Equity in Self-reported Adult Illness and Use of Health Service in South Africa: Inter-temporal Comparison

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ABSTRACT

The study was carried out to assess the magnitude of, and change in, inequities in self-reported adult illness and use of healthcare and to consider the policy implications of the findings. Datasets from three household surveys carried out in 1993, 1995, and 1998 were used. Inequities were measured using illness and healthcare-use concentration indices. Self-reported adult illness was greater among the rich in 1993, but this was reversed to reflect higher levels of reported illness among the poor in 1995 and 1998. Inequities were observed in self-reported injury and disability/chronic illness that favour the rich. The poor also reported more days of sickness compared to the rich. Overall, there were higher levels of use of doctors and hospital services by the rich, relative to their levels of reported illness. In contrast, there was a greater use of public-sector facilities by the poor. The time taken to reach a health facility also had a bias in favour of the rich. Although there were some favourable changes in the levels of inequities between the three time periods, there still remained considerable inequities that favoured the rich in self-reported adult illness and use of health services that need to be addressed. The consequences of higher concentration of chronic illness/disability and injury among the poor have far-reaching negative consequences on the socioeconomic welfare of the individuals and households. Redressing these inequities needs a holistic strategy that transcends the health sector.

Key words: Health equity; Inequalities; Adult health; Healthcare; Concentration index; South Africa

INTRODUCTION

Socioeconomic inequalities in health have featured high on the policy-making agenda since the 1980s, particularly after the publication of the Black report in the United Kingdom (1,2). Socioeconomic inequalities in health are pervasive in the developed world (3). For example, morbidity and mortality rates are higher among people with lower socioeconomic status as measured by proxy variables, such as education, occupational status, and income (4-8). In low- and middle-income countries, the evidence on socioeconomic inequalities in adult health is scanty (9). This is especially so in sub-Saharan Africa, where very few studies have been conducted in this area.

South Africa has emerged from decades of apartheid rule. The legacy of apartheid policies is typically characterized by the prevalence of high degrees of inequality in terms of income and access to resources. There are also high levels of inequality in health and development indicators among the different population groups (10). The post-apartheid government, which came to power in 1994, has taken several steps to redress these inequalities. While there has been little progress in addressing income inequalities, largely due to the neo-liberal macro-economic policy adopted by this government (11), the health department has made strenuous efforts to improve access to health services, particularly for vulnerable groups. Further development of primary care services has been given priority. In relation to improvements in geographic access, post-1994 initiatives include: a clinic-upgrading and building programme; recruitment of foreign doctors to work in currently-underserved areas
through bilateral agreements; and introduction of a year of compulsory service for medical graduates in underserved areas. Introduction of free care at all public-health services for pregnant women and children aged less than six years and free primary care services for all South Africans are important in addressing financial access issues. In addition to these health-sector initiatives, the right to access healthcare that is enshrined in the 1996 Constitution's Bill of Rights is of considerable socio-political importance (12). An empirical assessment of the likely impact of these policies and interventions is highly important to generate the required evidence-base to inform policies aimed at improving the well-being of the disadvantaged majority.

This study had dual objectives. First, it attempted to quantify inequalities in self-reported adult illness, which are accounted for by differences in socioeconomic status, and second, it assessed inequalities in care-seeking and type of provider used, conditional on having reported sickness. The analysis included data from three time periods that are sufficiently apart from one another to identify trends in these indicators. In line with Whitehead's definition of equity (13), we regard inequalities in health that are systematically related to one's income status as inequities as they are potentially avoidable through the implementation of appropriate policies and interventions.

