Review

Effectiveness of Palliative Care Including Physiotherapy in HIV Patients A Review of the Literature

ABSTRACT: It is estimated that 41 million people throughout the world are living with HIV/AIDS and of these 39 million are in sub-Saharan Africa (UNAIDS 2004). The HIV/AIDS epidemic is devastating the African continent. In Africa poorly resourced health care infrastructure further impairs the quality of life in HIV sufferers. Palliative care is an approach that aims to improve the quality of life of people living with threatening diseases such as cancer and HIV/AIDS. This review aimed to determine the efficacy of palliative care.

Uwimana J, MSc¹; Louw Q, PhD².

- ¹ University of the Western Cape. ² University of Stellenbosch.
- Complementary therapies such as Cognitive Behavioural Therapy, peer/counselling group therapy, massage therapy, and exercise therapy constitute palliative care. Seventeen articles published in peer reviewed journals during the period 1990-2005 were reviewed. The findings of our review demonstrate that there are indications that palliative care can be effective in improving the quality of life in patients with life threatening diseases such HIV/AIDS. Research in this field is complicated by the heterogeneity of study samples, difficulty in patient recruitment, and death before the end of the intervention period. Future research in this area should aim to include larger study samples, using valid tools to assess quality of life and to employ qualitative methods in studies to assess the effectiveness of palliative care.

KEY WORDS: PALLIATIVE CARE, COMPLEMENTARY THERAPY, PHYSIOTHERAPY, HIV/AIDS, TERMINALLY ILL, QUALITY OF LIFE.

INTRODUCTION

An estimated 41 million people worldwide are living with HIV/AIDS and of these 39 million are in sub-Saharan Africa (UNAIDS 2004). Ten million of these HIV/AIDS sufferers are significantly affected by the disease, which causes great suffering and economic hardship for them and their families (Sepulveda et al., 2002). Palliative care (PC) has been introduced with the aim of reducing suffering in HIV/AIDS patients. It is deemed crucial, since people with HIV infection can live 10 years and longer (Brecht et al., 2001, Singer 2002). Palliative care also offers a support system for carers to cope during the patient's illness and in their own bereavement after the loss of a relative or friend (Addington-Hall & Higginson, 2001).

The World Health Organisation (WHO) defines palliative care as an approach that should improve the quality of life in patients and their relatives who face problems associated with life-threatening diseases (WHO, 2002).

Palliative care is multidisciplinary in nature and it involves nurses, physiotherapists, medical doctors, counsellors, social workers and religious leaders (Meldbrum, 2003; Addington-Hall & Higginson, 2001). Physiotherapy plays a central role in this multidisciplinary approach by assisting patients to make the most of their decreasing potential, encouraging them to set short-term goals and relieving discomfort (Boyce, 2004).

Palliative care is considered to be a cost-effective method by which to manage HIV/AIDS patients (Sepulveda et al., 2002). It is thus advisable to introduce palliative care in poverty-stricken regions where the infrastructure is poor and opioid drugs are unavailable (Sepulveda et al., 2002). However, many African countries have not yet considered palliative care as a public health solution (Sepulveda et al., 2002). One explanation for this is that effectiveness of palliative care remains questionable and is mostly based on anecdotal reports. This review aims to ascertain

the effectiveness of palliative care in the management of HIV/AIDS patients, and to contribute towards further understanding of published and future research into palliative care.

METHODOLOGY

This review is based on information obtained from peer-reviewed publications in scientific journals over a period 15 years (1990-2005). In accordance with the aims of the review, studies that could provide insight into the effectiveness of palliative care were reviewed. Research papers in English and French were included. Review articles were excluded.

CORRESPONDENCE TO:

Prof. Quinette Louw Department of Physiotherapy University of Stellenbosch PO Box 19063

Tel: (021) 938-9300 Email: qalouw@sun.ac.za

Fax: (021) 930-8370

Formulation of search terms

Four key search terms were formulated: effectiveness of palliative care in HIV/AIDS patients, effectiveness of alternative therapy care in HIV/AIDS patients, effectiveness of home-based care in HIV/AIDS patients and effectiveness of primary care in HIV/AIDS patients. Synonyms were then applied

to formulate the 20 key search terms. The search terms are formulated in Table 1.

