



MANYAYA AND RECURRENT RESPIRATORY ATTACKS: THE ENERGY SHORTAGE AND HEALTH HAZARD DILEMMA IN ZIMBABWE

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ABSTRACT

The role of women in the African context is to serve and provide for the family. Manyaya who is a multiparous woman, delivered all her eleven children in her round kitchen with the assistance of traditional midwives. The small lit fire provided light and energy to the family. The energy shortage and health hazard dilemma is clearly not understood by the rural residents. The author interviewed rural women in their homes, made observations and reviewed documented information on energy availability and the challenges faced by women in Zimbabwe. Manyaya is now an invalid in her late 70's and has suffered recurrent respiratory attacks. The dream of Zimbabwe to realize total rural electrification remains a mirage. The author tried to bring out vivid stories of rural women who have succumbed to such conditions as pneumoconiosis, pneumonia, chronic bronchitis, conjunctivitis and other health problems, due to prolonged exposure to smoky huts and other social ills.

Objectives of the chapter:

- To highlight the magnitude of the problem of energy shortages
- To assess the involvement of men in carrying out household chores
- To indicate the role of traditional chiefs and significant others in policy formulation
- To discuss the knowledge gaps
- To suggest possible strategies that may assist to alleviate the energy shortage and health hazard dilemma in rural Zimbabwe

Findings in this paper will assist to further develop Distance Education health awareness programs for the purposes of information distribution to the rural Zimbabweans. It is hoped that this will be done through the Zimbabwe Open University where the applicant is a Senior Lecturer in the Department of Health Sciences.

INTRODUCTION

In Zimbabwe wood-fire is the principal source of energy to rural communities. Fuel wood provides close to 51 percent of the total domestic energy supply, followed by coal (20 percent), liquid fuels (15 percent), and electricity (14 percent) [1]. Almost all rural households use wood as the main cooking fuel, as against 40 percent of urban households. High levels of pollution from household emissions continue to be a major health hazard. The

country needs to adopt appropriate renewable energy technologies in order to reduce emissions [2].

Sub-Saharan Africa has 47 countries, most of which have a high percentage of low income and largely rural agrarian communities. The region consumes 2.7% of world commercial primary energy.

In Zimbabwe about 40 % of the population has access to electricity. 19% of the total rural population has



access to electricity, of which this percentage is mainly accounted for by growth points, business centers and mission stations [3]

The levels of investment in electricity generation are low mainly because of lack of a good energy policy. Some of the existing power plants are operating at very low capacities for various reasons [3]

Information on the energy sources and health hazards resulting from wood fuel exposure is not well documented. This paper focuses on house-hold sources of energy and the health hazards involved.

The story of Manyaya (Not real name, please note that all names used in this chapter are fictitious names) is a true story. Manyaya lives in a rural setting and she delivered all her children in their traditional home. The only source of light and energy is the fire fuelled by wood. Manyaya spent most of her life fending for her family and nursing children. An assessment made from the interviews seem to reveal that Manyaya is ignorant of the health hazards she may be exposing herself to by her continued stay in a poorly ventilated hut whose only source of light and energy is wood-fire. Manyaya is now an invalid with recurrent episodes of cough. She has visited the local clinic on a number of occasions seeking for treatment. On the day of the interview, Manyaya could be seen struggling with conjunctivitis that needed attention. One stream away from Manyaya's homestead, lives another elderly woman whose name is Nesi. Nesi was almost in tears when a question on the number of children she had was paused. Four out of seven of her children had died in infancy from what she described as 'mabayu' ie pneumonia. Nesi's situation was not different from Manyaya's with overcrowdedness, pollution from smoke, poor energy from wood fire, all in a round grass thatched hut.

Ndai and Nhamo who lived beyond the Chirozva hills gave similar stories. The interview with Ndai was continuously interrupted by her dry irritating cough. From dawn to dusk, the women endured a boring routine. They were the first to wake-up and the last to go to bed ensuring the comfort of their families. With scanty resources and little or no support, the women continued with their duties.

