribute to an individual's health outcomes. It is, therefore, important to incorporate this as a measure as the wellbeing of an individual is accounted for. For example, two people may be diagnosed with the same clinical criteria, yet they may have different responses that affect their daily tasks and emotional well-being, thereby allowing for differences in their health outcomes (Guyad et al., 1993:622). Further, HRQOL is becoming increasingly important for guiding policy decisions as this measure of health allows for better, more targeted policy interventions, health expenditure and parent management decisions to be made that are more congruent with the individual.

The EQ-5D-Y variable and the EQ-VAS variables are used as measures for one's HRQOL (EuroQol Research Foundation, 2021:4). This is a standardised measure of the health status used around the world and developed by the EuroQol research group (EuroQol Research Foundation, 2021:5). The EQ-5D-Y variable, specifically, is validated to asking questions that are facilitated to children. These questions are based off five dimensions and including: (1) Mobility, (2) Looking after myself (3) Doing usual activities, (4) Having pain or discomfort and (5) Feeling worried, sad or unhappy (EuroQol Research Foundation, 2021:13). The responses to these five dimensions are then divided into three levels, one indicating "no problem" and three indicating a "lot of problems"/bad health state. The variable is then converted into an

index value that is derived by attaching weights to each of the three levels of the child's reported health status (EuroQol Research Foundation, 2021:17). Particular challenges using self-reported data from children include firstly socio-economic status whereby children form different wealth backgrounds may respond to health-related questions differently as their background may influence how they perceive their health status. Secondly, when children answer the questionnaire, they may be under the influence of elderly figures, thereby influencing their decisions and skewing the results. However, it is still a validated measure as it is tailored to all children between 8- 15 years of age, giving the study a consistency of results for children within this age group and from a lower socio-economic background.

On the other hand, the EQ-VAS variable is a quantitative self-reported rating of the individual's health status (EuroQol Research Foundation, 2021). It is a self-judgement, visual analogue or pain rating scale whereby an individual chooses between "the best health you can imagine" and "the worst health you can imagine" (EuroQol Research Foundation, 2021). Including both EQ-5D-Y and EQ-VAS as a measure for a child's health related quality of life is important as they both provide unique self-reported information that, when combined, offer a comprehensive assessment of a patient's health status. Further, including both HRQOL measures, may provide more insightful information on socio-economic disparities and the contributing factors that influence not only physiological health but also one's overall quality of life.

2.2. THE SOCIAL DETERMINANTS OF HEALTH

The social determinants of health (SDOH), broadly defined, means any environmental or contextual factors that affects one's health- for example, the conditions a person lives in, their healthcare access, neighbourhood environment and their economic stability (Rebouças, Falcão & Barreto, 2022: 56). These factors all have the potential to influence health disparities and outcomes, and in return, this inevitably influences a person's health-related quality of life. Access to healthcare and low-paying jobs, for example, can decrease the quality of life as not only do people not have enough money for quality care, but their health status will be jeopardized. Social determinants of health, therefore, can produce inequities in health.

A lower HRQOL is usually associated with lower levels of education attainment as well as a lower level of income or lower SES (Wu et al., 2010: 970). The SDOH can further link to one's

own genetics or behaviour and in return, influencing their HRQOL. For example, poor living conditions may bring out a genetic predisposition which influences their HRQOL (Rebouças et al, 2022: 58). Although not linked to the external environment, HRQOL is also influenced by age- with older people generally having a lower HRQOL- as well as gender differentials- with females reporting lower levels of HRQOL as opposed to males (Wu et al., 2010: 970). This may be due to cultural factors, for example, there are certain cultures where women are treated differently to men, are not allowed to work and take the sole role of caregiving. These cultural factors may lower the ones health- both physically and mentally. It is evident how there are many social, economic and cultural factors that all contribute to the HRQOL in both adults and children. For example, having a low income may affect one's health and education as they cannot afford good quality services, in return, this impacts their HRQOL as they may be more prone to diseases, have a low-paying job and not be able to live their life to their fullest potential.

One empirical study uses the EQ-5D-Y index, as in this research paper, to measure the relationship between HRQOL in children and their demographic, socio-economic and family environment (Houben- van Herten et al., 2015: 1). This was done using a stepwise multivariate and regression analyses whereby various determinants were incorporated into the model. Some of these determinants included, but not limited to: GP/ hospitalisation visits in the last year, number of acute health complaints, BMI of the child, parents smoking behaviour, parents' education level, household income, siblings in the households, household formation age, gender and ethnicity (Houben- van Herten et al., 2015: 2). The results from this statistical analysis showed that the number of healthcare visits were negatively associated with children's HRQOL - in other words, if children were less likely to be sick and visit the doctor then they had a higher HRQOL (Houben- van Herten et al., 2015: 2). This shows how health has a direct association with the quality of life you experience. Secondly, the results showed how socioeconomic position, parental education or family wealth also all influenced the child's HRQOL- the lower the parents education level, wealth and socio-economic position the worse was the child's HRQOL (Houben- van Herten et al., 2015: 1). Children's HRQOL was also worse for girls than it was for boys, and it decreased by age (Houben- van Herten et al., 2015: 10). In other words, the results showed that HRQOL declined the older a person gets.

Lastly, family formation and functioning tended to influence the child's HRQOL as single parent households often had children with lower HRQOL than a household with married parents. These results, therefore, prove how a child's demographic, socio-economic and family/ environment all have the potential to influence the child's HRQOL.

2.3. CAREGIVER CAPABILITIES AND CHILDREN'S HRQOL

Sen's capability approach uses an alternative way of measuring one's well-being and quality of life. Rather than using utility, people's 'capabilities and 'functioning's' are used as means of people being able to achieve the life they desire, have reason to value and live to their happiest/fullest potential (Frediani, 2010: 176). For example, capabilities involve having access to affordable, quality healthcare versus functioning's that include having actual physical and mental wellbeing or being educated to eat a balanced diet which directly influences health. This approach allows for a multi-dimensional measure of well-being that rather assess people's capabilities, choices and freedoms as opposed to their wealth status. Functioning's are what people need as it is various aspects that a person values or have reason to value doing or being, thereby increasing their overall quality of life (Frediani, 2010: 176).

Capabilities and specifically adult capabilities is a set of tools that an adult needs in order to achieve a fulfilled life- such as: to focus on important tasks, plan ahead, set and achieve goals and deal with the challenges or changes of life etc (Centre on the Developing Child, 2016: 3). These capabilities are built over a lifetime and are essential for adults to have as it allows for the "bridge to self-sufficiency" to be developed. This means that capabilities provide the tools to execute important functions, enable adults to get out of poverty and optimize their overall wellbeing, family stability, career and education (Centre on the Developing Child, 2016: 5). It is by this that one would assume that adults who have more capabilities, tend to have an overall better quality of life, are more financially stable and have stable functioning family environment.

One of the assumptions underlying caregiver capabilities is that adults or caregivers who have higher capabilities will have a higher socio-economic status, and in return, children with a higher health-related quality of life. This then leads to the premise that there are positive associations between caregivers' socio-economic status (SES) and children's health (Poulain, et al., 2019: 1). That is, studies find how children with a lower socio-economic status report

having worse health conditions, more behavioural problems and an overall lower quality of life as opposed to children with a higher SES (Poulain, et al., 2019: 8). This relationship, however, could likely be bi-directional as a higher SES could lead to better capabilities. Both adult capabilities and one's SES, therefore, work in conjunction in improving the HRQOL of an individual as adult capabilities directly and indirectly influence the SES of an individual which, in return, will influence the HRQOL of their child. But how exactly do social inequalities associate with health inequalities? There are a variety of individual and contextual factors that play an important role when answering this question. Psychological resources, behavioural resources and social resources play a huge part in determining the disparities of ones SES and in return, their HRQOL (Zhang, et al., 2019: 2). This study will specifically focus on the behavioural and social resources that cause disparities amongst children's HRQOL, however, all three need to be understood to lay a foundation of the matter in question.

On the psychological side, for example, SES disparities may influence one's beliefs, self-efficacy and perceived autonomy, which in return affects their health status (Zhang, et al., 2019: 2). Having hope and being more optimistic, according to studies, is associated with better health conditions- both for caregivers and their children (Zhang, et al., 2019: 2).

On the other hand, social resources influence disparities in health. This refers to social bonds and social cohesion within a community that acts as a support mechanism and effecting the inequalities of health (Zhang, et al., 2019: 2). Lastly, behavioural resources contribute to disparities in one's HRQOL (Zhang, et al., 2019: 2). This is because people who have a lower SES, have lower income levels and may live in a worse neighbourhood environment, thereby decreasing their chances to access of critical resources for health. For example, they may not be able to afford health services, may not be educated on healthy decisions and eat less nutritious foods which will affect their overall HRQOL.

In line with the above associations, adult capabilities play a fundamental role when it comes to health disparities as well as one's SES (Centre on the Developing Child, 2016: 4). This is because core capabilities that adults successfully develop will manifest in their children by the way they are brought up, the positive aspirations they have for their children and their overall health and education status (Centre on the Developing Child, 2016: 8). For example, parents who have well-developed capabilities should be more effective parents as they are more prepared, have the necessary tools to deal with challenges and in return, be able to pass on

their capabilities to their children through action. Empirical evidence published in the "Journal of Pediatric Psychology" showed that positive parenting practices, through better capabilities, are linked to better HRQOL in children (Kim et al. 2017:2). In specific, the article shoed how providing emotional support and consistent discipline improved the HRQOL in their children.