Database search and results

MEDLINE, CINAHL, African Healthline and SCIRUS were searched, as these databases are available at the University of the Western Cape library. The results

TI THE

Table 1: Search Terms.

Search terms nr	Search Term
1	Effectiveness of palliative care in HIV/AIDS patients
2	Efficiency of palliative care in HIV/AIDS patients
3	Efficacy of palliative care in HIV/AIDS patients
4	Success of palliative care in HIV/AIDS patients
5	Outcomes of palliative care in HIV/AIDS patients
6	Effectiveness of alternative therapy care in HIV/AIDS patients
7	Efficiency of alternative therapy care in HIV/AIDS patients
8	Efficacy of alternative therapy care in HIV/AIDS patients
9	Success of alternative therapy care in HIV/AIDS patients
10	Outcomes of alternative therapy care in HIV/AIDS patients
11	Effectiveness of home-based care in HIV/AIDS patients
12	Efficiency of home-based care in HIV/AIDS patients
13	Efficacy of home-based care in HIV/AIDS patients
14	Success of home-based care in HIV/AIDS patients
15	Outcomes of home-based care in HIV/AIDS patients
16	Effectiveness of Primary care in HIV/AIDS patients
17	Efficiency of Primary care in HIV/AIDS patients
18	Efficacy of Primary care in HIV/AIDS patients
19	Success of Primary care in HIV/AIDS patients
20	Outcomes of Primary care in HIV/AIDS patients

Table 2: Search Results.

Database	Hits	Included	Excluded	Duplicate	Retained	Total
MEDLINE	38	20	18	15	5	5
CINAHL	26	17	9	12	5	5
AFRICAN HEALTHLINE	68	18	50	16	2	2
SCIRUS (Science direct)	1826	80	1746	75	5	5
					TOTAL =	17

of each search term were combined and results are presented in Table 2.

Methodological quality of articles reviewed

Studies were reviewed for methodological rigour by using validated quality scoring tools. The Crombie Scale was used to assess cohort studies, the Pedro Scale was use to assess the randomized controlled trials (RCTs) and survey studies were assessed by applying the National Health Medical Research Council Scale (NHMRC-Australia, 2003).

RESULTS

A total of 17 articles were reviewed. Table 3 indicates the four types of study design employed in the studies reviewed.

Observational study

The observational study aimed to assess the feasibility of quality of life (QoL) data in a palliative care setting and suggest practical ways of presenting QoL outcomes over a prospective period (Paci et al., 2001). The sample included terminal cancer patients aged 18 years and above. Patients experienced a reduction of pain in the final weeks of life. It was not possible to ascertain whether this finding was due to the palliative care intervention, as the pain reduction may also attributed to effective pain control by drugs or under-reporting of pain in the last period of life.

See Table 4

Surveys

Five surveys (Butters & Higgison, 1993; Hardy, Edmonds, Turner, Rees & A'Hern, 1999; Brechtl, Breitbart, Galietta, Krivo & Rosenfeld, 2001; Lo et al., 2002; Goodwin, Higginson, Myers, Douglas & Normand, 2003) aimed to evaluate the quality of life in patients receiving palliative care. Only one study could not mention the type of patients involved in the study, but most of the patients suffered from HIV/AIDS and advanced cancer. Males and females aged 19-91 years were included. Tables 5 and 7 summarize the study aims and populations of the surveys. Forty percent (4) of the surveys (Butters &

Higgison, 1993; Hardy, Edmonds, Turner, Rees & A'Hern, 1999; Lo et al., 2002; Goodwin, Higginson, Myers, Douglas & Normand, 2003) investigated different research tools/instruments to assess the quality of life, since this is the main outcome of palliative care. The McGill quality of life questionnaire and

Table 3: Types of study designs.

