

ABSTRACT

Aims:

To find and review studies in which investigators evaluated cultural-competence training in community-based rehabilitation settings; critique study methods, describe clinical outcomes, and make recommendations for future research.

Background:

A review of the effectiveness of cultural-competence training for health professionals in community-based rehabilitation settings was conducted.

Data Sources:

Research citations from 1991-2006 in CINAHL, Medline, Pubmed, PsycInfo, SABINET, Cochrane, Google, NEXUS, and unpublished abstracts were searched.

Methods:

Searching, sifting, abstracting, and assessing quality of relevant studies by three reviewers. Studies were evaluated for sample, design, intervention, threats to validity, and outcomes. A meta-analysis was not conducted because the studies did not address the same research question.

Results:

Five studies and one systematic review were evaluated. Positive outcomes were reported for most training programs. Reviewed studies generally had small samples and poor design.

Conclusions/Implications:

The paucity of studies and lack of empirical precision in evaluating effectiveness necessitate future studies that are methodologically rigorous to allow confident recommendations for practice.

KEYWORDS cultural competence, training, rehabilitation, community-based care, systematic review, evaluation

BACKGROUND

Community-based care, such as rehabilitation services for people with disabilities in South Africa are not well developed. Complicating efforts to improve services are the multiplicity of cultural and language groups in the post-apartheid environment. While South African literature exists that includes culture and health (Swartz 1998; Ross & Deverell 2004), little evidence exists concerning what constitutes a culturally sensitive rehabilitation service for people with disabilities in South Africa, or how best to train a culturally competent workforce.

Culture is composed of traditional ideas and related values. It is learned, shared, and transmitted from one generation to the next. It "organizes life and helps to interpret existence" (Diller 1999, p. 48). In the field of disability and rehabilitation, the meanings that people ascribe to disability and wellness can profoundly affect rehabilitation. There is a growing awareness that health services should take into account the cultural beliefs and values of clients and that practitioners should practice in ways that are culturally sensitive. This article includes an examination of the effectiveness of cultural-competence training in the field of rehabilitation.

Cultural Competence

Cultural competence in its broadest sense is "the ability to effectively provide services cross culturally" (Diller 1999, p. 10). Cultural-competence training programmes aim to increase "cultural awareness, knowledge, and skills leading to changes in staff (both clinical and administrative) behavior and patient-staff interactions" (Brach & Fraserirector 2000, p. 185). Cultural competence includes the capability to identify, understand, and respect values and beliefs of others (Anderson et al. 2003).

Culture and Disability

In viewing the effect of culture on disability, three areas of importance are identified, namely:

- Conceptualisation of illness and disability: attitudes about disability vary widely from culture to culture and can affect the response to treatment. Some cultures believe that disability is contagious. For example, in Kenya huts for disabled adults are built at a distance from the settlement and utensils and belongings are not mixed with those of the rest of the family (Niemeier et al. 2003).
- Presentation of illness and disability in different cultures: illness manifests differently in different cultures. For example, no word in the Zulu language exists for depression and people with depression might have a range of other symptoms.

- Cultural values and beliefs: health professionals from different cultures might have different cultural values and beliefs, which might affect services provided. For example, for some ethnic groups it is not customary to have direct eye contact or open discussion of sensitive topics (Niemeier et al. 2003).

Culturally Competent Practice

Culturally competent practice (Campinha-Bacote 2002) consists of five components within the health care professional and client relationship, namely:

- Cultural awareness: becoming sensitive to the values, beliefs, lifestyles, and practices of clients and identifying one's own biases and prejudices through self-examination and in-depth exploration.
- Cultural knowledge: seeking and obtaining sound information regarding the worldviews of different cultural and ethnic groups as well as biological variations, diseases and health conditions, and variations in drug metabolism found among ethnic groups (biocultural ecology).
- Cultural skill: the ability to conduct a cultural assessment to collect relevant cultural data regarding a client's problem, as well as accurately conducting a culturally based physical assessment.
- Cultural encounters: being involved in face-to-face encounters with clients from diverse cultures to modify existing beliefs and prevent stereotyping.
- Cultural desire: being motivated to "want" to seek cultural encounters and to become culturally aware, culturally knowledgeable, and culturally skillful.

Training Programmes

Training to increase cultural competence needs to be focused on more than just transmitting knowledge about culture, diversity, and identity (Bussema & Nemecc 2006). Exploring and changing attitudes and increasing awareness of personal biases are also important. Most recommendations on training programmes in cultural competence include the need to enhance self-awareness of attitudes and to improve care by increasing knowledge and culture-competence skills (Anderson et al. 2003).

