

# A QUALITATIVE STUDY OF FACTORS SURROUNDING HIGH MORTALITY IN NIGERIA

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## ABSTRACT

This research centers on the issue of mortality in Nigeria. A qualitative method was employed. Therefore, community members and professionals were interviewed. Observations and field notes were also used to corroborate the findings. The results shows that crime, lack of healthcare system, and poverty were among those issues that socially contribute to high mortality in Nigeria.

**KEYWORDS:** Mortality , crime, lack of healthcare system, and poverty in Nigeria

## INTRODUCTION

Several authors including Achebe, Soyinka, and Gebert (1) yielded some evidence suggesting that lack of sound leadership contributed to a number of issues in Nigeria, particularly the issues of mortality. Soyinka asserted that: poverty, high mortality, poor health care, poor economy, high criminal activity are some of those issues rooted in lack of leadership (2). Focusing on the issue of mortality, Nigerian's average life expectancy projection was 46, in 2004.(3). Mortality rate is an equation based on population, birth rate, and the probability of living from birth to a certain age, says Oeppen and Vaupel(4).

Compared to other countries, 46 is 30% below world average. In the United States for instance – retirement age starts from 62 based on standard projected by social security administration, a government agency that oversees retirement benefits.

Efforts were made to locate the mortality history of Nigeria from well-grounded source. The search engine, Google, was used to develop composite mortality record. As a result, one might ask to what extent is such an issue brought to the forefront for debate on a national level. To that end, one might also ask to what extent are people of Nigeria attentive to their own mortality?

High mortality is critical to the human race. And dismissal of such matter could suggest negligence, lack of concern for legacy, which is a threat to civilization. This is however not the basis of this study. Therefore, only those factors contributing to high mortality in Nigeria will be explored, not why such matter appears to have been treated nonchalantly.

The deaths of three well-known Nigerian leaders serve as notable examples: Chief MKO Abiola, a businessman, politician and philanthropist who died at the age of 60. Tai

Solarin, an educator and social activist died at the age of 70. Fela Anikulapo Kuti, a well-known musician died at the age of 58. These public figures were considered affluent and were able to afford healthcare both locally and abroad. Tai Solarin is considered an exception because he spent many years in Britain and lived a simple life-style based on how he interacted with the social and political issues in Nigeria. For example, he was one who was noted for purchasing ergonomic furniture, had one wife, planted his own tomatoes and ate in the same dining hall with his students at Mayflower, at Ikenne-Remo, in OgunState . Based on the aforementioned, some Nigerians refer to him as an odd character. But, whether or not his life-style contributed to the number of years he lived is a question worthy of exploration in a different research. It is noteworthy also that the aforesaid leaders died for different reasons. Though not a verifiable fact, it was suggested that the cause of death of these leaders ranged from Acquired Immune Deficiency Syndrome (AIDS) to political assassination. The cause of death of these citizens could have been verified via autopsy, but such a measure has yet to be implemented in the Nigerian health system.

In considering factors underpinning high mortality in Nigeria, the three areas evaluated in this study are: poor or no health care, high poverty and high crime. Other factors, however, such as lack of electricity, were found to impact the quality of life in Nigeria.

The following terms are defined to state the parameters of this research. It should be noted that although these terms are drawn from other well-grounded studies, they have however been modified for applicability to the population under study:

- **Basic need:** this concept has been heavily researched in western psychology. From this, hierarchy of need was coined (5). However, the western definition would not be appropriate in under-developed societies, such as Nigeria. From talking to the local citizens, the definition of basic need is therefore enacted from this field interviews as: food, clean water, access to free or affordable health care, uninterrupted electricity, and safety.
- **Laissez-faire leader:** generally employ a hands-off approach. In this framework, the leader gives little or no direction (6). It is common for this approach to result in futility. Another school of thought, namely Blake and Mouton (7) offers a description in the same premise.

They seem to be describing a laissez-faire leader in their study of the impoverish style, which is typified by lack of concern for members and lack of concern for result. It was suggested that this approach is likely to result in futility.

