Obuaku-Igwe, C. C. (2015). Health inequality in South Africa: a Systematic Review. African Sociological Review, 19(2)
https://www.ajol.info/index.php/asr/article/view/132917

Health inequality in South Africa: a systematic review

Chinwe C. Obuaku-Igwe

Abstract

This study presents a review of key empirical studies on health inequalities in South Africa with the aim of contributing to a comparative examination of social inequalities in health across different countries in Europe and other parts of the World. Studies reviewed were identified through a computerised search of key words such as inequalities, health, health inequalities, race, health in South Africa, health systems, socio-economic determinants of health and livelihoods in South Africa. Studies were included if the primary objective was to explore health inequality as a variable in child/adult mortality.

Introduction

Research has shown that the health of the general population of a nation depends in part on access to health care[1], the major determinants of which range from the availability of health services to the quality and effectiveness of professionals and the financial resources to access general and specialised care by patients[2]. Consequently, it is not surprising that policy makers, practitioners and other stakeholders in the global[3] health sector should be concerned about the growing disparities in health especially, despite the intervention efforts by governments.

Researchers show that health inequalities are determined by a range of social factors such as; race, education, ethnicity, gender, geographical location and income amongst others, and these factors reflect on and affect other components of a health system, resulting in poor health outcomes, mortalities and financial losses. This is observed more in Low and Middle Income Countries where life expectancy varies between 36 to 57 years compared to 80 years in high income countries. In South Africa, life expectancy at birth is 61 years (South Africa's life expectancy ranked 162 for females and 169 for males out of the 188 countries) [4]. Statistics reveal that health inequalities grew. This growth in health inequalities correspond to an increase in income inequalities. For example, income inequality in the country increased from 0.6 in 1994 to 0.679 in 2013. Of significance is the regional variation in health inequalities: for example, in the Western Cape Province where the white population in South Africa are mostly based, health inequalities and indeed income inequalities are stark.

[1] The world health report (2000). Health systems: improving performance. Geneva, World Health Organization, 2000.
[2] World Health Organization (2006). Quality of care: A PROCESS FOR MAKING STRATEGIC CHOICES IN HEALTH SYSTEMS. WHO, France
[3] Howson C, Fineberg H, Bloom B (1998). The pursuit of global health: the relevance of engagement for developed countries. Lancet 1998351586–590.590
[4] 4 Statistics South Africa (2014) statistical release: Mid year population estimate-2014. Accessed 20/07/2015 available http://www.statssa.gov.za/publications/P0302/P03022014.pdf

Generally, South Africa has a population of 51.77 million made up of different peoples with varied cultures and belief systems. The 2011 population census indicated that of the total population, black Africans make up the majority (79.2%) at 41.9 million followed by coloureds whose population is projected at 4.6million, then the whites also make up 8.9% at a total of 4.5 million while the population of Indians and Asians is estimated to be 2. 5% of the general population at 1.3 million

South Africa is multilingual with over eleven official languages being granted legal prominence as follows-Afrikaans, English, isiNdebele, isiXhosa, isiZulu, Sesotho sa Leboa, Sesotho, Setswana, siSwati, Tshivenda, Xitsonga. Geographically, South Africa's land mass is considered to be nearly one third of the size of the entire European Union[5]. Economically, it is considered one of the fastest growing economies in the world by virtue of its gross domestic product and ranked the world's 26th largest economy. In 2011, the greatest contributors to the GDP by sector were; services (65.9%), industry (31.6%) and agriculture (2.5%). And, by 2012, Statistics indicated that the GDP grew at a rate of 3.2% with education and health being allotted one third of the total state expenditure[6].

Public expenditure on education in South Africa has been rated one of the highest globally and it is evident in the fact that education is mandatory for all citizens from seven to fifteen years of age or from grade one to nine. Available data from the 2011 census indicates that the ratio of those who have no formal education reduced from 17.9% to 8.6%. In terms of health expenditure, South Africa's is projected to be roughly 8.3% of GDP, slightly higher than the 5% endorsed by the WHO. Yet, inequalities in health persist and evident in health outcomes which are significantly poor compared to other developing countries.

Against this background, the aim of this paper is to provide an understanding of inequalities in health in the country. The paper provides a survey of empirical studies of health inequalities in South Africa with the chief aim of contributing to a comparative examination of social inequalities in health across different countries in Europe and other parts of the world. This paper puts findings from South Africa in context by comparing South Africa with Brazil and Europe in the hopes that doing so would improve understanding of determinants of health inequalities as well as provide insight on commonly used indicators. This review complements previous studies and adds to existing knowledge by providing easy access to a body of filtered and methodologically strong evidence of health inequalities in South Africa. By synthesising results of previous studies on health inequalities in South Africa, this review limits error and bias through identification and appraisal of relevant studies irrespective of design. Given the fact that this study forms part of a comparative examination of social inequities in health across South Africa and Europe (European Social Survey), it is intended to serve as a stock taking review relative to a comparison of inequalities in health among minorities in Europe and South Africa, for the shaping of the proposed study.

[5] opcit
[6] ibid

Therefore, it is my utmost intention that this review would help in determining what is known about health inequalities in South Africa as well as help in establishing knowledge gaps in existing literature. And, by comparing South Africa with other countries, identified gaps could be used to shape further research on health inequalities in Europe and other countries. Although studies have shown that social inequalities in health is widening across social groups and races in South Africa as a result of the apartheid legacy. However, South Africa is not alone in this. Most studies on health inequalities in multi-racial [7] and non-multiracial [8] contexts have also indicated similar findings [9]. When compared to Brazil and Australia, there is evidence that just like in South Africa inequality in health varies across geographical context and dimensions of social and economic class. National statistics suggests that in Australia, health inequalities are strongly linked with variations in access to education, living conditions in childhood, age, geographical location, ethnicity, race, socio-economic conditions and gender[10].

Using a range of demographics and social indicators such as health status, disability and deaths; utilization pattern and provision of health and welfare services, studies have shown that in Australia, while the general wellbeing of the population is relatively high when compared to most countries, health outcomes and indicators vary across sub-groups and populations within the country, particularly, among the aboriginal and Torres Strait Island population. Akin to South Africa, socially excluded or disadvantaged populations in Australia, irrespective of age and gender were mostly associated with lower health outcomes, more likely to suffer frequent ill health, engage in unhealthy behaviour, experience poor health services utilization, less likely to utilise preventive healthcare.[11]

In Brazil, it is equally evident that social inequalities in health are comparable to that of South Africa. Demographically, both countries share similar characteristics history in terms of racial mix and history in the contexts of deprivation, stratification polarization and discrimination along racial/ethnic lines. While South Africa transited from apartheid rule to democracy in 1994, Brazil's transition from military dictatorship to democracy took place in 1988. Both countries transited into democracy as highly 'unequal' societies, scars from years of racial discrimination and legacies of inequities as a result of despotic rule. Just like South Africa introduced post-apartheid welfare, social grants and 'inclusion' sensitive laws to protect and cover previously disadvantaged population, Brazil introduced similar policies in its health system by focusing more on preventive care for all citizens and ensuring equitable access to health services. However, regardless of Brazils unified health system commonly known as S.U.S, which provides health coverage for all citizens, particularly low income earners, there is evidence of growing and persistent social disparities in health. And, these inequities are driven by educational attainment,

[7] Navarro V (1999) Health and equity in the world in the era of "globalization". Int J Health Serv 1999, 29:215-225
[8] Kunst AE, Groenhof F, Mackenbach JP, Health EW: Occupational class and cause specific mortality in middle aged men in 11 European countries: comparison of population based studies. EU Working Group on Socioeconomic Inequalities in Health
[9] Kawachi I, Marshall S, Pearce N(1991) Social class inequalities in the decline of coronary heart disease among New Zealand men, 1975–1977 to 1985–1987. Int J Epidemiol 1991, 20:393-398. PubMed Abstract OpenURL
[10] Public Health Information Development Unit (2010) Review of Health Status and Labour Force Productivity and Participation Data with Regard to Chronic Disease: Literature Review. University of Adelaide, Australia. [online] retrieved from: http://www.adelaide.edu.au/phidu/publications/2010-2014/health-status-labour-force-data-review.html
[11] Turrell G, Stanley L, de Looper M & Oldenburg B (2006) . Health Inequalities in Australia: Morbidity, health behaviours, risk factors and health service use. Health Inequalities Monitoring Series No. 2. AIHW Cat. No. PHE 72. Canberra: Queensland University of Technology and the Australian Institute of Health and Welfare

race, socio-economic status, income and geographical location (rural-urban differentials and residential segregation based on class and earnings)[12]

For instance, an investigation of healthy life expectancy, deprivation and variations in life expectancy among men in urban Rio Janeiro, Brazil indicated that life expectancy at birth among males living in cosmopolitan and wealthier residential areas were by far higher than those of males living at low cost residential areas and shantytowns. Similarly, life expectancy among the elderly population (both males and females) was significantly higher amongst those from opulent backgrounds and rich sectors compared to the poor[13].These findings are consistent with studies carried out in South Africa given the fact the issues that characterise social inequalities in health in Brazil reflect the contrasts of wealth and poverty as well as other complexities of social inequalities in South Africa.

