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QUANTITATIVE EVALUATION OF AN EMPOWERMENT PROGRAMME FOR COMMUNITY CAREGIVERS TO FACILITATE HIV AND AIDS PATIENTS' ADHERENCE TO ANTIRETROVIRAL TREATMENT

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Abstract
This study is based on Intervention Research, where initially a literature study and a needs assessment of community caregivers regarding the content of an empowerment programme for caregivers to facilitate HIV and AIDS patients' adherence to antiretroviral treatment, were undertaken. From these results an empowerment programme for caregivers was developed. In this article the evaluation of the programme will be reported on by means of quantitative measurement. An experimental design was utilised with both groups comprising of 12 caregivers with a pre-test, post-test and post-post-test. The results of the measurement indicated that the community caregivers were empowered and that such an empowerment programme is needed.
KEY WORDS: Evaluation, quantitative, psychosocial functioning, empowerment programme, community caregivers, HIV and AIDS, adherence, antiretroviral treatment.

Anotacija
Šis straipsnis remiasi intervenciniu tyrimu, kurio pradžioje atlikta literatūros analizė ir įvertinti bendruomenės rūpintojų, kurie padeda ŽIV ir AIDS sergantiems asmenims laikytis gydymo antiretrovirusiniais vaistais, poreikiai. Tai atlikta siekiant apibrėžti įgalinimo programos rūpintojams turinį. Gauti duomenys panaudoti įgalinimo programai parengti. Ši programa straipsnyje analizuojama remiantis kiekybinio tyrimo duomenimis. Tyrimui pasitelktas eksperimento metodas, kuriame dalyvavo dvi rūpintojų grupės po 12 asmenų. Tyrimo rezultatai atskleidė, kad bendruomenės rūpintojai buvo įgalinti ir kad tokios įgalinimo programos reikia.
PAGRINDINIAI ŽODŽIAI: įvertinimas, kiekybinis tyrimas, psichosocialinis funkcionavimas, įgalinimas, bendruomenės rūpintojai, ŽIV ir AIDS, gydymas, antiretrovirusinis gydymas.

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Introduction

As part of Intervention Research (De Vos, Strydom, 2011, p. 473–490) a literature study, complimented by a needs assessment of community caregivers regarding their needs in caring for HIV and AIDS patients' and their adherence to antiretroviral treatment, was conducted. After completing this phase of the study an empowerment programme was developed. The focus of this article is to quantitatively evaluate the programme in order to become new technology for Social Work. The programme was developed according to social group work principles (Toseland, Rivas, 2014, p. 6–8; Zastrow, 2010, p. 45) where community caregivers

can be supported in giving psychosocial aid to patients on antiretroviral treatment. The programme was evaluated by means of the Personal Multi-Screening Inventory (PMSI) (Perspective Training College, 2009).

Problem Statement. According to the global update on HIV treatment report 9.7 million people in low-and middle-income countries were receiving ART in 2012. The ART roll-out has expanded dramatically and an estimated 2,150, 880 million people living with HIV and AIDS in South Africa were receiving treatment for HIV by the end of 2012 (WHO, 2013). Despite recent international efforts to upgrade antiretroviral treatment (ART), only 34% of the 28.3 million eligible people in low-and middle-income countries are receiving antiretroviral treatment (UNAIDS, 2013, p. 46).

One of the main constraints in achieving universal ART coverage is the limited human resources available to treat HIV and AIDS. Research studies by Kabore et al. (2010), Schneider et al. (2006) and Van Damme et al. (2008) have indicated that overburdened health staff often have difficulty in conveying the practical skills aimed at empowering people living with HIV and AIDS for informed day-to-day decision making. Insufficient human resources causes stress to the limited staff available, leading to fatigue and a decrease in motivation (Schneider et al., 2006, p. 20). The need for the development of an empowerment programme was identified to strengthen the knowledge, skills and attitudes of these community caregivers with regard to psychosocial support to patients on antiretroviral treatment.

Social group work was chosen as medium to present the empowerment programme. According to Zastrow (2010, p. 45) group work seeks to facilitate the intellectual, emotional, and social development of individuals through group activities. In social work, there has been a move towards accountable and empirically validated practice (Toseland, Rivas, 2014, p. 17). By means of this social work empowerment programme, the psychosocial functioning of the community caregivers was evaluated before they started the empowerment programme, at the end of the programme as well as a post-post measurement one month after the programme.

Research Question. For the purpose of this article the research question to be answered is: in what ways can the presentation of a social work empowerment programme be effective in empowering community caregivers to facilitate adherence of patients on antiretroviral treatment?

Aim of the research: the aim of this article is to quantitatively evaluate the social work empowerment programme for community caregivers to facilitate the adherence of patients on antiretroviral treatment.