- Leadership is influence (8) and involves challenging the status quo (9). According to Fullan, (10) the primary role of a leader is to support its members to achieve higher level of morality.
- Poverty: this is a concept drawn from economy, values, and political influence, which varied by country (11). Nigeria, the country in question is yet to project a threshold of what it means to fall above or under the poverty margin. In a New England Journal, US census and socioeconomic class were taken into account, in which the majority falls in middle class (12). In the absence of socioeconomic categorization, poverty is based on have and have-not. That is, the degree to which an individual or group has basic needs.
- Professional ethics is a set of rules, values and moral code guiding a discipline and its associates (13).

## METHODOLOGY

Qualitative method was the design used in this research. And, convenient sampling technique was espoused. In Fraenkel and Wallen (14), a qualitative approach is used to study trends and discover new phenomena, through interviews and observation of the group under study in their naturalistic setting. They noted further that it could be comprised of: researcher observation, note taking, and follow-up interviews serving as triangulation in which observed data is correlated with field notes and interviews. These three approaches were employed to increase reliability and validity, which was concerned with consistency and accuracy.

One of the benefits of employing a qualitative design is that it lends itself to the possibility of illuminating factors that may not be otherwise unraveled in a quantitative driven research (15). As well, convenient sampling technique is beneficial in terms of participants' willingness to participate in the study. Furthermore, lack of pre-existing data to draw from necessitated this approach. On this note, this researcher conducted series of field observations of, and interviews with the Nigerian people, involving both groups and individuals, over a period of three months between February and May, 2011.

The goal for this study was to identify some factors surrounding high mortality in Nigeria. In conducting this study, it was gathered that the issue of mortality is country specific, making it a complex, yet a sociologically relevant issue. The following underpinnings: healthcare, crime, and poverty were identified to be directly related to high mortality in Nigeria. It should be noted that this list includes only a few factors, and should not be considered as the only issues that contribute to high mortality of the population. The result section provides greater illustration.

Crime-related data was collected through interviews with a police officer and a police man in two precincts-one inner city and one rural-about one hundred miles apart. A cursory

review of recent, local, and unpublished crime statistics was presented but not released to the public domain. Insights into the circumstances concerning healthcare problems were provided by three hospital staff, namely: two nurse practitioners and a medical doctor. Furthermore, two pharmacies were observed, and two of its sales clerks were interviewed. All participants were interviewed and/or observed individually.

A sociology professor was interviewed about the general issues of poverty and about a humanitarian perspective on mortality. He asserted that the issue of high mortality in Nigeria was complex because it was not only an economic issue, but also a "political and systemic" issue. He went on to describe the disturbing and inhumane living conditions in some areas of the country, to include housing and lack of basic needs (20) These conditions were then substantiated during the interview of a woman, the ninth participant. The subsequent subsections elaborate on these interviews.(21)

## DATA COLLECTION PROCEDURES

A qualitative design was chosen so that the subjects are studied in the naturalistic setting. This means, observations are documented and correlated to interview response. That said; the data in this study was collected from observations and interviews with participants. Notes were taken during and immediately after this researcher met the participants; clarifying questions were drawn, followed by informal interviews. The collection of notes taken from this experience, few publications, related issues projected by British Broadcasting Corporation (BBC), Nigeria Television Authority (NTA), and other local news were also taken into account.

## PARTICIPANTS

Literature review pertaining to mortality seem to have generally employed a quantitative approach and have looked at the issue predominantly from a medical angle, which seem to have left a void. That is, the lack of knowledge of social issues that also confound mortality. Some of those other studies made an auxiliary claim that community members may better shed light on some of the issues that a quantitative and medical research would have left out. To that end, community members that were willing to provide an input were interviewed for this study. Hence, convenient sampling was used and it includes a total of nine people. They are: two nurse practitioners, a medical doctor, one policeman, one police officer, two pharmacy sales clerk, a sociology professor and a 38 years old unemployed mother. Based on espousing an qualitative design, context, that is observations are also considered in the results.