Part of discussion section

I hope that this review would contribute to an understanding of the determinants of health inequalities in multiracial, highly unequal and developing societies like South Africa. It is also anticipated that comparing social indicators between Brazil and South Africa would contribute to and help in giving further insights on the determinants of health inequalities as well as putting findings from this review in a proper context. For instance, Brazil and South Africa are rapidly growing economies, members of the BRICs and while South Africa is currently ranked as a country with the highest inequality indexes, Brazil is ninth most unequal country in the world with Gini indexes of 66.0 and 52.7 respectively[14]. Then again, in as much as South Africa and Brazil share certain similarities in terms of social indicators of health inequality such as self-reported risk factors, ill health, utilization pattern of health services and health behaviours, generally, there are explicit differences in terms of household income distribution where an average monthly household income for South African homes at R 2,400 was almost forty percent higher than that of poor Brazilians which is pegged at $100[15]. Sixty five percent of South Africans dwell in Houses while only 13.6% live in shacks. 77% of South Africans have access to water from regional or local service provider. 85.3% have access to electricity.65.8% of South Africans completed Grade 9 or higher.

Method

The method used for the review is essentially desk based with computerised search of Ebsco, Jstor, Medlink, Pubmed, google scholar, research.edu, Lancet, Riley, Uwc electronic data base, human science research council reports, Statistics South Africa, World Social Science report and other databases. Reference lists of included literatures were also searched for relevant information on evidence and determinants of health inequality in South Africa.

[12] Frederico C G., (2010) Health equity in Brazil. BMJ 2010;341:c6542 doi: http://dx.doi.org/10.1136/bmj.c6542

[13] Landmann C S., Corrêa da Mota J, Damacena G N, and Pereira T G,(2011) Health Inequalities in Rio de Janeiro, Brazil: Lower Healthy Life Expectancy in Socioeconomically Disadvantaged Areas. Am J Public Health. 2011 March; 101(3): 517-523. doi: 10.2105/AJPH.2010.195453

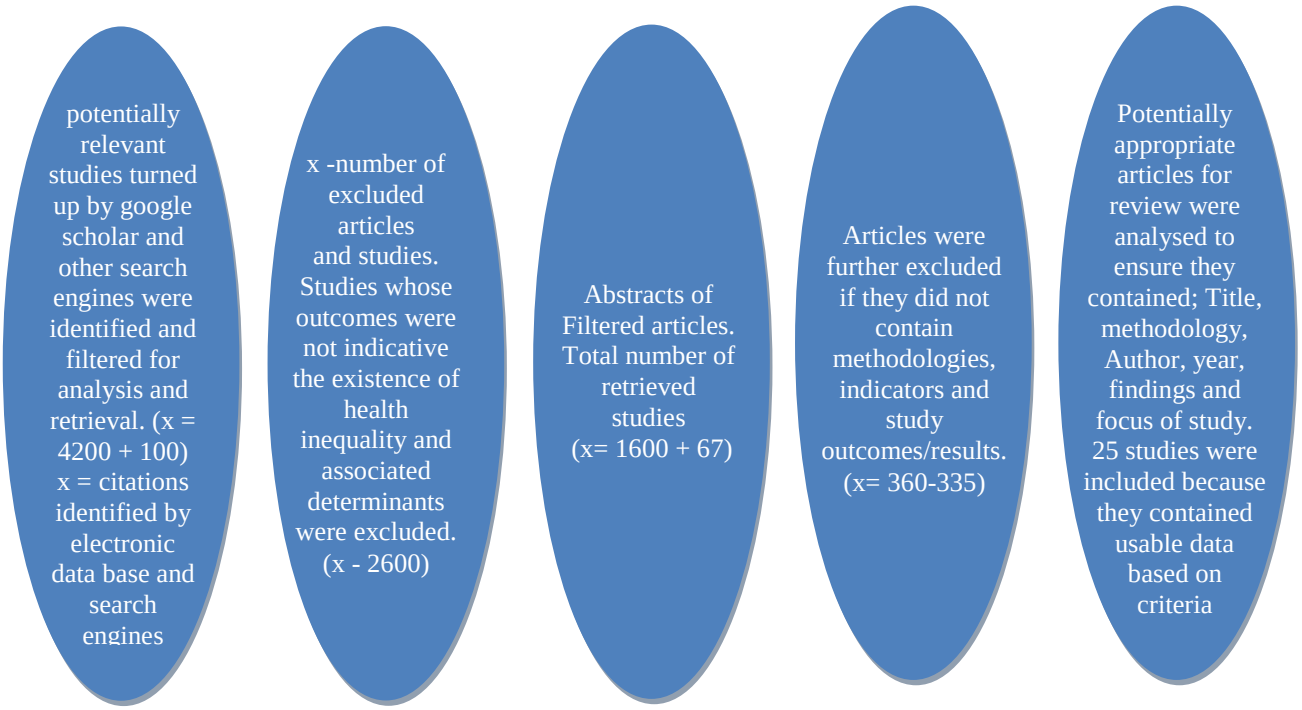
[14] The World Bank. (2014) World Development Indicators.

[15] See : Statistics South Africa : July 2015, South Africa Average Monthly Gross Wage. Retrieved from; tradingeconomics.com/south-africa/wages. Also, National Household Survey of the National Income dynamics study,(2008)

Inclusion criteria

The review focused on searching for titles, abstracts, abstracts and body of peer-reviewed literatures published in 1994 to date using terms such as 'health inequity', 'health inequality', 'determinants of health',' health inequities in South Africa', 'socio-economic determinants of health inequality'. Other key words that were used to expand the inclusion list for relevant literatures during the search are 'inequality', health in South Africa, social exclusion.

Flow Chart



Flow diagram: showing the inclusion and criteria and details of how studies were retrieved, filtered and reduced to suitable sources.

Studies with a mixed population of all racial/ ethnic groups, various age groups, gender, income level, geographical locations (all provinces and residential areas) and socio-economic status were included in the search without language restrictions. Although selected studies had varying designs, methodologies and datasets; however, the focus was on outcomes that were indicative of the existence of health inequality and associated determinants in South Africa.

The search (conducted from June to November 2015) from the databases listed above turned up 4200 literatures. Out of the 4200 literatures, 100 were based on frequent citations. Out of those, 2600 were excluded because the outcomes were not indicative of the existence of health inequality and associated determinants. Abstracts of filtered articles were retrieved and most studies were further excluded because they did not contain methodologies, indicators and study results/outcomes. Out of the filtered studies, 335 were considered potentially appropriate for reviews. Further analysis was carried out to ensure they contained Title, methodology, year, authors, findings and focus of study. Out of that number, 335 studies were deemed appropriate but further excluded when findings and methodology as well as variables did not relate to health inequalities in

South Africa. Out of the 335 studies that were considered usable, 275 had only abstracts while the remaining 60 contained the full articles. Out of the 60 full articles that came up during the search for 'inequality' in South Africa, only twenty five original studies, using data sets from various yearly household surveys and World Bank data, met the inclusion criteria of 'health' inequality/inequity and determinants of health in South Africa. Total number of 25 studies were included because they contained usable and relevant information based on criteria (x=25).

Sub -thematic selection criteria (social indicators of inequality):
All selected literatures were subjected to sub-theme analysis based on their primary and secondary research findings/outcomes. Major themes used for sub group analysis included the following- health inequality induced or measured by race, ethnicity, adults, children; age; gender, socio-economic status; educational status; adult/infant mortality; employment status; living conditions; access to healthcare; use of health services; nutrition, hunger and access to food; electricity and clean water, living conditions, structural processes/ issues, geographical /residential location, urban-rural differentials and affordability of care.

After collating all relevant literatures based on the themes and inclusion criteria outlined above, in order to check for heterogeneity, the studies were further grouped into six categories for sub-group analysis;

a. The first comprised original studies and literatures on socio-economic determinants of health,
b. the second group was made up of studies that were based on paper/document review or policy analysis with historical dimensions of South Africa's apartheid legacy and evidence of post-apartheid health inequality,
c. The third group comprised of studies that were related to access.
d. The fourth group was made up of comparative studies.
e. The fifth group included literatures that focused on the effects of migration on adult-mortality, morbidity and risk of diseases.
f. While the sixth group comprised studies that focused on evidence of inequality among children; infant mortality and economic status, nutrition, underweight and stunted growth among children as measures of health inequality.

Results and Discussion

The results of the systematic review is presented and discussed in this section starting with a summary and the Table containing the reviewed literature.

Summary of Results

1994- Studies conducted within this period focused on race groups, presented summary and evidence of health inequalities

2002- 2003 - Focused on discussing socio-economic determinants of health inequality among various racial/ethnic groups. The second study also mentioned 'race' as determinant of health inequality in South Africa.

2006- 2007 – focused on migration and its effect on health inequality; analysis of World development indicators such as child and adult mortality

2008- Focused on social/inclusion policies; structural issues/ processes that exclude disadvantaged people (disadvantaged people here meant people of low socio-economic status); determinants of health and trends – analysis of socio-economic policies

2009 – Addressed mechanism that could be used in dealing with the inequities of the past (apartheid legacy); Mentioned race as determinant and suggested pro-poor policies such as child support and health care as the key mechanisms.

2010- paid attention to social exclusion as determinants of health inequality but did not really elucidate or give a precise definition of the 'socially excluded'; the second literature focused on age as a determinant of health inequality

2011- Focused on access to healthcare by analysing socio–economic status, race/ ethnicity, household disparities. Other studies conducted in 2011 tend to focus on socio-economic determinants of health inequality but then, specifically on 'race and ethnicity'. However, given the nature of the South African society, which is slowly dealing with the inequities of the past (a form of racial segregation known as apartheid that is characterised by a general economic binary of white as economically well-off and blacks /coloured/Indians as economically poor) black South Africans are majority numerically, but constitute low-socio-economic group, and the findings reflect their experience irrespective of whether they as in socio economic groups.