Authors	No of studies	Study design
Butters et al. (1993), Galantino et al. (1999), Hardy et al.(1999), Sparber et al. (2000), Brechtl et al. (2001), Lo et al. (2002), De Visser et al. (2002), Virikt et al. (2002), Radbruch et al. (2002), Goodwin et al. (2003)	10	Surveys: 3 cross-sectional surveys, 5 prospective surveys, 1 retrospective survey 1 longitudinal study
McWhinney et al. (1994), Birk et al. (2000), Cohen et al. (2000), Diego et al. (2001), Molassiotis et al. (2002)	5	Randomised controlled trials
Paci et al. (2001)	1	Cohort study
Armes and Higginson (1999)	1	Qualitative study

Table 4: Crombie Scale: Observational Studies.

Authors		Criterion							Total		
	1	2 3 4 5 6 7 8 9 10									
Paci et al. (2001)	1	0	1	1	1	1	1	1	1	1	9(90%)

Support Team Assessment Schedule questionnaire were found to be appropriate validated tools to evaluate the effectiveness of palliative care for community and in-patient units for terminal illnesses such as Aids and cancer. The Rotterdam Symptom Check List questionnaire was used as a symptom control assessment tool and not as a measure of quality of life (Butters & Higginson, 1993; Hardy, Edmonds, Turner, Rees & A'Hern, 1999).

The average methodological score of all surveys (N=10) was good (74.8%). The lowest score was 50% (De Visser & Grierson, 2002). Methodological soundness of these surveys implies that the results may be valid and reliable. Table 6 illustrates the NHMRC score results.

Randomized Controlled Trials Studies (RCT)

Out of five randomized controlled trials, one study aimed to evaluate a palliative home care service. Four studies focused on evaluating the effectiveness of complementary or alternative therapies including massage therapy, Chinese

Table 5: Study Aims of Surveys.

Author	Study aims			
Butters et al. (1993)	To compare the views of palliative care reported by patients, informal carers and the community care team, a multidisciplinary team caring for people with late stage HIV/AIDS illness.			
Galantino et al. (1999)	To evaluate the effect of electroacupuncture in improving the condition of neuropathic HIV/AIDS patients			
Hardy et al. (1999)	To assess the quality of life of patients in palliative care by using the Rotterdam Symptom Checklist			
Sparber et al. (2000)	T o determine the extent at which Complementary Medicine or alternative therapy CAM) is used by adults patients participating in HIV/AIDS clinical trials and investigate issues of communication between patients and clinical investigators			
Brechtl et al. (2001)	To address the impact of Highly Active Antiretroviral Therapy (HAART) on medical, palliative care, and quality of life of patients with advanced HIV infection			
Lo et al. (2002)	To evaluate the quality of life of palliative care patients in the last two weeks of life			
De Visser et al. (2002)	To estimate the prevalence of Complementary Medicine or alternative therapy (CAM) use in a nation-wide sample of Australian people living with HIV/AIDS, and to identify sociodemographic and attitudinal variables associated with CAM			
Virik et al. (2002)	To qualify and quantify the nature of palliative Medicine Liaison Consultation service in a large teaching hospital and the utility of a simple scoring system in the assessment of the impact of the service on direct patient care			
Radbruch et al. (2002)	To evaluate information about the variability in the documentation and the services among the palliative care units and on factors influencing this variability			
Goodwin et al. (2003)	To evaluate the effectiveness of palliative day care in improving pain, symptom control, and quality of life			

Table 6: Quality of Surveys.

Authors		Criterion								Total					
	1a	1b	2	3	4	5	6	7a	7b	8	9	10	11	12	
Butters et al. (1993)	1	0	1	1	0	1	1	1	1	0	1	0	1	1	10(71%)
Galantino et al. (1999)	1	1	1	1	1	1	1	1	1	1	0	1	0	1	12(85%)
Hardy et al. (1999)	0	0	1	1	0	0	1	1	1	1	1	1	0	1	9(64%)
Sparber et al. (2000)	1	0	1	1	1	0	1	1	1	1	1	1	1	1	12(85%)
Brechtl et al. (2001)	1	1	1	1	1	1	1	1	1	1	0	1	0	1	12(85%)
Lo et al. (2002)	1	1	1	1	1	0	1	1	1	1	0	1	1	1	12(85%)
De Visser et al. (2002)	1	0	1	1	0	0	1	0	1	0	0	1	0	1	7(50%)
Virik et al. (2002)	1	1	1	0	0	1	0	1	1	1	1	1	1	1	11(76%)
Radbruch et al. (2002)	1	0	0	1	1	0	1	1	1	1	0	1	0	1	10(71%)
Goodwin et al. (2003)	1	1	1	1	1	0	1	1	1	1	0	1	0	1	11(76%)

Table 7: Study Population.