Nhamo brought out a bunch of dirty, torn outpatient cards. She squeezed out some tears from her eyes as she spoke. One out-standing symptom Nhamo was treated for was cough. The common health problems and the symptoms exhibited suggested that the use of unclean energy sources caused the health problems. The most worrying factor however was that, none of the interviewed persons associated their illnesses with their living conditions which depicted true courage, determination and perseverance of women in rural Zimbabwe.

Over-consumption of low grade traditional energy sources such as fuel wood and charcoal and under-consumption of high quality modern fuels is a common phenomenon in the Sub-Saharan countries. Large disparities exist among countries in sub-Saharan Africa, with only five accounting for 70% of total modern energy

consumption for the region (Nigeria, RSA). (World Bank, 1990). Enormous disparities also exist between urban poor and rural users and the higher income groups throughout the region [1].

Traditional fuels account for over 60% of total energy consumption throughout sub-Saharan Africa (see figure 1).

However, the majority of Sub-Saharan African people depend on wood fire for their basic subsistence. The dependence on this form of energy has contributed greatly to the problem of deforestation which has also impacted on climate change

In many areas deforestation has put severe pressure on wood-fuel resources are under severe pressure, a fact reflected in the growing use of inefficient and unhealthy non-woody biomass resources such as animal wastes and crop residues in some rural areas [1].

The literature on the fuel-wood question increasingly suggests that there are a host of complex sociological, economic and ecological factors which actively mold and reshape the nature and magnitude of the energy crisis confronting poor households in Africa[1]. While it has been stressed that there is a close link between energy, water and food, the threat to health need no be downplayed as more people in the rural areas are exposed to such conditions as conjunctivitis and respiratory conditions.

In Zimbabwe, access to electricity is very low with access to electricity in the continent of Africa standing at 20% [1]. However, Africa enjoys plenty of sunshine. Rural communities could benefit tremendously from solar energy. The amount of money that goes into the treatment of health problems caused by smoke from wood-fires or other forms of energy sources, could well be invested into the program of rural electrification or harnessing solar power. Wood fuel appears to be the predominant source of domestic energy in the Sub-Saharan Africa as it accounts for 63% of domestic energy demand [1].

Consumers of this energy source do not seem to be aware of the impact of wood fuel on health, hence the need for educational campaigns.

Affordability is a factor when it comes to the choice of energy source people decide to use. While electrical energy is easily accessible in cities and towns, the current experiences of load shading has resulted in the increased use of fire-wood. Fuel-wood is cheap or free in rural areas. However, the commodity has added considerable strain to household means of survival. Besides the issues of affordability and availability, the health dimension aspect also need to be seriously taken into consideration.

Rural electrification continues to be a mirage. Where electricity is accessible, the power supply has been erratic due to the problem of load shading, hence the need to consider alternatives such as the harnessing of solar energy. While forests are plentiful in Zimbabwe, the



distribution may not be uniform with some areas being completely bare. People in such areas may find themselves resorting to the use of maize stalks or cobs as a source of energy. The smoke from such sources is also detrimental to health. Policies in most Sub-Saharan Africa do not allow indiscriminate cutting down of trees. However, the guidelines in these laws have been turned into effective and applicable regulations or by-laws and often do not focus on the energy sector [1].

As such, the needs of the people are rarely addressed. Women and girls are disadvantaged in terms of self-advocacy. Fewer girls access education compared to men. Societal attitudes continue to perpetuate gender inequality [4]. As a result girls have lower access to and retention rates in the education system. For example, in 1995, the transition from primary school to secondary was 75.5% for boys and 71.7% for girls. In 1996, it was 71.2% for boys and 67.9% for girls [4].

Traditional community laws play a pivotal role in environmental conservation. These laws are complemented by prevailing regulations. However, the excessive centralization of state laws has been a deterrent to the active participation of the local people environmental management.