2012- Focused on evidence of health inequality among children

Table 1: Studies of health inequalities in South Africa

Author & year	Title	Focus of study	Methodology	Findings	comments
John E Ataguba, James Akazili, Di McIntyre (2011)	Socioeconomic-related health in equality in South Africa: evidence from General Household Surveys	Trend analysis of data which Investigates socio-economic related health inequality in South Africa; and tried to find out whether there has been a change in disease burden with regards to the spread of specific illnesses such as diabetes and other self-reported illnesses among socio economic groups and the extent to which there has been a change since 2000.	Analysed South African General Household Survey data from 2002, 2004, 2006, and 2008. In addition, standardized and normalized self-reported illness and disability focused directories were also used to evaluate the	The study indicates the existence of socio-economic inclinations in self-reported ill-health in South Africa. The burden of the major categories of ill-health and disability is greater among lower than higher socioeconomic groups. Non communicable disease such as diabetes and other disease considered disease of the 'rich' was evident among poor people. And, these poor	The trend analysis used data from previous national survey and compared changes in disease burden and patterns among socio economic groups. (comparative) Due to lower earnings which tend to affect their access to quality health care, poor people are more prone to all kinds of diseases. Authors proposed taking inter sectoral action to tackle health inequity in South Africa.
Lungiswa L Nkonki, Mickey Chopra, Tanya M Doherty, Debra Jackson and Bjarne Robberstad (2011)	Explaining household socio-economic related child health inequalities using multiple methods in three diverse settings in South Africa.	Focused on measuring inequalities in child mortality, HIV transmission and vaccination coverage among a group of infants in South Africa.	Used decomposition technique to Identify factors that determine inequalities in 'three' child health outcomes. Also used concentration index to sum up inequalities in the three' health outcomes.	The study detected inequalities and significant differences in the availability of infrastructure amongst least poor and most poor families. There was also evidence of major disparities in all measured child health outcomes. Within same sample, it was observed that disease (HIV) transmission was higher among children	The observed inequalities were mostly due to the racial residential segregation and disparities in incomes. This shows that residential location and income affects and to an extent determines individuals and families ability to access health services. These factors also influence health seeking behaviour. In addition, black residential areas seemed to be mostly affected by poor socio-

Hall, K.,& Woolard, I. (2012)	Children and inequality: An introduction and overview	Secondary data from various studies that had attempted measuring poverty and inequality	The study focused on various aspects of inequality among children in South Africa by first, delineating poverty and inequality, then went on to highlight a number	The study linked Health Inequalities in children to unfair living conditions and poor access to health services. The authors noted that the survival and development of children as well as their paths in life are influenced to a some extent, by their socio economic	When compared, poverty is similar to inequality in the sense that it is structural and could be passed on from one generation to another in a family. In the same way, the apartheid legacy of health inequities has persisted despite efforts made by the government at providing social grants for the poor. These
INDEPTH Training and Research Centres of Excellence – INTREC (2007).	South Africa Country Report	Social determinants of health inequality – structural and economic drivers of health inequity and how Social determinants of inequalities are being taught in universities across South Africa.	The study used a review of curricula & literatures, as well as in-depth interviews with stakeholders across various sectors in South Africa. Also based on WHO Commission on	The review of university curriculum and interviews with various stakeholders across sectors indicated that inequities in the distribution of finances, power, and social-economic resources are the major determinants of health inequality in South Africa. And, these social factors appear to be the essential	The literature proposed that when there is improvement in the general conditions of daily life – such as those in which people are born, develop, live, work, and age, it would help in closing the gap in health inequalities.
Rispel LCI, de Sousa CA, Molomo BG (2009)	Can social inclusion policies reduce health inequalities in sub Saharan Africa? A rapid policy appraisal.	A review of three categories of social inclusion policies (cash-transfers; free social services; and institutional arrangements for programme integration) that can impact on health inequalities in South Africa, Nigeria, Ethiopia, Botswana, Mozambique, and Zimbabwe.	Policy analysis based on the WHO Commission on Social Determinants of Health	The focus on South Africa analysed the effect of the country's pro-poor policies such as the child support grant and free health care on three things; poverty alleviation, access to health care and economic opportunities; and, how these inferred influenced health inequality. The review indicated that South Africa's	The study was designed as a policy paper but did not highlight the impact of free healthcare policy on health inequality. The review indicated major weaknesses in policy design and implementation. Such as; enforcement, targeting criteria, and underlying costs, poor participation of communities, inability to take cognisance of cultural context, lack of a monitoring and evaluation system.

J P Ruger and H-J Kim (2006)	Global health inequalities: an international comparison	Focused on gaps in the literature on health inequalities in work on inter-country inequalities, on the use of a threshold or norm (established by clustering techniques) and on the identification of "health gaps" for development policy purposes.	Data was analysed Analysis from the World Development Indicators 2003 database that was compiled by the World Bank. A systematic study of cross-national inequalities in adult and child mortality in order to classify mortality groups	Bivariate and multivariate analysis indicated that all 9 countries that had high adult mortality and the 23 with high infant mortalities were located Sub-Saharan, Western Africa and Afghanistan. Bivariate analyses showed that comparative to countries with low infant mortality, those with high infant mortality had considerably higher rates of extreme poverty coupled with populations living in rural	Inequalities in child and adult mortality are global issues, huge, growing, and mostly linked with and highly influenced by socio-economic and health variables such as poverty, income, disease burden, living conditions, access to health services, etc..
Bradshaw D. (2008).	Determinants of health and their trends.	Reviewed post-apartheid determinants of health, and changes in health in South Africa.	The study used and analysed data based on a few governmental development reviews indicators such as: midterm development review indicators, the macro-social review; Statistics South Africa – StatsSA (1996-2007 data) and	Findings indicated general post-apartheid economic growth which was directly related to socio-economic policies and seemed to impact positively on living conditions by improving accessing to basic social amenities. Although, access to water, sanitation and electricity was relatively poor in certain parts of the country. Disparities in health were attributed to mainly to	The study did not indicate how the economic growth impacted various social groups and the extent to which the living conditions of each racial / ethnic group were impacted by social and economic policies.

Rispel LC. MB, Dumel S. (2008).	South African case study on social exclusion.	The study focused on different concepts and policies of social exclusion; the effects of those ideas on well-being; as well as potential policies that could tackle the process of exclusion while reducing the inherent impact of inequality in health.	Qualitative method: informant interviews.	While a good number of social inclusion policies in South Africa focus on dealing with the legacy of apartheid, there is still evidence of growing inequities at both macro and micro levels which calls for a measurement of the exact scale of health inequalities in the country.	This study suggests that health inequality in South Africa is as a result of structural issues / processes that tend to exclude disadvantaged people. Social exclusion increases chances of people having higher health risks. Authors suggested further research and collective inter sectoral actions towards measuring
Sartorius B, Kahn K, Vounatsou P, Collinson MA, Tollman SM. 2010.	Space and time clustering of mortality in rural South Africa (1992-2007).	Focused on examining causal risk factors for diseases	Health and Socio-Demographic survey.	Findings indicated that social exclusion was a major determinant of Health among the sample population. Migrants have a tendency to live far away from labour markets, healthcare facilities and without proper access to sanitation and electricity, hence, their living standard is relatively low and often	The focus here was on Social determinants of health in rural areas. Excluded urban areas and did not highlight the cultural composition (black Africans, whites, coloureds or Indians) of the sample population. The study indicated that when compared to South Africans, migrants (Mozambicans) faced a higher health risks due to ethnic/ racial
Welaga P. (2006).	The impact of migration on adult mortality in rural South Africa: Do people migrate into rural areas to die?	The link between immigration and adult mortality in South Africa.	Health and Socio Demographic Survey- HDSS	The study showed that Migration is a significant determinant of adult mortality. Findings showed that survey participants who moved from places outside the survey site surveillance area to seek residency in surveillance area (external migrants) faced	The study generally shows that short term migrants and people who migrated more often had a higher tendency of facing HIV related death than those residents who rarely migrated.

Clark SJ, Collinson MA, Kahn K, Drullinger K, Tollman SM. (2007)	Returning home to die: Circular labour migration and mortality in South Africa.	Migration and mortality	Survey	Short term migrants were more likely to die compared to long term migrants and Residents due to exclusion and adaptation processes.	Migrants face ethnic and racial residential segregation which could be associated with or considered a causal factor of racial health inequalities. South Africa is a country that is rich in diversity, and its diversity is visible in variations that cut across the following: Educational differences, ethnic differences, gender differences, urban-rural differences, class differences and age-group differences. And these difference tend to affect socio-economically
Havenaar J, Geerlings M, Vivian L, Collinson M, Robertson B.	Common mental health problems in historically disadvantaged urban and rural communities in South Africa: prevalence and risk factors.	Assessment of the incidence and associated risk factors of mental health conditions in a sub-district and sub-urban location of Khayelitsha in the Western Cape province of South Africa.	Cross sectional study	Results from the study indicated that poor people (those who earn lesser income) and those with low educational qualifications faced higher risks of suffering mental disorder in the sub district (rural) of Agin-court, whereas, in the semi-urban location of Khayelitsha, unemployment particularly amongst females posed a higher risk.	The study formed part of literature on socio-economic determinants of mental health within a residential group in South Africa. Mental illness has been considered a factor of heal Here, Gender, income, educational achievement and economic opportunities were cited as the key determinants of mental health. And, mental health has been quoted as a common health disorder among social and economic minorities. This study raises valid questions about the possibility that residential