| Table 1. Illness and healthcare-use variables in household surveys |
|-------------------------|----------------|----------------|----------------|
| Ill health | | | |
| Acute illness | √ (2-week recall) | √ (4-week recall) | √ (4-week recall) |
| Injury | | √ (4-week recall) | √ (4-week recall) |
| Disability/chronic illness | | √ (no recall period specified) | √ (6-month recall) |
| No. of days sick | √ | | |
| No. of days off work | √ | | |
| Healthcare use | | | |
| Care sought for reported illness | | √ | |
| Type of care sought | | | |
| Doctor | √ | | |
| Public primary healthcare facility | | | |
| Public healthcare facility | | | |
| Hospital | | | |
| Any form of hospitalization | | | |
| Time to reach health facility | | | |
| Time to get treatment | | | |

MATERIALS AND METHODS

Source of data
For this analysis, data were derived from the Living Standards and Development Survey (LSDS) of 1993 and the October Household Surveys (OHSs) of 1995 and 1998. The LSDS 1993 was based on a sample of 8,848 households, which consisted of 40,284 individuals. The survey was designed to collect information on household welfare and behaviour and to evaluate the effects of various government policies on the living conditions of the population using a multi-topic questionnaire. The OHS 1995 and 1998 were annual sample surveys of South African households, which were also based on a multi-topic questionnaire that included questions relating to household welfare. The OHS 1995 and 1998 had sample sizes that were in excess of 20,000 households. The illness and healthcare-use variables incorporated in each of these surveys are summarized in Table 1.

There are differences between the surveys, particularly between the LSDS 1993 and the OHS 1995 and 1998 in some variables collected. All the surveys requested information on self-reported acute illness and whether or not care was sought for this illness. The LSDS 1993 used a two-week recall period, while the OHS 1995 and 1998 used a four-week recall period. Where relatively comparable data were collected in all the surveys, trends
in these variables were analyzed to assess the possible effects of recent policies. Where variables were only included in one survey, they were analyzed to provide insights into the nature and extent of inequalities. Limitations of the analysis due to these differences were noted where relevant.

**Measurement of ill health**

As this study depended on self-reported illness, it is important to consider the strengths and weaknesses of self-reported illness as a measure of morbidity.

Measures of self-reported illness are subjective, depend upon the recall period used (2-4-week recall span), awareness of respondents about pathologic conditions (9,14) and are highly influenced by transitory factors (9). Household survey interviewees tend to respond not only to the underlying health condition, but are also influenced by whether or not they perceive themselves to have a health problem and whether or not they regard the problem as sufficiently serious to report it (15).

It is assumed that, due to a greater concentration of illness among the poorest, what is self-reported as illness by the poorest is mostly more severe than what is reported by the economically better-off, which is likely to distort findings of health inequality (16). Individuals who have lived all their lives with frequent bouts of severe malaria or intestinal parasites may not report a mild episode of malaria or the presence of visible helminths as an illness, thus resulting in the under-estimation of the volume of illness. This may perhaps explain why a higher rate of self-reported morbidity was observed in the United States than in India (17). As Sen has aptly put it, a person living in a disease-endemic area and having no knowledge of other places and experiences may consider the suffering to be part of life rather than viewing it as avoidable through preventive and curative interventions (18). This implies that caution needs to be exercised when using self-reported illness in a cross-sectional analysis, especially when the subjects are of diverse socioeconomic and cultural backgrounds.

The subjective nature of self-reported measures of health should not, however, be over-emphasized to discount their use. Some studies observed a high correlation between the perceived assessment of one's own health and objectively verifiable health problems and survival (19). In addition, objective measures of health also have their own limitations. A study in Ghana found that only 1 in 15 of those who reported lower-back pain were confirmed objectively (20). Objective measures are, thus, deficient in the sense that they cannot capture the multidimensional nature of ill health. From the sociological perspective, it is argued that self-reported illness represents well-being of an individual more than an objective, medically-confirmed disease (6).

Self-perceived illness also has major effects on the use of health services, and has, thus, important implications for policy (21). If people perceive themselves as ill (even if objective tests may indicate to the contrary), then, *ceteris paribus*, there is a greater likelihood of them seeking care. On the other hand, even in the presence of objectively verifiable illness, people may not seek care unless they perceive it as illness. In a system where consumer choice is valued, it is the patient's rather than the health professional's opinion that counts more in decisions on whether or not to consume and pay for health services (22). Thus, the role of self-reported illness/health status in planning of health services is highly important.