Authors	Type of patients	Gender	Age
Butters et al. (1993)	HIV/AIDS	Not mentioned	25-55 yrs, 27-57 yrs
Galantino et al. (1999)	HIV/AIDS	Male (82%), Female (18%)	24-58 yrs
Hardy et al. (1999)	Cancer	Not mentioned	36-83 yrs
Sparber et al. (2000)	HIV/AIDS	Male (98%), Female (2%)	31-50 yrs
Brechtl et al. (2001)	Advanced HIV	Male (77%), Female (23%)	25-78 yrs
Lo et al. (2002)	HIV/AIDS	Male (91%), Female (9%)	18-72 yrs
De Visser et al. (2002)	Advanced cancer	Male (62%), Female (38%)	17-86 yrs
Virik et al. (2002)	Not mentioned	Male (46%), Female (54%)	19-95 years
Radbruch et al. (2002)	HIV and Cancer	Male (50%), Female (50%)	30-91 yrs
Goodwin et al. (2003)	Cancer and HIV	Male (49%), Female (52%)	35-87 yrs

Table 8: Study Aims and Population.

Authors	Study Aims	Type of Patients	Gender	Age
McWhinney et al. (1994)	To evaluate a palliative care home support team based on an inpatient unit	Advanced cancer patients	Not mentioned	Not mentioned
Birk et al. (2000)	To determine the effects of massage therapy alone and massage combined with exercise or immune system measures and quality of life in HIV	HIV/AIDS patients	Male (95%) Female (5%)	27-50 yrs
Cohen et al. (2000)	To evaluate the effectiveness and safety of Chinese herbal formulation for HIV-associated pathogen-negative diarrhoea	Advanced HIV/AIDS patients	Males	Above 17 years
Diego et al. (2001)	To assess the effect of massage therapy on patients with HIV/AIDS	HIV/AIDS patients	Females	13-19 yrs
Molassiotis et al. (2002)	To assess the effectiveness of cognitive behavioural group therapyc(CBT) and peer support/counselling group therapy (PSC) in relation to improving the mood and QoL and decreasing uncertainty in illness	HIV/AIDS patients	Male (91.4%) Female (8.6%)	20-62 yrs

herbal formulation, cognitive behavioural group therapy (CBT) and peer support/counselling group therapy (PSC) used in palliative care in improving the quality of life of patients. The findings demonstrate that complementary or alternative therapies such as massage therapy, CBT and PSC were effective in palliative care. This is evidenced by improvement in the patients' quality of life. Table 8 summarizes the aims of the studies and the population of RCTs.

The Pedro scale was used to score the quality of randomized controlled trials. The average score was 50.8%. One study by McWhinney, Bass & Allan (1994) was excluded because patients were terminally ill and died before the study ended. Table 9 presents the Pedro score results.

Description of interventions

Out of five randomized controlled trial studies, only one study used palliative home care as an intervention to evaluate the effectiveness of palliative care while others evaluated the effectiveness of complementary/alternative therapies used by HIV/AIDS patients in conjunc-

tion with quality of life assessment. Table 10 summarizes the interventions and main findings of palliative care and complementary/alternative therapies in HIV/AIDS and cancer patients.

Qualitative study

The main aims of the qualitative study (Armes & Higginson, 1999) were to assess the quality of HIV palliative care services and to qualitatively assess the needs of those with advanced HIV/AIDS. The components of high-quality HIV

palliative care were assessed by using the multidimensional model developed by Maxwell (Armes & Higginson, 1999). Maxwell's model (Armes & Higginson, 1999) identifies the components of high-quality HIV palliative care as:

- Effectiveness
- Acceptability
- Efficiency
- Access
- Equity
- Relevance

Table 9: Pedro Scale Results.

