

## Research Article

# Situation Analysis on the Applicability of a Communist Approach in the Delivery of Refractive Error Services in Kenya

Shadrack Muma\*

Department of Public Health, Maseno University, Kenya

\*Corresponding author: Shadrack Muma

Department of Public Health, Maseno University, Kenya.

Email: mumashadrack275@gmail.com

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**Abstract**

**Background:** Refractive error is the leading cause of visual impairment globally. Different models are being applied to aid in the delivery of refractive error services. However, there is still a challenge when it comes to delivery of the services to the base of the pyramid population. As a result, there is course for an alarm to adopt a communist approach where each and every one will be able to access the services.

**Methodology:** This was a prospective study in which respondents received the survey through online platforms. The survey was sent to 200 groups with each group having 150 participants. The Helsinki Declaration was adhered to. The response rate was 80% (24,000 out of 30,000).

**Results:** Out of the 24,000 respondents, 60% were living in urban areas with 40% residing in rural areas. There was an association between the region of residence and access to refractive error services (t-test,  $p=0.04$ ). The private sectors were 2.56 (95% CI 0.17–0.22) times likely to deliver refractive error services to the middle class living in urban areas compared to those residing in rural areas. The human resource remains a challenge as over 70% of the eye care providers are distributed within urban areas with less than 15% willing to work in rural areas.

**Conclusion:** The current capitalistic approach used in the delivery of refractive error services in Kenya is full of drawbacks. As a result, there is a dire need for the application of a mixed approach of capitalism and communism. This is desirable as the capitalistic approach majorly favors the individuals at the apex of economic pyramid with the population at the base of pyramid remaining underserved.

**Keywords:** Communist; Analysis; Refractive error

**Introduction**

In the nineteenth-century, the writing of Karl Marx and Friedrich Engels on communism was crucial in informing political, economic and social systems in a country [2]. However, many elites in the Western countries were against the writings as the communist ideologists were probing revolutions in different parts of the world.

In Kenya, the government advocates for a universal health coverage across the country. This is intended to ensure that each and every Kenyan can access and afford healthcare services [11]. However, in as much as the UHC is advocated for not

only Kenya but different countries across the world, the implementation still faces some hurdles in developing countries. This is attributed to different conditions the eye care professionals are exposed to.

The healthcare system in Kenya is majorly capitalistic. This implies that the owner of a healthcare facility decides on how much to charge for a specific service [7]. That is, for refractive error which remains the leading cause of visual impairment globally, the capitalistic approach allows the service providers to charge fee without regulation. This has impacted negatively

on refractive error uptake in Kenya especially among the base of pyramid population who cannot afford and access the services. Therefore, there is a dire need to investigate a different approach in the delivery of refractive error services not only to the individuals at the apex of the pyramid but at the base of pyramid population. This will help in addressing the gap attributed to quality of life impacted by unaddressed refractive error.

In China, the healthcare system from 1949-1999 was purely based on a communist approach [1]. During this period, the Chinese healthcare was accessible and affordable to many who lived in rural and urban areas. In China, the government had full control over hospitals and provided the funding for the operation of the facilities. While the private practice of medicine and ownership of a private hospital was not allowed [4]. The providers of healthcare including the doctors, the nurses and any other healthcare provider were employed by the government. In the rural areas, the government advocated for communes who had various responsibilities including organizing for healthcare through Cooperative Medical System for the locals. In the rural areas, paramedics supported by the CMS were deployed to provide services to the locals [1]. The paramedics were responsible for provision of services ranging from therapeutic to public health services. The Chinese health care system made tremendous achievements and during this period the infant mortality dropped from 200 to 34 per 1000 live births with life expectancy increased to about 68 from 35 years [6].

### Challenges of a Capitalist System of Healthcare

Many countries all over the world are applying the capitalistic approach in the delivery of healthcare to their citizens. However, the approach has had tremendous impact in terms of quality of services delivery; the replication in the developing countries still faces challenges using the approach as the base of pyramid population which constitute the majority remains underserved.

Change in the provision of a financed healthcare by the government poses a major threat in the delivery of not only refractive error services but to the general healthcare. Many children in Kenya are at a greater risk of suffering from refractive error [10]. Hence the government should be tasked by financing healthcare so as to maintain a constant provision of quality healthcare to the citizens. In Kenya, there is a devolved system of government where healthcare is manned at the county level with central government tasked with over seeing the delivery [8]. However, the central government investment in healthcare services is crucial. In china, after the central government assigned the provincial and local authorities to provide healthcare services including refractive error and lowering the share of healthcare from 32% to 15%, the quality of healthcare provision declined drastically and only the wealthy living in urban areas were able to access the services [5].

### Methodology

This was a prospective study in which respondents received the survey through WhatsApp groups. The survey was developed by author SM using a goggle form. The survey was sent to the groups of 200 with each group having 150 participants. The survey was first sent to community representatives who later circulated the link to different groups they are having for community members. The latter was done to individuals residing in urban areas. To be included in the group, the participant must be 18 years and above. After reminder was sent to the groups,

through their representatives, 24,000 responses were received. The response rate was thus 80% (24,000 out of 30,000). Participation in the survey was voluntary, and the respondents could withdraw from the survey at any time during the study period. The responses were kept purely confidential, and the data were de-identified before data analysis.