Research methodology. The Intervention Research model with its six phases was used in this study (De Vos, Strydom, 2011, p. 476). Phase 6 of the research model, which is the aim of this article, focused on the quantitative evaluation of a

social work empowerment programme for community caregivers to facilitate patients' adherence to antiretroviral treatment. Experimental research (Fouché et al., 2011, p. 145), and specifically the quasi experiment, was chosen for data gathering (Botma et al., 2010, p. 114). According to Fouché and Bartley (2011, p. 148), a quasi-experiment has some, but not all of the requirements of a true experiment. The comparison group pre-test, post-test, post-post-test was chosen in order to determine how the programme will affect the experimental group.

For the purpose of the study, an experimental and comparison group were formed comprising of 12 caregivers each, with nine females and three males in both groups. The caregivers in the experimental group received the empowerment programme while the comparison group did not participate in the programme. The comparison group received both the pre-test, post-test and post-post-test, at more or less the same time as the experimental group, but did not receive the treatment (Rubin, Babbie, 2011, p. 271–278). Simple random sampling (Babbie, 2010, p. 189) where each individual case in the population has an equal chance of being selected for inclusion, was used accompanied by specific inclusion and exclusion criteria. No absolute assurance could be given that the two groups would exactly be the same, however, all possible measures were done to select the two groups as similar as possible (Rubin, Babbie, 2011, p. 271–278). Diversity issues, such as language, literacy level and socio-cultural issues, were thus important in the selection of participants (Toseland, Rivas, 2014, p. 146–147).

For the purpose of this study the Personal Multi-Screening Inventory (PMSI) of Perspective Training College (2009) was used for data analysis, which is a computer based standardised questionnaire with high validity and reliability (Botma et al., 2010, p. 174). This scale was used to measure the psychosocial functioning of the participants based on 7 areas of functioning. The post-post-test was conducted with both groups one month after the intervention was terminated.

Permission to conduct the research was obtained from the managers of the home community based care (HCBC) centres. They also assisted with the selection of the participants for the study. Ethical permission was obtained from the ethical committee of the North-West University, Potchefstroom Campus with the number NWU-00130-14-S1NWU. The following ethical issues were taken into consideration, namely to ensure a safe environment, the handling of emotional discomfort, adherence to the rights of participants, anonymity and confidentiality (Alston, Bowles, 2007, p. 21). The research report was compiled as accurately and objectively as humanly possible (Strydom, 2011, p. 126). Information regarding the findings of the study was made available to participants in their own language through information sessions after the completion of the study.

1. The nature and content of the social work empowerment programme

An empowerment-based practice evaluation such as a social group work programme is a process of helping individuals, families, groups and communities (Barker, 2014, p. 141). Such a programme enables participants to increase their personal, interpersonal, socio-economic and political strengths. The process in group work is goal directed, aimed at accomplishing tasks and meeting socio-emotional needs (Toseland, Rivas, 2014, p. 19–42). According to the results of the needs assessment, the programme was developed based on specific subjects for eight sessions. The presentations took place over a period of eight weekly sessions. The duration of each session was more or less 2 hours with a 15 minute break in between. The programme is schematically presented in table 1.

Table 1. Social work empowerment programme

Session	**Topic**	**Programme activities**
Session 1	Introduction to empowerment programme	Welcoming Measuring scale Post-test Ice breaker Group discussion Contracting
Session 2	ART and adherence	Group exercise Presentation Brainstorm Group discussion
Session 3:	Community caregivers, psychosocial support and adherence	Group exercise Presentation Case study Group discussions
Session 4:	Communication and lay counselling skills	Group exercise Presentation Group discussions Role play
Session 5:	Psychosocial and adherence support	Group exercise Presentation Group discussions Assessment tools Case study

Session	Topic	Programme activities
Session 6:	An approach to disclosure	Group exercise Presentation Group discussions Case study
Session 7:	Mental health, Substance abuse and ART	Group exercise Presentation Group discussions Case study Role play
Session 8:	Positive Living, Prevention and ART Termination	Group exercise Presentation Group discussions Role play Evaluation-Completion of measuring scale

2. Results of the study

The results of the PMSI scale will be discussed according to the various sections of the scale.

2.1. Positive psychosocial functioning

The positive psychosocial functioning area is divided into three main categories, expectation, achievement and satisfaction which are divided into internal functioning (ISS) and behaviour (GBS). The six areas were used to measure the positive psychosocial functioning with the following percentage values.

0–30%: Under activated, unable to rationalize.
31–72%: Under activated, needs attention.
73–79%: Warning area.
80–95%: Optimally activated.
95–100%: Over activated, out of touch with reality.