Authors		Criterion								Total		
	1	2	3	4	5	6	7	8	9	10	11	
McWhinney et al. (1994)	1	1	0	0	1	0	0	0	0	0	0	3 (27%)
Birk et al. (2000)	1	1	0	1	0	0	0	0	1	1	1	6 (54%)
Cohen et al. (2000)	1	1	1	1	0	0	0	1	0	1	1	7 (64%)
Diego et al. (2001)	1	1	0	1	0	0	0	1	0	0	1	5 (45%)
Molassiotis et al. (2002)	1	1	1	1	0	0	0	1	0	1	1	7 (64%)

Table 10: Description of interventions Studied in Palliative Care.

Authors	Interventions	Main findings
McWhinney et al. (1994)	Palliative care home for a period of 18 months	Negative outcome: Problems with recruitment, death before comparison point, failure to complete questionnaire
Birk et al. (2000)	45-minute overall body massage once/week, similar massage and supervised aerobic exercises 2 other days/week, similar massage and biofeedback stress management once /week.	Positive outcome: Massage in combination with stress management favourably alters health perceptions and leads to less utilization of health care resources.
Cohen et al. (2000)	Source QiTM (Chinese herbal formulation) in an 8- week, open label study	Positive outcome: Reduction in diarrhoea in patients with advanced HIV, pathogen-negative diarrhoea.
Diego et al. (2001)	Massage therapy in a period of 2 times/week for 12 weeks	Positive outcome: Patients feeling less anxious and depressed. Enhanced immune function.
Molassiotis et al. (2002)	Cognitive-behavioural group therapy (CBT) and peer support/counselling (PSC) for 12 weekly sessions over 3 months	Positive outcome Improved psychological distress in terms of mood, anger, tension-anxiety, depression and confusion and the quality of life improved significantly compared to the PSC group.

The main findings illuminated the complex nature of the needs of people with HIV/AIDS. Clients' needs and personal circumstances seemed to influence the criteria used to judge the six dimensions of high-quality HIV palliative care and also their rating of their relative importance. These six dimensions

sions of high-quality HIV palliative care appear to be inextricably linked from the client's point of view. Thus, service commissioners and providers need to assess the quality of HIV services in palliative care in all six dimensions, namely effectiveness, acceptability, efficiency, access, equity and relevance.

Description of outcome measures

The most common outcome tool used in all 17 studies reviewed was the McGill pain and quality of life questionnaire. The McGill pain and quality of life questionnaire describes physical symptoms, psychological aspects, existential, support and sex domains. Assessment of

Table 11: Assessment Tools and Outcome Measures

Author(s) and years	Assessment tools	Outcome measures
Butters et al.1993	Support team assessment schedule (STAS) questionnaire	Pain, and symptom control, anxiety and service needs
McWhinney et al. 1994	McGill pain questionnaire and Melzack nausea questionnaire	Pain and nausea
Hardy et al.1999	Rotterdam symptom check list questionnaire (RSCL)	Psychological and physiological aspects of quality of life such as depression, anxiety, pain, nausea, etc
Galantino et al.1999	MOS-HIV: 30 – item instrument questionnaire and tibial reflex index	Pain
Armes and Higginson, 1999	Individual interviews and focus groups	Components of high-quality HIV palliative care: effectiveness, acceptability, efficiency, flexible and responsive care, equity.
Birk et al.2000	Questionnaires (General Health Self-Assessment)	Change in Peripheral blood levels of CD cells, CD8 cells, CD4/CD8 cells ratio and natural killer cells, 6 dimension of quality of life.
Cohen et al.2000	The Thygeson Stool Tool (daily diary)	Diarrhoea
Sparber et al. 2000	Questionnaire	CAM and HIV related problems: nausea, dermatological, depression, insomnia, and weakness
Paci et al.2001	Therapy impact questionnaire (TIQ) Quality of life questionnaire (QoL)	Physical symptoms, function condition, psychosocial aspects
Brechtl et al.2001	Karnofsky Performance rating Scale (KPRS), Brain Pain Inventory (BPI), Memorial Symptom Assessment scale (MSAS), Hamilton Depression Rating Scale (HDRS), Edmonton Functional Assessment Tool (EFAT)	CD4 cells counts and Physical and psychological factors (pain, symptom distress, depression, psychological well-being)
Diego et al.2001	Demographic questionnaire, CES-D and the State Anxiety Inventory	CD4 and CD8 cells counts, depression and anxiety
De Visser et al.2002	Questionnaire	CAM
Lo et al.2002	McGill QoL scale for Hog Kong Chinese (MQOL-HK)	Physical symptoms, psychological, existential, support and sex domains
Virik et al.2002	Questionnaire	Pain
Molassiotis et al. 2002	Questionnaires (The profile mood states,BREF-HK scale, and Mishel uncertainty in illness scale	Psychological distress and quality of life
Radbruch et al.2002	Questionnaire	Pain control
Goodwin et al. 2003	McGill Quality of Life Questionnaire (MOQL) and Palliative care outcome scale (POS)	Pain and symptom control, and quality of life aspects

