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Relationship between quality of care for people living with HIV/AIDS and socio-economic variables: A case of Morogoro Municipality, Tanzania

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ABSTRACT: Assessment of the relationship between quality of care provided to people living with HIV/AIDS (PLWHA) and socio-economic variables was undertaken in Morogoro Municipality whereby a cross-sectional survey approach was adopted. Ninety PLWHA from two NGOs that are well known to support PLWHA in Morogoro Municipality were involved. Data were collected through face to face interviews. Descriptive and inferential methods of data analysis were used. Six variables were tested to determine their relationship with the quality of care in three components of care. Results showed that counseling and testing was significantly influenced by only the duration of living with the virus while medical care was affected by age and education level of respondents. The communication and behaviour change component was affected by respondents' age and marital status. It is therefore recommended that education be strengthened to PLWHA and even the care providers that high quality of care is essential to all PLWHA regardless of their socio-economic backgrounds so as to improve the quality of and prolong their lives.

KEYWORDS: HIV/AIDS, PLWHA, counseling, opportunistic infection, behaviour change.

1 BACKGROUND INFORMATION

HIV/AIDS stands for Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome whereas; AIDS is the fatal clinical condition that results from long-term infection with HIV. History shows that AIDS came into public consciousness in the early 1980s as a disease that was primarily affecting white male homosexuals in the Bay area of San Francisco (Almond, 1990). Currently, HIV/AIDS is a world's greatest threat causing deaths largely among the productive young adults (UNAIDS, 2006). However, the Sub-Saharan Africa, Tanzania inclusive, remains the hardest hit region by HIV/AIDS. Almost 70% of the world's people living with HIV/AIDS (PLWHA) live in this region (Amfar, 2014). In 2011, Tanzania was estimated to have 1.6 million PLWHA (Avert, 2014). Currently, the overall prevalence rate in the country is 5.1% whereby, it is 6.2% and 3.8% in females and males respectively (TACAIDS, 2012).

The relationship between HIV and AIDS and socio-economic development is complex. On one hand, HIV and AIDS negatively affect economic growth and on the other hand, the weak economy makes it difficult for nations and individuals to mount adequate and comprehensive responses to the epidemic. In addition, poverty is a co-factor to the spread of HIV and AIDS. Deaths due to AIDS have reduced agricultural labour force, productivity and disposable incomes in many families in rural areas. HIV/AIDS also leads to reduced capacity to deliver social responsibilities because of illness (RCQHS, 2003). Socially, death of a young adult means loss of a father or/and a mother who are the main family income earners, leaving the care burden to the old (grandparents). This tends to increase poverty and food insecurity within the family whereby, orphans not only get deprived of material, social and emotional priviledge, but also lack the opportunity for education and health care. Widows and orphans are deprived of their inheritance rights by relatives through the application of oppressive traditional practices and customary laws. The widows are often blamed for the premature deaths of their husbands and

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spread of the disease to their infants (NACP, 2005). Adequate and quality care for PLWHA is therefore crucial if development is to be achieved.

1.1 COUNSELING AND TESTING

HIV testing is the first step in the comprehensive care for PLWHA (other care components include medical care, communication and behavior change, home based care and prevention of mother to child transmission (PMTCT) – the latter two not dealt with in this paper). Despite having HIV testing programmes in sub-Saharan Africa, many people still do not get tested and they get health care only when they are already severely compromised (Phaladze, 2005). Testing in Tanzania is done either at voluntary bases or when a sick person needs treatment that involves blood examination or transfusion, and this is done only where such services are provided. Once and individual has tested and found to be HIV-positive, then she or he becomes eligible for enrollment in home based care organization if she or he wishes and eligible for Anti-retroviral drugs (ARVs) if CD4 count is below 200 (NACP, 2005). HIV infection affects all dimensions of a person's life: physically, psychologically, socially and spiritually. Counseling should consider both the physical and mental well-being of a person. Voluntary counseling and testing (VCT) for HIV, plays the key part in HIV-related prevention and care. It is particularly important as a starting point for the access of other HIV/AIDS-related services (WHO, 2001). If a person does not know she or he is affected, she or he can't get any treatment or care. It is widely recognized that knowledge of HIV infection can help a person to stay healthy for longer as well as preventing new infection.