Table 2. Analysis of positive psychosocial functioning of experimental group (n = 12) and comparison group (n = 12)

	Experimental group (n = 12)			**Comparison group (n = 12)**		
Measurement	Pre	Post	Post-post	Pre	Post	Post-post
EXPECTATION-IIS	79%	60%	63%	74%	59%	59%
EXPECTATION-GBS	81%	57%	70%	70%	63%	58%
ACHIEVEMENT-IIS	71%	59%	65%	66%	54%	59%
ACHIEVEMENT-GBS	76%	56%	65%	71%	58%	58%
SATISFACTION-IIS	75%	58%	69%	69%	57%	56%
SATISFACTION-GBS	75%	56%	65%	73%	63%	61%
Average score	76%	57.6%	66%	70.5%	59%	58.5%

- Expectation – Inner Interactive Scale

The experimental group measured at 79% for the pre-assessment compared to 74% of the comparison group. After the presentation of the programme the positive psychosocial functioning of the experimental group measured 60% and increased to 63% for the post-post-test, while the comparison group score declined to 59% for both the post and post-post-test. This measurement indicates that both groups, fluctuated between inner feelings of optimism and hopefulness about the future and to focus on positive elements in their circumstances. According to research done by Van Dyk (2007) occupational stress in care workers working in the HIV and AIDS field, was more severe and intense than in other fields. Although a decline from the baseline measurement for both groups, it can be concluded that the empowerment programme yielded positive results for the experimental group to make them hopeful and optimistic about the future and to focus on the positive elements in their circumstances on a personal level and with regard to their working environment.

- Expectation – General Behaviour Scale

The positive psychosocial functioning of the experimental group measured at 81%, for the pre-assessment, which indicated that it was optimally activated. Respondents' behaviour showed that they were fully developed in this area and did not need much intervention. The comparison group measured at 70%, which indicated that their positive psychosocial functioning was under activated and needed attention. However, the post measurement showed a decline to 57% for the post test

for the experimental group and 63% for the post-post-test compared to the comparison group measurement of 63% and 58% for the post-post-test. However the experimental group measurement increased again to 70% during the post-post-test. This measurements show significant variances for both groups. This also points to uncertainty based on the ability to help others and encourage others. However, the empowerment programme had a slightly positive affect for the experimental group and they did develop qualities of helping others to be successful and to encourage them, to show others that they care and have faith in them, to act calmly, to deal positively with problems and to support others.

- Achievement – Inner Interactive Scale

The experimental group measured at 71% for the pre-assessment compared to 66% of the comparison group. According to the analysis, this indicated that they needed development to improve qualities of goal-setting, self-motivation, desire to grow and improve, perseverance to complete difficult tasks, and taking responsibility for their behaviour and success. The post-test results revealed that the experimental group measured 59% for the post test and the comparison group measured 54%, which still indicated that they needed development in this area. This area also showed significant fluctuation between the measurements and the results might point to overwhelming tasks based on their work environment (Caregivers Action Network, 2013, p. 14; Simpson, 2006). After the presentation of the programme the positive psychosocial functioning of the experimental group measured 65% for the post-post-test. Although still under activated there was a slight improvement from the post-test to the post-post-test compared to the comparison group score of 54% for the post test and 59% for the post-post-test. This indicated that this area still needed attention and intervention strategies to address for both groups.

- Achievement – General Behaviour Scale

The experimental group measured 76% which indicates a warning area. The comparison group measured 71%, which indicated that this area was under activated and needed attention. After the presentation of the programme the positive psychosocial functioning of the experimental group measured 56% and increased to 65% for the post-post-test, while the comparison group declined to 58% for both the post and post-post-test. Although the experimental group showed an improvement, with the post-post measurement, with the fluctuation in measurements, the conclusion can be drawn that respondents of both groups experienced challenges with regard to the following qualities in their behaviour: organization, self-confidence and drive. This indicated that continuous professional assistance to develop these qualities is needed.

- Satisfaction – Inner Interactive Scale

The experimental group measured 75% and indicated a warning area. The comparison group measured 69%, which indicated that this area was under activated and needed attention. Characteristics of this area include; satisfaction with ones circumstances, humour, positive use of free time, interaction with others, happiness, friendliness and peace of mind. Previous research studies (Shobede, 2011; Simpson, 2006; Singh et al., 2011; Van Dyk, 2007) indicated that caregivers have little time or energy for self-care, neglecting nutrition, exercise, socialisation and sleep leading to physical ailments. The demands of caring for patients and their families also mean that caregivers can face social isolation. After the presentation of the programme the positive psychosocial functioning of the experimental group measured 58% and increased to 69% for the post-post-test, while the comparison group decreased to 57% for the post test and 56% for the post-post-test. The conclusion can be drawn that although respondents of the experimental group improved slightly, both groups experiences difficulty with regard to this area and will need continues professional intervention.