pain was the most common outcome measure assessed in all studies. Quality of life evaluation is the main outcome of the effectiveness of palliative care although it is often difficult in the terminal stage to evaluate quality of life, since patients sometimes die before the end of intervention. Table 11 illustrates how quality of life was assessed as well as the different tools utilized in the studies that were reviewed.

SUMMARY OF REVIEW

Complementary alternative therapies (CAM), peer/counselling group therapy (PSC), as well as physiotherapy techniques including massage and exercise therapy, are included in palliative care and may be effective in improving QoL of HIV/Aids patients (Diego et al., 2001; Molassiotis et al., 2002). However, many patients do not communicate with their healthcare provider about their use of alternative therapies, nor do the providers ask patients about their use of such therapies. This results in a chance for interaction with the anti-retroviral drugs medications, adverse reactions of alternative therapies, or other unforeseen problems. It is therefore critical for HIV/AIDS patients and their providers to openly communicate about the use of alternative therapies. There is an increasing trend of alternative therapies usage among patients and this trend is likely to continue until a cure for HIV/AIDS is developed (Friedenreich & Orenstein, 2002).

Quality of life is the primary outcome measure of palliative care in terminally ill HIV/AIDS patients. This review highlighted that the McGill quality of life questionnaire/scale and Support Team Assessment Schedule questionnaire are valid tools to provide information on quality of life in HIV/AIDS patients (Butters & Higgison 1993; Hardy, Edmonds, Turner, Rees & A'Hern, 1999; Lo et al 2002; Goodwin, Higginson, Myers, Douglas & Normand 2003).

CONCLUSION

Conclusive evidence regarding the efficacy of palliative care for HIV/AIDS patients is lacking since very few studies have been conducted in this field. Furthermore, published studies

lack methodological rigour. Research in this area is complicated by the variety in the package of palliative care, difficulties in patient recruitment, heterogeneity of study samples, death of a patient before the end of the project, and heterogeneity of study samples. Randomised controlled trials may be a suitable research design to assess the effectiveness of palliative care. However, this design may be inappropriate in the terminal stages of life due to the death of patients before the end of the intervention. Qualitative study designs should be considered in assessing the quality of HIV palliative care services since the quality of HIV palliative care appears to be inextricably linked to the client's point of view.

Despite the high incidence of HIV/AIDS in Africa, palliative care is not yet a priority on the health agenda in most African countries (Sepulveda et al., 2003). Considering the cost efficacy, research on HIV/AIDS and palliative care in Africa is of paramount importance in order to meet the needs of people with HIV/AIDS and their families (Addington-Hall & Higginson, 2001).

REFERENCES

Abdu-Saad H H 2000. Palliative care: An international view. Patient Education and Counselling, 41, 15-22.

Addington-Hall M J & Higginson J I. 2001. Palliative care for non-cancer patients. London: Oxford University Press.

Armes J P & Higginson I J 1999. What constitutes high-quality of HIV/AIDS palliative care? Journal of Palliative Care, 15(41), 5-12.

Birk T J, McGrady A, MacArthur R D & Khuder S 2000. The effects of Massage therapy alone and in combination with other complementary therapies on immune system measures and quality of life in Human Immunodeficiency virus. Journal of Alternative and Complementary Medicine, 6(5), 405-414.