By and large, both subjective and objective measures have their own strengths and flaws. With respect to the subjective measures, the differential reporting of illness experience is likely to confound the presence of actual inequalities. In some instances, it may obscure part of the objective inequalities while in others it may inflate observed health inequalities (23).

**Measurement of inequities**

The concentration index proposed by Wagstaff et al. is used for measuring income-related inequalities in self-reported illness (acute, chronic/disability and injury) and in care-seeking and type and place of care sought, which are regarded as inequities as they are systematically related to position of an individual in the socioeconomic hierarchy (24). The illness concentration index is computed from the ill health concentration curve, which is depicted in Figure 1. An illness concentration curve plots the cumulative proportions of individuals ranked by their income status against the cumulative proportions of self-reported illness.

The concentration index is twice the area between the illness concentration curve ($L(S)$) and the diagonal with values ranging between $+1$ and $-1$. A negative illness concentration index indicates that there is a higher burden of illness among the poorest, whereas a positive value implies the opposite. If illness is distributed equally, the concentration curve overlaps with the diagonal and the value of the concentration index is zero.
On individual-level data, the concentration index, is computed as follows (25):

$$C = \frac{2}{n \mu} \sum_{i} x_i R_i - 1$$  \hspace{1cm} (1)

Where,

$x_i (i = 1, \ldots, n)$ is the ill-health score of the $i^{th}$ individual;

$\mu$ is the mean level of health; and

$R_i$ represents the relative rank of the $i^{th}$ person. The individuals are ranked according to their socioeconomic status beginning with the worst-off.

To enable statistical inference, a standard error for the concentration index can be computed using a convenient regression as follows (25):

$$2\sigma R\left(\frac{x_i}{\mu}\right) = \beta_0 + \beta_1 R_i + \mu$$ \hspace{1cm} (2)

In equation 2, $\beta_1$ is equal to the concentration index.

The concentration index takes into account the socioeconomic dimension of health inequalities and, thus, focuses on those health inequalities that are amenable to policy interventions. Furthermore, it reflects the experience of the entire population rather than two extreme groups on the socioeconomic scale as is commonly seen in rate-ratios. However, the concentration index has some limitations. First, since it is a relative measure independent of the absolute levels of both illness and income, it may yield the same value for two populations with different actual health gradients across socioeconomic groups. As we are analyzing the differences between socioeconomic groups within a single country, this methodological concern is not a limitation for the current study. Second, its computation may not be easily accessible to policy-makers (26).

In the adult population which, in this case, is operationally defined to include those who are aged 18 years and above, the assumption of a fairly similar risk of illness may not be tenable as the age range is wide. Thus, it is necessary that the concentration indices calculated take into account the confounding effect of age and gender. This is done by means of the techniques of direct and indirect standardization.

In this study, the indirect method of standardization was used as the study draws data from individual level. This was done by means of running a binary logit model, where the dependent variable, self-reported illness—acute, chronic (disability), and injury—was regressed against age and gender and retaining the predicted values from the regression. The resultant standardization implies that the degree of illness of a person is replaced by the degree of illness suffered, on average, by persons of the same age and gender (25). The difference between the non-standardized and standardized concentration indices measures the extent of avoidable inequalities in self-reported illness, that is:

$$I^* = C_M - C_N$$ \hspace{1cm} (3)

where,

$I^*$ = a measure of avoidable inequality;

$C_M$ = non-standardized concentration index; and

$C_N$ = standardized concentration index

$I^*$ takes negative values if there are greater levels of avoidable illness among the poor, and positive values if there are greater levels of avoidable illness for the rich (25).