While Zimbabwe has well-structured Ministries that deal with various issues including the environment, energy and agriculture, it is important to involve communities in all activities for the purposes of ownership and sustenance of programs. Research and technological advancement in energy use and management in rural areas need to be fully explored if communities are to benefit. Action research is one area universities could assist with in trying to solve some of the problems rural communities face. Health problems affecting those who use fire wood and other agricultural by-products, appear to be ignored and neglected. Pneumoconiosis, upper respiratory tract infections, conjunctivitis, water and fire burns appear to be some of the common problems. Deforestation could be a result of some of the government policies where agriculture is viewed as the main-stay of the country's economy. The result is usually the use of other energy sources that affect health.

Access to clean energy sources remains a challenge in Zimbabwe. Manyaya grew-up in the rural areas under very difficult conditions. She narrates how she used to travel for long distances to fetch clean water and look for fire-wood. This is the plight of most rural women and girls. On the other hand, fuel-wood is often considered in the context of environmental protection rather than in terms of the health hazards it causes. No measures or policies are directed or focused toward technological development or prevention of such hazards

Manyaya did not go beyond Grade One with her education. This was because she did not have adequate financial support. Manyaya also stayed at home because she had to assist her widowed mother with household chores. Today most rural girls have fallen prey to the

socio-economic ills of our society. This may adversely impact on national development. If the prevailing situation persists, the country may not be able to achieve the targeted Millennium Development Goals by 2015.

While wood fire remains the life line for most rural communities, woodlots have to be maintained to ensure availability of the energy source. Experience has shown that village woodlots have had a lot of support from communities where populations are consulted. Projects thrive because of the sense of ownership. However. There should be continued effort to harness alternative energy in order to mitigate some of the health hazards that are caused by smoke. Families may be encouraged to cook outside under a shade or use the Dover stove connected to a chimney that can assist to draw out smoke. Cleaner and safer energy sources can be the solution to the perennial health problems most rural populations suffer.

While fuel-wood substitution and fuel switching seem to be closely linked with household incomes, accessibility to electrical energy remains a dream in most parts of rural Zimbabwe. Although some families have resorted to use of solar energy, the concept is still not very popular. Individuals interviewed had no knowledge of what solar energy was and its uses. A few individuals believed solar energy could be used for lighting, but they seemed to have problems in conceptualizing on how it could be used for cooking, hence the need for educational programs.

The observations made on the plight of women and girls in terms of access to clean water and energy are critical. Stakeholders need to work together to improve the energy situation. Innovations such as the construction of well ventilated shades where women and girls could do their cooking, building of chimneys and use of dover stoves, could be some of the approaches used to reduce exposure to health hazards to women and children.

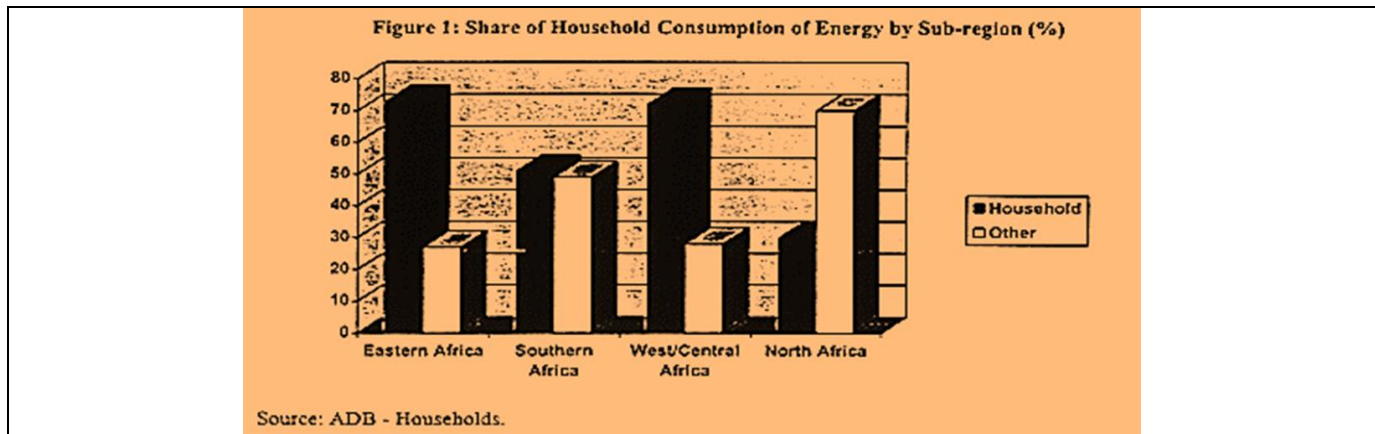
While Zimbabwe continue to talk of the provision of clean energy to rural communities, it is now high time populations demand more action than empty promises. It should be understood that getting clean energy sources is a human right. Policy makers need to be aware of this. Deliberate effort has to be made in order to alleviate human suffering. Societies should hold leaders accountable for the adverse health issues people suffer due to continued exposure to smoky environment.