## DELIMITATION

Nigeria is considered one of the developed countries in Africa and has the largest number of educated citizens (16). As of 1993 and 1994, there are approximately 145 colleges and universities in Nigeria (17). Since the 1990s, the number of newly established private colleges is around a hundred. Yet, the country seems to exist as an under-educated society. For example, the country's leadership, its citizens, its values and its political system remain under-researched or wrongly educated, based on Amos Wilson's argument. In his book

entitled: *Blue Print for Black Power*, he claimed that education ought to be cultural specific, that is, societal based. On this note, he wrote:

“Cultural continuity is maintained by educating children in the ways of their culture. And they are educated in the ways of their culture to MAINTAIN their culture, to advance its interests, and ultimately to try to maintain its very survival. That is the fundamental reason people are educated. What does it matter if you learn physics and computer science and everything else and you cannot defend yourself against a military assault by Europeans or a germ warfare assault? A knowledge of computer science, a knowledge of law, a knowledge of all of these other things matters not at all if you are unable to use that knowledge for your self-defense.” (18)

He further stated that as long as we are not educated to pay attention to the very essence of our survival, then we are being incorrectly educated. Simply put, intelligence must be defined in terms of the degree to which it solves the problems of the society in question.

The limitation of this study was based on the absence of preexisting research on mortality and factors surrounding it, which could be attributed to a lack of education on societal problems (19) Therefore, corroboration with other findings was not possible.

### Assumptions

It was assumed that a qualitative method was ideal for this subject matter, which has been under-researched, and has different connecting components. To name a few, it includes healthcare, lack of basic needs and crime, which were investigated through interviews and observations at two law enforcement offices, a hospital and a small town clinic. It was assumed that three months was enough time to collect the data for this study. Moreover, it was assumed that this study would aid leaders and individuals towards asking those questions that could lead to transformation.

### Bias

This researcher is a native of Nigeria. I lived in Ondo and Lagos state from birth through my teenage years. Therefore, I am not without some knowledge of the country's economic and social shortcomings. For the last 15 years, I have lived in North America and was fortunate to visit Nigeria twice.

This researcher's bias came from losing a family member that would be considered middle age. The reaction of the people closer to the incident compelled the question concerning mortality rate of the Nigerian people.

## RESULTS

### Healthcare

One of the nurses told the story of how diseases spread in the facility due to reuse of supplies. The second nurse, who started as an auxiliary nurse at a different hospital, explained the challenges of electric outage and how that puts patients' lives at risk.(22). From the medical doctor's perspective, the

issue of healthcare in Nigeria is far from simple. He expressed that access to adequate medical equipment, is a major concern. He went on to explain that he has to refer patients to other hospitals for x-ray as the one they had at the hospital was out of service, which consequently slows down treatment process. More importantly, he mentioned that there has been instances when the clinic's ambulance was immobile, which seem to be a prevalent issue across many hospitals. Furthermore, he noted that in many cases, patients are brought to the hospital after a prolong use of traditional medicine later proved abortive. When asked to clarify what he meant by traditional medicine, he explained that people tend to use herbs, such as tea made from certain roots because it is generally inexpensive and can be bought in the market place. He stated that whether people knew what they were buying is questionable; so is the veracity of the healing process. The explanation was that sometimes, people who take herbal medicine and feel better over the cause of time tend to believe that it works, not knowing if the illness had simply run its course. The disadvantage, he emphasized, was that if patients suffering from something much more terminal were evaluated sooner by licensed healthcare professional, they would be treated, if not cured, sooner. In the same breath, he mentioned that he, however, understood that people may not seek healthcare treatment sooner because of affordability. And consequently, people die. He summed up his reaction to the question of the impact of healthcare on mortality in Nigeria by stating that it is a bigger problem that would require government's intervention (23) .

Access to healthcare is based on affluence. Healthcare professionals have limited medical equipment, which results in the reuse of needles, and gloves. This was according to a nurse practitioner of local clinic where at least 30 patients are seen on a daily basis. The nurse stated that this was also the case when she worked at a state hospital (24).