Following van Doorslaer et al. in measuring inequity in the use of healthcare (27), the use concentration indices were computed. The focus in this case was on horizontal equity, where people in an equal need of care were to be treated the same, regardless of their income status. The method compares the concentration curve for actual use of healthcare with the concentration curve expected on the basis of need. The expected use is derived through the technique of indirect standardization. This was also done by running a logit regression of the dependent variable—use of healthcare—on need indicator variables. In the case of the LSDS 1993 data, the indicators of need considered were age, gender, and reported sickness. Since the OHS 1995 and 1998 data had more categories of self-reported illness, use was regressed on the following need indicators: age, gender, self-reported acute sickness (four weeks or less), disability (chronic) (of more than six months duration), and injury.
The predicted use from the above regressions gives the need-expected use of healthcare, i.e. use after taking into account the need for healthcare. The Wagstaff-van Doorslaer index of horizontal inequity ($WVHI$) was then computed as the difference between the non-standardized use (i.e. unadjusted for need) and the need-expected use, i.e.:

$$HII_{WY} = C_M - C_N$$

where,

$C_M$ = medical care concentration index unadjusted for need; and

$C_N$ = concentration index for need, that is indirectly standardized medical care

A positive value of $HII_{WY}$ indicates horizontal inequity favouring the rich, whereas a negative value implies horizontal inequity favouring the worse-off. This is shown diagrammatically in Figure 2.

In Figure 2, the medical care concentration curve $L_M(R)$ depicts the distribution of medical care by income. $L_N(R)$ represents the need-adjusted medical care concentration curve. The value of $HII_{WY}$ depends on the size of the area between $L_M(R)$ and $L_N(R)$.

**RESULTS**

**Inequities in self-reported illness**

The LSDS 1993 data indicated that, when using self-reported illness which has not been standardized for the confounding effect of age and sex, the rich reported themselves sick more frequently than did the poor (Table 2 for concentration indices). However, given its age and sex composition alone, the poor would be expected to report more sickness (negative standardized concentration index). The difference between the non-standardized and standardized concentration indices, denoted as $I^*$, indicates that there was statistically significant avoidable excess self-reported illness in the rich. However, data of both OHS 1995 and 1998 have values of $I^*$ which were negative, thus signifying that there was avoidable excess self-reported ill health among the poor.

The standardized LSDS 1993 data indicated that not only did the poor report more ill health than the rich, they also reported more days of sickness and spent more days out of work than the rich. This issue could not be evaluated in later years as the OHS did not include a question on the number of days sick or out of work.

Another dimension of health assessed in the OHS 1995 and 1998 was self-reported injury. While the OHS 1995 data did not show any statistically significant difference in avoidable self-reported injury between the richest and the worse-off, the OHS 1998 data revealed significant avoidable excess injuries among the poor ($I^*$ was negative and statistically significant). Not only was a higher burden of self-reported injury borne by the poorest in society, but this inequality had increased substantially since 1995.

Measures of chronic illness/disability give a better understanding of inequalities in adult illness both in developed and developing countries (29). Comparison between the OHS 1995 and the OHS 1998 was difficult because of the differences in framing the disability questions in the two surveys. However, in both the time periods, there were avoidable excesses of disability among the poor.

**Equity in access to, and use of, health services**

As seen above for self-reported illness and injury, the concentration indices for use also revealed marked inequalities that sometimes favoured the poor and at other times the better-off (Table 3). All the sets of questionnaire in the household survey included a question about whether or not a person sought care, conditional on having reported an illness. The LSDS 1993 data produced an index of horizontal inequity ($HI_{uv}$) that showed highly significant use of greater healthcare by the poor, relative to the illness that they reported. The OHS 1995 data also revealed horizontal inequities in seeking care favouring the disadvantaged, although the magnitude was much smaller. This was, however, reversed in 1998,
Other important points worth noting were issues of inequity relating to the use of primary care facilities. As may well be expected, the concentration index using the LSDS 1993 data for the use of public-sector primary healthcare services revealed horizontal inequity in favour of the poor. Hence, the poor made more use of these first-level services relative to their need. The concentration indices for both OHS 1995 and OHS 1998 data showed that the use of public-health facilities was greater for the poor than for the rich, relative to their respective levels of reported illness. The degree of horizontal inequity favouring the poor increased tremendously in 1998 compared to 1995.

