Health-related quality of life in a sample of HIV-infected South Africans

International Conference on Health Promotion and Quality of Health Services in Bangkok, 20 Nov 08

Karl Peltzer Nancy Phaswana-Mafuya

Social science that makes a difference

40
1968-2008

HSRC
Human Sciences
Research Council

Background

About 5.54 million people were estimated to be living with HIV in South Africa in 2005

with 18.8% of the adult population (aged 15–49) and about 12% of the general population infected

350,000 on ARV treatment in 2008

40
1968-2008

HSRC
Human Sciences
Research Council

Background

- Health-related quality of life (HRQoL) is a multidimensional concept:

- global health perspectives,

- symptom status,

- functional status,

- biological and physical variables,

- individual and environmental characteristics, and

- general health perceptions
(Wilson & Cleary, 1995)

Background

- Aim of this study:
- to explore HRQoL
- self-reported HIV symptoms
- in a group of PLHIV residing in resource-poor communities

  in the Eastern Cape Province, South Africa.

40
1968-2008

HSRC
Human Sciences
Research Council

Method

- ***Sample and procedures***
- The study involved 607 PLHIV sampled from all districts of the Eastern Cape Province:
- recruited through convenience sampling by other PLHIV
- at health facilities (42%), key informants in the community (44.1%) and support groups (13.9%).

Method

- *Measures*
- *Health-related quality of life (HRQoL)*
- The WHOQOL-HIV BREF is based on the WHOQOL-HIV measure, one of the two World Health Organization's Quality-of-Life Instruments for use with HIV-infected populations

(O'Connell, Skevington & Saxena, on behalf of the WHOQOL-HIV Group, 2003)

40
1968-2008

HSRC
Human Sciences
Research Council

Method

- ## Measures:

The Revised Sign and Symptom Checklist for Persons with HIV Disease (SSC-HIVrev)
The SSC-HIVrev is a 72-item checklist of HIV/AIDS-specific physical and psychological symptoms (Holzemer et al., 2001)

Demographic and health-status characteristics

Table 1: Personal characteristics of the participants ($n = 607$ PLHIV)

	n	%
Females	475	78.3
Males	132	21.7
Age (years)		
18–25	80	13.2
26–35	274	44.8
36–45	187	30.8
46+	66	10
Race		
Black	588	96.9
Coloured	17	2.6
White	2	0.3
Locality		
Rural	290	48.1
Informal settlement	51	8.5
Urban	262	43.4

Results

Table 2: Severity of illness of participants (*n* = 607 PLHIV)

	N	%
Year known HIV-positive:		
1988–1997	24	4
1998–2001	65	10.8
2002–2003	152	25.2
2004–2005	206	34.1
2006 onwards	157	26
AIDS diagnosis:		
'Yes'	395	66.4
'No'	200	33.6
Most recent CD4 cell count:		
<200	196	32.3
200–350	145	23.9
>350	169	27.8
Missing data/'Don't know'	97	16
Currently on ART	292	48.1
Commenced ART (among those on ART):		
Less than 3 months ago	18	7.8
3–6 months ago	39	16.8
6 months to 1 year ago	52	22.4
1–2 years ago	59	25.4

40
1968-2008

HSRC
Human Sciences
Research Council

Table 3: Symptom rank order, frequency, percentage and mean intensity

Problem	Rank	Frequency	Percentage	Mean intensity[a]
Headaches	1	403	79.0	2.15
Fever	2	351	68.8	1.83
Thirsty	3	346	67.8	2.17
Fatigue	4	340	66.7	2.10
Weakness	5	338	66.3	1.79
Painful joints	6	332	65.1	2.08
Nausea	7	307	60.2	1.74
Muscle aches	8	302	59.2	1.95
Fear/Worries	9	300	58.8	1.87
Dizziness	10	293	57.5	1.89

Table 4: The WHOQOL-HIV BREF descriptive statistics according to sex of the participants (mean values ± standard deviation)