Ng N, Kowal P, Kahn K, Naidoo N, Abdullah S, Bawah A, (2010)	Health inequalities among older men and women in Africa and Asia: evidence from eight Health and Demographic Surveillance System sites in the INDEPTH WHO-SAGE Study. Glob Health Action	This *comparative study among LMICs* uses international survey data to determine the full scale of *demographic* and *socio-economic variables* impact upon health measures in older people in Africa and Asia; To investigate gender disparities in health and possible explanations for these variations as well as how they could be ascribed to demographic and socio-economic determinants.	Longitudinal Analysis of Survey data using abbreviated form of WHO – SAGE (Study on global Ageing and adult health) Wave I instrument. Study population was a total of 46,269participants; male and female adults, fifty years and above, whom were studied between 2006 and 2007. Measured	Generally, the study showed that Older men have better self-reported health than older women. There were visible variations in socio-economic factors such as: age, marital status, household socio-economic status, educational status and living arrangements. In addition, it was noted that various health fields such as pain, sleep and wellbeing contributed inversely to the general health ranking for men and women in each country.	The South African Survey took place at the Health and Demographic Surveillance Site at Agincourt and showed significant gender variations in terms of self-reported wellbeing. There were suggestions regarding further studies that could enable further understanding of other significant individual and contextual determinants to which the observed gender related disparities in health could be attributed to. This will lay foundations for an evidence based resource allocation and other health promotion programmes for older men and women in similar situations
Bronwyn Harrisa, Jane Goudgea, John E Ataguba, Diane McIntyre, Nonhlanhla Nxumaloa, Siyabonga Jikwana and Matthew Chersich (2011)	Inequities in access to health care in South Africa	The focus was on exploring affordability, availability, and acceptability of health services.	Household survey using national data. Measured variables were: *health services utilization pattern*, self-reported health status, reasons for postponing or suspending health care, patients' opinions and experiences regarding health services, and health related	The study showed that Socioeconomic status, race / ethnicity, medical insurance status, and residential / demographic location (urban-rural) were linked with access to health care. Results further showed that of all those mostly affected by poor access to care, poor people, rural dwellers, uninsured and black Africans faced the greatest barriers access to care	Private spending (out of pocket) expenditures on health in South Africa is high among poor people. In addition, the existing information gaps regarding utilization payments and government policies seem to worsen 'access' challenges. When measured by health status, 'health needs' varied by gender,socio-economic status, and residential location. Perceptions of 'ill health' also varied among the rich and poor indicating that health needs were also influenced by socio economic factors which pointed out that while rich people might

Di McIntyre, & Lucy Gilson (2002)	Putting equity in health back onto the social policy agenda: experience from South Africa.	Focuses on stirring up debates around improvements in health inequalities reduction in South Africa, and also attempts to shape a general understanding and usage of the concept 'equity' in a comparatively limited manner.	Conceptualisation of concepts and analysis of policies and relevant 'equity and social inclusion documentations / literatures.	The study showed that the differences in human development in South Africa could be attributed to the apartheid legacy of racially inequitable socio-economic policies. In addition, post-apartheid, South Africa has made headway with social policies that could facilitate or constrain health equity progress- such policies include but not limited to: increased access to housing, water and sanitation services. The paper concluded that	The study pointed out constitutional right to health, civil society activism; improved access to housing, water and sanitation as the major factors that would help in consolidating the gains of social policies that are meant to close the growing gaps in health equity. The study also alluded to the dominant role of the south African Socio-economic Structural processes; albeit, as a constraining factor; The argument has been that little effort has been made towards promoting cross-subsidisation between private and public health

Benatar S (2013)	The challenges of health disparities in South Africa	The socio –economic factors that influence health in South Africa.	Policy analysis-National Health Insurance.	The key determinants of an individual's health start at the mental, physical and nutritional wellbeing of the pregnant woman at conception and childbirth then continues throughout the life span of the child. Maternal literacy and wellbeing influence the socio –economics status of the child and contributes in a great measure to improved access to nutrition, sanitation and better housing and living conditions which are factors that improve or limit good health outcome. Although living conditions have improved reasonably since the end of apartheid in 1994, free market structure and rapid urbanisation has	Health inequality in South Africa was highly influenced by racial residential segregation and differed by race/ ethnicity as well as geographical region. e.g. while Kwazulu Natal had higher mortalities, western cape province had lesser. Within western cape province, while those in the metropolitan suburbs had relatively lower mortalities, the people in Kyhelitsha a sub district, had higher mortalities. Between 1994 and 2008, Black Africans recorded poorer health outcomes (higher mortalities) compared to whites and Indians..

Community Agency for Social Enquiry (CASE) & Henry J. Kaiser Family Foundation. (1994)	A National Household Survey of Health Inequalities in South Africa	This national survey focused on assessing the extent of health inequality and progress made in reducing determining factors post-apartheid by evaluating the following aspects of health; : Demographic data, child and reproductive health, barriers to healthcare, quality of healthcare, satisfaction with healthcare, Public Health Situation, Site of Care, Chronic Health Conditions.	National household survey	When compared to whites and Indians/Asians, black African population in South Africa suffered the highest form of socio-economic deprivations. The high level of depravity among the black African population was evident in the following variables ;Poverty, public health conditions, living conditions such as housing, sanitation and access to drinking water. Overall, poor living conditions and poor public health made black Africans most vulnerable to ill health resulting in higher mortalities. The study found that physical and emotional health are thoroughly interwoven; individuals who were unhappy or worried about their socio –economic status/ wellbeing were more likely to suffer anxiety, depression/ mental health disorders and poor health compared to those who were satisfied with their socio-economic status. Furthermore, the study showed that amongst whites, irrespective of their residential or geographical	Out of three black Africans, one lived in the rural areas, in informal locations within urban areas or on white owned farms where timely access to health services and amenities are relatively challenging compared to other social / racial groups. South Africa is made up of 70% Black Africans, 7% coloureds, 20% whites and 3% Indians. And, of the total sum of black Africans, 54% live in rural areas, former homelands or white owned farms and use public health facilities' facing constrains such as long distances, lack of transportation and lack of health insurance. While, on the other hand, whites and Indians live in metropolitan areas, closer to amenities and use private health facilities, sometimes subsidised by employers and the government. Consequently, the wages of the majority black Africans reflect in their choice of residential locations; poor living conditions, access to amenities, health and social services as well as the resultant poor health outcomes. Furthermore, while living conditions are determined by race, income and educational attainment, access to healthcare is further influenced by race, income, gender and socio-economic status. Beyond race and

StasSA (2011)	Use of health facilities and levels of selected health conditions in South Africa	Health related aspect of a general household survey in South Africa	General household survey made up of mostly qualitative interviews of 25,000 households of all races / ethnicities in South Africa.	There are significant variations in access to healthcare among various racial groups in South Africa. Access and quality of care varies not just by race but by provinces(geographical and residential location While households in the Western Cape province tend to have easier, faster access and quality healthcare, those in Kwazulu Natal had a higher probability of experiencing longer waiting times and better services compared to those in the non-urban and poor province of Eastern Cape who can barely access quality	This study corroborates previous studies from CARE- majority of black African South Africans and coloureds live in areas and provinces where access to health and amenities remain a challenge years after apartheid. When compared to whites, Indians and coloureds who lived in Kwazulu Natal and Western Cape either lived close to amenities, have better means of transportation, medical aid and when they do not live closer to amenities, can afford health/ social services from the private sector.

Wadee, H., Gilson, L., Thiede, M., Okorafor, O., &McIntyr D. (2003). e,	Health care inequity in South Africa and the public/private mix	The study summarises post-apartheid health policies by analysing health inequality in South Africa, within the context of specific public private synthesis in health care. In doing so, it identifies various apartheid legacies of health inequality that that are intractable and evident in the health status of citizens and unequal access to health care.	A national household survey with focus on use of healthcare across public and private sectors. Data for the survey was collected yearly between 1993 and 1999 by Statistics South Africa (StatsSA);	Data analyses indicated that the most prominent determinants of health and health inequality post-apartheid are; race (Black South Africans and to a minimal extent coloureds); gender (particularly, female headed households); age; educational attainment, economic or employment status; access to food and nutrition; living condition such as housing, sanitation, access to electricity; access to safe/clean water and sanitation; educational status; residential and geographic location; disintegration of the family and labour related migration.	A comparison of health outcomes relative to income flow across all racial/ ethnic groups in South Africa indicated that although the private sector currently plays an important role in the South African health system, most service providers and medical insurers in that sector still live out the country's apartheid legacy by directly or indirectly serving a particular racial (whites) and socio economic (higher income earners) groups, to the detriment of low income earners who are mostly black African population and tend to utilise and patronise the public sector more often. Users perception of general healthcare services in South Africa reflects that the health system is polarised along racial/ethnic lines where black Africans and coloured tend to use public health sector more frequently compared to Indians and whites who prefer the private
Coovadia, H.,Jewkes, R., Barron, P., Sanders, D., & McIntyre, D. (2009).	The health and health system of South Africa: historical roots of current public health challenges.	A report that focuses on analysing social and health policies in South within a historical epoch.	Review of past health policies and documents using the following variables – HIV / AIDS, TB, Violence, Maternal health, child	Racial and gender discrimination, the migrant labour system, the destruction of family life, vast income inequalities, and extreme violence have all formed part of South Africa's troubled past, and all have inexorably	The report presented historical dimensions of racial and gender inequalities in the country as well as associated macroeconomic and socioeconomic milieus of health Once again, there is an allusion to structural processes and apartheid legacy as fundamental

