

Content-Analysis of Social Networks and Mobile Phone Text Messages Among HIV Patients in Tanzania

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Agenda

1. Phenomenon
2. Review of the study
3. Report of content analysis
4. Discussion & Conclusion
5. Acknowledgement

HIV/AIDS by numbers

AIDS by the numbers

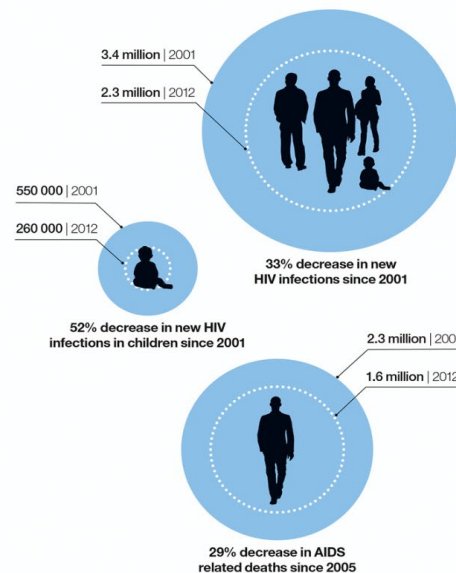
40-fold

Increase in access to antiretroviral therapy since 2002.

More than 10% of people living with HIV in low- and middle-income countries are aged 50 years or above

35.3

million people living with HIV
In the world.



People accessing treatment

9 700 000

Every hour
50 young women
are newly infected
with HIV.

HIV prevalence in adults and key populations

HIV disproportionately affects sex workers, men who have sex with men and people who inject drugs across the world.

Source: UNAIDS 2012 Global Report



HIV prevalence in 2012

Time for strategic HIV response

Challenges by the numbers

60% of countries have laws, regulations or policies that block effective HIV services for key populations and vulnerable groups

50% increase in likelihood of acquiring HIV among women who have experienced intimate partner violence

41 countries, territories, and areas impose some form of restriction on the entry, stay and residence based on HIV status.

People more likely to be living with HIV than the general population

22 x
people who inject drugs

13 x
sex workers

13 x
men who have sex with men

Every hour

50 young women are newly infected with HIV

People in need of treatment in 2013 (around 34% had access)

28 600 000

Children in need of treatment who did not have access in 2012 (under WHO 2010 guidelines)

1 250 000

Women aged 15 and over newly infected with HIV in 2012

960 000

Fewer male condoms were donated in 2012 than in 2011

1 000 000 000

Social Determinants of health

Definitions

“Circumstances where people are born, grow up, live and the system in place to deal with illness”

(WHO, 2007)



- Social network
A structure where social capital flows and amplifies
- The currency of social networks- Social capital
- Easily accessible information and networking capability over mobile networks