Little published evidence-based literature is available on training programmes for culturally sensitive practice in the area of disability rehabilitation. The dearth of literature on these topics in South African literature is particularly evident. A discussion article by Niemeier et al. (2003) indicated some of the challenges faced by rehabilitation providers seeking to become more culturally competent. These include: (1) continuing education in language and culture, (2) assessment instruments appropriate for diverse populations, (3) majority vs. minority population beliefs, (4) attitudes and beliefs about disability, and (5) past experiences with

rehabilitation service providers. Niemeier and colleagues suggest that enhanced cultural awareness in clinical rehabilitation practice should be provided, especially at the pre-service professional education level. She suggests that if rehabilitation providers understood the cultural variables, which affect care, they would be more likely to have professional behavior and improved decision-making skills (Niemeier et al. 2003).

Considering what should be included in cultural- competence education, Eddey & Robey (2005) include competencies such as (1) language issues, especially important with clients who have communication disabilities; (2) understanding the values and needs of people with disabilities; (3) folk illness and treatments; (4) provider practice; and (5) normative cultural values.

Effectiveness of Training Programmes for Cultural Competence

Many investigators have attempted to evaluate the effectiveness of training for culturally sensitive practice. However, there has been great variation in these studies.

Some were focused on undergraduate health professional training with specific cross-cultural courses (Culhane-Pera et al. 1997) or including cultural-competence courses in medical curricula (D' Andrea et al. 1991), while other studies were focused on a variety of professional settings. Most of these studies had small sample sizes limiting generalisation of the information to other settings. Beach et al. (2005) conducted a systematic review of 34 undergraduate and professional cultural-competence training programmes. These programmes were either specific cultural-competence training programmes or general training programmes with a cultural-competence component. The review indicated good evidence that cultural competence training improved provider attitudes, knowledge, and skills (Beach et al. 2005). However, they found that few investigators measured patient outcomes and that the heterogeneity of curricular content, methods, and evaluation strategies made determining the effect of the training difficult (Price et al. 2005).

AIMS OF REVIEW

The aims of this review were to:

- review the literature on studies indicating the effectiveness of cultural-competence training programmes for health professionals caring for clients with disabilities in community-based rehabilitation settings,
- critique research methods,
- describe clinical outcomes, and
- make recommendations for future research.

QUESTIONS

The questions for this review included: (1) How effective is cultural-competence training versus no training for improving the knowledge, attitudes, and skills of community-based health professionals caring for clients with disabilities? (2) How effective is cultural-competence training versus no training for improving the health of clients with disabilities in community-based settings?

DEFINITION OF TERMS

Community-based rehabilitation: includes a wide range of community-based activities such as physical, psychosocial, and occupational care aimed at enabling people with disabilities (mental or physical) to reach and maintain optimal functional levels and to attain independence and self-determination (World Health Organisation 2007).

Health professionals: includes community-based professional nurses, occupational therapists, speech therapists, social workers, medical doctors, and physiotherapists caring for people with disabilities.

METHODS

A systematic review was carried out in order to retrieve international and national evidence and to translate the results of the search into evidence summaries, which would be suitable for knowledge transfer to health professionals caring for clients with disabilities.

Literature Search

The search strategy was designed to give access to published and unpublished materials from the last 10 years, which, because of the paucity of studies, was extended to 15 years (1991-2006).

Electronic search

A limited search of the cumulative index to nursing and allied health literature (CINAHL) and Medline was initially undertaken to identify relevant keywords contained in the title, abstract, and subject descriptors. Terms were then identified by the researchers and the synonyms used by respective databases were used in an extensive search of the literature.

Search terms used were: evaluation studies and cultural-competence training; training and culture and disability; training and rehabilitation and culture. The following databases were searched using these search terms; CINAHL, Medline, Pubmed, PsycInfo, SABINET, Cochrane, and Internet search engines (Google and Google Scholar). Unpublished abstracts were

searched through NEXUS. Reference lists of key articles reviewed were searched and appropriate articles identified and accessed. No hand searching of indexes or "grey" literature such as non-commercially published reports, working papers, theses, and conference proceedings were searched.