VCT also provides benefit for those who test negative because it may result in change of behavoiour (WHO, 2001).) Ideally, care for PLWHA should start with voluntary counseling and HIV testing. Counseling should inform people about the facts of HIV infection. Correct information helps to dispel myths about HIV and AIDS. Counseling is also crucial to the success of any medical treatment. It is important that the person understands why and how illnesses related to HIV should be treated. The person should also be informed what treatment and care services are available locally and how they can be accessed. Even in very resource poor settings with minimum infrastructure, some treatment can be made available (NACP, 2005). Counseling is done with information on basic technical aspects of screening and the possible personal, medical, social, psychological and legal implications of being diagnosed either positive or negative (MOH, 2005). It is worth noting that quality of counseling is very important as from this point, is when the person living with HIV/AIDS can live positively and get assisted to work through particular problems she/he faces (SAT, 2003).

1.2 MEDICAL CARE

Although hospitalizations and deaths have decreased since the implementation of ART, opportunistic infections remain a leading cause of morbidity and mortality in HIV- infected persons (Buchecz *et al*., 2008). There are different conditions that typically occur at different stages if HIV infection. In early HIV disease, people can develop tuberculosis, malaria, bacterial pneumonia, herpes zoster, staphylococcal skin infections and septicaemia (Avert 2014). These are diseases that people with normal immune systems can also get, but with HIV they occur at a much higher rate. It also takes longer for a person with HIV to recover than it takes for someone with a healthy immune system. When the immune system is very weak due to advanced HIV disease or AIDS, opportunistic infections such as toxoplasmosis and cryptococcusis develop. Some infections can spread to a number of different organs, which is known as 'disseminated' or 'systemic' disease. Many of the opportunistic infections that occur at this late stage can be fatal. Providing prevention and treatment of opportunistic infections not only helps HIV-positive people to live longer healthier lives, but can also help prevent TB and other transmissible opportunistic infections from spreading to others (Avert, 2014).

Patients with HIV also have typical health care needs beyond conditions related to HIV (Aberg, 2004). These include the need for routine, age-appropriate health-maintenance screening for cardiovascular health and for cancer (breast, prostate, colorectal). This means PLWHA need baseline evaluation in health maintenance interventions, opportunistic infection prophylaxis and antiretroviral therapy (Khalsa, 2006). One component of health maintenance in patients with HIV is routine vaccinations such as for tetanus and diphtheria. The overall goal of antiretroviral therapy is to convert HIV infection into a chronic disease by suppressing viral replication to arrest or revert immunodeficiency progression and preventing opportunistic complications.

1.3 COMMUNICATION AND BEHAVIOUR CHANGE

Behaviour change is one of the services provided to PLWHA. There are two aspects to behaviour change counseling: one is to encourage persons who have tested HIV negative to adopt behaviours and lifestyle patterns that may be less risky than

those practiced before the test. The other one is to encourage those who have tested positive to adopt behaviours and lifestyle patterns that enhance their own health status and that prevent further transmission of HIV (RCQHC, 2003). In Asian countries, HIV infection is attributable primarily to various high- risk behaviours such as unprotected sexual intercourse with sex workers, and injection-drug use (UNADS, 2006). The most important prevention approach is education and behavior modification (Gallant, 2004)) whereby emphasis should be on behavioural intervention strategies that focus on interpersonal prevention skills rather than just patient knowledge. Positively reinforcing incremental changes toward safer behavior and addressing how to disclose HIV-seropositive status to a sex or drug partner is also important (CDC, 2003). However, other studies (Goldschmidt, 2004, Bryson, 1996) have documented the safest sexual practices for PLWHA to be abstinence followed by monogamy. For patients who are neither abstinent nor monogamous, the physician should convey the following infection prevention messages: consistent and correct condom use, sex only while they are sober, reduced number of sex partners and less mucosal trauma. For patients who use intravenous drugs, physician should recommend cessation of illicit drug use or, if this is unlikely, using sterilized or new needles and not sharing needles.