It appears that pharmaceutical companies and facilities are not inspected and monitored, thus, lacking accountability and leadership. In two instances, at different pharmaceutical stores, it was observed that medications that required refrigeration were kept on the shelf directly under the sun, even though the packaging was labeled "Keep Refrigerated." Perhaps, lack of attention to this important detail was due to inconsistent electricity. Those medications may have lost their potency; yet were being sold to the public.

During a field observation at a pharmaceutical store, it was gathered that there were instances when expired medications were sold, which could be due to lack of structure and professional regulation. It was observed that some medications were stored in a jar, with no label of its expiration. Prevalent is the issue of medications being disseminated by unlicensed people, with the title of sales person. In two instances, the sales people working in the two visited pharmacies only had high school education. They sometimes are expected by customers to know what medication to use to treat certain symptoms, even though they have no formal training in the field of pharmacy. When asked how do you know what to prescribe? The consensus between the two sales clerks was that they have seen many incidents where specific medication was used, which served as frame of reference. It was further learned that most people who come to buy medication from the pharmacy have

neither visited the hospital nor been prescribed a medication by a medical doctor. Due to poverty, they have no financial resources to seek professional help. Because they have no choice, they ask the sales person to sell them the medication that would alleviate the symptoms. (25) Though maybe cost effective, it also means inadequate medical intervention, which has resulted in death.

Other notable instances are times when medications were sold on the bus from plastic bags. The manufacturing and distribution of these medicines seem rather questionable on the basis that people selling them on the street appear to be under the age of 20, have no real concept of the ingredients in the medicine as well as have no professional training in diagnosing symptoms before selling the medication. It seems that the absence of regulation for the pharmaceutical companies and other medical facilities, such as hospitals and clinics, could be attributed to lack of accountability by a governing agency, which is inherently a lack of leadership.

### Crime

Most crimes seem to be linked to poverty. The police officer who participated in this study stated that a large number of criminal activities such as theft, armed robbery, purse snatching, and other like crimes, from his perspective, were due to lack of basic needs. He added that from his experience interviewing fugitives, he gathered that most thefts could be attributed to lack of basic need. That is, people steal to sustain their lives, especially when lack of food is involved. (26) Similarly, a policeman indicated that criminal activities that are reported to his station appeared to be rooted in economic and systemic issues. He further shared that most reported instances of theft could be easily curtailed if people had means for food and most importantly, employment. It was learned that what happens is that youth graduating from colleges and universities often could not find a job and, as a result, in order to survive, resort to robbery. (27) While records of reported crimes were shared with the researcher in both interviews by the policeman and police officer, a release to evaluate the document as part of this research was not granted. However, the consensus was that a better economic system would reduce crime.

### Poverty

Lack of basic needs is an indication of poverty. Food for instance, is basic, yet crucial on the survival scale. The sociology professor, referred to above, was asked to weigh in on the relationship between mortality and poverty. His first reaction was that citizens both in the inner cities and rural areas experience shortage of food, which was also tied to lack of money to purchase foodstuff. He included that the only difference between people in the inner cities and the rural areas was the ability to farm. That is, people in the rural areas were able to farm and survive on their crops. This is however not the case for people in most inner cities. He also explained that Lagos state, for instance, is not conducive for farming due to limited land availability and the density of the population, among other reasons (28).

As he delved more into this issue, he pointed out that clean water is a major, yet, a common issue for most people in Nigeria. Most common water source is the well. However, during the dry season, the land is dry, conversely the well water reduces drastically. Furthermore, he noted that the

affluent populations are able to afford water supply from the public works. In which case, the affluent use tank or put in place a form of reservoir, from which to access clean water (29) Others simply have no choice but to use stream and untreated water, coming directly from the ground. In a Vanguard (2010) publication, it was noted that such water, namely stream and untreated water, was linked to many cases of cholera, partly because people launder their clothes in the stream, while the same water is fetched for drinking, cooking and for other uses (30).