- Satisfaction – General Behaviour Scale

The experimental group measured 75% and the comparison group measured 73%, which indicated a warning area. After the presentation of the programme the positive psychosocial functioning of the experimental group measured 56% and increased to 65% for the post-post-test, while the comparison group decreased to 63% for the post test and 61% for the post-post-test. The conclusion can also be drawn that respondents of the experimental group's ability to develop qualities to make use of their free time and to enjoy life in a responsible manner did slightly improve based on the scores. However, the results based on respondents' behaviour indicated a lack of humour, use of free time, interaction with others and pleasure of life.

2.2. Negative psychosocial functioning

The negative psychosocial functioning area is divided into three main categories, stress, helplessness and frustration, which is divided into internal functioning (ISS) and behaviour (GBS). Six indicated areas as illustrated underneath were used to measure the negative psychosocial functioning of the respondents:
0–5%: Under activated, out of touch with reality.
6–21%: Optimally activated.
22–28%: Warning area.
29–70%: Over activated, needs attention.
71–100%: Over activated, unable to rationalize.

Table 3. Analysis of negative psychosocial functioning for experimental (n = 12) and comparison group (n = 12)

	Experimental			Comparison		
	Pre-	**Post**	**Post-post**	**Pre-**	**Post**	**Post-post**
STRESS-IIS	40%	42%	34%	33%	38%	39%
STRESS-GBS	34%	41%	38%	33%	36%	40%
HELPLESSNESS-IIS	27%	43%	32%	30%	35%	38%
HELPLESSNESS-GBS	34%	32%	33%	32%	40%	28%
FRUSTRATION-IIS	31%	42%	33%	34%	40%	38%
FRUSTRATION-GBS	27%	34%	27%	26%	36%	34%
Average	32%	39%	32%	31%	37.5%	36%

- Stress – Inner Interactive Scale

The pre-test score with regard to negative psychosocial functioning for the experimental group was 40% and 33% for the comparison group, which indicated that it was over activated and needed attention. This means that community caregivers had high stress levels and they did not respond positively to the demands of their environment. Stress, nervousness, overload, burn-out, worry and fatigue was part of their daily functioning based on the pre-assessment. According to UNAIDS (2008a), caregivers who work with HIV and AIDS patients are faced with enormous psychological and physical challenges in providing care, which may result in burn out, which results from a discrepancy between the demands of the job and the ability of the worker to meet these demands (Caregivers Action Network, 2013; Van Dyk, 2007). Stigma impact negatively on patients as well as community caregivers and may lead to withdrawal from social support at a time they need it most (Ogden et al., 2006, p. 335; WHO, 2003).

The post measurement showed the same results for both groups 42% for the experimental group and 38% for the comparison group and stayed in this category of 34% for the experimental and 39% for the comparison group in the post-post-test. Although the experimental group improved slightly from the post-test to the post-post-test, the results indicates that despite the programme, they still experience challenges on this level and needed professional assistance.

- Stress – General Behaviour Scale

The pre-test score for the experimental group was 34% and 33% for the comparison group. The post-test showed a score of 41% for the experimental and 36% for the comparison group. The post-post-test revealed a score of 38% for the experimental and 40% for the comparison group. This showed over activation and needed attention. Behaviour that characterise this area include anxiety and physical symptoms of headaches which is an indication that they could not manage the behavioural elements of stress in a responsible way and acted in uncertain, moody

and panicky ways. However, according to UNAIDS (2008b), managing stress in HIV and AIDS caregivers is not an event, but a process in which everyday stressors and anxieties which are not addressed, gradually undermine the carers mental and physical health. Therefore, it can be concluded that community caregivers need assistance to address their stress in a positive manner.

- Helplessness – Inner Interactive Scale

The pre-test score for the experimental group was 27%, which indicated a warning area. The result of 30% for the comparison group indicated that this area was over activated and also needed attention. However, the post-test showed a score of 43% for the experimental and 35% for the comparison group, which still indicated a need for development. A research study done by De Saxe Zerden et al. (2006, p. 42–43) found that 69% of caregivers felt sad about patient related issues and feel helpless to address the problems. This sense of helplessness may be due to inadequate expertise to deal with PLWHA, increased workload and coping with inadequate resources. Trauma was also reported by 70% of the respondents. The post-post-test revealed a score of 32% for the experimental and 38% for the comparison group. Although the experimental group improved slightly between the post-test and the post-post-test, the results still showed that this area was over activated and needed attention. This indicated that this area did regressed for both groups and their inner experience were less positive, characterised by feelings of down-heartedness, uselessness and senselessness.

- Helplessness – General Behaviour Scale

The pre-test score for the experimental group was 34% and 32% for the comparison group which indicated that it was over activated and needed attention. The post-test showed a score of 32% for the experimental and 40% for the comparison group. In this regard, the experimental group improved slightly during the intervention. However, the post-post-test revealed a score of 33% for the experimental and 28% for the comparison group. This showed that this area needed attention. These results showed that respondents experienced challenges with regard to goal orientation, motivation and were less positive.