Another study showed how parents who went on educational programs, whereby they learnt better capabilities and parenting skills, were able to improve the HRQOL in their children as well as assist in improving the quality of life for parents who had ADHD children (Kousha & Karodi, 2019: 2). In return, the results showed how parents who underwent these educational programs, were able to manage their children more effectively and pass on the necessary skills, thereby improving their overall HRQOL. Another journal proved how parenting styles have a significant role in predicting the quality of life and mental health in their children (Bolghan-Abadi et al. 2011: 1).

A strong development in early childhood is essential for better development later on in life and a more prosperous future - both in terms of their health and wealth. Children, therefore, need to live in an environment that begins with their family as a strong family functioning lays a solid foundation for a child and contributes to a higher HRQOL. Adult capabilities and the development of adults should, therefore, be a key area of focus for changing children's HRQOL outcomes (Centre on the Developing Child, 2016: 8). Although limited, if not any, empirical evidence on the importance of caregiver's capabilities, this research will provide new insight into the association between improved caregiver's capabilities and children's HRQOL.

2.4. THE SDOH: IMPACT OF CAREGIVERS ON CHILDREN'S HEALTH

But how exactly do these social determinants of health impact children's health specifically? And why do caregivers of children play such a critical role in determining their child's health status? As mentioned previously, a big determinant is the socio-economic status of caregiver's which plays a critical role in determining their child's health (Rebouças, Falcão & Barreto, 2022: 57). These can be referred to as 'structural factors' and are due to the unfair distribution and power of resources causing inequalities in health and wellbeing. In hindsight, this distribution of resources determines the circumstances and environment in which they live and in return, their overall health status (Rebouças, Falcão & Barreto, 2022: 58). These health outcomes are directly influenced by biological conditions that the child or caregiver has no

choice in, such as their gender, social class or race and are further influenced by cultural, social and macro-economic policies (Rebouças, Falcão & Barreto, 2022: 58). The unfavourable conditions may impact schooling, the type of job one has and their overall income, thereby jeopardizing their child's health. This is because the caregivers may not be able to afford quality care, have limited health literacy and they may have limited resources or knowledge for nutritious foods which impacts the child's overall health. For example, stunting, wasting and underweight are all conditions that lead to impaired growth and development of children as a result of poor nutrition (Bastagli, 2016: 136). Caregiver's education status will also impact the type of job they get and, in return, the type of schooling their child will receive (Rebouças, Falcão & Barreto, 2022: 57). Children who have limited access to quality education may experience delays in cognitive development which affects their future prosperities and their overall health status.

Material circumstances and/or determinants such as inadequate housing also influence the child's health (Rebouças, Falcão & Barreto, 2022: 58). For example, an overcrowded household or a poor living environment that is unhygienic, close to a pollution site and no clean water, all contributes to the communicable diseases of children (Rebouças, Falcão & Barreto, 2022: 58). The socio-economic status of the household further depicts whether the caregiver is able to resolve this by purchasing fresh food, hygiene products or medicine for their sick children. Often people with a lower socio-economic status will not be able to afford such, thereby compromising their children's health as well as lowering their overall health related quality of well-being.

Non-material factors, including characteristics of caregivers, is another important factor that depicts the health and well-being of their children (Rebouças, Falcão & Barreto, 2022: 58). This refers to, for example, the caregiver's capabilities, their mental health state or just their day-to-day actions and habits. Depressive symptoms in caregivers can easily be passed down to their children through negative feelings/words, neglect of the child and a sense of undervaluation for their child (Rebouças, Falcão & Barreto, 2022: 58). There is evidence that depressive and anxious decisions in mothers are associated with less childcare and late decisions to seek healthcare for their children (Rebouças, Falcão & Barreto, 2022: 58). Further, caregivers' capabilities and knowledge set are easily passed onto their children so if parents

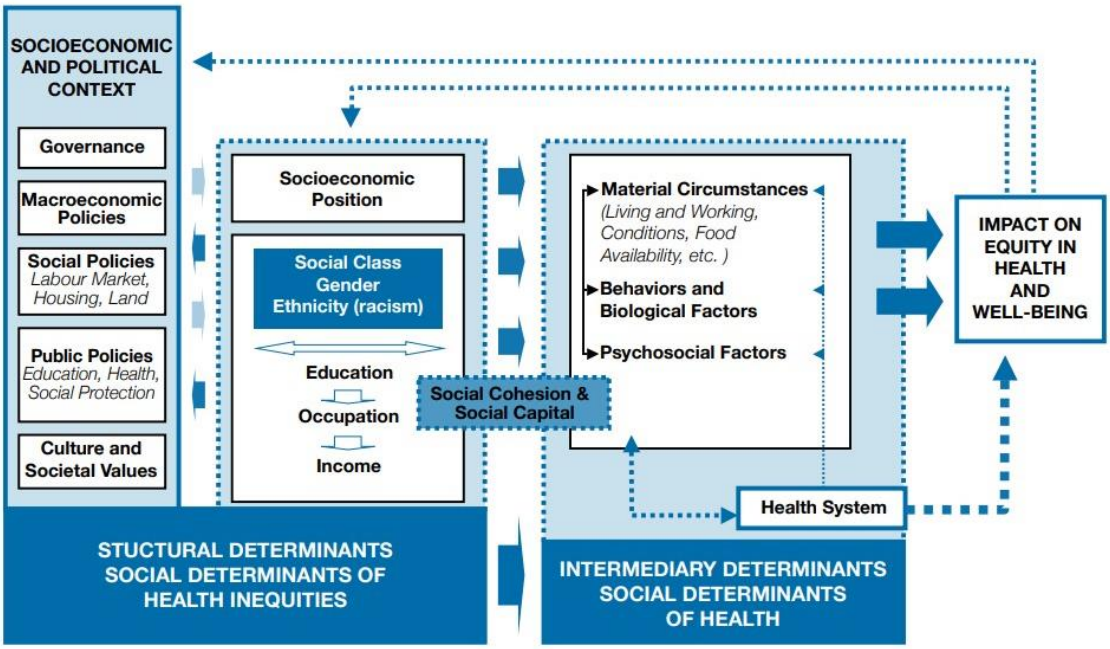
are smoking and making poor decisions it is more likely that their children will initially imitate such behaviours.

Communities, as part of one's external environment, also play an important role in determining the child's health. This is because the relationship the caregivers have with their community and the social cohesion formed is essential for support mechanisms as well as a healthy and positive environment that the child grows up in (Rebouças, Falcão & Barreto, 2022: 58). Solidarity can provide caregiver's support, companionship, good advice and lessen the chance of neglect for a child- hence, the child will be more likely to have a better health status if their parents have a stronger social cohesion within the community (Rebouças, Falcão & Barreto, 2022: 58).

2.5. CONCEPTUAL FRAMEWORK

The below diagram, taken from the World Health Organization, shows a conceptual framework of how one's external environment as well as their socio-economic position influences their HRQOL (WHO, 2010: 6). This diagram is important as it aids in explaining the first research question of what the possible associations of children's HRQOL and their contextual factors are. The diagram gives a visual contextual of how one's external environment and socio-economic position influences their HRQOL. For example, contextual factors such as income, gender and education (from the framework) were used as independent variables in my regression models motivating their potential association with children's HRQOL. On the left-hand side of the diagram, it displays various economic, political and social mechanisms, depicting one's socio-economic position and in return, contributing to education, income (and so forth). These different socio-economic positions all contribute to the disparities in one's health and wellbeing- causing health inequalities- as they have both direct and indirect effects on one's health (WHO, 2010: 6). Furthermore, the diagram differentiates between "structural determinants" and "Intermediary determinants" that impact the equity in health (WHO, 2010: 6). Both these determinants have causal influences on each other that contribute to the overall HRQOL of an individual.

Figure 1: Conceptual Framework Explaining the Link Between Contextual Factors and HRQOL



From above, it is evident how understanding the pathways and the social determinants of health is critical for identifying how health inequalities can be prevented and how they are produced (Rebouças, Falcão & Barreto, 2022: 58). The social determinants of health play a large role in influencing a child's health related quality of life as it incorporates a large spectrum of factors- from their parent's socio-economic status, the community or environment they live in and to the household itself, such as the family functioning. All these determinants to some degree influence HRQOL and hence, by understanding their nature, important policy decisions can be made. These can specifically be targeted or structured differently around the most socio-economically vulnerable people in order to minimize negative health outcomes in children.

3. DATA

In this section I will describe the dataset that I used to form my methodology and answer the various research questions and objectives of the paper. This was a specifically small sample size with only 293 observations, however, the results still allowed for a feasible statistical study.

To answer the research questions an adequate dataset that describes the socio-economic disparities in children's health related quality of life is needed. A variety of variables is needed to test both child-related factors as well as contextual factors that may contribute to different socio-economic positions within a family and in return, help explain the outcomes of children's health related quality of life. The data that I will be using is from a recent (2022) study or survey conducted in Mahikeng Local Municipality in the North West province of South Africa.