	Total	Men	Women	t
Overall quality of life	2.8 ±1.0	2.6	2.8	-2.35*
General health perceptions	3.1 ±1.0	2.8	3.1	-2.88**
Physical domain:	13.2 ±3.2	12.9	13.2	-0.83
3. Sleep and rest	3.5 ±1.0	3.5	3.5	-0.36
Psychological domain:	13.9 ±2.8	13.4	14.0	-2.16*
6. Self-esteem	3.6 ±1.0	3.5	3.7	-1.99
Level of independence domain:	12.6 ±3.1	12.4	12.7	-1.16
9. Mobility	3.4 ±1.0	3.4	3.4	0.09
Social relationships domain:	14.0 ±2.8	13.8	14.1	-1.14
14. Social support	3.9 ±0.8	3.8	3.9	-1.48
Environment domain:	12.2 ±2.2	12.0	12.3	-1.01
19. Health and social care: accessibility and quality	3.6 ±0.9	3.6	3.6	-0.40
Spirituality/religion/personal beliefs domain:	14.4 ±3.5	13.9	14.6	-1.82
54. Death and dying (r)	3.6 ±1.3	3.5	3.6	-1.21

Table 5: QoL and health variables by AIDS diagnosis and CD4 count values

	AIDS diagnosis	No AIDS diagnosis	*t*-value	CD4 count <200	CD4 count 200–350	CD4 count >350	*F*
Overall quality of life (QoL) score	2.8 (0.9)	2.8 (1.1)	-0.17	2.6 (1.0)	2.9 (1.1)	2.9 (1.1)	3.78*
General health perceptions	3.0 (1.0)	3.1 (1.0)	-0.72	3.0 (1.1)	3.2 (1.1)	3.2 (1.1)	1.30
Domains:							
Physical health	13.2 (3.2)	13.0 (3.3)	-0.78	12.6 (3.3)	13.4[1] (3.1)	13.7[1] (3.1)	6.16**
Psychological health	14.0 (2.6)	13.5 (3.0)	-2.10*	13.5 (2.8)	14.3[1] (2.7)	14.5[1] (2.6)	7.77***
Level of independence	12.6 (3.1)	12.7 (3.1)	0.34	12.2 (3.0)	12.9[1] (3.2)	13.4[1] (3.0)	7.63***
Social relationships	14.2 (2.8)	13.6 (2.8)	-2.57**	14.0 (2.8)	14.4 (2.9)	14.3 (2.6)	.84
Environment	12.3 (2.0)	12.0 (2.6)	-1.89	12.2 (2.2)	12.3 (2.1)	12.7 (2.1)	2.23
Spiritual/religious/personal beliefs	14.9 (3.3)	13.5 (3.7)	−4.52***	14.5 (3.5)	15.0 (3.5)	14.3 (3.1)	1.46
HIV-symptoms index	27.5 (13.0)	23.6 (14.4)	3.33***	28.4[1] (13.4)	26.2 (13.7)	23.7 (14.1)	5.24***

Social science that makes a difference

40
1968-2008

HSRC
Human Sciences
Research Council

Table 6: QoL and health variables by ART status

	On ART	Not on ART	*t*-value	On ART (1 year or more) *t*-value
Overall QoL	2.8 (1.1)	2.7 (1.0)	1.57	1.19
General health perceptions	3.2 (1.1)	2.9 (1.1)	3.42*	-0.06
Domains:				
Physical health	13.3 (3.2)	13.1 (3.2)	0.69	-0.73
Psychological health	14.0 (2.7)	13.8 (2.8)	0.55	-0.83
Level of independence	12.7 (3.1)	12.6 (3.1)	0.55	1.47
Social relationships	14.2 (2.8)	13.9 (2.8)	1.22	-0.79
Environment	12.2 (2.2)	12.2 (2.2)	-0.23	-0.43
Spiritual/religion/personal beliefs	14.6 (3.5)	14.3 (3.5)	1.04	-1.19
HIV symptom index	25.9 (13.0)	26.2 (14.3)	-0.26	-2.23**