Hirschowitz R; Orkin M; de Castro J; Hirschowitz S; Segel K; Taunyane L (1995)	Examines healthcare inequalities in South Africa.	a 1994/5 survey of health inequalities.	The study used data from a nationally representative survey that was conducted in 1994 among 4000 households.	Findings suggest that the black South African population in South Africa were mostly affected by inequalities in health with evidence from factors ranging from 'poor public health conditions, difficulties in accessing health services, and ill-treatment during health service provision'. A great majority of the Black South African population were affected by poor access to toilets, safe/clean water, sanitation, lack of electricity and overcrowding compared with Indians and Whites who had close to zero incidence of poor access to tap water. With regards to income, majority (66%) of white families earned incomes that was above R2000 compared with ¼ of the Black African families that earned average monthly income of R300 which is considered abysmally lower than the minimum living level of R900. While black south Africans	The study focused on assessing selected determinants of health inequality across all racial/ethnic groups such as health, maternal / reproductive health, infant health, barriers to care, health centres, public health conditions, quality of health care, patient- satisfaction with services, chronic health conditions. The study contradicted other studies that suggested that black south Africans seldom used private doctors. Perhaps, this new development might be associated with the BEE policy. Findings suggests that 70% of African children lived in rural areas, 66% did not have birth certificates, 75% lived in families whose incomes were below R900

Maureen Mackintosh	Health Care Commercialisation and The Embedding Of Inequality	Systematic observations of the impacts of globalisation on poverty, inequality and systems of social protection; comparative study of Mali, South Africa, Vietnam, Bulgaria and Switzerland. The study also focuses on exploring the extent of Commercialisation of healthcare and how this is and examines its associated with Inequality in income and health.	Case study - Comparing five countries. Using available data The following variables on globalisation and inequality were measured; Health, Education, Income inequality, economic development, political economy, social development and social Protection/pensio ns	The study did not provide detailed analysis of research results by country. However, findings showed that the south African health system is divided along racial and economic lines where the rich which includes most of the white population have medical insurance cover and can afford private sector services whereas, the poor and mostly black Africans and coloureds do not have medical insurance therefore, are forced to seek care in public sector or made poorer by the highly regressive payment	The study examines the burdens and effects of for commercialisation in health care health care by concluding that in increases health inequality. Within the context of health inequality, the challenge of affordability is worsened by Commercialisation and hinders and in some instances impacts negatively on social cohesion.
Gavin Mooney and Lucy Gibson	The economic situation in South Africa and health inequities				

Eyob Zere and Diane McIntyre (2003)	Inequities in under-five child malnutrition in South Africa	The study focuses on quantifying health inequalities in South Africa by measuring the scale of inequalities in malnutrition of under-five kids that are attributable to socio-economic status. It evaluates and enumerates the extent of socio-economic related disparities in under-five child malnutrition in South Africa.	Data on the sample population (3765 under-children) was collected from the Living Standards and Development Survey in South Africa. The socio-economic status of households was measured using household expenditure. While inequality in malnutrition was measured using residential or provincial residence. The survey was conducted jointly by the South	Results showed that stunting was the commonest form of malnutrition across all social groups in the Country but highly prevalent among under-five children in provinces (Eastern Cape & Northern Cape) with higher rates of poverty. However, while no form of inequality or malnutrition was detected among White children across all provinces/ residential locations, a measure of underweight and stunting was found amongst coloured children and in metro (Western Cape and Gauteng) residential locations. Across all provinces/ residential areas, malnutrition which is an indication of health inequality	This study confirms findings from the 1994/95 survey by CARE on behalf of Kaiser family that health inequality in South Africa is determined by provincial and residential locations. Residents of poor, mostly non-urban and rural provinces are more likely to suffer poor health and health inequality than those of same race and socio-economic status living in richer and more urban provinces. The study also validates previous studies that major variables associated with health inequality such as malnutrition and stunting diminish significantly as a family's income or socio-economic status increases. There is evidence of Socio-economic inequities in health across all age groups, with the probability that childhood
Eyob Zere (2002)	Addressing health inequalities in South Africa : policy insights and the role of improved efficiency	Empirical assessment of the existing state of health inequality and trends with regards to infant mortality, self-reported illness, disease and use of various service providers in adulthood.	Survey and analysis of secondary data collected from the Living Standards and Development Survey (LSDS) of 1993, annual statistical publications of provincial health departments and October	Study showed that membership of a white household and living in the rural area affected Infant mortality and morbidity rates. The study also showed that mortality and morbidity rate was significantly higher among Black African infants.- children living in rural areas recorded higher incidence of ill health and death compared to those in urban areas and	The study and analysis was based on old data that was collected in 1993. There is possibility that the data may have changed and not totally descriptive of the investigated variables. This study upholds findings from other studies that geographical area and race were the fundamental determinants of health inequality in South Africa, outside gender and income.

Studies of Health Inequalities in South Africa: Overview

In South Africa, inequality is greater today than at the end of apartheid, Oxfam (2014). Studies by the World Bank (2012) have shown that health inequalities in SA are influenced by various factors such as educational level, income, race, gender, geographical or residential location and these factors vary among different age groups and geographical location. Agatuba et al (2011) and Gakidou (2000) defined health inequalities as the variations in health status across individuals in the population. Regardless of the operational definition or dimensions of analysis, inequality remains one of the most debated issues on the South African socio-political agenda and one that draws attention to the Country's economic growth which apparently has not impacted much on the welfare of the people. Inequalities in health has been associated with a broad range of poor health outcomes for minority, socially excluded and disadvantaged groups[16]. High mortality rates, poverty and race have also been mentioned as some of the common issues associated with variations in health among various socio-economic and racial/ethnic groups in South Africa.

What is evident in the literature is that the end of apartheid in the 1990s saw the introduction of a dispersal system where the health system was overhauled to close the inequality gaps in the distribution of health/social services and resources. However although these system reforms and introduction of primary health care may have made inroads in some aspects, it has been associated with disparities among previously disadvantaged people and highly regarded as the intractable legacies of the apartheid rule[17].

Other studies[18] examining post-apartheid poverty and inequalities in South Africa among racial/ethnic population also reported a high level of income inequality at the racial / provincial level, particularly among black South Africans and Western Cape coloured population[19]. These studies suggested that health inequalities, low access to healthcare services, income inequalities and poverty among the black population and coloureds in the country were increasing at an alarming rate and had prevailed given the fact that post-apartheid government in South Africa focused more on increasing the country's GDP(economic growth) rather than taking pro poor income redistribution measures

Even though the reasons for the prevalence of health inequities among previously excluded people (black South Africans) remain poorly understood, some studies have attributed it to structural processes while others suggested that at birth, most blacks are born without economic opportunities[20]. It has been hypothesized that governance deficit, the structure of the South African health system; provincial healthcare stewardship, policy implementation and financial management are significantly associated with health

[16] Van Rensburg, H. C. (2014). South Africa's protracted struggle for equal distribution and equitable access–still not there. Hum Resour Health, 12(26).

[17] Ronelle B, Caryn B, Christelle G, Servaas B (2012) Have public health spending and access in South Africa become more equitable since the end of apartheid? Development Southern Africa Vol. 29, Iss. 5, 2012

[18] Zeida R. Kon and Nuha Lackan. Ethnic Disparities in Access to Care in Post-Apartheid South Africa. American Journal of Public Health: December 2008, Vol. 98, No. 12, pp. 2272-2277.doi: 10.2105/AJPH.2007.127829

[19] Özler, B. (2007). Not separate, not equal: poverty and inequality in post-apartheid South Africa. Economic development and cultural change, 55(3), 487-529

[20] Woolard.

inequalities sin the country. A similar position has been adopted by Gelb (2003)[21]& Coovadia et al (2009)[22] which suggests that health inequalities in South Africa could be traced to governance deficit and apartheid polarization of the country along ethnic and racial lines which post- apartheid government had failed to adequately address. Coovadia et al suggested that post-apartheid government was weak and often executing poor policies that have led to the implementation of macroeconomic policies and the promotion of economic growth rather than redistribution, thereby contributing to the persistence of fiscal inequalities among racial/ethnic groups even with increases in social grants.

Another study suggested that ideological supports, systemic lapses, health sector structural conditions and weak policies have deepened health inequalities resulting in provinces with white majority receiving more healthcare funding and having better access compared to provinces with black majority where access to health services are generally inadequate[23]. Stuckler et al (2011) revealed that provinces with better spending capacities are more likely to receive funding than those with greater disease burden/health needs given the fact that those who spend their budgetary allocation tend to build more infrastructure and often have tangible output to show for the expenses.

Another researcher argued that inequitable disbursements and expenditure patterns compared to health needs as well as operational inefficiencies and shortage of bio medical personnel in public health facilities have aggravated health inequities in the country, Harrison (2009)[24]. Considering the hypothesis that the South African health system funding is tilted in support of provinces/regions with absorptive spending capacities (an apartheid legacy), it would not be out of place to suggest that the general structure of the health system could likely be the core driver of health inequalities in the country.

While most of the hypotheses presented above were based on thorough analysis of imprecise health-related indices and policies, The 2008 NDIS survey provides a report similar to most of the expressed hypothesis and positions. The study reported that 45% of black South Africans did not have satisfactory healthcare coverage, whereas, only 19% whites had inadequate coverage. A similar submission by Gradin (2013) agrees that years after apartheid rule, the percentage of blacks who lived in deprivation was far greater than whites. For instance, 30% of black South Africans in 2008 lived in informal residences, 47% did not own refrigerators, 34% did not have television, 32 % did not own radios while 2/3 did not have access to pipe borne water in their homes and sourced water outside, compared to 5.5% of whites who lived in informal settlements, 6 % did not own television, 7% did not have refrigerators while 18 percent did not own radios. Generally, fewer than 2% of whites did not have all three of these appliances in their homes; while12% of Black South Africans lacked the three appliances. These figures by Gradin (2013) sum up the determining factors of health inequalities in South Africa as evident from previous studies

[21] Gelb, S. (2003). Inequality in South Africa: Nature, causes and responses. Edge Institute.
[22] Coovadia, H., Jewkes, R., Barron, P., Sanders, D., & McIntyre, D. (2009). The health and health system of South Africa: historical roots of current public health challenges. The Lancet, 374(9692), 817-834
[23] Stuckler, D., Basu, S., & McKee, M. (2011). Health Care Capacity and Allocations Among South Africa's Provinces: Infrastructure–Inequality Traps After the End of Apartheid. American Journal of Public Health, 101(1), 165–172. http://doi.org/10.2105/AJPH.2009.184895
[24] Harrison, D. (2009). An overview of health and health care in South Africa 1994–2010: Priorities, progress and prospects for new gains. Washington, DC: Henry J Kaiser Family Foundation.

which subsequently prompts the question of how these results from South Africa compare with results and statistical indicators from other regions like Brazil and Europe?