Use of mobile technologies in health care

Communication and educational platform

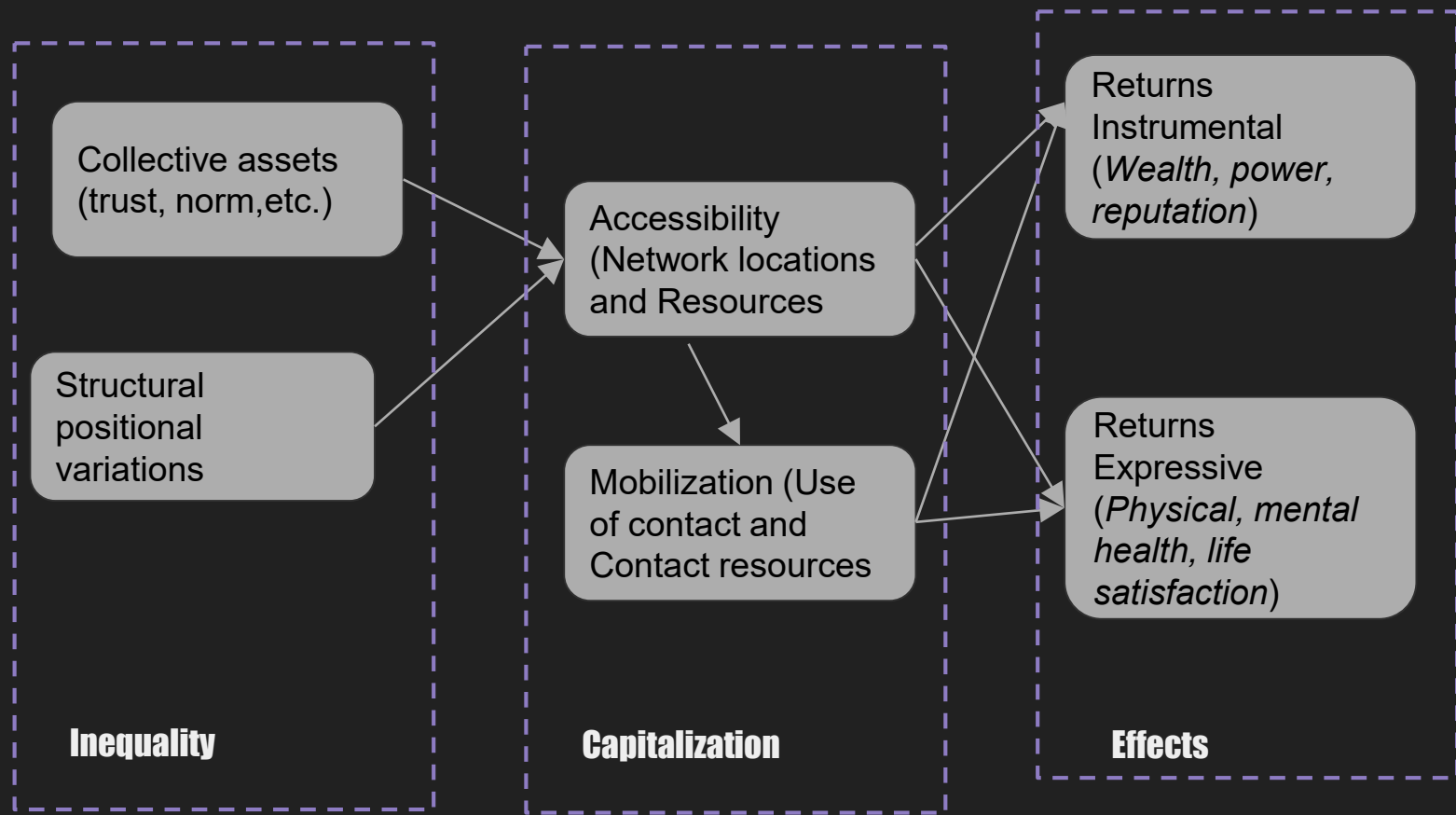
Mobile text message reminders to improve medication adherence and follow-up appointment among PLWH

Have more potential to improve health service delivery

Social Capital

Definition

“Features and resources—social norm and trust, for example, embedded in a social structure which are accessed/mobilized in purposive action”
(Lin, 1999; Putnam, 2001)



Theoretical framework

Theory of Social Capital (Nan Lin, 1999)

Research aim

The study aimed to explore and understand HIV patients' social networks and support in relation to their use of mobile text messages (SMS). This study also presents HIV patients' perspectives on use of SMS for HIV care and management.

Overview of the Study

Design	Cross-sectional design
Study period	August - September 2015
Study locations	6 HIV clinics in Dar es Salaam, Tanzania
Study participants	N=163
Measurements	<ul style="list-style-type: none">• Questionnaire: Demographics, Social capital, Multidimensional poverty index (MPI), Health related quality of life (SF12), social networks• Medical record review: HIV biomarkers and retention to care• Individual interviews and Social network analysis
IRB Number: 14-15590	

Demographic characteristics (N=163)

Age mean (SD, range)	40.6 years (9.9, 19-77)
Sex, n (%)	
Male	39 (23.9)
Female	124 (76.1)
Initial CD4 count (cells/mm ³), mean (SD, range)	277 (235, 3-1441)
On ART, n (%)	149 (91.4)

WHO HIV stage, n (%)	
Stage 1	40 (25.5)
Stage 2	22 (14)
Stage 3	81 (51.6)
Stage 4	14 (8.9)
Work for pay, n (%)	
Yes	49 (30.1)
No	114 (69.9)

Income, n (%)	
Totally inadequate	61 (37.4)
Barely adequate	77 (47.2)
Enough	25 (15.3)
Education, n (%)	
Primary school or less	130 (79.7)
Secondary school	24 (14.7)
High school	5 (3.1)
College or higher	4 (2.5)

Poverty among the participants

- Incidence of poverty (H)=23.5%
- Average intensity of poverty (A)= 39.9%
- Multidimensional poverty index (MPI)=HxA=0.09
- Tanzania National level: 0.33
Urban average: 0.15

United nations development plan (UNDP)