One of the measures of access to healthcare is the time taken to reach a health facility to get treatment. The LSDS 1993 data indicated a highly significant concentration index, whereby the poor needed more time than the rich to reach a health facility to get treatment. However, there were no significant differences between the rich and the poor with respect to waiting time at the health facility to receive treatment.

### DISCUSSION

The results presented above showed that, overall, there were systematic inequalities in self-reported adult illness that were related to income status. In most instances, the inequalities were to the advantage of the rich. These were regarded as inequities, as they were related to one’s socioeconomic status and were avoidable given appropriate social policies and interventions.
Table 3. Healthcare-use concentration indices

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<tr>
<td></td>
<td>C(^\circ) (t-ratio)</td>
<td>C(^\circ) (t-ratio)</td>
<td>H(L_{WV}) (^{\circ}) (t-ratio)</td>
</tr>
<tr>
<td>Seek care</td>
<td>-0.1605 (-12.132)</td>
<td>-0.0003 (-1.228)</td>
<td>-0.1583 (-12.132)</td>
</tr>
<tr>
<td>Time to reach health facility</td>
<td>-0.1374 (-18.998)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Time to get treatment</td>
<td>-0.0142 (-1.539)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Use of doctor</td>
<td>0.0815 (5.376)</td>
<td>0.0001 (0.864)</td>
<td>0.0814 (5.370)</td>
</tr>
<tr>
<td>Use of hospital</td>
<td>0.0845 (4.680)</td>
<td>-0.0006 (-0.911)</td>
<td>0.0323 (4.760)</td>
</tr>
<tr>
<td>Use of primary healthcare facility</td>
<td>-0.1885 (-7.429)</td>
<td>0.0006 (0.885)</td>
<td>-0.2343 (-7.452)</td>
</tr>
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* Use concentration index (unadjusted for need)
† Use concentration index (adjusted for need)
†† Horizontal inequality measure

With respect to self-reported acute adult illness, although the finding using LSDS 1993 data of excess avoidable self-reported illness among the better-off appeared anomalous, it was in line with the findings of many other studies. Gilson and McIntyre, using rate ratios between the highest and lowest income quintiles, reported a similar finding in their study of equity in self-reported illness (11). In the same vein, Wagstaff, using the illness concentration index, reported the same for a number of developing countries, including South Africa (29).

This result does not conform to the commonly-held view that the poor fall sick more often than do the rich. It would be a mistake to consider low perceptions and, hence, reporting of illness as positive evidence of good health (18). As discussed earlier, self-reported adult illness may be influenced by a multiplicity of socioeconomic factors, including income and education, by previous experience with sickness, and by the recall period used in the household survey. It is expected that people with higher levels of education and previous experience with illness tend to report episodes of illness more frequently (30,31). Furthermore, people with no access to healthcare and scanty education on health issues can regard certain bodily conditions as inevitable and, thus, refrain from reporting them as sicknesses (18). Given the apartheid era of discriminatory social policies, this may be a plausible explanation in this case.

It is of considerable interest that the OHS 1995 and 1998 data indicated that there are statistically significant levels of avoidable excess reported illness among the poor. Furthermore, the strength of the avoidable inequalities increased markedly between 1995 and 1998.
This falls in line with expectation and common sense. While the change from excess reported illness for the rich in the LSDS 1993 to excess reported illness for the poor in the OHS 1995 and 1998 may be attributable to differences in the recall period between the LSDS 1993 and the OHSs, there are other plausible explanations that warrant consideration.