It was observed that electricity is one other issue that affects the quality of life in Nigeria, which is validated by the interview response in the healthcare section. Electricity is needed to run most home appliances, including an air conditioner. However, most people in Nigeria would say the electricity is not reliable and have come to accept this as a reality. The observable difference is that the affluent are able to afford a standby generator, while majority are not able to afford it. Even if a generator were affordable, the poor could not afford the gas needed to run it. Generator is not something people in the rural area conceive of because most of them have not experienced what it means to have electricity. This is another issue lacking oversight, in part, the energy company, namely, Nigerian Electric Power Authority (NEPA) lacked accountability and social responsibility given that several cases of power outage have been linked to patient death in the hospital, according to the nurse practitioner in this study.

Housing scarcity is a major issue, especially for people in big inner cities. Though prevalent, the ratio of homeless people in Nigeria is yet to be documented. According to the sociology professor, there is no governmental support for citizens to tap into nor is there a system of accountability for homeowners to improve the condition of the houses they lease out. For instance, a studio apartment averaging 400 square feet could be leased to a family of more than 4, according to the sociology professor. He added that to compound the issue of lack of homeowner accountability, there are large numbers of dilapidated houses that one would consider uninhabitable (31) Yet, people occupied them, even when it posed a danger to their well-being. In a field interview, a 38-year-old unemployed woman who lived in a dilapidated house at risk of collapse, was asked if she was aware of the danger she could be in as a result of living in a house built over a century ago and have major issues concerned with mold and overflowing latrine? She answered, yes! And further explained that she was left to take care of her 3 children after her husband had passed away in 2008. Furthermore, she highlighted that her limited financial assets or marketable skill to find a job confounded her ability to lease a different house, which made it a lost cause. Therefore, she had no option but to remain in the house, in spite of its condition. When asked if she had talked to the owner of the property, she indicated yes and added that the landlord said he was aware of the, for example, overflowing latrine among other things. But in order for him to do anything about it, the rent would be increased for other tenants and that she would be evicted for overdue rent. And, knowing that she would not be able to pay the past due, she had no option but to keep quiet, especially because there is no governing body to report the situation other than to go through the court system. The dilemma with that however is that she would not be able to afford a lawyer to take on the case, therefore, making it a lost cause (32)

## DISCUSSION OF FINDINGS

According to the findings, mortality is multi-factor. Strategies based on the categories of healthcare, poverty and crime, but especially healthcare, would offer an incremental improvement in quality of life, although it could take years or even decades for the effect to show. A starting point would be a comparison of the mortality rate of North America as well as other stable neighboring countries to Nigeria's rate. This may lead to such question as: what are the social, political and environmental conditions leading to Nigeria's high mortality rate? Then, when this question is answered, a strategy to improve those issues (either devised or borrowed) would need to be identified towards finding a solution. Furthermore, future study could employ a statistical approach to look for differences, if any, between different regions within Nigeria, to determine if there is a difference in the mortality rate within specific population, for instance a comparison of large city and small town.

This research is not intended to answer the question surrounding mortality in Nigeria as a whole. Rather, it is meant to serve as an entry point into burgeoning research that has various factors. It seems that such fundamental question, yet, that has greater implication, would lead healthcare providers, political leaders, educators and citizens to investigate what it would take to improve mortality in the country of Nigeria. Moreover, such issue would seem to require some degree of collaboration with healthcare providers, a few federal and government agencies, local law enforcement, farmers, and social service agencies.

On the basis that the factors learned to have contributed to high mortality, as explored in this study, are within the scope of political policy and leadership, the lack of governmental engagement on such issue suggests a hands-off leadership approach, which seems to have resulted in failure (33) Northouse (34) described this style of leadership as *laissez-faire*. On this note, a small-scale and practical alternative centered to the grassroots is suggested. Because this has been a long-standing issue, that seems not to have been brought to the forefront, a feasible and important strategy would be for individual citizens to take personal responsibilities to improve their health, limit crime and employ other strategies that would improve their mortality. This approach is deemed important as it necessitates education, starting from the home, school and to raising community awareness. Based on professional ethics, it seems that it would be imperative for healthcare providers to step in to raise community awareness, particularly in areas pertaining to health and wellness, disease control, diets, and nutrition among other things (35) While this is one approach to change, it would seem that such effort would have a lasting effect and reduce a fraction of those people affected by factors that individuals could control, even as mundane as appointing leaders that are concerned with the welfare of the people. Additionally, education system could be improved, that is, centered on social issues affecting Nigeria as opposed to Eurocentric pedagogy, that has little bearing on Nigerians' way of life. It is realistic to state that it would take years to see the result of any intervention, simply because it is a systemic and a long-standing issue.