The municipality, which borders Botswana, has extreme unemployment and poverty levels with an estimated population of 314,394 people of which 97.1% are Black African (Statistics South Africa, 2016). The employment rate in this district is estimated to be 31.8% compared to 40.77% nationally (Statistics South Africa, 2023). Within this population, the majority of people live below the poverty line and only 38.4% of adults have received secondary education (Statistics South Africa, 2016). The survey contains 295 carer-child dyads and is separated into various sections where different questions were asked regarding the household, parents/caregiver and lastly, the children themselves.

In order to limit bias of the survey, quantitative data was collected amongst nine different Mahikeng district communities and their respective households using snowball sampling. Households with an adult primary caregiver (18 years or older) of an index child were eligible to participate in the study and received a R200 incentive for participating. The sections I will be focusing on in the survey will include household and caregiver contextual factors (section 1), household assets (section 2), adult capabilities (section 5) and the EQ-5D-Y proxy for children between 8-15 years of age (section 1 in the children's section). The EQ-5D-Y and EQ-VAS variable is used a proxy for children between the ages of 5-18 HRQOL.

This data is both useful and relevant to my research questions as it includes the EQ-5D-Y and EQ-VAS variables as a measure for HRQOL, thereby incorporating a multidimensional approach to health when analysing socioeconomic disparities. It also includes 27 questions

that assess adult capabilities, thereby allowing for a capability index to be included in the study that further deepens and enhances research yet to be done. This particular dataset has also not yet been used to analyse such research questions on a micro household level, focusing on a poor community where many people lack access to quality health, education and are already in a poor socio-economic environment. This will further aid in my research as households that face extreme poverty and lack education may not always allocate resources efficiently, have their children's best interest or have the necessary capabilities themselves to perform everyday tasks and achieve their goals. These factors will all contribute to the health-related quality of life outcome and in return, have the power to influence policy choice.

4. METHODOLOGY

To estimate the relationship between my key variables of interest, namely, -EQ-5D-Y, EQ-VAS and the adult capabilities variable - econometric analyses will be used. The research question firstly questions whether there are associations between children's HRQOL and their contextual factors, then following this, if there are socio-economic disparities that exist in children's HRQOL. Once an analysis of disparities has been done, a decomposition allows for an examination of what factors is exactly contributing to the socio-economic disparities in children health related quality of wellbeing.

To answer the first research, question an ordinary least squares (OLS) regression will be run with the EQ-5D-Y and the EQ-VAS as the dependent variable. In this study, I will be using the EQ-5D-Y variable as well as the EQ-VAS variable as a measure or proxy for children's HRQOL. The EQ-5D-Y and EQ-VAS scales have been determined as valid, feasible and reliable variables in the South African population and between children aged 8 to 16 years old (Scott et al., 2019). By using these two variables, it will allow for a more comprehensive as well as two different self-reported understanding of the individual children's health status. Children's HRQOL (using the EQ-5D-Y variable) was answered in the survey by children 5-18 years of age and if the child was below 8 years of age, the same questions were asked to the primary caregiver as a proxy for EQ-5D-Y. The variable consisted of five questions where different boxes were ticked according to different categories regarding their level of health, namely: (1) "Mobility (walking about)", (2) "Looking after myself", (3) "Usual activities" for example going

to school, hobbies or sports, (4) “Having pain or discomfort” and lastly (5) “Feeling worried, sad or unhappy”. The responses from this variable, were used to generate a health profile and then converted into a single summary index value using a scoring algorithm. This index value is a quantitative measure of the patient's health status.

On the other hand, the EQ-VAS variable was a self-reported rating of an individual’s overall health, reported on that specific day the respondent was questioned. Respondents rated their overall health state on a visual analog scale with ‘0’ being the worst imaginable health state and ‘100’ being the best imaginable health state (EuroQol Research Foundation, 2021). This variable is validated and ranges from 0-100.

To test the first research question, the following OLS regression models will be estimated to establish the relationship, and possible associations, between children’s health related quality of life and the contributing factors that may influence this. The construction of these models was informed by the relevant literature of associations between children’s HRQOL and their contextual factors.

$$(1) \quad Y = \beta_0 + \Sigma_{j=1..p} \beta_j X_j + \varepsilon$$

where Y represents the outcome-EQ-5D-Y and EQ-VAS- children’s heath related quality of life, β_0 represents the intercept. The rest of the equation represents adult capabilities and the wealth index as well as a vector of contextual/family characteristics that contribute to the child’s health related quality of life. More specifically, this includes variables that could potentially have had an influence on children’s health related quality of life, being: (1) adult capabilities index, (2) wealth index, (3) household size, (4) household dependency ratio, (5) household residence, (6) household head identity, (7) household head sex, (8) family functioning changeability index, (9), family functioning attachment index, (10) sex of the child, (11) health expenditure on the index child, (12) whether the child received food at school or not, (13) access to the child support grant, (14) sex of the caregiver, (15) education level of the caregiver and lastly (16) the caregivers marital status. ϵ represents the error term which includes unobserved factors that may affect the dependent variable and are not included in the model. By review of the literature, these independent variables are described more precisely, as well as the way they were constructed in Table 1 shown below.

From the above equation and to answer the research question of how children's HRQOL is associated with socio-economic disparities, a variable named "hhold_poor" was constructed as one of the key grouping variables. This variable was constructed from the wealth quintile variable, with children in households in the bottom 40% of the wealth distribution in the sample (quintiles 1-2) being compared with children in households in the top 40% of the wealth distribution in the sample (quintiles 4-5). Multiple Correspondence Analysis (MCA) was used to construct this household wealth index, drawing on questionnaire items reflecting energy sources used for lighting, heating and cooking; the main source of drinking water; the main type of toilet facility; and ownership of twelve different assets, land or property, and livestock. An OLS regression was then run (as in equation 1 and 2)

Table 1: Explanatory Variables Construction

VARIABLE NAME	VARIABLE LABEL	CONSTRUCTION
Adult capabilities index	ac_index	MCA was used to construct the capabilities index where caregivers were asked the following questions, with responses ranging from able to unable. (1) "Being able to do physical work: physical health, energy" (2) "Being able to space births: family planning availability, FP practice" (3) "Employment and job opportunities" (4) "Peace of mind: mental health, sleep lost, relax time" (5) "Control over personal matters: control over daily activities, permission to go to funerals, permission to go to clinic" (6) "Free from oppression: freedom of expression, lack of oppression" (7) "Knowledge and education: read, write" (8) "Control over money: access household money, control over minor expenditure, control over major expenditure" (9) "Living in a decent house: toilet, water, house tenure, fear of house eviction, house adequate, house adequate in 6 months" (10) "Children's education: all children will reach desired level of education" (11) "Family care: take care of children and husband/wife and other family members" (12) "Family and home environment" (13) "Access services: easy/difficult to reach health centre, under 5 clinic, school, market, water source, church" (14) "Access services: electricity, water source, other municipal services" (15) "Safety and security" (16) "Social exclusion and discrimination: not allowed in groups, gender discrimination, poverty discrimination" (17) "Being respected: respect, admiration"(18) "Feeling proud of community" (19) "Safety net: help asked to you, you asked for help"

		(20) “Business opportunities: access to business opportunities” (21) “Coping with shocks: able to care for the family if crisis”(22) “Mobility and transport” (23) “Being able to enjoy an environment that is safe, hygienic and free from pollution” (24) “ Access to open, public, shared spaces for communal uses” (25) “Freedom to practice religion and beliefs” (26) “Satisfaction: satisfied with life overall” (27) “Happiness: taking all things together, how happy are you?”
Wealth index	wealth_index	MCA was used to construct the scale using the questionnaire items reflecting energy sources used for lighting, heating and cooking; the main source of drinking water; the main type of toilet facility; and ownership of twelve different assets, land or property, and livestock.
Household size	hhold_size	Caregivers were asked what the total number of people living in their household was. This ranged from 2 to 15 people.
Household dependency ratio	hhold_depratio	The sum of the number of household members younger than 15 years or 65 years and older expressed as a ratio of the total number of adults in the household aged 15-64.
Household residence	hhold_residence	Caregivers were asked how long they have lived in their community (in years), ranging from 1 to 82 years.
Household identity	hhold_identity	Household members were asked “Is the main household head a different person than the main caregiver.” The variable was recoded into a numeric variable (1) “yes” and (0) “no.”
Household sex	hhead_sex	The household head were asked their gender. The variable was then recoded into (1) “female” =1 and (2) “male”=0.
Family functioning changeability	FACI8_Changeability	MCA was used to construct the changeability index based on caregivers responses to the degree that they agreed with the following: (9) “In our (my) family it is easy for everyone to express his/her opinion” (10) “Each family member has input in major family decisions” (11) “Family members discuss problems and feel good about the solutions” (12) “Family members consult other family members on their decisions” (13) “Discipline is fair in our family” (14) “Our (my) family tries new ways of dealing with problems” (15) “In our (my) family, everyone shares responsibilities” (16) “When problems arise, we compromise.” The eight response options ranged from “Never” to “Always”.
Family functioning attachment	FACI8_Attachment	MCA was used to construct the attachment scale based on caregivers’ responses to the degree that they agreed with the following statements: (1)”It is