40
1968-2008

HSRC
Human Sciences
Research Council

Table 7: QoL and health variables by disability grant status

	Disability grant status		
	Receiving a grant	Not receiving a grant	*t*-value
Overall perceived quality of life (QoL)	2.9 (1.1)	2.6 (1.1)	2.35*
General health perceptions	3.2 (1.1)	2.7 (1.3)	4.08***
Domains:			
Physical health	13.5 (3.1)	12.4 (3.5)	2.85**
Psychological health	14.2 (2.6)	13.4 (3.1)	2.50*
Level of independence	13.1 (3.1)	12.2 (3.4)	2.46*
Social relationships	14.3 (3.0)	13.7 (3.0)	1.69
Environment	12.4 (2.1)	11.8 (2.5)	2.43*
Spiritual/religious/personal beliefs	14.6 (3.3)	13.8 (3.9)	1.75
HIV-symptoms index	25.5 (13.1)	31.3 (15.0)	−3.60***

40
1968-2008

HSRC
Human Sciences
Research Council

Table 8: Multivariate logistic regression between domains of QoL, HIV symptoms and medical variables and socio-economic variables with overall quality of life

WHOQOL-HIV BREF subscales	Adjusted by sex, age and WHOQOL-HIV BREF domains	95% CI	*p*-value
Level of independence	1.12	1.01–1.24	0.035
Psychological health	1.21	1.06–1.39	0.007
Environment	1.19	1.06–1.34	0.003
Physical health	1.03	0.93–1.14	0.531
Spirituality	1.36	1.16–1.59	0.0001
Social relationships	0.99	0.91–1.08	0.832
Nagelkerke r^2 (effect of size) = 0.42			
HIV symptoms and medical variables	Adjusted by sex, age, HIV symptoms and CD4 counts	95% CI	*p*-value
HIV-symptoms index	0.93	0.91–0.95	0.0001
AIDS diagnosis			
CD4 cell count	1.15	0.94–1.41	0.17
Nagelkerke r^2 = 0.25			
Socio-economic variables	Adjusted by sex, age and socio-economic variables	95% CI	*p*-value
Educational level	1.17	1.01–1.34	0.03
Enough food to eat	1.36	1.06–1.75	0.02
Receiving a disability grant	1.75	1.11–3.41	0.06
Disability grant stopped			
Nagelkerke r^2 = 0.12			

Discussion

- This study among 607 PLHIV in the Eastern Cape found overall low levels of quality of life (QoL) among the domains in the WHOQOL-HIV BREF:

- environment (12.2), level of independence (12.6), physical health (13.2), psychological health (13.9), social relationships (14.0) and spirituality (14.4),

- compared to the results of other surveys among PLHIV (cf. WHOQOL-HIV Group, 2004)

Discussion

- Surprisingly, the group of participants with an AIDS diagnosis scored higher in the spiritual/religious/personal beliefs, social relationships and psychological domains, and lower on the HIV-symptoms index, than those with no AIDS diagnosis.

- These findings indicate that HIV infection impacts early and on all aspects of QoL.

- Health workers must not neglect the needs of patients with early HIV disease and must support them at a primary-care level.

Discussion

- Similar to the results of other studies (e.g. Eriksson et al., 2000; Wig *et al.*, 2006),

- we found that PLHIV with higher CD4-cell-count values scored higher in the domains: overall quality of life, psychological health, physical health and independence level, and lower on the HIV-symptoms index, than those with lower CD4-cell-count values.

Discussion

- Among medical variables and HIV symptoms, CD4 cell count and fewer HIV symptoms without an AIDS diagnosis were identified as predictors for perceived overall QoL.

- Among the socio-economic variables, having sufficient food to eat, a higher educational level, and receiving a disability grant were identified as predictors for overall QoL.

40
1968-2008

HSRC
Human Sciences
Research Council

Discussion

- This study found that on comparing persons receiving ART at the time of the study versus those who were not receiving ART, there were no significant associations regarding all WHOQOL-HIV BREF domains (except for general health perceptions) and the HIV-symptoms index.

Limitations of the study

Because non-probability sampling was used, the findings are not generalisable to the entire population of PLHIV in the Eastern Cape Province.
Another limitation of the study is that CD4 cell counts were assessed by self-report data and not confirmed with clinical records.
Even though about 32% of the patients reported a CD4 cell count less than 200, the group as a whole seemed to be extremely ill: about 66% self-reported to have been given an AIDS diagnosis

Acknoledgements

- This study was funded by the Eastern Cape Socio-Economic Consultative Council and the Eastern Cape AIDS Council, South Africa.

Social science that makes a difference

HSRC
Human Sciences
Research Council

40
1968-2008