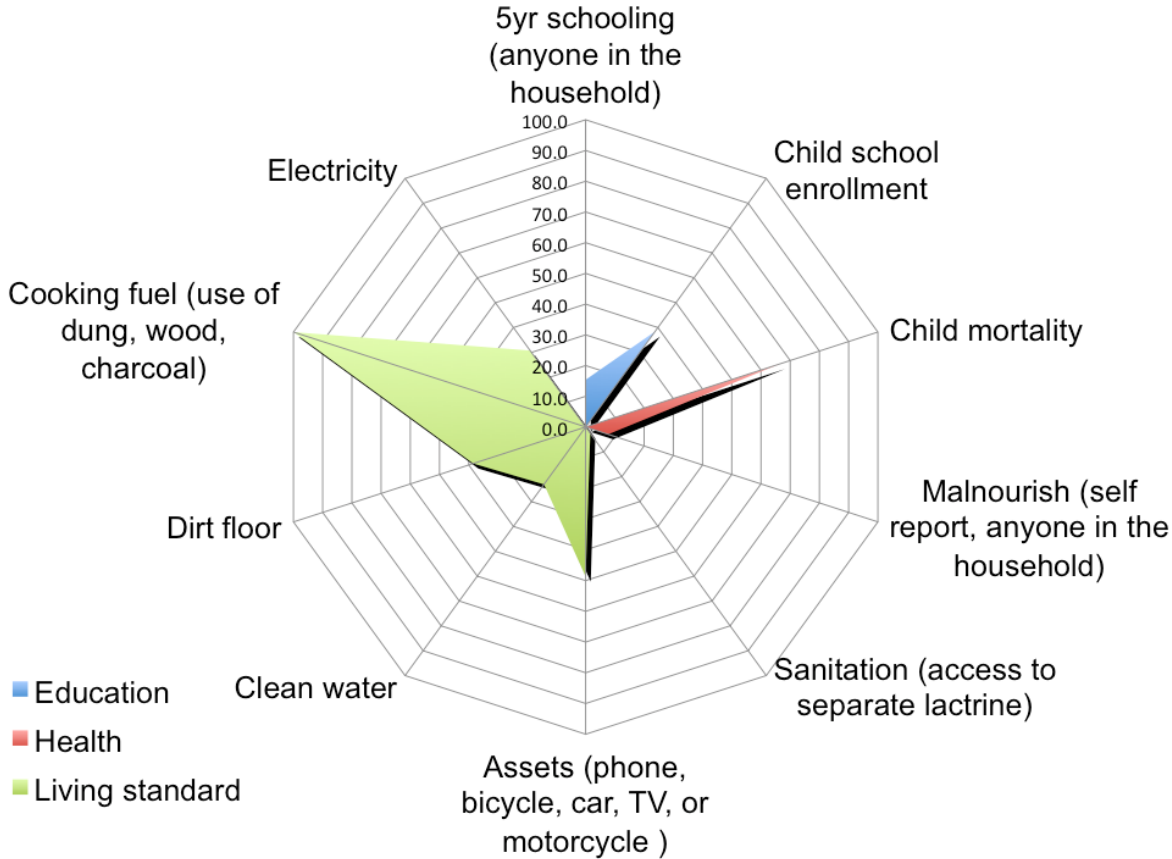


Figure 1. Deprivations in each poverty indicator

Gender differences in social capital and QoL

Variables	Total (n=163)	Female (n=124)	Male (n=39)	t ¹ (df ²)	Significance (p-value)
Social Capital (mean, SD)	2.61 (0.45)	2.56 (0.07)	2.75 (0.04)	-2.46 (69.37)	0.02
Quality of Life (mean, SD)	42.91 (5.56)	42.3 (5.8)	44.7 (4.2)	-2.87 (88.09)	0.005