## CONCLUSION

Based on what was learned from the interviews, it could be concluded that transformational leadership is needed. Based on the lack of attention to important social issue confounding mortality, the claim was made that the leadership of Nigeria could be described as *laissez-faire*. To this end, an intervention to consider, oblige the leaders to concern themselves with the citizens' welfare, which may necessitate a democratic approach (36) that is, reaching out to understand grassroots problems and by so doing reach a new understanding around a transformed political system, whereby healthcare is affordable and accessible to all, not just the affluent. Also important would be regulation of the pharmaceutical industry, agricultural program to ensure adequate provision of food - with this in place, some percentage of crime would be curtailed.

It also seems that a servant leadership trait is another transformational approach to such political and systemic problems that hinder improving human lives, education, and economy. In this premise, Green leaf's words come to mind. He said, the result of an effective servant leader is measured by the degree to which the community they lead "became healthier, wiser, and freer" (37). From this school of thought, awareness is a crucial element.

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## APPENDIX A

**List of countries by life expectancy by the United Nations (2005-2010)**

Rank	Country (State/territory)	Life expectancy at birth (years) Overall	Life expectancy at birth (years) Male	Life expectancy at birth (years) Female
1	*Japan	82.6	79.0	86.1
2	*Hong Kong (PRC)	82.2	79.4	85.1
3	*Iceland	81.8	80.2	83.3
4	*Switzerland	81.7	79.0	84.2
5	*Australia	81.2	78.9	83.6
6	*Spain	80.9	77.7	84.2
7	*Sweden	80.9	78.7	83.0
8	*Israel	80.7	78.5	82.8
9	*Macau (PRC)	80.7	78.5	82.8
10	*France (metropolitan)	80.7	77.1	84.1
11	*Canada	80.7	78.3	82.9
12	*Italy	80.5	77.5	83.5
13	*New Zealand	80.2	78.2	82.2
14	*Norway	80.2	77.8	82.5
15	*Singapore	80.0	78.0	81.9
16	*Austria	79.8	76.9	82.6
17	*Netherlands	79.8	77.5	81.9
18	*Martinique (France)	79.5	76.5	82.3
19	*Greece	79.5	77.1	81.9
20	*Belgium	79.4	76.5	82.3
21	*Malta	79.4	77.3	81.3
22	*United Kingdom	79.4	77.2	81.6
23	*Germany	79.4	76.5	82.1
24	*U.S. Virgin Islands (US)	79.4	75.5	83.3
25	*Finland	79.3	76.1	82.4
26	*Guadeloupe (France)	79.2	76.0	82.2
27	Channel Islands (Jersey and Guernsey) (UK)	79.0	76.6	81.5
28	*Cyprus	79.0	76.5	81.6
29	*Ireland	78.9	76.5	81.3
30	*Costa Rica	78.8	76.5	81.2
31	*Puerto Rico (US)	78.7	74.7	82.7
32	*Luxembourg	78.7	75.7	81.6
33	*United Arab Emirates	78.7	77.2	81.5
34	*South Korea	78.6	75.0	82.2
35	*Chile	78.6	75.5	81.5
36	*Denmark	78.3	76.0	80.6
37	*Cuba	78.3	76.2	80.4
38	*United States	78.2	75.6	80.8
39	*Portugal	78.1	75.0	81.2
40	*Slovenia	77.9	74.1	81.5
41	*Kuwait	77.6	76.0	79.9
42	*Barbados	77.3	74.4	79.8