2 PROBLEM STATEMENT

However, some studies have shown variations in health care for PLWHA. In a study by Opiyo *et al*. (2008) in Western Kenya, it was found that about 90% of afflicted men received hospitalized care before their death compared to only 64% of women. The reasons given were; lack of someone to remain with children at home, even where the husbands were alive and well and that it is easy to replace a wife as men can be polygamous. Also more affluent families seek medical care from different hospitals and clinics as well as herbalists, willing to spend considerable amounts of money on medical care, which they believe might prolong their lives (UNIFEM, 2009). Further, religious-based stigma can also have negative influence on uptake and adherence to HIV care. Watt *et al*. (2009) observed high perceptions of stigma in religious communities usually related to associations between HIV infection and "sinful" sexual behaviour. This therefore shows that care for PLWHA depends on some social, economic factors as well as the gender of a person. It is from this point of view that the current study was aimed at finding out the relationship between quality of care provided to PLWHA and various socio-economic and demographic variables in Morogoro Municipality.

3 METHODOLOGY

As explained earlier the study was conducted in Morogoro municipal and the respondents were drawn from two non-governmental organizations (NGOs) namely Faraja Trust Fund (FTF) and Wanaoishi na Virusi vya Ukimwi Morogoro (WAVUMO), meaning people living with HIV in Morogoro. A total sample of 90 (40 from FTF and 50 from WAVUMO) PLWHA were purposively selected from the total population of PLWHA from the two organizations for interview. Care was taken to ensure desired representation of specific subgroups of males and females, different age groups and marital status and different education levels and occupations. Also two informants who were members of the management team from each organization were interviewed. Other stakeholders such as collaborating NGOs, Morogoro Regional and District Medical Officers, and Morogoro Regional and District AIDS Coordinators were consulted. In order to assess the quality of care provided to PLWHA, score indexes were developed with respect to three caring parameters which were counseling and testing (index A), medical care (index B) and communication and behavior change (index C). A panel of relevant experienced experts and practitioners from the Sokoine University of Agriculture and Tanzania Commission for AIDS (TACAIDS) were consulted to suggest the parameters to be included. A draft was complied and given to the experts for comment before the indexes were used to collect data. Ruel and Purmima (2002) used a similar approach of scoring system to quantify child feeding practices and used the scores to examine associations between child feeding practices and nutrition.

A). Variable and scoring system for counseling and testing

Variable	**Coding**
Availability of pre-test counseling	Yes= 2, No = 0
Quality of pre-test counseling Waiting time before consulting the counselor Duration of consultation with the counselor Clarity of information received from the counselor Quality/depth of information received from the counselor Usefulness of information received from the counselor An opportunity to ask questions during the consultation	For each parameter: Poor = 0, Fair = 1, Good = 2, Very good = 3, Excellent = 4
Availability of post- test counseling	Yes = 2, No = 0
Quality of post-test counseling Emotional support given by counselor Easiness of making new appointments Overall quality of counseling session	For each parameter: Poor = 0, Fair = 1Good = 2, Very good = 3, Excellent = 4
Maximum/Minimum	**40/0**

B). Variable and scoring system for medical care for PLWHA

Variable	**Coding**
Quality of services received from health facility	Poor = 0, Fair = 1, Good = 2, Very good = 3, Excellent = 4
Paying for health facility services	Yes = 2, No = 0
Cost paid at the health facility	High = 1, Fair = 2, Low = 3, Don't know = 0
Failed to get health services at least once	Yes = 2, No = 0
Frequency of missing health services	None = 4, Once = 3, Twice = 2, Thrice = 1, >4times =0
Maximum/Minimum	**15/0**