		easier to discuss problems with people outside the family than with other family members" (2)" In our family everyone goes his/her own way" (3) "We have difficulty thinking of things to do as a family" (4) "Family members feel closer to people outside the family than to other family members" (5) "It is difficult to get a rule changed in my family" (6) "Family members avoid each other at home"(7) "Family members are afraid to say what is on their minds" (8) "Family members pair up rather than do things as a total family". The eight response options ranged from "Never" to "Always".
Female child	child_female	This variable asks whether the child's sex is female or male. The variable was coded from a string variable to a numerical variable, where 1 indicated to "yes" and zero "no".
Expenditure on child's healthcare	child_hcare	Total expenditure on the relevant child's healthcare in the past three months. The specific amount of money spent on healthcare was employed and where this was not the case, the mid-point value of the relevant expenditure category was used to proxy expenditure on the child's healthcare. The variable was then coded into a numerical variable where 1 indicated "yes", meaning the caregiver did spend money on their child's health and 0 indicated "no", implying no money was spent on the child.
School nutrition	School_nutrition	The main caregiver was asked whether their index child receives free food at school. The variable was then recoded into a binary variable: (1) "yes" and (0) "no".
Child support grant	grant_csg	Household members were asked if they received a child support grant. The variable was recoded into (1) "yes", (0) "no".
Caregiver's sex	caregiver_sex	Caregivers were asked whether they were male or female. The variable was coded from a string to a numerical variable, whereby 1 indicated "female" and 0 "male."
Caregiver's education level	Caregiver_education	Caregivers were asked their highest level of education completed in eight separate categories ranging from illiterate to university/college/technician completed. The variable recoded into a binary variable, where 0 was assigned to those caregiver's who had less than a tertiary education and 1 for those who had a tertiary education or higher.
Caregiver's marital status	Caregiver_Marital	Caregivers were asked their marital status. The variable was in 8 categories, ranging from "never married", "cohabiting" to "widowed or divorced." It was then recoded into a binary variable with categories: (0) "not married", (1) "married."

Household socio-economic status (see details in the text above)	hhold_poor	This variable was constructed using the wealth quantile variable. It was then recoded into a binary variable where (0) indicated non-poor households and (1) indicated poor households.

(2)

$$\overline{Y}_A - \overline{Y}_B = \overline{F(X_A\beta_A)} - \overline{F(X_B\beta_B)}$$
$$= \underbrace{\left\{\overline{F(X_A\beta_A)} - \overline{F(X_B\beta_A)}\right\}}_{E} + \underbrace{\left\{\overline{F(X_B\beta_A)} - \overline{F(X_B\beta_B)}\right\}}_{C}$$

Secondly, to determine what factors contribute to explaining the magnitude of socio-economic disparities in children's health related quality of life, the Blinder-Oaxaca Decomposition method was used. The purpose of decomposition was to examine what factors, particularly the caregiver's capabilities, contributed to the socio-economic disparities in children's HRQOL. More specifically, a two-way approach as opposed to a three-way approach to Stata's Oaxaca decomposition was used. The reason for this choice was due to the analysis including a non-linear response model that incorporate recent contributions used to overcome various challenges dealing with identification and path dependence (Powers et al., 2011: 556). Furthermore, the two-way approach was more suitable to a smaller, simpler dataset that allowed for significant relationships to be interpreted (Powers et al, 2022: 556).

This *mvdcmp* Stata routine was used in order to decompose the observed differences in children's health related quality of life across two separate groups- being poor vs non-poor households (Rahimi and Nazari, 2021: 8). This method is particularly relevant for such study as it explains to what extent the mean predicted HRQOL between these two groups is explained by observable factors and what extent the differential characteristics are due to unobserved factors that are not included in the model (Rahimi and Nazari, 2021: 1). In return, this allows for a more intricate analysis of the particular factors contributing to socio-economic disparities amongst poor and non-poor households, thereby allowing for more targeted policy interventions. The equation that was used for this model is as follows:

Where $\overline{Y}_A - \overline{Y}_B$ represents the mean difference in Y between groups A (reference group) and B (comparison).

'E' indicates the endowment effects or observable characteristics- these effects aim to show the size of the disparity across the reference and the comparison group (Powers, 2011:558). 'C' indicates the outcome across both reference and comparison groups. In other words, it is the coefficient effect that explains the disparities by means of different regression coefficients, of the independent variables and across both groups (Powers, 2011:558). The coefficients aim to show how much each characteristic contributes to the outcome. For example, even if two groups have the same level of HRQOL, they may receive different returns on this, thereby contributing to the disparity across two groups. These factors explain the extent of children's health related quality of life in different socio-economic households (non-poor=0 vs poor households=1). In equation 2, I have chosen A as the reference group (non-poor households) and B as the comparison group (Poor households). Thus, E depicts a counterfactual comparison of the difference in outcomes from group A's perspective i.e. the expected difference if the poor households (B) were given the same qualities and attributes as non-poor households (A) (Powers, 2011: 558). On the other hand, C also depicts a counterfactual comparison, however it is the difference in outcomes from group A's perspective i.e. the expected difference if non-poor households (A) experienced poor households (B) behavioural responses to X (Powers, 2011: 558).

The next research question assesses caregivers' capabilities and how these influences socio-economic disparities in children's health related quality of well-being. This sub-question will be investigated by including the adult capabilities index in the above three regressions (i.e. the decomposition analysis and one OLS each for the two measures of HRQOL). The adult capabilities index was constructed based on the literature explaining how quality of life could merely not just be assessed using one's utility or desires but rather their "beings" and "doings" (capabilities) that people make use to value life and live it to their fullest potential (Greco, et. al, 2015: 69). The index incorporates six different spheres of wellbeing that are necessary to live life successfully, adapt to change and plan ahead. These capabilities include: "happiness, economic security, community relations, household wellbeing, inner wellbeing and physical strength" (Greco, et.al, 2015: 72). These dimensions incorporate a broader spectrum of what

quality of life means and how these aspects are essential to live a good life. This was the only literature that had constructed a capabilities index in a LMIC and hence, was extremely relevant for this study. However, the index from the literature was adapted by adding in missing dimensions that came up in the pictures/discussions, which also included a male group as well as having to remove direct references to violence and abuse for ethical reasons. This index was then constructed from the adult capabilities' questions in section five of the survey. In particular, caregivers were asked 27 questions, with responses ranging from able to unable (see table 1 for reference) MCA was then used to construct the adult capabilities index.

In the decomposition analysis a few of the independent variables were removed in order to limit multi-collinearity and ensure the model is better specified. The variables that were removed from the above equation included: the wealth index, healthcare expenditure, and access to the child support grant. These were removed as they had no statistical significant associated with the EQ-5D-Y and EQ-VAS variable, thereby alleviating concerns regarding multicollinearity and improving the overall significance of the model.

Lastly, the third research question asks whether the contribution of caregiver capabilities to socio-economic disparities in children's HRQOL differs by sex. To answer this, the Blinder-Oaxaca decomposition will be used again as it will allow for differences in sex to be accounted for and how/if socio-economic disparities in children's HRQOL differ amongst females and males. To test this question, equation (2) will be used, however the decomposition will be run separately for a boy sample (n=125) and for a girl sample (n= 112).

The independent variables that were incorporated in this model, and were decomposed by the household's poverty status, included: the adult capabilities index, contextual/household factors, child factors, family functioning characteristics and the caregivers background factors such as their education level and marital status. I chose these independent variables to incorporate as I believe that they all have a potential influence on the EQ-VAS and EQ-5D-Y variables and potentially have a significant relationship with children's health related quality of life. These variables incorporate contextual factors, parental factors as well as factors from the child itself that may all contribute to the level of HRQOL in children.

5. RESULTS

5.1. DESCRIPTIVE ANALYSIS

Table 2: Summary Statistics of the Dependent Variables

Variable	Obs	Mean	Std. dev.	Min	Max
EQ-5D-Y Mobility	293	1.400	0.528	1	5
EQ-5D-Y Selfcare	293	1.065	0.297	1	4
EQ-5D-Y Usual Activity	293	1.109	0.363	1	3
EQ-5D-Y Pain	293	1.280	0.500	1	4
EQ-5D-Y Anxiety	293	1.167	0.392	1	3
EQ-5D-Y	293	0.955	0.096	0.363	1
EQ-VAS	293	84.474	17.346	0	100

Table 3: Summary Statistics of Independent Variables

Variable	Obs	Mean	Std. dev.	Min	Max
Caregiver adult capability index	291	0.000	1.002	-4.024	0.752
Wealth Index	293	0.000	1.002	-2.312	1.288
Household Size	293	5.512	2.355	2	15
Household dependency ratio	291	0.486	0.176	0.143	1
Household residence	293	28.177	17.407	1	82
Household head identity	293	0.215	0.412	0	1
Household head sex	290	0.892	0.475	0	1
FACI8_Chagability	293	32.399	6.839	15	40
FACI8_Attachment	293	24.239	7.812	8	40
Female	293	0.481	0.501	0	1
Child healthcare expenditure	293	0.382	0.487	0	1
Access to school nutrition	289	0.913	0.282	0	1
Access to child support grant	292	0.842	0.365	0	1
Caregiver sex	292	0.756	0.372	0	1
Caregiver education	293	0.522	0.500	0	1
Caregiver marital	291	0.296	0.457	0	1

Note: The wealth index and the caregiver adult capability index are normalized.