43	*Brunei	77.1	75.0	79.7
44	*Czech Republic	76.5	73.4	79.5
45	*Reunion (France)	76.4	72.3	80.5
46	*Albania	76.4	73.4	79.7
47	*Uruguay	76.4	72.8	79.9
48	*Mexico	76.2	73.7	78.6
49	*Belize	76.1	73.3	79.2
50	*New Caledonia (France)	76.1	72.8	79.7
51	*French Guiana (France)	75.9	72.5	79.9
52	*Croatia	75.7	72.3	79.2
53	*Oman	75.6	74.2	77.5
54	*Bahrain	75.6	74.3	77.5
55	*Qatar	75.6	75.2	76.4
56	*Poland	75.6	71.3	79.8
57	*Panama	75.5	73.0	78.2
58	*Guam (United States)	75.5	73.3	77.9
59	*Argentina	75.3	71.6	79.1
60	*Netherlands Antilles (Netherlands)	75.1	71.3	78.8
61	*Ecuador	75.0	72.1	78.0
62	*Bosnia and Herzegovina	74.9	72.2	77.4
63	*Slovakia	74.7	70.7	78.5
64	*Montenegro	74.5	72.4	76.8
65	*Vietnam	74.2	72.3	76.2
66	*Malaysia	74.2	72.0	76.7
67	*Aruba (Netherlands)	74.2	71.3	77.1
68	*Macedonia	74.2	71.8	76.6
69	*Syria	74.1	72.3	76.1
70	*French Polynesia (France)	74.1	71.7	76.8
71	*Serbia	74.0	71.7	76.3
72	*Libya	74.0	71.7	76.9
73	*Tunisia (10% above world average)	73.9	71.9	76.0
74	*Venezuela	73.7	70.9	76.8
75	*Saint Lucia	73.7	71.8	75.6
76	*Bahamas	73.5	70.6	76.3
77	*Palestinian territories	73.4	71.8	75.0
78	*Hungary	73.3	69.2	77.4
79	*Tonga	73.3	72.3	74.3
80	*Bulgaria	73.0	69.5	76.7
81	*Lithuania	73.0	67.5	78.3
82	*China	73.0	71.3	74.8
83	*Nicaragua	72.9	69.9	76.0
84	*Colombia	72.9	69.2	76.6
85	*Mauritius	72.8	69.5	76.2
86	*Saudi Arabia	72.8	70.9	75.3
87	*Latvia	72.7	67.3	77.7
88	*Jamaica	72.6	70.0	75.2
89	*Jordan	72.5	70.8	74.5

90	*Romania	72.5	69.0	76.1
91	*Sri Lanka	72.4	68.8	76.2
92	*Brazil	72.4	68.8	76.1
93	*Algeria	72.3	70.9	73.7
94	*Dominican Republic	72.2	69.3	75.5
95	*Lebanon	72.0	69.9	74.2
96	*Armenia	72.0	68.4	75.1
97	*El Salvador	71.9	68.8	74.9
98	*Turkey	71.8	69.4	74.3
99	*Paraguay	71.8	69.7	73.9
100	*Philippines	71.7	69.5	73.9
101	*Cape Verde	71.7	68.3	74.5
102	*Saint Vincent and the Grenadines	71.6	69.5	73.8
103	*Samoa	71.5	68.5	74.8
104	*Peru	71.4	68.9	74.0
105	*Estonia	71.4	65.9	76.8
106	*Egypt	71.3	69.1	73.6
107	*Morocco	71.2	69.0	73.4
108	*Georgia	71.0	67.1	74.8
109	*Iran	71.0	69.4	72.6
110	*Indonesia	70.7	68.7	72.7
111	*Thailand	70.6	66.5	75.0
112	*Guatemala	70.3	66.7	73.8
113	*Suriname	70.2	67.0	73.6
114	*Honduras	70.2	66.9	73.7
115	*Vanuatu	70.0	68.3	72.1
116	*Trinidad and Tobago	69.8	67.8	71.8
117	*Belarus	69.0	63.1	75.2
118	*Moldova	68.9	65.1	72.5
119	*Fiji	68.8	66.6	71.1
120	*Grenada	68.7	67.0	70.3
121	Federated States of Micronesia	68.5	67.7	69.3
122	*Maldives	68.5	67.6	69.5
123	*Ukraine	67.9	62.1	73.8
124	*Azerbaijan	67.5	63.8	71.2
125	*North Korea	67.3	65.1	69.3
126	*Uzbekistan (world average)	67.2	64.0	70.4
-	World	67.2	65.0	69.5
127	*Kazakhstan	67.0	61.6	72.4
128	*Guyana	66.8	64.2	69.9
129	*Mongolia	66.8	63.9	69.9
130	*Tajikistan	66.7	64.1	69.4
131	Western Sahara	65.9	64.3	68.1
132	*Kyrgyzstan	65.9	62.0	69.9
133	*Bhutan	65.6	64.0	67.5
134	*Bolivia	65.6	63.4	67.7
135	*Sao Tome and Principe	65.5	63.6	67.4