The tenant of Helsinki Declaration was adhered to. All ethical standards for research without direct contact with human or animal subjects were observed. The survey had 10 semi-structured questions broadly around respondent's demographic characteristics, services in health facilities, distribution of drugs, affordability of healthcare, accessibility of healthcare services and ownership of healthcare facilities. The questions had two to five responses with five open-ended questions to get the individuals living in rural and urban areas view on the applicability of a communist approach in delivering refractive error services amongst them. A pilot study was conducted to test the validity and reliability of the instrument. The tool had a reliability of 0.87 with a Pearson correlation coefficient of a sig. (2 tailed) of 0.000 applied.

## Results

### Demographic Characteristics of Respondents

Out of the 24,000 respondents, 60% were living in urban areas with 40% residing in rural areas. Majority 65% of the participants were earning an income of less than \$2 a day. There was an association between the region of residence and access to refractive error services (t-test,  $p=0.04$ ).

### Classless society

Almost all respondents 85% from rural areas agreed that the current approach used in delivering refractive error services is biased and majorly based on class. However, only 45% of the populations from urban areas were concerned about discrimination based on class when it comes to access of refractive error services. Of all the respondents, 65% agreed that access to refractive error services still faces hurdles as majority cannot afford a pair of spectacle. There was a significant difference between access to refractive error services and the economic status of the respondents ( $p=0.002$ ). The private sectors were 2.56 (95% CI 0.17–0.22) times likely to deliver refractive error services to the middle class living in urban areas compared to those residing in rural areas.

### Services

The distribution of refractive error services in rural areas was significantly low ( $p=0.012$ ) as compared to urban areas. Most participants 73% argued that the quality of services provided to them in rural areas is very low as they are not even allowed to choose frames based on their facial appearance.

How do you want us to say that we receive services when here in rural areas we can only get reading glasses (Participant ID12, 209,307).

Over 50% of the respondents from urban areas also argued that not all can afford refractive error services. They stated that only the working class can afford the spectacle with the jobless residing in urban areas being able to afford the services.

### Human Resource

The human resource remains a challenge as over 70% of the eye care providers are distributed within urban areas with less

**Table 1:** Demographic characteristics of respondents.

Area of residence	Proportion	p
Urban	60% (14,400)	P=0.04
Rural	40% (9,600)	
<b>Income</b>		
<2\$	65% (15,600)	
>2\$	35% (8,400)	

than 15% willing to work in rural areas. Again more than 50% of the respondents argued that distribution of eye care providers in rural areas is an issue of concern as close to 79% of those residing in rural areas does not have access to eye care provider. The distribution of health facilities in urban areas were significantly higher than ( $p=0.002$ ) those in rural areas. Over 70% of the health facilities in rural areas were not offering refractive error services.

### Discussion

The distribution of eye care professionals in rural areas justify why refractive error remains a challenge among the underserved population. The individuals find it extremely hard to access and afford the services. As a result, this makes it very hard for the capitalists to view the community in a more communal way. In China, the commitment on the funding of public health services made the community health providers to divert to other activities which could generate to them income and to which they were not properly trained on [13]. This was after the fall of communism in which over 900 million people residing in rural areas could not access healthcare as opposed to during communism system of administration [12]. Refractive error services can only be achieved through creation of a class's society where each and every one can have access to the services. Access to refractive error remains a major challenge for capitalist states as the individuals at the base of pyramid do not have access to the services.

In as much as the healthcare in Kenya is not free, access should be a priority. The government should be tasked by ensuring that each and every citizen has access to refractive error services. However, being that access to the services is based on the individual capability to afford; refractive error still has a long way to be accessible to the base of pyramid population. Therefore a communist approach where healthcare is accessible to everyone especially refractive error services is desirable. In China, the expenses from out-of-pocket accounted for 58% of health care spending in 2002, as compared with 20 percent in 1978 [3]. This was during the communist regime and it is evident that majority of the population could access healthcare. Healthcare can be more satisfying if there are no class aspects especially during delivery.

The communist approach advocates for a classless society when it comes to delivery of essential services to the general population. In China during the communist approach in healthcare delivery, the government used to provide full support to the healthcare facilities so that each and every one could access the services [9]. However, the reduction in governmental support for the health care system made the private sector to boom and this in effect forced majority to rely more on the sale of services in private markets to cover their expenses after allocations from public sources declined. This shows that communist approach was impacting positively when it comes to delivery of healthcare among the underserved population.

Refractive error challenges could be addressed if the government inserts a lot of support for the sector. The sector is currently overwhelmed by the population they serve and the availability of human resource. As most eye care services in Kenya are provided at private sectors, there is a dire need for the government to also ensure that each and every level facility has a comprehensive refractive error services. This is to ensure that even the populations in rural areas who can only access level one facility do have access to refractive error services due to its availability.

### Conclusion

The current capitalistic approach used in the delivery of refractive error services in Kenya is full of drawbacks. As a result, there is a dire need for the application of a mixed approach of capitalism and communism. This is desirable as the capitalistic approach majorly favors the individuals at the apex of economic pyramid with the population at the base of pyramid remaining underserved. Therefore, the government needs to encourage communism within the National Hospital Insurance Fund so that the capitalist contributions can help the underserved access and afford refractive error services.

### Author Statements

#### Declaration

Participation was voluntary, and the respondents could withdraw from the survey at any time during the study period. The responses were kept confidential, and the data was de-identified with subjects assigned to number codes before data analysis. Written consent was emailed to the respondents with details about the study. The study adhered to the tenets of the Declaration of Helsinki.

#### Availability of Data and Materials

The dataset for the participants generated and analyzed during the current study are available from the corresponding author upon reasonable request.

#### Competing Interests

SM declares that they have no competing interest related to this study.

#### Author's Contributions

SM initiated the research concept, developed the proposal, did the data collection analyzed and wrote the manuscript.

#### Acknowledgement

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