The summary statistics of the dependent variables are presented in Table 2 above (for EQ-5D-Y and EQ-VAS). EQ-5D-Y has the distribution and characteristics of responses across all five dimensions. Table 3 shows the summary statistics of all the explanatory variables. This is important as it provides a foundational understanding of the data, which is essential for further analysis, decision- making, and policy formulation. The sample for which non-missing data was available on the outcome or dependent variable for both EQ-5D-Y and EQ-VAS was 293 observations.

5.2. OLS REGRESSION ANALYSIS

Model 1: Contextual factors and EQ-5D-Y (OLS regression)

EQ-5D-Y	Coefficient	Std. err.	t	P>t	[95% conf.	interval]
Caregiver adult capability index	0.016	0.006	2.540	0.012	0.004	0.03
Wealth index	-0.001	0.006	-0.090	0.927	-0.013	0.012
Household size	0.003	0.002	1.140	0.256	-0.002	0.008
Household dependency ratio	-0.006	0.032	-0.200	0.840	-0.069	0.056
Household residence	-0.001	0.000	-3.740	0.000	-0.002	-0.001
Household head identity	-0.026	0.020	-1.340	0.180	-0.064	0.012
Household head sex	0.006	0.022	0.270	0.786	-0.037	0.049
FACI8_Attachment	0.001	0.001	0.730	0.463	-0.001	0.002
FACI8_Changeability	0.003	0.001	2.590	0.010	0.001	0.005
Female	-0.003	0.011	-0.280	0.780	-0.025	0.019
Child healthcare expenditure	-0.020	0.012	-1.590	0.112	-0.044	0.005
Access to school nutrition (1=yes, 0=no)	0.022	0.021	1.060	0.290	-0.019	0.064
Access to child support grant (1=yes, 0=no)	-0.022	0.016	-1.330	0.185	-0.054	0.010
Caregiver sex	0.001	0.024	0.040	0.971	-0.047	0.049
Caregiver education status	-0.009	0.011	-0.760	0.446	-0.031	0.014
Caregiver marital status	-0.016	0.014	-1.130	0.259	-0.043	0.012
_cons	0.896	0.052	17.400	0.000	0.795	0.998
Number of Obs	279					
F(16, 262)	3.42					
Prob > F	0.0000					
R- squared	0.1729					

The first OLS regression presents EQ-5D-Y as the dependent variable, using different independent variables that are believed to be associated with a child's HRQOL.

In Table 1, the model showed that the only statistically significant factors were household residence ($p<0.005$) and the family functioning changeability index ($p<0.05$). These coefficients represent the change in EQ-5D-Y for a one-unit change in the corresponding independent variables, that is holding all the other variables constant. The family functioning index was positively related with EQ-5D-Y, thereby showing how a stronger family functioning is associated with higher health related quality of lives for their children. More precisely, for every one-unit change in the family functioning variable, it resulted in children's HRQOL increasing by 0.0027 units. On the other hand, the negative result of the household residence variable implied that for every one year more that the household had lived in the community, the child's HRQOL declined by 0.00127 units.

Model 2: Contextual factors and EQ-VAS (OLS regression)

EQVAS	Coefficient	Std. err.	t	P>t	[95% conf.	interval]
Caregiver adult capability index	4.225	1.161	3.640	0.000	1.938	6.511
Wealth index	-2.080	1.149	-1.810	0.071	-4.342	0.182
Household size	-0.414	0.454	-0.910	0.364	-1.308	0.481
Household dependency ratio	2.367	5.890	0.400	0.688	-9.232	13.965
Household residence	-0.061	0.063	-0.980	0.327	-0.185	0.062
Household head identity	-6.111	3.603	-1.700	0.091	-13.205	0.983
Household head sex	1.453	4.002	0.360	0.717	-6.427	9.332
FACI8_Attachment	-0.033	0.146	-0.230	0.819	-0.321	0.254
FACI8_Changeability	-0.0532	0.192	-0.270	0.788	-0.431	0.327
Female	-1.156	2.064	-0.560	0.576	-5.220	2.908
Child healthcare expenditure	4.274	2.294	1.860	0.064	-0.243	8.790
Access to school nutrition (1=yes, 0=no)	8.676	3.869	2.240	0.026	1.058	16.294
Access to child support grant (1=yes, 0=no)	-3.201	2.996	-1.070	0.286	-9.101	2.699
Caregiver sex	-1.255	4.501	-0.280	0.781	-10.117	7.607
Caregiver education status	-1.099	2.091	-0.530	0.600	-5.217	3.019
Caregiver marital status	-0.664	2.574	-0.260	0.797	-5.733	4.406
_cons	85.513	9.502	9.00	0.000	66.803	104.224
Number of Obs	279					
F(16, 262)	2.44					
Prob > F	0.0019					
R- squared	0.0019					

The same OLS regression with the same independent variables was run as above, however, EQ-VAS was used as the HRQOL measure. In this case, variables that were significant at the 5% level included: the adult capabilities index and school nutrition. This then implies that in model 2, an increase in the adults' capabilities index of one standard deviation was associated with an increase of 4.22 units in EQ-VAS. Further to this, children's HRQOL increased by 8.67 units when they received food at school.

5.3. DECOMPOSITION ANALYSIS

Model 3: Decomposition Analysis of Socio-Economic Disparities in Children's HRQOL (EQ5DY)

Decomposition Results	Number of obs = 237						
Reference group (A):hhold_poor==0	Mean = 0.9719						
Comparison group (B):hhold_poor==1	Mean = 0.9398						
EQ5DY	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]	Pct.
E	0.007	0.006	1.190	0.233	-0.004	0.019	21.710
C	0.026	0.014	1.830	0.068	-0.002	0.054	78.290
R	0.034	0.012	2.840	0.005	0.010	0.056	
Due to Difference in Characteristics (E)							
EQ5DY	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]	Pct.
Caregiver adult capability index	0.004	0.003	1.390	0.164	-0.002	0.009	11.860
Female	-0.000	0.001	-0.040	0.967	-0.002	0.002	-0.130
Access to school nutrition (1=yes, 0=no)	0.000	0.006	0.020	0.984	-0.012	0.011	0.370
Caregiver marital status (1=married, 0=not married)	-0.003	0.003	-0.830	0.408	-0.009	0.004	-8.500
Caregiver education status	-0.001	0.003	-0.280	0.776	-0.006	0.005	-2.320
Household Identity	-0.000	0.002	-0.310	0.758	-0.005	0.004	-2.040
Household head sex	0.001	0.001	1.160	0.244	-0.001	0.002	2.440
Household Size	0.001	0.002	0.530	0.598	-0.003	0.005	2.940
Houhold dependecy ratio	-0.001	0.000	-1.750	0.080	-0.001	0.000	-1.890
Household residence	0.000	0.000	0.860	0.392	-0.000	0.001	0.740
FACI8_Attachment	-0.000	0.001	-0.090	0.928	-0.002	0.002	-0.320
FACI8_Changeability	0.006	0.004	1.430	0.152	-0.002	0.015	18.590
Due to Difference in Coefficients (C)							
EQ5DY	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]	Pct.
Caregiver adult capability index	0.001	0.002	0.490	0.623	-0.002	0.004	2.320
Female	-0.005	0.010	-0.460	0.648	-0.025	0.016	-14.080
Access to school nutrition (1=yes, 0=no)	-0.012	0.064	-0.180	0.856	-0.138	0.114	-34.840
Caregiver marital status (1=married, 0=not married)	0.017	0.012	1.410	0.159	-0.007	0.041	51.190
Caregiver education status	0.012	0.012	0.970	0.330	-0.012	0.036	35.570
Household Identity	0.021	0.012	1.760	0.079	-0.002	0.045	63.590
Household head sex	-0.124	0.063	-1.960	0.050	-0.248	0.000	-370.570
Household Size	-0.025	0.025	-1.000	0.317	-0.073	0.024	-74.070
Houhold dependecy ratio	0.051	0.037	1.370	0.169	-0.022	0.123	150.770
Household residence	0.044	0.019	2.230	0.026	0.005	0.082	130.000
FACI8_Attachment	-0.002	0.038	-0.060	0.951	-0.076	0.072	-6.850
FACI8_Changeability	0.069	0.068	1.010	0.311	-0.064	0.202	205.950
_cons	-0.020	0.118	-0.170	0.864	-0.253	0.212	-60.700

Models 3 and 4 show the results for the decomposition analysis that aimed to determine the magnitude of socio-economic disparities in children's HRQOL. 'A' was the reference group which referred to non-poor (or "rich") households and 'B' was the comparison group which referred to poor households. Together, both poor and non-poor households, were used as a means to determine the socio-economic disparities in children's HRQOL where model 3 uses EQ-5D-Y as the outcome variable and model 4 uses the EQ-VAS as the dependent variable.