Boyce G 2004. Lymphoedema-palliative physiotherapy. Medicine Australia. [Online] Available: http://www.medicineau.net.au/clinical palliative care/physioLymph> [5/8/04] 2:30 p.m.

Butters E & Higgison I 1993. Palliative care for people with HIV/AIDS: Views of patients, cares and providers. AIDS care, 5(1):105-117.

Brechtl J R, Breitbart W, Galietta M, Krivo S & Rosenfeld B 2001. The use of highly active antiretroviral therapy (HAART) in patients with advanced HIV infection: Impact on medical, palliative care and quality of life outcomes. Journal of Pain and Symptom Management, 21(1), 41-51.

Cohen M R, Mitchell T F, Bacchetti P, Child C, Gawforf S, Gaeddert A & Abrahams D I 2000. Use of Chinese herbal medicine for treatment of HIV-related pathogen-negative diarrhoea. Integrative medicine, 2(2-3), 79-84.

De Visser R & Grierson J 2002.Use of alternative therapies by people with HIV/AIDS in Australia. AIDS care, 14(5), 559-606.

Diego M A, Field T, Hernandez-Reif M, Shaw K, Friedman L & Ironson G 2001. HIV adolescents show improved immune function following massage therapy. International Journal Neuroscience, 106, 35-45.

Field D, Clark D, Corner J, & Davis C 2001. Research in Palliative care. (1st ed.). Philadelphia: St Edmundsbury Press.

Friedenreich C & Orenstein M 2002. Physical Activity and Cancer Prevention: Etiologic Evidence and Biological Mechanisms. Journal of Nutrition, 132, 3456-3464.

Galantino M L A, Eke-okoro Sunday T, Findley T W & Condoluci D O 1999. Use of Noninvasive electroacupuncture for treatment of HI-related peripheral neuropathy: A pilot study. Journal of Alternative and Complementary Medicine, 5(2), 135-142.

Goodwin D M, Higginson I J, Myers K, Douglas H R & Normand C E 2003. Effectiveness of palliative day care in improving pain, symptom control and quality of life. Journal of Pain and Symptom Management, 25(3), 202-212.

Hagen N A 2003. Research methodology in palliative care. Journal of Pain and Symptom Management, 26(5): 1065-1066.

Hardy J R, Edmonds P, Turner R, Rees E & A'Hern R 1999. The use of the Rotterdam symptom checklist in palliative care. Journal of Pain and Symptom Management, 18 (2): 79-84.

Lo R S K, Woo J, Zhoc K C H, Li Y P C, Yeo W, Johnson P, Mak Y & Lee J 2002. Quality of life of palliative care patients in the last two weeks of life. Journal of Pain and Symptom Management, 24(4), 388-397.

Lukas R, Nauck F, Fuchs M, Neuwohner K, Schulenberg D & Lindena G 2002. What is Palliative care in Germany? Results from a representative survey. Journal of Pain and Symptom Management, 23(6), 471-483.

Meldbrum J 2003. Palliative care for people with AIDS map. [Online] Available: <www.aidsmap.com/en/docs> [6/30/04]: 8.30 p.m.

McWhinney I R, Bass M J & Allan D 1994. Evaluation of a palliative care service: problems and pitfalls. British Medical Association, 304(6965), 1340-1343.

Molassiotis A, Callaghan P, Twinn S F, Lam S W, Chung W Y & Li C K 2002. A pilot study of the effects of Cognitive-Behavioural Group Therapy and Peer Support/Counseling in decreasing psychologic distress and improving quality of life in Chinese patients with symptomatic HIV disease. AIDS patient care and STDs, 16(2), 83-96.

Paci E, Miccinesi G, Toscani F, Tamburini M, Brunelli C, Constantini M, Peruselli C, Di Giulio P, Galluci M, Addigton-Hall J & Higginson Irène J 2001. Quality of life assessment and Outcome of palliative care. Journal of Pain and Symptom Management, 21(3):179-188.

Sparber A, Wootton J C, Bawer L, Curt G, Eisenberg D, Levin T & Steinberg M S 2000. Use of complementary medicine by adult patients participating in HIV/AIDS clinical

trials. Journal of Alternative and Complementary Medicine, 6(5), 415-422.