In particular, this finding may partly be related to changes in the political climate of the country arising from the process of democratisation and the installation of a government that upholds the welfare of the majority. The post-1994 period is marked by the formulation of a democratic constitution, including a Bill of Rights, which, among other things, guarantees the right of access to healthcare. The social context in which one lives heavily influences self-perception of health and illness (26). The constitution also allows for the development of a patient's charter. Shortly after the constitution was adopted, health NGOs embarked on a 'Health Rights Charter' campaign. This campaign, through the extensive consultation process involved in drawing up the Charter and the widespread dissemination of the draft Charter, has engendered a greater understanding of constitutional health rights and duties and responsibilities of individuals and communities (12). These political developments and civil society actions may have increased the awareness of the poorest that the diseases they are suffering from are not a normal part of human life and that they are avoidable through various interventions—curative and/or preventive.

Furthermore, an increased access to healthcare by the poorest may also increase the likelihood of reporting an illness, as people are aware that they can do something to address it. There is substantial evidence that, in countries that provide more education and good health services, people are in a better position to perceive and report their illnesses (32). The achievements in healthcare in South Africa in the post-1994 period may perhaps explain the trend. For example, between 1994 and 1997, 393 new clinics were built mainly in rural areas, thus increasing physical access to services (33). Furthermore, Cuban doctors were recruited to fill up posts mainly in under-served areas which meant an increased availability of services. The introduction of free public-sector primary care services in 1996 had also improved financial access to these services.

It is likely that a combination of these factors has contributed to the change in patterns of reported illness since 1993. What can be said with certainty is that there is convincing evidence that poor South Africans bear a greater burden of ill health. The LSDS 1993 data further indicated that the poor reported more days of sickness than the rich. This suggests that the poor report a sickness when it is in its advanced stage. Furthermore, the poor spend more days out of work compared to the well-off.

The implications of this have to be considered seriously, as the opportunity cost in terms of forgone earnings is very high to the poor. As may be expected, the longer time of sickness and days out of work that the poor experience are likely to result in aggravation of their economic disadvantage. The maintenance of the health status of the poor should, thus, assume centre-stage in poverty-reduction programmes that are aimed at improving the living conditions of the poor. Similarly, health equity policies need to have a comprehensive approach as the consequences of inequities in health are multidimensional and touch upon many areas of individual and household welfare.

It is unfortunate that the OHSs do not measure days of illness or days when the ill person is unable to undertake normal activities. If, as argued above, perceptions and reporting of illness have changed due to sociopolitical changes and improved geographic and financial accessibility of health services, it is possible that poorer South Africans seek care at an earlier stage of their illness. This may already have a positive effect on addressing the impoverishing effects of illness among the poor population.

The findings also indicated that there was a higher prevalence of self-reported injury among the poor than among their rich counterparts, even after controlling for the confounding effect of age and sex. This is in line with studies from the developed world, which have also demonstrated higher rates of injury among those of lower socioeconomic status (34). This may be a result of community-, household-, and individual-level factors. It may imply that the poor live in environments that are accident-prone and where there are high levels of crime and violence. These possible causal factors may, in turn, depend upon the socioeconomic circumstances of individuals, households, and communities that are beyond their control. However, these hypothesized explanations need further probing in future research.

Self-reported chronic illnesses/disabilities also showed a higher concentration among the poorest. As these are long-standing illnesses that may limit the
productivity of an individual, their role in deepening existing poverty levels cannot be underestimated. This problem may pose a real threat to efforts of government to improve the socioeconomic conditions of the poor and to break the vicious circle of poverty and ill health.