In the *mvdcmp* output (model 3), and from the R result, it shows one how the socio-economic disparity between non-poor and poor households is statistically significant (p=0.005), favouring non-poor households who report having a higher EQ-5D-Y than poor households. The endowments (E) and coefficients (C), between poor and non-poor households, as a group, did not contribute to explaining the observed socio-economic disparity. However, one individual coefficient was statistically significant, namely, the independent variable "hhold_residence" ($p<0.05$). As mentioned in the methodology, household residence questions how many years the caregiver has lived in the community. When running individual regressions for this variable, in each sub-group, it had a negative coefficient in poor households (-0.00198) and in non-poor households (-0.00039). This implies that if the caregiver had lived in the community for a year more than the mean, their HRQOL would decline. In other words, the HRQOL would decline the longer they lived in the community, however, this effect was smaller in the poor household group as opposed to the non-poor household group.

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Model 4: Decomposition of Socio-Economic Disparities in Children's HRQOL (EQVAS):

Decomposition Results	Number of obs =	237					
Reference group (A):hhold_poor==0	Mean= 87.1818						
Comparison group (B):hhold_poor==1	Mean=83.2155						
EQVAS	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]	Pct.
E	4.101	1.852	2.210	0.027	0.471	7.731	86.790
C	0.624	2.969	0.210	0.833	-5.195	6.444	13.210
R	4.726	2.300	2.050	0.040	0.218	9.234	
Due to Difference in Characteristics (E)							
EQVAS	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]	Pct.
Caregiver adult capability index	1.538	0.437	3.520	0.000	0.683	2.394	32.550
Female	0.051	0.225	0.230	0.819	-0.390	0.493	1.090
Access to school nutrition (1=yes, 0=no)	3.054	1.794	1.700	0.089	-0.463	6.571	64.630
Caregiver marital status (1=married, 0=not married)	0.373	0.531	0.700	0.483	-0.668	1.415	7.900
Caregiver education status	-0.631	0.480	-1.310	0.189	-1.573	0.311	-13.350
Household Identity	0.687	0.327	2.100	0.036	0.045	1.328	14.530
Household head sex	0.005	0.093	0.060	0.956	-0.177	0.188	0.110
Household Size	-0.308	0.409	-0.750	0.452	-1.111	0.495	-6.510
Houhold dependecy ratio	-0.155	0.089	-1.720	0.085	-0.331	0.021	-3.280
Household residence	0.007	0.058	0.120	0.904	-0.107	0.121	0.150
FACI8_Attachment	0.409	0.259	1.580	0.114	-0.098	0.916	8.660
FACI8_Changeability	-0.930	0.832	-1.120	0.263	-2.561	0.700	-19.690
Due to Difference in Coefficients (C)							
EQVAS	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]	Pct.
Caregiver adult capability index	-0.187	0.281	-0.670	0.506	-0.737	0.363	-3.950
Female	1.427	1.979	0.720	0.471	-2.453	5.307	30.190
Access to school nutrition (1=yes, 0=no)	10.058	19.187	0.520	0.600	-27.547	47.664	212.840
Caregiver marital status (1=married, 0=not married)	-1.291	2.328	-0.550	0.579	-5.855	3.272	-27.320
Caregiver education status	-1.722	2.196	-0.780	0.433	-6.026	2.581	-36.440
Household Identity	-0.884	1.854	-0.480	0.634	-4.518	2.751	-18.700
Household head sex	-7.884	10.360	-0.760	0.447	-28.189	12.422	-166.820
Household Size	-8.634	5.700	-1.510	0.130	-19.807	2.538	-182.700
Houhold dependecy ratio	11.511	7.548	1.530	0.127	-3.282	26.304	243.580
Household residence	0.198	3.947	0.050	0.960	-7.537	7.934	4.210
FACI8_Attachment	-7.662	8.334	-0.920	0.358	-23.997	8.672	-162.140
FACI8_Changeability	-10.993	13.895	-0.790	0.429	-38.227	16.241	-232.620
_cons	16.687	26.681	0.630	0.532	-35.608	68.982	353.100

In this model, the same *mvdcmp* was run, however, EQ-VAS instead of EQ-5D-Y was used as the outcome variable. R was statistically significant ($p<0.05$) which implies that the socio-economic disparity between rich and poor households is statistically significant, also favouring non-poor households, who report having a higher HRQOL/EQ-VAS than poor households. In this case, only differences in endowments and not in the coefficients, between poor and non-poor households contribute to explaining the observed socio-economic disparity with

differences in endowments contributing 86.79%. Differences in endowments are, therefore, more important than differences in coefficients.

The individual endowments that were statically significant and thereby further contributed to explaining this disparity included the “ac_index”, “school_nutrition” and “hhead_identity”. The adult capabilities index, according to the result, can be interpreted as follows: there is a much higher level of adult capabilities in non-poor households (index of 0.13) as opposed to poor households (index of -0.10). This result is therefore in line with what one would expect as caregivers in non-poor HH’s tend to be more capable than caregivers in poor HH’s.

Furthermore, the result implies that if caregivers in poor households had the same adult capabilities in non-poor households, the gap in children’s HRQOL would decline by 32.5% ($p<0.001$). That is a large and extremely significant difference, both statistically and economically. This result, therefore, not only implies how improvements in adult capabilities may increase children’s HRQOL, but also how richer households show associations with adults that have better capabilities than poorer households, thereby reiterating the socio-economic disparities.

The independent variable “school_nutrition” indicates whether the child receives food at school or not. From the results it shows that 3.57% of the poor households had children who received food at school vs 4% from non-poor households. As a result, if access to school nutrition among children living in poor households (mean of 3.56%) was to increase to levels equivalent to children living in non-poor households (mean of 3.95%), the socio-economic disparity in EQ-VAS would decline by 64.63% ($p<0.001$).

Lastly, the “hhead_identity” variable measures whether the household head is a different person than the main caregiver. When running individual summary statistics for this variable, the results showed that in non-poor households 19% of these children lived in households where the caregiver was the same person as the household head but in poor households it was 23.2%. In other words, in poor households there are more children whose caregiver is also the head of the household as opposed to non-poor households. Precisely, the gap went down by 14.5%, which implies that if poor households had the same characteristics (or an equal number of children living with the combined head and caregiver) as non-poor households, the gap in children’s HRQOL would decline. Or simply put, the socio-economic

gap in children's HRQOL decreases when fewer caregivers of the children are also the household heads. Reasons justifying this result are mentioned in the discussion.

6. DISCUSSION

As mentioned previously, children's health-related quality of life was the main outcome variable, and therefore, incorporating EQ-5D-Y and EQ-VAS was important for this particular analysis. Eight models were run- half using EQ-5D-Y and the other half using EQ-VAS- to explain and discuss the results at a more intricate level. The decomposition analyses used *mvdcmp* as the Stata routine in order to understand the magnitude of socio-economic disparities in HRQOL and if this differentiated amongst boys and girls.

6.1. CORRELATES OF CHILDREN'S HRQOL

According to the literature, there are multiple contextual factors or SDOH that impact children's HRQOL. However, according to model 2, there were only a few significant factors- specifically: household residence and the family functioning changeability index (impacting EQ-5D-Y) and adult capabilities and school nutrition (impacting EQ-VAS). In the beginning, the research question asked whether there were associations between children's health related quality of life and their contextual factors and according to the results the above significant variables showed associations with children's HRQOL. This is in line with diagram 1 which demonstrates the SDOH framework, explaining how one's external and internal environment impacts their HRQOL (WHO, 2010: 6).

The significance of the adult capabilities index implies that children who are cared for by adults who have higher or better capabilities (depicted by the index) are associated with a higher HRQOL. While this is extremely important result, there is limited literature in adult capabilities and its association with children's HRQOL. This proposes an important gap in literature that needs to be explored.

Although there were not many variables that contributed to the overall significance of children's HRQOL, strong associations can be seen in adult capabilities, school nutrition and family functioning. It is therefore evident how, and in accordance with the literature, there are

associations with children's HRQOL and their contextual factors- being a strong family functioning and having access to school nutrition (Houben- van Herten et al., 2015: 11).

The limited associations may be due to the fact that the sample only included 293 participants as well as the fact that the population was limited to an extremely rural area, causing limited diversity that was not accounted for. The variables that were statistically significant seemed to align with the literature - for example, adult capabilities showed a strong association with the EQ-VAS index (Centre on the Developing Child, 2016: 3). This once again reiterates the point of how higher adult capabilities in caregivers translate to higher skills functioning's, better decision-making and goals which indirectly influences the HRQOL in their children (Centre on the Developing Child, 2016: 3).

The family functioning changeability index, which was also statistically significant, can also be linked to the evidence from the existing literature. Family formation and functioning were one of the contextual factors that influences children's HRQOL (Houben- van Herten et al., 2015: 11). These associations may be due to better social cohesion, better support structure and happier and more financially stable families which all results in a higher HRQOL for the child. Lastly, school nutrition showed strong associations with children's HRQOL and although not in the literature, this may be an avenue for further exploration and policy development. This is because if feeding a child at school can play an important role in increasing their HRQOL, it would have an extremely beneficial impact on future economic outcomes and society as a whole, hence it should be assessed at a policy level.

6.2. SOCIO-ECONOMIC DISPARITY IN CHILDREN'S HRQOL

The results from the decomposition analysis are also in accordance with the literature as it shows one how a family's SES is associated with their child's HRQOL (Poulain, et al., 2019: 8). According to the decomposition analysis, non-poor households had children with a higher HRQOL (both on EQ-5D-Y and EQ-VAS) as opposed to poor households. According to the relevant literature, these disparities are filtrated in communities through the unfair distribution in psychological, behavioural and social resources amongst poor and non-poor households (Zhang, et al., 2019: 2). Lower SES individuals often face more physical, financial and structural constraints such as not having access to good healthcare systems, being uneducated, not receiving adequate nutrition and not being able to financially afford multiple

aspects of their life. In return, this both directly and indirectly affects the HRQOL of their children.