- Frustration – Inner Interactive Scale

The score for the experimental group for the pre-assessment was 31% and 34% for the comparison group which indicated that it was over activated and needed attention. The post-test showed a score of 42% for the experimental and 40% for the comparison group. The post-post-test revealed a score of 33% for the experimental and 38% for the comparison group. This indicated that the experimental group was slightly better off, however still in the over activated area. This indicated that their capacity to handle anger, irritation and impatience improved slightly from the post-test to the post-post-test.

- Frustration – General Behaviour Scale

The score for the experimental group in the pre-test was 27%, which indicated a warning area and 26% for the comparison group. The post-test showed a score of 34% for the experimental and 36% for the comparison group, which showed that this was over activated and needed attention. The post-post-test revealed a score of 27% for the experimental group and 34% for the comparison group. The measurement for the experimental group was thus stable from the pre-test and again the post-post-test which might indicate an improvement. This indicated that the experimental group was slightly better, with a downward move, compared to the comparison group score of 34%. This indicated that community caregivers' ability to control themselves when angry and to make other people feel secure improved. It can be concluded that the experimental group was equipped to manage their anger more effectively and showed development in this area.

2.3. Emotional functioning

The emotional functioning is divided into seven areas, dependency, paranoia, anxiety, memory loss, disturbing thoughts, senselessness of existence and suicidal thoughts. These seven areas were used to measure the emotional functioning of the respondents.

Emotional functioning
0–16%: Optimally activated.
17–21%: Warning area.
22–70%: Over activated, needs attention.
71–100%: Over activated, unable to rationalize.

Table 4: Analysis of emotional functioning of experimental (n = 12) and comparison group (n = 12)

	Pre	**Post**	**Post-post**	**Pre**	**Post**	**Post-post**
DEPENDENCY	38%	48%	34%	38%	48%	43%
PARANOIA	34%	46%	35%	33%	41%	45%
ANXIETY	23%	37%	27%	22%	29%	32%
MEMORY LOSS	23%	35%	27%	21%	35%	32%
DISTURBING THOUGHTS	23%	42%	29%	26%	37%	39%
SENSELESSNESS OF EXSISTENCE	22%	44%	41%	36%	46%	47%
SUICIDAL THOUGHTS	20%	38%	25%	15%	36%	38%
Average	26%	41%	31%	27%	39%	39%

- Dependency

Indicative of this area is the ability to cope with life and to handle problems effectively without support of something else. The measurement for the experimental and comparison group pre-test was 38% for both, which indicated that it was over activated. This implicated that they needed development in this area. The post-test measured 48% for both the experimental and comparison group, which still showed that it was over activated and needed attention. The post-post-test revealed a measurement of 34% for the experimental and 43% for the comparison group. This indicated that the experimental group improved, compared to the comparison group. The conclusion can therefore be drawn that the experimental group's ability to handle pressure and problems effectively improved from the pre-test to the post-post-test.

- Paranoia

The pre-test measurement for the experimental group was 34%, and 33% for the comparison group which indicated that it was over activated and needed development. This measurement was an indication that both groups had the perception that people are talking behind their back and were out to get them or trying to hurt them. The post-test showed a score of 46% for the experimental and 41% for the comparison group, which still showed that it was over activated and needed attention for both groups. The post-post-test revealed a score of 35% for the experimental and 45% for the comparison group, however, still over activated. The conclusion can therefore be drawn that community caregivers need attention in this area.

- Anxiety

Behaviour that is characteristic of this area includes fear or becoming afraid easily. The pre-test measurement for the experimental group was 23%, which indicated that it was over activated and needed development and 22% for the comparison group. The post-test showed a measurement of 37% for the experimental and 29% for the comparison group, which still showed that it was over activated and needed attention. Research by De Saxe Zerden et al. (2006, p. 42) indicated that fear of family and fear of HIV and AIDS play a major role in the emotional functioning of caregivers. They have to cope with their own fear of becoming HIV positive and fear of their clients with regard to disclosure issues. Most caregivers' personal exposure and experience of HIV was high. Most of them knew someone who have HIV. The post-post-test revealed a score of 27% for the experimental and 32% for the comparison group. This indicated that the experimental group was slightly better off, however, still over activated compared to the comparison group measurement of 32%.

- Memory loss

The pre-test measurement for the experimental group was 23%, and 21% for the comparison group. This indicated that community caregivers displayed signs of memory loss and experienced challenges with remembering important activities. The post-test measured 35% for both the experimental and the comparison group, which still showed that it was over activated and needed attention. The post-post test revealed a measurement of 27% for the experimental and 32% for the comparison group. This indicated that the experimental group was slightly better off, however, still over activated compared to the comparison group.