C). Variable and scoring system for communication and behaviour change care for PLWHA

Variable	**Coding**
Awareness of importance of behaviour change	Yes = 1, No = 0
Have you opted changing your sexual behaviour? Yes, already, Have started, I don't think I will, Have no plan for that	Yes, already = 3, Have started = 2 I don't think I will / have no plans for that = 0
Perceived level of information on HIV/AIDS: I have received enough information I have not received enough information Not at all	Enough information = 2 Not enough information = 1 Not at all = 0
Sources of services obtained on behaviour change: Training, Meeting, IEC, Media, PMTCT	For each parameter; Yes = 1, No = 0
Maximum/Minimum	**11/0**

Quantitative data analysis was conducted using computer program Statistical Package for Social Sciences (SPSS) version 16.0. Descriptive statistics were computed to determine the quality of care provided to PLWHA. Inferential statistics were computed to show relationship between dependent and independent variables. This involved cross-tabulations with t-test statistics. Qualitative data were analyzed using content analysis.

4 ETHICAL CONSIDERATION

Ethical considerations were abided to throughout this study. Consent was obtained orally after a participant was given all the information about the project. Confidentiality of the information provided by the respondent and the organization was ensured.

5 RESULTS AND DISCUSSION

In order to allow for comparisons, the scores in each of the care score indexes (A, B and C) were converted to percentages of the maximum possible score. Therefore each parameter had 100 as the maximum score and 0 as the minimum score. Scores were categorized as very low quality of care (0-20), low quality of care (21-40), moderately high quality of care (41-60), high quality if care (61-80) and very high quality of care (81-100). T-tests for mean values of various variables were conducted to determine the relationship between the extent of care in the selected care components namely counseling and testing, medical care and communication and behaviour change. The variables tested included duration of living with HIV, age, gender, occupation, marital status and level of education.

5.1 COUNSELING AND TESTING

Findings revealed that there was significant difference at $p \leq 0.05$ in quality of counseling between the respondents who have lived with HIV for 0-2 years and those of 3-4 years whereby the former scored higher than the latter as shown in Table 1 below. The possible reason could be that the PLWHA who have lived for a shorter time with their positive serology tend to attend and adhere more to counseling than those who have lived longer with their positive serology. It can further be explained that perhaps messages that are provided during the counseling are the same so much that PLWHA are not motivated to continue receiving the service. The other duration categories as well as the other variables showed no significant difference in their mean values.

Table 1: Quality of counseling and duration of living with HIV/AIDS

Duration category	Mean score	t	Significance (2 tailed)
0-2 year	51.7614	2.251	0.028*
3-4 years	35.4348		
0-2 years	51.7614	-0.003	0.997
5-18 years	51.7857		
3-4 years	35.4348	-1.798	0.079
5-18 years	51.7857		

Key: * indicates $p \leq 0.05$

5.2 MEDICAL CARE

Results in this care component revealed no significant difference in the mean values of care quality in the four variables that is gender, marital status, occupation and duration of staying with the disease. As far as age is concerned, respondents in various age groups were found to score significantly different values of quality of medical care (Table 2). Old adults scored the lowest quality of medical care and this may be due to the fact that the most young people and adults are more economic independent and thus tend to have more access to medical care. Adults who scored the highest were probably more responsible to themselves and to their families and hence tend to seek whatever medical care they could obtain.

Table 2: Quality of medical care and age

Age group	Mean score	t	Significance (2 tailed)
Young (16-30years)	35.4545	-0.823	0.414
Adults (31-45 years)	37.5362		
Young (16-30 years)	35.4545	2.154	0.037*
Old adults (≥46 years)	28.7879		
Adults (31-45 year)	37.5362	3.482	0.001***
Old adults (≥46 years)	28.7879		

Key: * indicates $p \leq 0.05$ and *** indicates $p \leq .001$

Further, findings showed significant difference at $p \leq 0.05$ in the mean scores among various categories of education. As indicated in Table 3 below, primary/adult education level scored higher in quality of medical care than those with secondary education and above. It is likely that most of the educated individuals living with HIV/AIDS tend to shy away to be seen that they are infected. They therefore tend to miss some of the very important services including medical services. Free medical services for PLWHA were only provided to individuals who have declared their status and who were willing to attend in person.