6.3. POLICIES TO REDUCE CHILD HEALTH INEQUALITIES

Governmental and societal policies to improve children's HRQOL is essential and can be more precisely targeted once these social determinants of health are better understood. If the cause of children's illness is a social one, then interventions aimed at reducing inequalities need to be addressed. More specifically, this starts by policies aimed at reducing the socio-economic disparities amongst South Africans by allowing improvements in income and access to quality education and health services (Rebouças, Falcão & Barreto, 2022: 63). For example, policies targeted at the most vulnerable groups can aim to redistribute income, and in return, reduce poverty, reduce inequality and improve one's overall health. Furthermore, these policies should be addressed at a holistic level where ones external factors, physical and mental health are considered, thereby aiming to improve one's HRQOL and not just their health status.

Cash transfers are one such example of a vital policy tool that has the power to influence the social determinants of health as well as contribute directly to better health outcomes (Rasanathan & Krech, 2012: 11). One of the main goals of cash transfers is to improve economic growth by reducing poverty and vulnerability in developing countries (Rasanathan & Krech, 2012: 8). Cash transfers, on the one hand, have the potential to indirectly influence the SDOH by, for example, influencing the health and education outcomes of those with a lower socio-economic status. Not only will people have more money to better their education and health standards but also it will lessen the scarcity of resources, therefore people make more rational decisions, minimize their exposure to risk and partake in more economically profitable opportunities (Rasanathan & Kretch, 2012: 8).

On the other hand, direct impacts of cash transfers include aspects such as improving mortality and morbidity rates, chronic diseases, improving nutrition and the mental health or wellbeing of citizens (van Daalen et al., 2022: 3). Evidence proves how cash transfers mostly yield high returns on health outcomes, are a preventative measure to comorbidities and hence they are a vital tool for policy makers when reducing health and social inequalities (van Daalen et al., 2022: 3). Policies that seek to achieve equity and are specifically targeted at those with

a lower socio-economic status can aid in reducing child health inequities through the redistribution of resources and wealth (Rebouças, Falcão & Barreto, 2022: 63).

Secondly, policies based on a macro-level that aim to reduce poverty and improve equity are also influential in improving the HRQOL of children (Rebouças, Falcão & Barreto, 2022: 63). This stems from a governmental level whereby the economic, social and environmental aspects are all targeted to increase economic growth, generate inclusivity as well as create efficient and effective health and education systems to improve the overall equality levels. For example, empirical evidence shows how RDP housing in South Africa (housing for low-income families) have been linked to better health outcomes for children (Ntema et al, 2021).Lastly, polices aimed directly at improving healthcare are important when reducing child health inequities (Rebouças, Falcão & Barreto, 2022: 63). This, for example, can be tackled by improving primary health care facilities, educating people on their health, healthy eating programmes and improving state facilities and resources. This Is also where caregiver's capabilities come into play as by educating and training caregivers, they will be more aware on their children's health, seek preventative care measures and have the technicalities to deal with challenges. Adult capabilities will further allow a family to be at a higher socio-economic status, thereby reducing health inequalities as people will have better access to private resources. The Triple P (Positive Parenting Programme) is one such empirical example, whereby educating parents about child health, nutrition, and development can lead to improved health outcomes (Arruabarrena et al, 2022: 2).It is evident how social inequalities affect children's HRQOL and how children with a lower socio-economic status often experience a lower health-related quality of life (Rebouças, Falcão & Barreto, 2022: 58). Tackling these inequalities is therefore a key challenge and opportunity for government to improve the HRQOL in children as well as the caregivers themselves. Not only will this reduce social disparities, but it will also contribute to higher productivity growth for the country. These inequalities, however, need to be tackled using a multidimensionality of polices that incorporates an effective and efficient design on both a social, economic and political level.

6.4 CAREGIVERS' CAPABILITIES

As mentioned in the results, the factors that contributed to explaining socio-economic disparities in children's HRQOL were adult capabilities, household residence, school nutrition and household identity. As one would expect, children from households with a lower SES have a higher probability of attending schools where they do not receive any food. This may be due to the fact that the school is of lower standard due to the low income of the family or maybe the poorer area that they live in does not have good quality schools.

When caregivers were also the household head, children's HRQOL decreased- this was more prevalent in non-poor households as opposed to poor households. This result may be explained as follows: caregivers who are also the household head may have to take on more responsibility and therefore they devote less time to caregiving than if they were not the head of the household. Having a dual responsibility could imply more stress, more decision-making and more responsibilities outside of the caregiving role. In return, they devote less time to their children, and this potentially decreases their HRQOL (specifically for the EQ-VAS index) relative to children whose caregivers are not also the household's head.

The socio-economic disparity in household residence explains how the longer one lives in a community, the lower the HRQOL of their children is - this was more prevalent in non-poor households as opposed to poor households. A reason that could potentially justify this result, may be due to the aging of the caregiver. In other words, the older they get, the less functionalities they have and may not be able to care for their children – specifically their child's health. Also, the environment or culture of the community could worsen as time goes on, meaning the economic, cultural and political environment of the community worsens, thereby causing a decline in the child's HRQOL.

What is particularly fascinating from the decomposition, is the significant results on adult capabilities and its associations with a child's HRQOL. There have been very few, if not any statistical studies, that have analysed the impact of adult capabilities and how this significantly contributes to children's HRQOL (Centre on the Developing Child, 2016: 8). Yet this is particularly important as caregivers play a crucial role in the early childhood developmental phases- contributing to their social behaviours, self-efficacy, their own perceptions, aspirations and even their chance at a good education and future.

The socio-economic disparities that do exist between poor and non-poor households can be explained by the adult capabilities index (as seen by model 4 and 5). This can be seen by how caregivers in non-poor households had better capabilities than parents in poor households (for both EQ-5D-Y and EQ-VAS). Although, not in the literature, this result shows one how contributing to improvements in the SES of a community will not only narrow the socio-economic disparity in children's HRQOL but also improve adult capabilities.

It is, therefore, essential to implement policies that help to improve adult capabilities as this will directly contribute to increasing children's HRQOL and will allow them to achieve more, have a prosperous future and be healthier. In return, this may contribute significantly to the economy as a healthier and better educated population translates to a more productive population, thereby increasing the overall growth of the economy (Rebouças, Falcão & Barreto, 2022: 58).

Policies aimed at improving adult capabilities will empower parents to develop their skills, knowledge and opportunities for professional growth. For example, education programmes that help to build and grow adults' skill sets – such as apprenticeship programmes, literacy and numeracy programs or even online classes (Centre on the Developing Child, 2016: 16). These should all aim to not only assist and grow the skills of those actively looking for jobs but also those already in the workplace, thereby increasing the overall productivity in the labour market. Businesses need to continually invest in their employees by constant learning and development initiatives. Community based support programmes is another example of a policy that aims to build adult capabilities (Centre on the Developing Child, 2016: 16). Investing in community support, career guidance, counselling and adult learning centres can help people form a unity whereby they lean on each other and learn from one another in order to better their capabilities. Lastly, flexible work arrangements may also contribute to better adult capabilities as it would make it easier to balance personal responsibilities and work, including further education and caregiving.

6.5. BUILDING CAREGIVER CAPABILITIES

At a policy level, understanding how to further develop adult capabilities is essential for effective change, in not only their children's HRQOL, but also themselves and their surrounding communities. It is therefore necessary to strengthen communities and build

caregiver capabilities by techniques such as stress management, techniques to deal with adversity, time management and optimal decision making (Centre on the Developing Child, 2016: 15). This is necessary as often people who live in poverty, and especially the sample in this research paper, are affected by huge financial challenges as well as social and emotional adversity. These hardships or challenges stem from early on in life and they overdevelop the regions of the brain that are used for dealing with threating or stressful situations (Centre on the Developing Child, 2016: 15). In return, this creates a low self-perception and lack of order and control in a person's life which further inhibits the effective and efficient use of their capabilities. It is therefore extremely necessary for policymakers to have an understanding of the psychological, physiological and self-regulatory implications that both poverty and adversity play and then to tackle this from a multi-dimensional, contextual approach (Centre on the Developing Child, 2016: 16).

For example, strategies that teach people to manage and cope with stress are essential for reducing social problems and growing one's capabilities. This can be done through aspects such as financial literacy training programmes, housing, transportation, family planning and nutritious food (Centre on the Developing Child, 2016: 16). All of these will not only allow for better stress management and a higher quality of life, but also allow adults to build capabilities that may be passed down to their children. There is empirical evidence showing how successful interventions to improve caregivers' capabilities has increased their children's HRQOL. For example, a study based on the Triple P (Positive Parenting Program) which was used to provide parents with strategies to promote children's social competence, self-regulation and behavioural problems and reduce caregiver's stress, proved to increase their children's overall HRQOL (Lindsay and Strand, 2013: 4). Another study conducted, evaluated the impact of group interventions on parenting -practices. These group-parenting classes focused on strengthening parenting skills, strategies to achieve better capabilities and reduce child behavioural problems. The results from this study were extremely successful as their children had an enhanced HRQOL and less behavioural problems (Arruabarrena et al, 2022: 2).