- Disturbing thoughts

The measurement for the experimental group pre-test was 23%, and 26% for the comparison group which indicated that it was over activated and needed attention. The post-test showed a measurement of 42% for the experimental group and 37% for the comparison group, which still showed that it was over activated and needed attention. The measurement during the post-post-test showed a score of 29% and 39% for the experimental and control group respectively. It can be concluded that both groups showed a regression from the baseline measurement which might point towards better knowledge on the topic and the possibility of being able to do introspection.

- Senselessness of existence

The pre-test measurement for the experimental group was 22%, which indicated that it was over activated and needed attention and 36% for the comparison group. To have sense in existence points to the fact that one has a purpose in life, having dreams and the ability to help to make the world a better place. The post-test showed a measurement of 44% for the experimental and 46% for the comparison group, which still showed that it was over activated and needed attention for both groups. The post-post-test revealed a measurement of 41% for the experimental and 47% for the comparison group. This indicated that the experimental group was slightly better off, but still over activated.

- Suicidal thoughts

The pre-test measurement for the experimental group was 20%, which indicated a warning area and 15% for the comparison group which means that it was optimally activated. The post-test showed a higher measurement of 38% for the experimental and 36% for the comparison group. Both groups regressed from the baseline measurement. This showed that this area was over activated and needed attention for both groups. This was surprisingly high for the post-test for both groups. The post-post-test revealed a measurement of 25% for the experimental and 38% for the comparison group. This indicated that the experimental group showed a lower score in the post-post-test, however, regressed from the initial baseline assessment.

2.4. Self-perception

Self-perception is divided into three areas, Inner insecurity, guilt feelings and lack of self-worth. These three indicated areas were used to measure the self-perception of the respondents.

Self-perception

0–20%: Optimally activated.

21–25%: Warning area.

26–70%: Over activated, needs attention.

71–100%: Over activated, unable to rationalize.

Table 5. Analysis of self-perception for experimental (n = 12) and comparison group (n = 12)

	Pre	**Post**	**Post-post**	**Pre**	**Post**	**Post-post**
INNER INSECURITY	35%	39%	32%	34%	40%	34%
GUILT FEELINGS	22%	36%	22%	19%	36%	28%
LACK OF SELF-WORTH	19%	18%	20%	17%	36%	33%
Average	25%	31%	25%	23%	37%	32%

- Inner insecurity

During the pre-measurement the experimental group had a percentage of 35% and 34% for the comparison group which indicated that it was over activated and needed attention. This indicated that community caregivers experienced insecurity in relationships and were afraid that they will be hurt emotionally. They felt threatened by circumstances and were afraid of the future, failure and rejection. The post-test showed a measurement of 39% for the experimental and 40% for the comparison group, which still showed that it was over activated. The post-post-test revealed a measurement of 32% for the experimental group and 34% for the comparison group. This indicated that the results have dropped for the experimental group from the pre-test to the post-post-test, which suggest the social work empowerment programme had improved their inner security.

- Guilt feelings

The pre-test measurement for the experimental group was 22%, and 19% for the comparison group. This indicated that community caregivers did not have guilt feelings with regard to their ability to manage themselves responsibly and did not accept blame for everything that went wrong. However, an increase in the measurement to 36% for both the experimental and the comparison group, indicated that development in this area was needed. The post-post-test revealed a score of 22% for the experimental and 28% for the comparison group. The score from the pre-test to the post-post-test was thus stable for the experimental group.

- Lack of self-worth

Indicators of self-worth include feeling good about oneself and to experience oneself as someone important and special. The measurement for the experimental group pre-test was 19%, and 17% for the comparison group. This measurement was positive and indicated that community caregivers did not need any development in this area. The post-test measurement of 18% for the experimental group indicates a positive change over the intervention period. In contrast, the comparison group measurement increased to 36%, which indicated a difference of 18% for the post-test. The post-post-test revealed a score of 20% for the experimental and 33% for the comparison group. Therefore, the conclusion can be drawn that the participants in the experimental group did not experience major problems in this area.

2.5. Interpersonal functioning

Interpersonal functioning is divided into eight areas, namely social support, relationship with child, relationship with partner, relationship with mother, relationship with father, relationship with family, relationship with friends and relationship with colleagues.

0–30%: Under activated, unable to rationalize.
31–63%: Under activated, needs attention.
64–68%: Warning area.
69–100%: Optimally activated.