With respect to use of healthcare, the initial pattern of the rich not seeking healthcare as much as their health status (need) warrants (1993) changes to one where it is the poorer groups which seek less care relative to their need (1998). This, however, does not necessarily imply that the rate of use by the poor has declined. It may well mean that the use-rate of the rich has increased. It should also be noted that actual use is compared to the use expected based on need, which, in turn, is based on self-reported illness. Given that there was likely under-reporting of illness by the poor in the early years of this evaluation, their actual use would have appeared high relative to self-reported need for care. The trend in self-reported illness outlined previously, thus, contributes to the trend in horizontal inequities in the use of services. It also has to be emphasized that since seeking care is not specific of provider type, seeking care from a traditional healer and from modern healthcare providers are combined, making this non-specific indicator less reliable.

In relation to the use of services by specific provider type, the poorest have less access to services of doctor in all datasets, except OHS 1995. This is not entirely unexpected, given that the majority of doctors work in the private sector in South Africa and that general practitioners, and even some specialists, are the first-line providers for high- and upper-middle-income groups.

The consistent finding of relatively greater use of public-health facilities by the poor suggests that government resources are appropriately targeting the poorest. This finding is in line with empirical studies from Indonesia, which indicates that subsidies to primary healthcare centres provide the best way of reaching the poor (35). The focus of the post-apartheid government on primary care services, as evidenced by the aggressive clinic-building programme and introduction of free primary care services is, thus, a step in the right direction.

Finally, the analyses presented in this paper indicate that the poor need more time to reach a health facility where they can get treatment. This depicts a supply-side problem; it indicates the presence of physical barriers to access. This, however, reflects the situation prior to the change of government in 1994. It is expected that this problem has been addressed to some extent since then through initiatives, such as the extensive clinic-building campaign and the recruitment of doctors from foreign countries.

Findings of this study indicate the usefulness of measuring the extent of inequities within a country and monitoring changes over time, particularly to evaluate the likely impact of key policies. Although the use of self-reported illness has some limitations, this study highlights a number of methodological and policy-relevant issues.

From a methodological perspective, this study highlights the importance of using age-sex standardized data in analyses of health equity and of using measurement techniques, such as concentration indices, which evaluate the illness experience of the full range of socioeconomic groups. Previous South African studies, using rate ratios and non-standardized data, have consistently reported higher levels of ill health among the rich (11). This pattern was also found in the present study when non-standardized data were used. However, when the data were standardized for the confounding effects of age and sex, it was clear that the poor were indeed bearing a greater burden of ill health in South Africa.

Another methodological issue highlighted by this study is the importance of careful design of household survey questionnaire to allow for the monitoring and evaluation of policy interventions. In particular, it is important to use consistent recall periods for reported illness and use of healthcare in surveys conducted at different times. It is also valuable to include questions relating to geographic access to health facilities to evaluate policies that are being implemented to address this issue. Questions on the number of days that a person is sick and unable to undertake normal work are critical to assess whether the vicious cycle of poverty and ill health is being impacted upon by health and other policies.

Findings of policy relevance include the potentially important influence of the sociopolitical context on perceptions of illness. There are also indications that government policies to improve the geographic and financial accessibility of health services are bearing some fruit, although the absence of key variables in more recent surveys have limited the comprehensiveness of evaluation of the feasible impact of policy. Of considerable importance is the finding that government resources, at least at the primary care level, are
appropriately targeted to disproportionately benefit the poor. However, the considerably higher use of hospitals (unfortunately not disaggregated into public- and private-sector facilities) requires further investigation to assess whether this relates to excessive use by the rich, or barriers to accessing hospital services for the poor. This is important in evaluating whether government resources for hospitals are being appropriately targeted. The relatively high use of doctors by the high-income groups, which is related to the heavy concentration of doctors in the private sector, is also of policy concern. There is a growing recognition that ways need to be found to draw on these human resources to serve a greater proportion of the population, given that less than 20% of the population have routine and secure access to private-sector services (36).

Although the trend analysis presented in this paper indicated some positive aspects of post-apartheid health policies, this study also highlights that substantial inequities in self-reported illness, injury, disability, and use of services favouring the rich continue to exist in South Africa. Redressing these inequities will take considerable policy effort and will require that policy interventions be not restricted to the health sector.

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