Communities need support in terms of information and technology. It appears very little or no attention is given to the health problems arising from smoke. The need for policies that focus on energy development cannot be over-emphasized. Equality between men and women is key to sustainable development. The gender prescribed roles and lack of economic empowerment continue to hinder women development. Water and electricity are basic needs for human survival. The patriarchal society indirectly places women and girls in strategic positions that favor men. Decision making powers rest in the hands of men. Girl-



child education is compromised as she is inundated with household work after making long journeys to fetch firewood and water. The girl-child does not have adequate time for educational exercises. The percentage of rural girls progressing to secondary school is less than that of

boys. Lack of education perpetuates the state of poverty and this consequently impacts on development. Societies, the world over, continue to marginalize women. It is only through deliberate effort to influence policy and empower women.



CONCLUSION

With communities relying on wood-fire, the health related consequences seem to have received little or no attention at all. Those individuals who have succumbed to illnesses as highlighted, may not even associate the health problems to the exposure to smoke and ashes. There is need for intensive research in this area. The use of firewood might even prove to be more expensive especially if we are to collectively analyze the health bills incurred by individuals.

The case of Manyaya is a typical example of the ordeals many rural women are experiencing. Men are better placed as they spend most of their time at 'padare' which is a specific area designed for men and they usually have a fire outside thereby reduce the risk of contracting upper respiratory tract infections. The case-study highlights the magnitude of the problem of energy availability, energy accessibility, health hazards associated with the use of firewood. Policy issues related to wood use and energy accessibility were also discussed. While men may assist with the gathering of fire-wood, the responsibility is not an obligation. On the other hand, the African woman is expected to provide for the family.

The positive role played by traditional chiefs and government in environmental conservation cannot be over-emphasized. However the efforts need to be more coordinated. Health issues that seem to be neglected need to be highlighted as communities could incur unnecessary heavy financial losses as they seek for treatment for ailments that could easily be prevented. Action research in this area need to be strengthened. In the absence of

appropriate technology, alternatives such as the use of open fires need to be advocated for if some of the health problems are to be minimized or eliminated. From the interactions with communities, it is evident that some people may not associate smoky environment with respiratory problems. Rural communities still consider that the place of the woman is in the kitchen where she prepares food for the family.

The writer hopes to develop some learning materials and roll-out awareness programs on energy production, accessibility, available energy alternatives as well as the associated health problems that result from the use of wood-fire. Advocacy for rural electrification is an area of priority and this could be done through influencing policy.

Manyaya received some advice and is now cooking outside her kitchen when the weather is conducive. This has substantially reduced the persistent cough she was getting. However the situation becomes tricky during the rainy season or in winter when temperatures go down. It is hoped that the dream of rural electrification or harnessing of solar energy that has remained in its embryonic stages of development will soon become a reality to the rural communities of Zimbabwe.

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CONFLICT OF INTEREST:

The authors declare that they have no conflict of interest.

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