Table 6: Analysis of interpersonal functioning for experimental (n = 12) and comparison group (n = 12)

	Pre-	**Post**	**Post-post**	**Pre**	**Post**	**Post-post**
SOCIAL SUPPORT	97%	100%	100%	86%	92%	25%
RELATIONSHIP WITH CHILD	100%	100%	100%	55%	65%	35%
RELATIONSHIP WITH PARTNER	100%	13%	75%	38%	50%	29%
RELATIONSHIP WITH MOTHER (STEP)	90%	95%	95%	70%	50%	55%
RELATIONSHIP WITH FATHER (STEP)	70%	60%	55%	0%	35%	50%
RELATIONSHIP WITH FAMILY	75%	89%	89%	57%	89%	39%
RELATIONSHIP WITH FRIENDS	68%	68%	68%	29%	21%	39%
RELATIONSHIP WITH COLLEAGUES	78%	11%	44%	42%	47%	58%
Average	85%	55%	78%	47%	56%	41%

- Social support

The study indicated that community caregivers rely heavily on social support in the form of family structures. These findings correlate with other research findings. The pre-test score for the experimental group with regard to social support was 97%, which indicated that it was optimally activated and did not need attention and 86% for the comparison group. The post-test showed a score of 100% for the experimental, and 92% for the comparison. The post-post-test revealed a score of 100% for the experimental, however, surprisingly 25% for the comparison group. This indicated that the experimental group was functioning optimally with regard to social support. This means that they could rely on a special person for support when in need and who is a source of comfort. The conclusion can be drawn that the empowerment programme was successful based on the post intervention score of the experimental group.

- Relationship with child

A stable relationship with children was seen as an important form of support for community caregivers. The score for the experimental pre-test was 100%, which indicated that it was optimally activated and did not need attention. The score of 55% for the comparison group indicated that they needed intervention with regard to relationship building with their children. The post-test showed a score of 100% for the experimental, which showed it was still optimally activated and the comparison group scored 65%, which indicated a warning area. The post-post test revealed a score of 100% for the experimental and 35% for the comparison group. This indicated that the experimental group functioned optimally with regard to their relationships with their children.

- Relationship with partner

Relationship with partners also formed a cornerstone for optimal functioning for community caregivers. The pre-test measurement of 100% for the experimental group is an expression of the value of partner support. However, the measurement of 38% for the comparison group indicated a strong need for development. This might be due to the selection of the groups since these criteria did not form part of the selection criteria. The post-test showed a score of 13% for the experimental group, which showed that it was under activated. It can be concluded that the experimental group gained knowledge about relationships form their involvement in the empowerment group. The comparison group scored 50%, which indicated it was under activated. However, the post-post-test revealed a score of 75% for the experimental and 29% for the comparison group. This indicated that the experimental group was functioning optimally and was more realistic about their relationship with their partner.

- Relationships with mother (step)

As seen from this study, the relationship with the mother was viewed as important. The pre-test score for the experimental group was 90%, which indicated that it was optimally activated and did not need attention and 70% for the comparison group. The post-test showed a score of 95% for the experimental, and 50% for the comparison. The post-post-test revealed a score of 95% for the experimental and 55% for the comparison group. This indicated that the experimental group was functioning optimally with regard to relationship with the mother.

- Relationship with father (step)

The pre-test score for the experimental group was 70%, which indicated that it was optimally activated and did not need attention and 0% for the comparison group. The post-test showed a score of 60% for the experimental, and 35% for the comparison group. The post-post test revealed a score of 55% for the experimental and 50% for the comparison group. This indicated that this area was under activated and regressed from the pre-test to the post-post-test especially for the experimental group, which can possibly be ascribed to a more realistic view of the relationship with the father, as well as a broken relationship with the father or even absent fathers.

- Relationship with family

Relationship with family measured 75% for the experimental group pre-test and 57% for the comparison group. The post-test showed a positive change regarding family relationships. The post-test showed a score of both 89% for the experimental and the comparison group. However, the post-post-test revealed a score of 89% for the experimental and 39% for the comparison group. This indicated that the experimental group was functioning optimally with regard to this area.

- Relationship with friends

Relationships with friends scored 68% for the experimental group pre-test and 29% for the comparison group. The post-test showed a score of 68% for the experimental, and 21% for the comparison group. The post-post-test revealed a score of 68% for the experimental and 39% for the comparison group. In contrast, this indicated that the experimental group was stable in terms of relationships with friends.

- Relationship with colleagues

Relationship with colleagues scored 78% for the experimental group pre-test and 42% for the comparison group. The post-test showed a drastically lessen score of 11% for the experimental group. The score of the experimental group increased again during the post-post-test to 44% which indicated that it was under activated. This fluctuation in scores can be attributed to the fact that the obtained knowledge on relationships gave them a chance to evaluate their relationship with their friends realistically. The comparison group post-test revealed a score of 47% for the post-test and 58% for the post-post-test.

2.6. Spiritual functioning

The following scores represent the scoring on spiritual level.
0–30%: Under activated, unable to rationalize.
31–75%: Under activated, needs attention.
76–80%: Warning area.
81–100%: Optimally activated.