Comparing health inequalities in South Africa, Brazil and Europe:

Health inequalities are determined by a range of social factors such as; socioeconomic status, race/ethnicity, education, gender, geographical location and income amongst others, and these factors reflect on and affect other components of a health system, resulting in poor health outcomes, mortalities and financial losses: As such, becomes a concern of global, regional and national policy makers and agencies implementing health related projects and actions. However, even though there is a growing body of evidence documenting inequalities in health distribution and access to health services in South Africa, there seems to be no consensus on what the major social indicators and determinants of health and access to health care should be[25]. Besides, even though a number of studies present comparative analysis of health systems, there is limited cross-national analysis and systematic reviews of health inequalities in high and medium income countries. Consequently, in order to identify, pre-filter and document evidence of health inequalities, major determinants, similarities and differences among various populations and groups in high versus middle income countries, this section of the paper will compare health inequalities in South Africa, Brazil and the EU member states.

Although this review will not pay particular attention to the comparison of ethnic majorities versus minorities in South Africa, Brazil and EU, the follow up to this (proposed ESS study in South Africa) paper would be operationalised thus: The comparison would be between black South Africans as the majority versus Asians, Whites, Indians, and African immigrants as minorities. In the EU, the comparison would be between indigenous Europeans as majority and immigrants as the minorities. The study would also present detailed analysis of all ethnic and minority groups in SA and immigrants in the EU for a comparative understanding of existing health disparities within the minority groups and possible explanations for such variations.

Although there have been improved international, regional and national level policies aimed at closing the inequality gaps in health between 2000 and 2014, World Bank statistics show that income and health inequalities in South Africa and Brazil remain one of the highest globally[26]. For example, large percentage of the majority of the population (mostly black) in South Africa still does not have access to health services twenty years after the apartheid rule. Similarly, despite the notable and outstanding success rate of Brazil's national health system, Sistema Unico de Saude-SUS, majority of Brazils rural population do not have access to health services and medicines[27].

In addition, just as health inequalities statistics in SA differs across geographical provinces, the same holds in Brazil. In the predominantly white Western Cape Province (mostly urban and richer) of South Africa, maternal mortality figures reflect 27 per 1000

[25] De Maio F, (2007) Income inequality measures. J Epidemiol Community Health. 2007 Oct;61(10):849-52. Review. PMID: 17873219 http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2652960/

[26] World Bank (2014) World Development Indicators.

[27] Ingrid V., Amparo S., Garcia-Subirats I., Ferreira da Silva R., De paepe P., Borrel C., and Jean Pierre U., (2014) Inequities in access to health care in different health systems: a study in municipalities of central Columbia and North-eastern Brazil. International Journal for Equity in Health 2014,13:10. Doi:10.1186/1475-9276-13-10

births while in the predominantly black Eastern Cape (mostly non-urban); the figures are 70 per 1000[28]. Similarly, in Brazil, the North east has extreme levels of poverty coupled with stunting in children and high infant mortality ratios while the mostly urban areas of south and south east Brazil recorded lower mortality ratios and stunting in children[29]. Just like in South Africa, inequalities in health in Brazil are driven by factors such as socioeconomic status, living conditions, ethnicity, geographical location and gender. In both countries, poverty, income, residential segregation (for people living in same province), geographic location (rural-urban differentials) educational status, health insurance, gender, and socio-economic condition at birth contribute in great measures to inequalities in health[30].

Generally, inequalities in health in both South Africa and Brazil tend to be more prominent at the secondary and preventive care level given the fact that both countries operate pro-poor health systems where primary care is universal and free at public facilities, making it easier for low income earners to gain access to care. Yet, in terms of secondary care, long waiting times, delayed consultation with bio medical personnel and lack of health insurance contribute to inequities experienced by low income earners at this level. Furthermore, while most low income earners in both countries have low access to health insurance, research has shown that they have greater need for healthcare and ironically, lesser access to and utilization of healthcare services[31].

Apart from Brazil and South Africa, inequities in access to healthcare keeps widening, affecting health outcomes globally, even in developed countries[32]. Beyond its effect on health outcomes, inequalities account for over one third of the world's urban population living in slums and poor conditions. In financial terms, in the European Union as a whole, health inequalities-related fatalities account for more than 700,000 deaths annually, and over 33 million dominant cases of ill-health[33]. While inequalities related losses have led to financial and resource damages in the EU to the tune of nine hundred and eighty billion euro (€980 billion) per year. Additionally, when valued as consumption good[34], the losses are evident in taxes and loss of productivity due to ill health, which are estimated at 9.5% of the annual GDP in the EU.

Throughout low and middle income countries, life expectancy varies between 36 to 57 years, whereas in high-income countries, it is 80[35]. Generally from 2000 to 2010, inequalities in life expectancy at birth amongst EU countries diminished by 10 % for women but only by 3% for men. Correspondingly, infant mortalities reduced between EU countries and same in South Africa. Yet, other dimensions of health inequities such as

[28] Human Rights Watch. "Stop Making Excuses." Accountability for Maternal Health Care in South Africa. Johannesburg: Human Rights Watch. http://www.hrw.org/reports/2011/08/08/stop-making-excuses
[29] Opcit'
[30] Pinheiro R., Viacava F., Travasco C., Brito A., (2002) Gender, morbidity, access and utilization of health services in Brazil. Cien Saude Colet 2002,7(4):687-707.
[31] opcit
[32] Van D., Masseria C., Koolman X., (2006) Inequalities in access to medical care by income in developed countries. CMAJ 2006,174(2):111-183.
[33] Mackenbach JP. (2006)Health inequalities: Europe in profile. London: Department of Health.
[34] Mackenbach J, Willem J, Anton K (2007) Economic implications of socio-economic inequalities in health in the European Union. Published by European Communities
[35] World health organization" Fact file :10 Facts On Health Inequities And Their Causes" http://www.who.int/features/factfiles/health_inequities/facts/en/index9.html

income and educational levels keep increasing across borders, within countries and amongst ethnicities/sub populations.

A World Bank report[36] published in 2012 on health inequalities in SA revealed that the variances in life opportunities for children in South African were largely due to factors that range from household income, gender to location and race. Likewise, a 2013 study revealed that across the EU, and in virtually all member countries, the self-reported level of health was worse for those with lesser income and educational levels than those with high incomes and education[37]. These figures reflect widening health inequalities in SA and the EU that could be traced to socio economic factors although the exact scale and reasons for these disparities has not been accurately estimated particularly among minority groups.

Determinants of health inequality in South Africa

The evidence of health inequality and determinants of health inequality among minority groups in South Africa was investigated in 25 existing literatures. Of all analysed literatures, provided evidence of health inequality in South Africa; seven studies discussed and analysed historical dimensions of health inequality in South Africa; two studies examined the effect of migration on adult mortality; an additional two studies examined health inequality among children; another two studies were comparative studies of South Africa and other countries in Asia and Europe (Bulgaria and Switzerland) while eleven studies examined the socio-economic determinants of health inequality in South Africa.
Of the eleven studies that addressed socio-economic determinants of health, nine analysis reported that infant /adult mortality, self-reported ill-health, disease burden, use of health services, geographical/residential location, race, public health condition, living conditions and income were associated with and highly influenced health. Of these eleven studies, seven analyses found that out of all racial/ethnic groups, black South Africans, uninsured people, females, children, rural/non-urban dwellers, residents of poor provinces/ neighbourhoods and unemployed people were mostly affected by the determinants of health. While all the studies found a significant association between the socio-economic statuses of black South Africans with health inequality, two analyses found a minimal association between the health of coloureds and residential location (within the metropolitan areas); two analyses found imprecise association between the health of Indians, geographical location and use of health services, while no form of inequity was observed among whites of all ages and gender living in Gauteng and other provinces.

Two studies suggested that race, educational status and gender significantly influenced access to and use of health services which were used as measurable dimensions of health inequality in those studies. Only one study submitted that race and socio-economic conditions of the mother during pregnancy and the child at birth could influence health in adulthood. Thus, evidence of health inequality and socio-economic determinants of health were obvious.

[36] World Bank, (2012). South Africa Economic Update: Focus on Inequality of Opportunity. World Bank, Washington DC.
[37] European Commission (2013). Health inequalities in the EU — Final report of a consortium. Consortium lead: Sir Michael Marmot. Published by the European Commission Directorate-General for Health and Consumers. ISBN 978-92-79-30898-7 doi:10.2772/34426 http://ec.europa.eu/health/social_determinants/docs/healthinequalitiesineu_2013_en.pdf

The evidence of health inequality and its determinants in South Africa were the focal points of this study. And, given the apartheid legacy of inequities in income distribution and dispersal of social infrastructures in the country, two analyses attributed growing inequities in health to income inequality which is associated with the free market policy of post-apartheid government; Van et al (2014). This free market policy has been accountable for widening inequities in income within racial groups and has ultimately rubbed off on health, thereby, necessitating timely interventions in the form of pro-poor policies.