Table 3: Quality of medical care and education level of respondent

Education category	Mean score	t	Significance (2 tailed)
Primary and adult education	35.9259	2.157	0.034*
Secondary education and above	29.2308		
Primary and adult education	35.9259	0.276	0.783
No formal education	34.6667		
Secondary education and above	29.2308	-0.896	0.384
No formal education	34.6667		

Key: * denotes $p \leq 0.05$

5.3 COMMUNICATION AND BEHAVIOUR CHANGE

Among the test variables that were considered, only those categories of age and marital status were significantly different in the way in which they were related with communication and behaviour change care component at $P \leq 0.05$.

Table 4: Quality of communication and behaviour change care and age

Age group	Mean score	t	Significance (2 tailed)
Young (16-30years)	56.6116	-1.744	0.086
Adults (31-45 years)	63.2410		
Young (16-30 years)	56.116	-2.140	0.038*
Old adults (≥46 years)	66.1157		
Adults (31-45 year)	63.2410	-0.819	0.416
Old adults (≥46 years)	66.1157		

Key: * denotes $p \leq 0.05$

The study results revealed that old adults (46 years and above) scored the highest and this was particularly so as compared to young respondents at $p \leq 0.05$ (Table 4). This could be that the old adults are a group that is having a lot of responsibilities on matters concerning their lives and possibly their marriages and also is an age group that cares for a number of people (dependants). Therefore, this age group is likely to seek for more information and be willing to change behaviour than the young age group. With marital status, the findings showed significant difference in the mean scores between the single and the married/cohabiting couples at $p \leq 0.01$ as can be seen in Table 5 below, whereby the latter group scored higher than the former group.

Table 5: Communication and behaviour change care and marital status

Marital status	Mean score	t	Significance (2 tailed)
Single	54.0670	-2.838	0.007**
Married/cohabiting	66.4334		
Single	54.0670	-0.936	0.357
Divorced/separated	59.5041		
Single	54.0670	-2.704	0.009**
Widow	64.7059		
Married/cohabiting	66.4334	1.350	0.186
Divorced/separated	59.5041		
Married/cohabiting	66.4334	0.501	0.618
Widow	64.7059		
Divorced/separated	59.5041	-1.114	0.271
Widow	64.7059		

Key: ** indicates $p \leq 0.01$

The possible reason could be that, the married/cohabiting respondents tend to support each other and hence give each other some useful information regarding their care. Likewise, being a couple, they might be having some responsibilities to their children or relatives hence could be trying to search for more information with regard to their care so as to stay healthy for longer. Significant difference was also noted between the single and widowed respondents at $p \leq 0.01$, with widows showing higher scores. Having lost heir spouses, the widows are more likely to accept behaviour change than the singles.

6 LIMITATIONS OF THE STUDY

The findings of this study are limited to people living with HIV/AIDS from Faraja Trust Fund and Wanaoishi na Virusi vya Ukimwi Morogoro NGOs in Morogoro. They therefore should not be generalized.

7 CONCLUSION AND RECOMMENDATIONS

There are still some socio-economic and demographic variables which influence various aspects of quality of care for HIV/AIDS infected people. These include age, marital status, education level and the duration one has been living with the virus. There is a need therefore, to educate PLWHA on the importance of quality care for all so as to improve and prolong their lives. Further, PLWHA should be enabled to improve their economic situation by providing them with low interest loans, training and support for expanding their businesses. Also, counseling should be strengthened as a support for other services provided to PLWHA since it is a cross-cutting type of service involving all other care components.

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