Table 7. Analysis for spiritual functioning for experimental (n = 12) and comparison group (n = 12)

	Pre	**Post**	**Post-post**	**Pre-**	**Post**	**Post-post**
RELATIONSHIP WITH GOD	100%	100%	100%	100%	94%	34%

2.7. Physical functioning

The score card represents the scores for physical functioning.
0–31%: Under activated, unable to rationalize.
31–67%: Under activated, needs attention.
67–74%: Warning area.
74–100%: Optimally activated.

Table 8. Analysis of physical functioning for experimental (n = 12) and comparison group (n = 12)

	Pre	**Post**	**Post-post**	**Pre**	**Post**	**Post-post**
BODY IMAGE	63%	69%	64%	68%	58%	64%
SEXUAL SATISFACTION	45%	41%	52%	66%	56%	53%
Average	54%	55%	58%	67%	57%	59%

- Body image

The pre-test score for the experimental group with regard to body image was 63% which indicated that it was under activated and needed attention and the comparison group scored 68%. The post-test showed an increase to 69% for the experimental group which means that it improved with regard to feelings about their body image compared to the score of the comparison group of 58%. However, the score of the experimental group decreased again to 64% during the post-post-test, but still shows an overall increase from the pre-test to the post-post-test compared to the decrease in the post-post-test of the experimental group from 68% in the pre-test to 64% in the post-post-test.

- Sexual satisfaction

The pre-test score for the experimental group with regard to sexual satisfaction was 45% which indicated that it was under activated and needed attention and the

comparison group scored 66%. The post-test showed a decrease to 41% for the experimental group compared to the score of 56% for the comparison group. However, the score of the experimental group increased to 52% in the post-post-test, compared to the decrease of 53% of the comparison group.

Discussion

The purpose of this programme was to address the need for community caregivers to actively support people living with HIV and AIDS (PLWHA) in enhancing antiretroviral treatment (ART) adherence. Upon successful completion of this programme, it was envisaged that the caregivers will be able to effectively apply the relevant knowledge and skills to support patients on ART. Social group work was found to be an effective method and tool for empowering community caregivers, focusing on various aspects of service delivery to the patient on ART in order to empower community caregivers.

The programme was evaluated using the Personal Multi-screening Inventory (PMSI) scale comprising of 7 levels of psycho-social functioning. The measurement took place on a pre-, post- and post-post-test basis. Based on the results, the conclusion could be drawn that community caregivers showed a need for further development, on a regular basis, with regard to positive psychosocial functioning in all 7 indicated areas. The average score, however, showed a stable measurement from the pre-test to the post-post-test.

Participants measured the most positive development in the area of interpersonal relationships, however, a need was indicated for development in the area of relationships with father, partner, and colleagues. These discrepancies in measurement could be attributed to absence of fathers, a negative relationship with fathers, no guidance with regard to interpersonal relationships with colleagues and the fact that some caregivers were not in steady relationships. Spiritually they functioned optimally. The intervention programme should probably include a section on the integration of emotional, work and environmental challenges facing the community caregivers.

In general with regard to the PMSI some others factors may have influenced the accuracy of the findings. This assessment could have been mentally challenging due to the length of the scale and the difference in timelines of the two groups in completing the scale. This could have resulted in repetition of answers, not taking enough time to reflect on possible answers or even omitting certain aspects. Respondents may have underreported on some areas such as sexual satisfaction and partner relationship which may have influenced the accurateness of some information. In future the programme should be presented in more and shorter sessions

over a longer period of time in order for community caregivers to practice and better internalize what they have learned. However, it can be regarded as positive that respondents developed significantly with regard to specific items covered in the empowerment programme, for example the handling of stress and family relationships.

Recommendations

- Community caregivers play an important role in assisting HIV and Aids patients' adherence to anti-retroviral treatment and therefore this initial programme should be re-evaluated by other researchers in order for the programme to become standardised.
- It can be recommended that this programme be presented over a longer period of time with more and shorter sessions in order for more growth to take place in caregivers.
- Seeing that the caring for patients in this regard takes a high emotional toll of caregivers it can be suggested that the programme be offered to all caregivers at least once a year.
- The programme should be expanded in order to incorporate sessions on the link between emotional, work and environmental issues as well as stress management and motivational aspects.
- Measuring instruments should be uncomplicated and should the literacy levels of participants be taken into account when planning the programme.

Conclusions

This article argued that intervention based on a social work empowerment programme for community caregivers would be effective in developing the skills of community caregivers to facilitate patient's adherence to antiretroviral treatment. The conclusion from this study can be drawn that community based educational and self-management programmes aimed at adherence are important for community caregivers and group work can be regarded as an empowerment method in this regard. The research results showed that in order to achieve meaningful and sustainable results, the emotional and work environment of the community caregiver must be taken into account. Future studies with larger samples should be undertaken so that the programme can eventually become standardised in line with the Intervention Research model.

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