Generally, the methodologies of all included 25 literatures differed given the fact that they studied different variables. However, the outcomes and findings presented, indicated similar evidence and consensus on the existence of health inequality in South Africa, post –apartheid. For example, Hirschowitz et al (1995) assessed selected variables that are descriptive of inequality and found evidence that Black South Africans were still marginalised in terms of access and use of healthcare services. In all studies, morbidity, self-reported ill-health of selected health conditions, living conditions, race, income and geographical locations featured prominently, however, neither of the studies delved deeper into the causes of all self-reported health conditions noticed in all social/racial groups. For instance, Ataguba (2011) observed that there was prevalence of stroke and diabetes (disease of the affluent) among poor people but did not provide further explanations for this incident among poor people who are mostly black South Africans.

Results from all studies could not be pooled based on the fact that the study designs and sample populations differ significantly. Moreover, the use of various variables as dimensions of health inequality presents a core challenge in measuring health inequality among minority groups in South Africa given that fact that observed indices in one social/racial group might be different and not visible in another racial group. Although there was consensus regarding the existence of health inequality and its social determinants in South Africa, fitting the variables used in original studies was quite challenging since methodologies and datasets differed greatly and could hardly be quantified.

Given the fact that only literatures and articles which mentioned health inequality and factors that influence inequities in health in South Africa were selected, it limited the scope and sample size. While this review applied a rigorous selection / inclusion process, the major limitation is the fact that due to time constrain and protocols regarding copyright/ permission for use of most print materials, most print materials and unpublished national surveys within the context of health inequality were excluded.

Out of all the studies, the most frequently cited determinants of health were race, structural processes, poverty, income and geographical /residential location. In addition, gender, employment opportunities, socio-economic status, educational attainment, living conditions and medical insurance were mentioned. A regression analysis of studies revealed significant differences of ($p< 0.01$) in terms of selection of variables and methods as well as several perspectives on determinants of health inequality in South Africa. However, in spite of the heterogeneity across studies, the combined agreement/consensus

on the evidence of widening health inequality among (previously excluded or disadvantaged) black South Africans and poor people was 88%.

An evaluation of research methods, study samples and variables indicated that geographical location was significantly associated with health. However, 30% of the studies that were specific to particular provinces or conducted in the rural areas did not have the right mix of all racial/ethnic and socio-economic groups. Only those studies conducted with national data could perhaps, be said to have representative samples of all racial/ethnic groups. Most of the studies ignored rural-urban differentials in their conclusions and this factor alone, was considerably associated with the variability of health inequality among people of same race/ethnicity (blacks, coloureds and Indians) except whites.

Literatures that focused on analysis of policies and policy documents from 1994 till early 2000s found significant association between redistribution of wealth, social grants or increased income with variables like race, living conditions, sanitation, malnutrition (underweight, stunted growth), hunger, gender and age. Surprisingly, studies conducted in the context of policy analysis related, without clearly defined variables and sample population were significantly associated with determinants of health inequality among poor people, older people, children and women.
Neither studies using previously collected yearly national survey data or those using World Bank data revealed significant variances in their results. Studies using national survey data from 1994 to 2003 were significantly associated with socio-economic determinants of inequality while those from 2006 till 2014 indicated higher association with emerging trends (such as access to healthcare, mortality rates and prevalence of diseases among adults and children of all races/ethnicities) and the role of social processes as drivers of health inequality in South Africa.

Geographic location / racial residential segregation were also linked with major differences in health among black South Africans resident in Gauteng / rural or non – urban areas and that of coloureds in the Western Cape and those in other metropolitan suburbs. There were significant variations in health and socio-economic determinants or Estimates from blacks and coloureds that had lived longer or permanently in urban areas than those who lived in sub-districts, non-urban/rural areas or recently migrated to the suburbs for economic reasons.

Conclusions
The systematic review of literatures reveals what can be highlighted as follows: Evidence of health inequality among black South Africans, coloureds and Indians; analysis indicated 75% of black South Africans were more affected compared to coloureds and Indians.

Limited evidence of health inequality among whites; infants and older people Although the methods, variables and samples differed, the results of all analysed studies were similar and reinforced the notion that 21 years after apartheid and the introduction of social grants, health inequality exists in South Africa.

Heterogeneity and variances in methods and measured variables in analysed studies reflect lack of consensus on acceptable measures/indices of health inequality.

Poor research on inequality in health related issues among ethnic minorities beyond provincial and urban/rural differentials.

No significant variation in health was noticed among whites regardless of their provincial / residential location. Besides, the only apparent explanation might be the association between the socio-economic status of whites at birth and the apartheid rule which had favoured whites over blacks and coloureds and still continues due to structural processes that tend to replicate the apartheid system.

In terms of health inequality being associated with income, years after apartheid rule, the legacy lives on and reflects in wage structure which appears to follow existing racial lines by maintaining a higher remuneration for whites who have higher chances of being employed with return to education estimated at 43%, compared to their black counterparts with similar qualifications who settle for lesser wages due to low employment opportunities and approximate return to education as low as 7%. From the foregoing it is evident that using same demographics and given same opportunities/choices open to whites, inequality rates among Black South Africans reduced considerably. However, even though race, income and education score high as major influencers of health and health seeking behaviour, factors such as fertility rates, family background, religious/cultural beliefs and large number of children/ households tended to influence health (inequalities) amongst blacks (African descents and coloureds) at all socio economic levels compared to whites and Indians/Asians.

The implication of the observed trend of general inequality on health in South Africa is that between races, inequality exists, is on the rise and explains poor health outcomes, low access to health services and health seeking behaviours among racial groups. And, within sub populations, health inequalities among black South African population is highest compared to whites and Indians/Asians and has increased significantly post-apartheid. Moreover, health inequality within residential locations has increased resulting in rural areas being disadvantaged in terms of availability of health resources/personnel due to health workers migrating to the urban areas and inequity in provision of health services as well as financing by the government being channelled towards urban areas where migrants/workers with higher earnings live and are able to pay /utilise services.

The concepts of 'literacy rate (illiteracy)' and 'income/earning differentials ' amongst others, have been used by scholars to structure the challenges that characterise inequalities in South Africa which are direct results of limited opportunities and racial/ethnic discriminations brought about by the apartheid legacy. Some of the effects of limited opportunities and racial discriminations include illiteracy, poverty, poor living conditions, racial residential segregation, mental health, maternal and infant mortalities, low health insurance coverage, poor access to health services and medicines, discrimination in health settings, disparities in quality of treatments and infectious diseases. Much worse is the fact that beyond racial differences, illiteracy and low income limit socio economic development of minority groups, increases chances of them living in

poor conditions/unsafe vicinities where they are likely to pick up infectious diseases (faster than their more privileged counterparts who are born with better opportunities) and, in the case where they are able to access public health facilities, they are prone to experience disparities in treatment as well as other forms of discriminations in health settings.

The recent health inequality related protests by public health personnel and COSATU over the two-tier health system where tax rebates and other forms of government funding are channelled into the private health sector which services 8.5% of the population, majority of whom are whites compared with low funding of public health sector that caters for the health needs of over 43.8 million people who are mostly blacks. There are speculations that this trend in health inequalities represents a new form of economic apartheid where health affordability by the rich is being wielded as a weapon of oppression comparable to racial apartheid where whites oppressed blacks. Moreover, health inequalities in South Africa are divided not just along racial lines but by gender and residential areas. Within the racially disadvantaged groups, black women are more likely to be affected by inequalities in health. In addition, those in sub districts within metropolitan cities tend to face similar challenges as those in rural areas who patronise public health facilities . In addition, among the white population, White south African males over the age of 45 are the worst hit by socio economic inequalities given the fact that they are considered part of the old dispensation (apartheid system) therefore as the previously advantaged people, they are made to go without a lot of social benefits and make up the bulk of unemployed. Besides, rising cost of living appears to be the most difficult challenge faced by this group of South Africans who make up the larger part of unemployed whites.

Although a number of scholarly literatures have sought to identify socio economic determinants of inequalities in health among various racial populations in South Africa (Agatugba 2011 & 2012; Wakeford 2001; Keswell 2010; Gradin 2013; Bradshw et al 2008), studies that apply sociological perspectives, intersectional approach and particularly, cross national comparisons to this occurrences among minority groups in developed and middle income countries is mainly limited.

For example, Goesling & Firebaugh (2004) studied trends in international health inequality by comparing average life expectancy among 169 countries from 1980 to 2000. In addition, Beckfield et al (2013) examined cross-national variation in inequalities in health among 48 countries and found significant disparity in health inequalities by gender, migration status, education and income. The relative lack of sociological cross national studies on not just structural conditions but ideological support that influence health inequalities among sub populations in mixed race societies is a particularly major omission. Given the fact that applying a sociological approach to cross national studies typically would reveal how government policies, dominant values and social/health structures contribute to and sustain inequalities in health. It is in this regard, that the effort of this paper can be viewed and the systematic review of the empirical studies of health inequality in South Africa can be considered as a useful contribution to the comparative examination of social inequalities in health across different countries in Europe and other parts of the world.

References

Adato, M., Carter, M. R., & May, J. (2006). Exploring poverty traps and social exclusion in South Africa using qualitative and quantitative data. The Journal of Development Studies, 42(2), 226-247.

Ataguba J, McIntyre D(2009) Financing and benefit incidence in the South African health system: Preliminary results. Health Economics Unit, University of Cape Town Working Paper 09-1 2009.

Ataguba JE, Akazili J (2010) Health care financing in South Africa: moving towards universal coverage. Continuing Medical Education 2010, 28:74-78.