¹ T-test: unequal variance assumed

² Satterthwaite's degrees of freedom



Methods- Conventional content analysis

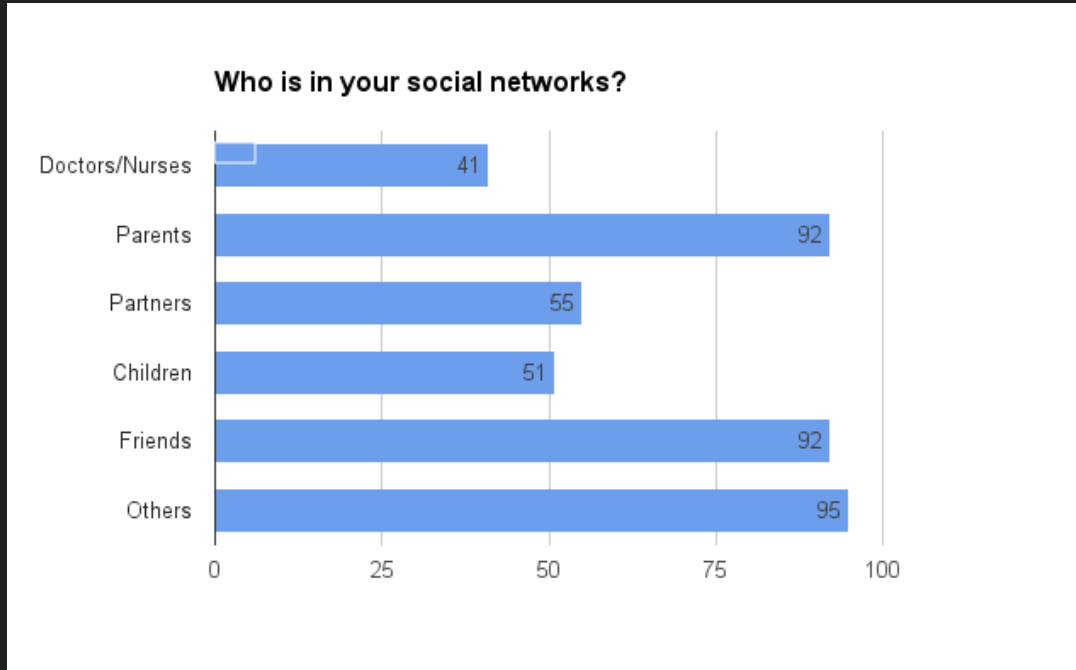
Questions developed by inductive category development

Systematic text analysis

Descriptive statistics and graphs

Assessing Social Networks:

Looking back over the past 6 months, who are the people/ organizations with whom you discussed matters important to you (list the relationships eg. Mother, friend 1, 2, partner, etc.)?

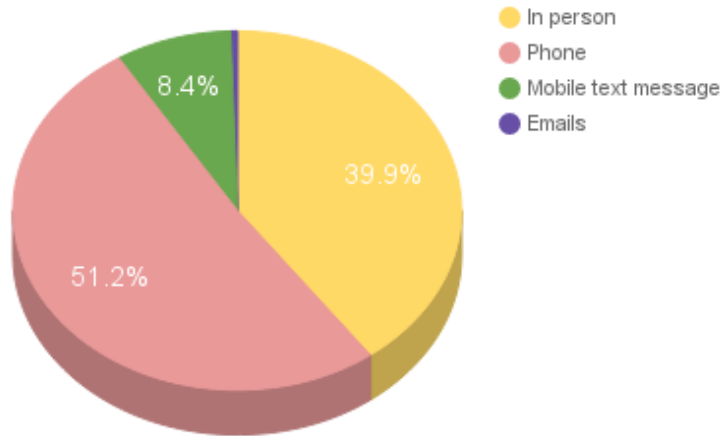


(Multiple choices allowed for participants, N=163)

Assessing Social Networks:

Looking back over the past 6 months, who are the people/ organizations with whom you discussed matters important to you (list the relationships eg. Mother, friend 1, 2, partner, etc.)?

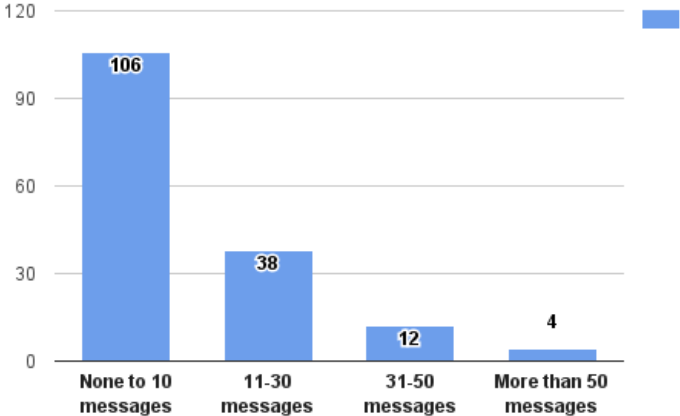
Modes of Communication within your Social Networks