136	*Pakistan	65.5	65.2	65.8
137	*Russia	65.5	59.0	72.6
138	*Comoros	65.2	63.0	67.4
139	*India	64.7	63.2	66.4
140	*Laos	64.4	63.0	65.8
141	*Mauritania	64.2	62.4	66.0
142	*Bangladesh	64.1	63.2	65.0
143	*Nepal	63.8	63.2	64.2
144	*Solomon Islands	63.6	62.7	64.5
145	*Turkmenistan	63.2	59.0	67.5
146	*Senegal	63.1	61.0	65.1
147	*Yemen	62.7	61.1	64.3
148	*Myanmar	62.1	59.0	65.3
149	*Haiti	60.9	59.1	62.8
150	*East Timor (10% below world average)	60.8	60.0	61.7
151	*Ghana	60.0	59.6	60.5
152	*Cambodia	59.7	57.3	61.9
153	*Iraq	59.5	57.8	61.5
154	*Gambia	59.4	58.6	60.3
155	*Madagascar	59.4	57.7	61.3
156	*Sudan	58.6	57.1	60.1
157	*Togo	58.4	56.7	60.1
158	*Eritrea	58.0	55.6	60.3
159	*Papua New Guinea	57.2	54.6	60.4
160	*Niger	56.9	57.8	56.0
161	*Gabon	56.7	56.4	57.1
162	*Benin	56.7	55.6	57.8
163	*Guinea	56.0	54.4	57.6
164	*Republic of the Congo	55.3	54.0	56.6
165	*Djibouti	54.8	53.6	56.0
166	*Mali	54.5	52.1	56.6
167	*Kenya (20% below world average)	54.1	53.0	55.2
168	*Ethiopia	52.9	51.7	54.3
169	*Namibia	52.9	52.5	53.1
170	*Tanzania	52.5	51.4	53.6
171	*Burkina Faso	52.3	50.7	53.8
172	 *Equatorial Guinea	51.6	50.4	52.8
173	 *Uganda	51.5	50.8	52.2
174	 *Botswana	50.7	50.5	50.7
175	 *Chad	50.6	49.3	52.0
176	 *Cameroon	50.4	50.0	50.8
177	 *Burundi	49.6	48.1	51.0
178	 *South Africa	49.3	48.8	49.7
179	 *Cote d'Ivoire	48.3	47.5	49.3
180	 *Malawi	48.3	48.1	48.4
181	 *Somalia	48.2	46.9	49.4

182	 *Nigeria (30% below world average)	46.9	46.4	47.3
183	 *Democratic Republic of the Congo	46.5	45.2	47.7
184	 *Guinea-Bissau	46.4	44.9	47.9
185	 *Rwanda	46.2	44.6	47.8
186	 *Liberia	45.7	44.8	46.6
187	 *Central African Republic	44.7	43.3	46.1
188	 *Afghanistan	43.8	43.9	43.8
189	 *Zimbabwe	43.5	44.1	42.6
191	 *Lesotho	42.6	42.9	42.3
192	 *Sierra Leone	42.6	41.0	44.1
193	 *Zambia	42.4	42.1	42.5
194	 *Mozambique	42.1	41.7	42.4
195	 *Swaziland (40% below world average)	39.6	39.8	39.4