Ataguba, J. E., Akazili, J., & McIntyre, D (2011). Socioeconomic-related health inequality in South Africa: evidence from General Household Surveys. Int J Equity Health, 10(1), 48.

Ataguba, J. E.-O., & Alaba, O. (2012). Explaining health inequalities in South Africa: A political economy perspective. Development Southern Africa, 29(5), 756–764. http://doi.org/10.1080/0376835X.2012.730962

Bailey, S (2012). Measures of "Race" and the analysis of racial inequality in Brazil. Social Sci. Res. http://dx.doi.org/10.1016/j.ssresearch.2012.06.006

Beckfield J, Olafsdottir S, & Elyas B (2013). Health Inequalities in Global Context American Behavioural Scientist August 2013 57: 1014-1039, first published on June 26, 2013 doi:10.1177/0002764213487343

Bekker L (2009). An overview of HIV/AIDS in South Africa. Annual Review, Desmond Tutu HIV Foundation. Cape Town: Desmond Tutu HIV Foundation, 2009:6-7.

BENATAR, S (2013). The challenges of health disparities in South Africa. South African Medical Journal, [S.l.], v. 103, n. 3, p. 154-155, jan. 2013. ISSN 2078-5135. Available at: http://www.samj.org.za/index.php/samj/article/view/6622/4918 . Date accessed: 05 May. 2015. doi:10.7196/samj.6622.

Castro-Leal F, Dayton J, Demery L, Mehra K(1999) Public social spending in Africa: Do the poor benefit? World Bank Research Observer 1999;14:49-72.

Commission on Social Determinants of Health. Achieving health equity: from root causes to fair outcomes. Interim statement. Geneva: Commission on Social Determinants of Health, World Health Organization; 2007

Coovadia H, Jewkes R, Barron P, Sanders D, McIntyre D(2009) The health and health system of South Africa: historical roots of current public health challenges. The Lancet 2009, 374:817-834.

Coovadia, H., Jewkes, R., Barron, P., Sanders, D., & McIntyre, D. (2009). The health and health system of South Africa: historical roots of current public health challenges. The Lancet, 374(9692), 817-834.

Daynes S, Lee O (2008). Desire for Race. Cambridge University Press, Cambridge

De Maio F, (2007) Income inequality measures. J Epidemiol Community Health. Oct;61(10):849-52. Review. PMID: 17873219 http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2652960/

Demombynes, G., & Özler, B. (2005). Crime and local inequality in South Africa. Journal of Development Economics, 76(2), 265-292.

Erichsen, G. and J. Wakeford (2001) Racial Wage Discrimination in South Africa. Before and after the First Democratic Election, DPRU Working Paper, No 01/49, Development Policy Research Unit, University of Cape Town, South Africa.

Evans T, Whitehead M, Diderichsen F. et al Introduction. In: Evans T, Whitehead M, Diderichsen F, Bhuiya A, Wirth M, eds. Challenging inequalities in health: from ethics to action. Oxford: Oxford University Press, 2013–11.11

Foege W (1998). Global public health: targeting inequities. JAMA 19982791931–1932.1932 European Commission (2013). Health inequalities in the EU — Final report of consortium. Consortium lead: Sir Michael Marmot. Published by the European Commission Directorate-General for Health and Consumers. ISBN 978-92-79-30898-7,doi:10.2772/34426 http://ec.europa.eu/health/social_determinants/docs/healthinequalitiesineu_2013_en.pdf

Frye I, Farred G, & Nojekwa L (2008). Inequality in South Africa. unknown publication), website: http://www.osisa.org/sites/default/files/sup_files/chapter_4__south_africa.pdf.

Gakidou EE, Murray CJL, Frenk J:(2000) Defining and measuring health inequality: an approach based on the distribution of health expectancy. Bulletin of the World Health Organisation 2000, 78:42-54.

Gelb, S. (2003). Inequality in South Africa: Nature, causes and responses. Edge Institute.

Goesling, B, & Firebaugh G (2004). The trend in international health inequality. Population and Development Review, 30(1), 131-146.

Goldsmith H, Hamilton D, Darity W (2006). Shades of discrimination: skin tone and wages. American Economic Review 96 (2), 242–245.

Gradín C (2013) Race, Poverty and Deprivation in South Africa J Afr Econ (2013) 22 (2): 187-238 first published online September 3, 2012 doi:10.1093/jae/ejs019

Groenewald P, Bradshaw D, Daniels J, Matzopoulos R, Bourne D, Blease D. (2008) Cause of death and premature mortality in Cape Town 2001-2006. Cape Town: City of Cape Town, South African Medical Research Council, University of Cape Town

Harrison, D. (2009). An overview of health and health care in South Africa 1994–2010: Priorities, progress and prospects for new gains. Washington, DC: Henry J Kaiser Family Foundation.

Hirschowitz, R., Orkin, M., de Castro, J., Hirschowitz, S., Segel, K., & Taunyane, L. (1995). A national household survey of health inequalities in South Africa. Overview report.

Howson C, Fineberg H, Bloom B (1998). The pursuit of global health: the relevance of engagement for developed countries. Lancet 1998351586–590.590

Human Rights Watch. (2011) “Stop Making Excuses.” Accountability for Maternal Health Care in South Africa. Johannesburg: Human Rights Watch. http://www.hrw.org/reports/2011/08/08/stop-making-excuses

Human Rights Watch. “Stop Making Excuses.” Accountability for Maternal HealthCare in South Africa. Johannesburg: Human Rights Watch. http://www.hrw.org/reports/2011/08/08/stop-making-excuses

Keswell, M. (2010) ‘Education and racial inequality in post-apartheid South Africa’, in P. Attewell and K. S. Newman (eds), Growing Gaps: Educational Inequality around the World. Oxford: Oxford University Press

Labonte R, Schrecker T. (2011).The state of Global Health in a radically unequal World: patterns and prospects. In: Benatar S, Brock G, eds. Global Health and Global Health Ethics. Cambridge: Cambridge University Press, 2011:24-36

Leibbrandt M, Nicola B, Julia G and David L (2012) Education and Inequality: The South African Case. SADRU Working Paper Series Number 75

Leibbrandt M, Woolard I, Finn A (2010).Trends in South African Income Distribution and Poverty since the Fall of Apartheid. OECD Social, Employment and Migration. Working Papers, No. 101. Paris: OECD Publishing, 2010. http://dx.doi.org/10.1787/5kmms0t7p1ms-en

Leibbrandt, M., Finn, A., & Woolard, I. (2012). Describing and decomposing post-apartheid income inequality in South Africa. Development Southern Africa, 29(1), 19-34

Mackenbach J (2006). Health inequalities: Europe in profile. London: Department of Health.

Mackenbach J, Willem J, Anton K (2007). Economic implications of socio-economic inequalities in health in the European Union. Published by European Communities.

National Planning Commission (2011). National Development Plan Vision for 2030. Pretoria: National Planning Commission, http://www.npconline.co.za/medialib/downloads/home/NPC%20National%20Development%20Plan%20Vision%202030%20-lo-res.pdf.

Nattrass N & Seekings J (2001). " Two Nations"? Race and Economic Inequality in South Africa Today. Daedalus, 45-70.

Opinion Piece "Healthcare Inequality South Africa's New Apartheid – Vavi" October 30th 2014, SA breaking news. http://www.sabreakingnews.co.za/2014/10/30/healthcare-inequality-south-africas-new-apartheid-vavi/

Özler, B. (2007). Not separate, not equal: poverty and inequality in post-apartheid South Africa. Economic development and cultural change, 55(3), 487-529

Ronelle B, Caryn B, Christelle G, Servaas B (2012) Have public health spending and access in South Africa become more equitable since the end of apartheid? Development Southern Africa Vol. 29, Iss. 5, 2012

South African Governmnet (nd) Health http://www.gov.za/about-sa/health

Statistics South Africa (2009) Living Conditions of Households in South Africa 2008/2009.

Statistics South Africa (2012). http://www.statssa.gov.za/

Statistics South Africa(2013) General Household Survey

Stuckler D, Basu S, & McKee M (2011). Health Care Capacity and Allocations among South Africa's Provinces: Infrastructure–Inequality Traps after the end of apartheid. American Journal of Public Health, 101(1), 165–172. http://doi.org/10.2105/AJPH.2009.184895

The world health report (2000). Health systems: improving performance. Geneva, World Health Organization, 2000

Wagstaff, Adam. (2002). Poverty and health sector inequalities. Bulletin of the World Health Organization, 80(2), 97-105. Retrieved May 15, 2015, from http://www.scielosp.org/scielo.php?script=sci_arttext&pid=S004296862002000200004&lng=en &tlng=en.10.1590/S0042-96862002000200004

Woolard, I. (2002). An overview of poverty and inequality in South Africa. Unpublished briefing paper, HSRC, Pretoria (living standards and ethnic inequality)

World Bank (2012). South Africa Economic Update: Focus on Inequality of Opportunity. World Bank, Washington DC.

World Health Organization (2006). Quality of care: A Process for Making Strategic Choices in Health Systems. WHO, France

World health organization" Fact file :10 Facts On Health Inequities And Their Causes" http://www.who.int/features/factfiles/health_inequities/facts/en/index9.html

Zeida R. Kon and Nuha Lackan. Ethnic Disparities in Access to Care in Post-Apartheid South Africa. American Journal of Public Health: December 2008, Vol. 98, No. 12, pp. 2272-2277.doi: 10.2105/AJPH.2007.127829

Zere E, Moeti M, Kirigia J, Mwase T, Kataika E(2007) Equity in health and healthcare in Malawi: analysis of trends. BMC Public Health 2007, 7:78.