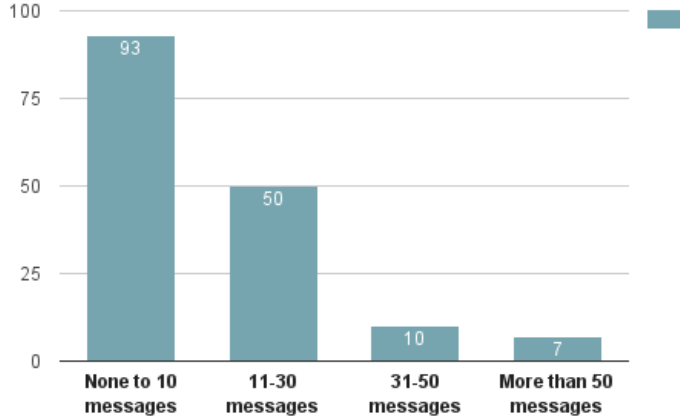
N=203 (multiple choices allowed for 163 participants)

Uses of mobile text messages

Number of text messages sent out/week



Number of text messages received/week



Conclusions and Suggestions for road forward: Mobile technologies and health

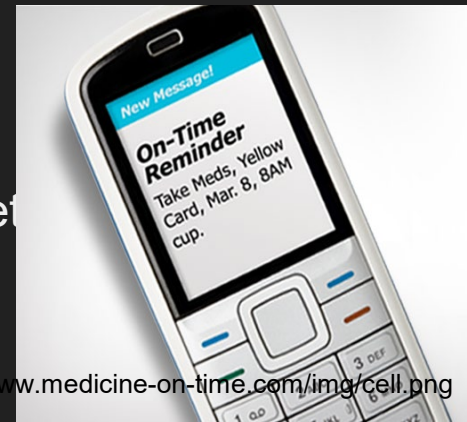
Mobile text messages are affordable and well-accepted

Mobile text messages are as effective as mobile phone calls

Bi-directional and personalized mobile text messages over automated, one way reminders

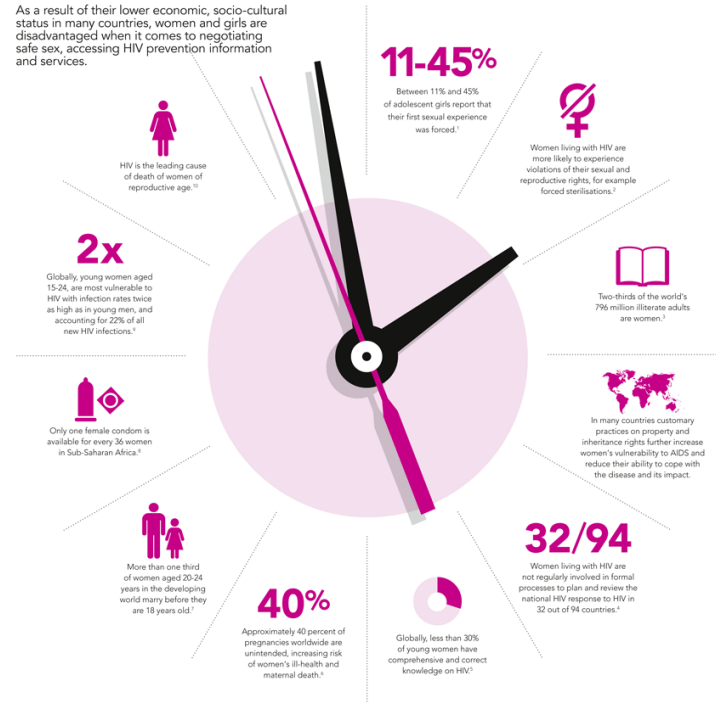
Know recipients' characteristics

Go beyond reminders: information, support, voucher, fund, net



Every minute, a young woman is newly infected with HIV.

As a result of their lower economic, socio-cultural status in many countries, women and girls are disadvantaged when it comes to negotiating safe sex, accessing HIV prevention information and services.



Sources

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Suggestions for road forward: Social capital and Global health

People with high social capital,

More access to resources and opportunity

Leading to better health status, reputation, and wealth

Limited resources available in a given community,

Mobilizing flow of information, education, links to resources, and communication to improve opportunity to better health and QoL

Benefiting more for people in resource-limited settings and vulnerable situations

Mobile technologies: effective platform at low cost

-----Acknowledgement

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Questions and Comments

This presentation was based on author's research and synthesis of literatures.
List of references is available upon request.