Further to these policies, adult capabilities need to be improved and taught upon an individual level, where people learn to think positively about the world and themselves, learn to regulate their emotional responses and coping mechanisms to deal with change (Centre on the

Developing Child, 2016: 16). Although this is a continuous cycle of learning, failing, growing and improving- the development of human capital and a healthy population is our future. Not only does the development of core capabilities and skills strengthen our society and improve the HRQOL in children, but also helps contribute to growth and economic development of our society as a whole.

Furthermore, adult capabilities are a vital factor that contributes to socio-economic inequalities within society, and, in return, it should be analysed at a policy level. This is shown by empirical evidence whereby caregivers' financial stability and educational levels play crucial roles in ensuring children receive adequate healthcare and developmental opportunities, thereby increasing their HRQOL (Nutakor, 2023: 1). Social inequalities, therefore, could be reduced by improving adult capabilities whereby adults are better enabled to have self-efficacy, a higher education status and are financially literate (Centre on the Developing Child, 2016: 16). This will also contribute to increasing the health and well-being of their children as they will be able to learn these effective tools and capabilities set from their parents. Furthermore, it also has the potential to improve economic growth as not only will children have a higher HRQOL, but they will be more productive and effective in the workplace.

When returning to research question 2, caregivers' capabilities did indeed play a critical role on children's HRQOL, and this was more prevalent in families with a higher socio-economic status (as seen by non-poor households who had better capabilities than poor households).

6.6. INTERPRETING EQ-5D-Y VS EQ-VAS

What is important to note from the study, however, is that the models, using EQ-5D-Y and EQ-VAS as the outcome variable, gave different results. This is because, although they both aim to measure HRQOL they are methodologically distinct (EuroQol Research Foundation, 2021: 5). In other words, EQ-5D-Y is specially measured around five dimensions of health, thereby giving a holistic approach to one's health and wellbeing whereas EQ-VAS is more subjective in the sense that it is a global self-rated score for a particular person at a particular time (EuroQol Research Foundation, 2021: 5). EQ-VAS is a self-reported measure, reporting how they rate their health on that that particular day and does not explicitly include other aspects of health such as mental wellbeing. Research has validated the concurrent validity and responsiveness of both

measures, indicating they can provide complementary insights into patient health. The EQ-5D-Y's detailed five dimensions can identify specific areas of concern, while the EQ-VAS can capture overall health changes from the patient's perspective (Yu Tsai et al, 2021).

Other than the different constructs of the two outcome variables that could potentially capture different aspects of health, the subjective nature of the EQ-VAS variable may be influenced by individual perceptions and expectations, thereby causing variability in scores. Secondly, differences may further be explained by how the EQ-5D-Y variable is specifically for younger people (specifically ages 8-15 years old) that captures health in specific categories, vs the EQ-VAS variable that is a more general measure capturing overall health status (EuroQol Research Foundation, 2021: 5). Lastly, cultural and contextual differences may account for the variability in scores. For example, the environment in which one grows up in, their availability of resources, family functioning and self-perceptions may all influence how individuals perceive their health (Rebouças, Falcão & Barreto, 2022: 58). These factors, therefore, should be taken into consideration in the discussion of the results.

7. LIMITATIONS

First and foremost, none of the above methods prove causality, they merely determine if there are any associations with children's contextual factors and their HRQOL. Furthermore, they determine if there are socio-economic disparities that exist in children's health related quality of life and what is contributing to such disparity, however these are merely associations and not causations due to the cross-sectional data A suggestion for an avenue of further research, therefore, would be to do causal studies on this topic.

Secondly, the data and the people questioned is specific to a very poor community who most likely already suffer from poor health, do not have good educational or health facilities nearby and are uneducated. The children's adults/caregivers are more likely to not have the tools to develop their capabilities and furthermore, they are constrained by contextual factors (relating to their low socio-economic status and external environment). In return, this may impact the EQ-5D-Y and EQ-VAS results as most of the population is socially and economically disadvantaged and hence, the gap between "poor" and "non-poor" households is not large.

There also may be important unmeasured factors influencing HRQOL in children and were not included in the analysis due to complexity or difficulty in quantifying them. For example, social support and relationships plays a big role in influencing one's HRQOL as a strong support mechanism can significantly influence how one is able to deal with emotional and physical health circumstances. Another example would be one's lifestyle (physical exercise and diet) as well as their personality and psychological resilience. These aspects, along with a few others, are hard to measure and even proxies may not be able to give complete precision.

The sample group is also limited to 293 observations who do not differ significantly by race or income. This makes any possible associations weak due to such limited sample size. Furtehrmore, the limited sample size in the decomposition caused only a few statistically significant variables when explaining the reason for different outcomes between poor- and non-poor households. This makes it difficult to detect meaningful factors that explain the disparities. The limitations for the underlying measures of the used in the analysis includes the subjectivity of the EQ-VAS and EQ-5D-Y variables- these are self-reported measures and dependent on the persons health status that particular day. The wealth index is also a limitation in the sense that it is a complex variable that has been simplified and could potentially ignore access to services and social capital that would affect health outcomes. The indices also provide a snapshot in time and may not capture the dynamic changes within the household and its economic situation, thereby leading to potential misinterpretation of long-term impacts.

In terms of limitations to the Oaxaca-blinder decomposition analysis itself, I only used a two-way approach. The reason for this was due to practicality - the dataset was small, and a two-way approach allowed me to focus on significant relationships while striking a better balance between interpretability of results, simplicity and robustness (Powers et al, 2011: 556). A three-way decomposition, however, may be done as further research to expand the study and enhance the preciseness of the results. It also has the potential to provide additional insights.

One of the limitations involving the relationship between SES and caregiver capabilities was that although the relationship is likely to be bi-directional, due to the cross-sectional nature of the data, I could not elucidate the directionality of these associations.

The total health care expenditure on the index child ('child_hcare'), used in the first two regressions, was further limited to 160 observations, instead of the whole sample size. This was due to only 160 people having reported being sick in the past three months. The short time frame that the survey was questioned, therefore, poses a limitation to the study as the sample size is already small (293 observations) and now was even smaller when analysing this specific variable. To account for this, the new healthcare expenditure variable was created which assigned zeros to those that did not report any healthcare spending and included what the total amount of healthcare expenditure was on their index child in the specific time frame. This was an important variable to include as healthcare expenditure on a child is likely to be associated with his/her HRQOL, therefore, having limited observations caused a limitation on the model itself.

Omitted variable bias is another limitation of this study. This means that there are variables that matter and/or important independent variables that contribute significantly to the health-related quality of life of a child, however they are not included in the model. For example, parents' aspirations that they have for their children could not be incorporated as majority of parents already had extremely high aspirations for their children, thereby making the index difficult to measure. Another example of this is the children who attend school variable. This could not be included in the model as it does not question for the index child specifically; hence, it would be inaccurate if included.

The EQ-5D-Y and EQ-VAS variable may also be another limitation as children were asked to rank how they feel about their health in five different sections. This may bias the assessment as answers were depicted on the child's mood for that particular day. For example, the question "I feel worried, sad or unhappy" - a child may feel sad on that day if they have just been shouted at but are rather happy overall. A suggestion to improve research of this nature would require using a Likert scale whereby feelings and emotions are more quantified. This is because the scale uses a more general measure, ranging from very dissatisfied to satisfied, and asks the question on a broader basis. On the other hand, however, having both EQ-5D-Y and EQ-VAS as a measure of a child's HRQOL may be an advantage as it would strengthen the robustness of results.

In the available literature, adult capabilities have also not been tested in a model with HRQOL. While this may aid in the gap in research it also poses a limitation for validation of results. Some suggestions to improve these limitations, therefore, will need to be considered.

8. CONCLUSION

The one objective of this study was to investigate children's HRQOL and its associated correlates. Children's HRQOL is an important measure as a good health translates into a more productive economy, a higher quality of life overall and a narrowing of the inequality gap. The independent variables which showed associations to children's HRQOL, and their contextual factors included: household residence, the family functioning changeability index, access to school nutrition and the adult capabilities index. Following this, socio-economic disparities in children's HRQOL was explored by breaking the sample into poor and non-poor households – which was relevant to investigate what exactly was causing such disparities amongst the data used.

The results from the decomposition proved extremely interesting as adult capabilities showed up as significant in a variety of the regression models. What this then implied is that adult capabilities are associated with children's HRQOL, meaning that caregivers who have a better capabilities skill set, tend to have children with a higher HRQOL. These results are pivotal for policy making as adult capabilities lay the foundation for early childhood development, thereby improving such capabilities, could potentially result in healthier children as well as a more productive and efficient economy. Policies to improve adult capabilities as well as policies to reduce child health inequalities have both been mentioned and will both be useful in reducing the socio-economic disparity gap in South Africa. The need to improve adult capabilities starts with the parents themselves as they are the ones who are teaching their children the necessary skills, tools, values and perceptions for fundamental growth and development later on in life. Such study, therefore, was important to the literature as it used recent data from a low-income area as well as incorporated the capabilities index into the SDOH of health which had not been done yet.

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