Sepulveda C, Amanda M, Tokwo Y & Ullrich A 2002. Palliative care: The WHO's global perspective. Journal of Pain and Symptom Management ,24(2): 91-96.

Sepulveda C., Habiyambere V, Amandua J, Borok M, Kikule E, Mudanga B, Ngoma T, & Bogale S 2003. Quality care at end of life in Africa. British Medical Journal, 324(7408), 209-214.

Schopper D & Walley J 1992. Care for AIDS patients in developing countries: A review. AIDS Care, 4(1), 89-102.

Singer P A & Bowman K W 2002. Quality of care at end of life. British Medical Journal, 30(324), 129-192.

Tassinari D, Poggi B, Fantini M, Ravaioli A, Sartori S & Maltoni M 2003. Can we really consider quality of life as an outcome of palliative care? Journal of Pain and Symptom Management, 26(4), 886-887.

Renwick R 1996. Quality of life in health promotion and rehabilitation: Conceptual approaches, issues, and applications. USA: Sage Publications.

Virik K & Glare P 2002. Profile and evaluation of a palliative medicine consultation service within a tertiary teaching hospital in Sydney, Australia. Journal of Pain and Symptom Management, 23(1): 17-25.

UNAIDS 2004. Epidemiological AIDS fact sheet. [Online] Available: <www.unaids.org> [6/30/04]: 8.30 p.m.

WHO 2002. National cancer control programmes: Policies and management guidelines. Geneva. [Online] Available: <www.unaids.org> [6/30/04]: 8.30 p.m. His effectiveness of physiotherapy in the palliative care of older people

CONGRESS



South African Society for Physiotherapy National Congress 2007

22nd September -25th September 2007 at Southern Sun Elangeni Hotel, DURBAN

TO REGISTER KINDLY VISIT THE WEBSITE www.physiosa.org.za

For further information contact The Conference Company on Tel: +27 31 303 9852 / Fax: +27 31 303 9529 / E-mail: Sonja@confco.co.za

CPD Questions (Vol 63 no 2 - July 2007)

How to Submit your Answers:

- 1. Complete questionnaire & insert the correct answers on the spaces provided.
- 2. Ensure that you have included your full details as requested.
- 3. Only original questionnaires will be considered therefor please cut out and submit to the SASP Head Office at:
- SASP CPD Questionnaire, P.O. Box 92125 Norwood 2117 by **15 August 2007**.
- 4. In order to capture your CPD points at the HPCSA your submission must be accompanied by a cheque/postal order to the value of R20.00 (no cash), made out to the South African Society of Physiotherapy.

FULL NAME:	LIDOGA DT NIG
Question 1 List two implications of the finding that Black chi	ildren in Cape Town are performing 10% below their American peers on
the BSIDII.	
Question 2 What is the name of the brain area that process	ses positive emotions?
Question 3 What is the body's first defence line?	
Question 4 Which four areas were highlighted as areas that	t impacted on the lives of youths with SCI?

Please turn over.

For any queries regarding the submission of questionnaires, contact Gloria at the SASP Head Office on (011) 485-1467.



Question 5
Which alternative therapies interventions are effective in enhancing quality of life in HIV/AIDS and cancer patients?
Question 6
Which physiotherapy interventions may be effective in improving the immune function and quality of life?
Question 7
What is the evidence available to warrant physiotherapy intervention in HIV/AIDS prevention treatment and care?
Question 8
What role do physiotherapists play in establishing their contribution to HIV prevention treatment and care?
Question 9 (Identify the correct option)
To determine the psychometric properties of the Roland-Morris Disability Questionnaire for people with chronic mechanical low back pain,
 a) it was measured against a gold standard b) content and construct validity were determined c) a gold standard was not applicable as it is a self-report measure d) inter-rater reliability was established.

Question 10 (Identify the incorrect option)

The results of a study of patients with chronic mechanical low back pain showed that the Roland-Morris Disability Questionnaire

- a) has a very high internal consistency
- b) measures two distinct dimensions of function
- c) has a good ability to predict the need for surgery
- d) is easy to administer and score