Eligibility criteria

Inclusion criteria were randomized controlled trials (RCTs), quasi-experimental studies (before and after studies), and evaluation studies (studies in which investigators evaluated the implementation and effect of a programme). This review included studies that indicated specific cultural-training programmes for health professionals who were practicing in rehabilitation. Because of the paucity of articles found, the criteria were broadened to include community-based settings. The exclusion criteria were all studies that involved undergraduate student cultural-competence training or did not have a specific targeted cultural-training programme. Articles in any language other than English and Afrikaans, articles published before 1991, and qualitative studies were excluded.

Abstract review

Titles and abstracts of articles identified were screened by two reviewers independently for full-article review. If the title or abstract did not provide sufficient information, the full article was retrieved for review. If the two reviewers disagreed, the item was reviewed by the third reviewer and if no agreement was reached, the full article was retrieved.

Article review

Retrieved articles were evaluated by two reviewers for suitability for inclusion. Eligibility for full- article review, assessment of study characteristics, and relevant data extraction was assessed using a standard tool and data were entered into a database. If two reviewers disagreed, this was discussed with a third reviewer and agreement was reached. A kappa statistic was calculated to assess level of agreement for eligibility for inclusion.

DATA ABSTRACTION

A review form was developed to systematically evaluate the methodologic rigor of the eligible articles based on guidelines for intervention studies (NHMRC 1999a). For each eligible study the reviewers extracted information concerning: author, journal, publication year, type of setting (e.g., rehabilitation, community), the type (professional, undergraduate) and number of participants (including loss to follow-up), the outcomes (e.g., knowledge, attitudes, cultural competence, and patient satisfaction), the comparison groups (consistent treatment, standard outcomes, and adequate), and study design (sampling, before and after measurement, appropriate statistics).

ASSESSMENT OF METHODOLOGIC RIGOUR OF STUDIES AND ANALYSIS

The quality and methodologic rigor of studies were evaluated by two reviewers using the adapted Oxford evidence- based levels (Oxford Centre for Evidence Based Medicine 2001) and classified from I to V (Table 1). Based on the recommendations of the NHMRC (1999b) that strength of evidence entails aspects of studies other than study design, factors such as bias, statistical significance of results, and relevance of evidence were also considered.

The quality of study design was rated as high, moderate, or poor based on whether the study (1) provided information on the setting, (2) provided information on the participants, (3) described the intervention in enough detail, (4) used a concurrent and control group, (5) blinded allocation of participants and staff, (6) reported inclusions and exclusions, and (7) reported the effect size of the intervention. Following the data-extraction process, all studies rated less than III were further excluded.

The methodologic rigor of the systematic reviews were rated using the following criteria (National Health Service Centre for Reviews and Dissemination 1996): (1) explicit criteria for exclusion and inclusion of studies, (2) comprehensive search methods, (3) reproducibility of primary studies, (4) exploration of variation between studies, and (5) appropriate synthesis of data. The planned analysis of the data included a meta- analysis of the studies addressing the same research question and measuring the same outcomes.

RESULTS

Literature Search and Review Process

Of the 63 articles retrieved, 48 were excluded after the abstract- and article-review process. Seventeen articles had data on cultural-competence programmes and were included for further review. A kappa statistic of 0.83 was found for the two reviewers, which showed excellent agreement. The most common reasons for exclusion of articles were no evaluation methodology used to evaluate

TABLE 1

Adapted levels of evidence and grades of recommendation (Oxford Centre for Evidence Based Medicine 2001)

LOE	LEVEL OF EVIDENCE (LOE) DESCRIPTION	GRADES OF RECOMMENDATION
I	Evidence obtained from a systematic review of all relevant randomized controlled trials	A
II	Evidence obtained from at least one properly designed randomized controlled trial	B III-1
	Evidence obtained from well-designed pseudo-randomized controlled trials (alternate allocation or some other method)	
III-2	Evidence obtained from comparative studies (including systematic reviews of such studies) with concurrent controls and allocation not randomized, cohort studies, case-control studies, or interrupted time series with a control group	
III-3	Evidence obtained from comparative studies with historical control, two or more single-arm studies, or interrupted time series without a parallel control group	
IV	Evidence obtained from case series, either post-test or pre-test/post-test	C
V	Evidence obtained from surveys only or not enough information provided to make a judgment	D

outcomes, studies were outside the date range, studies were focused on undergraduate training only, and the reviewers were unable to determine the specific cultural-competence training content in the curriculum.

Characteristics of the 17 selected studies (Wade & Bernstein 1991; Gany & de'Bocanegra 1996; Flavin 1997; Smith 2001; Way et al. 2002; Anderson et al. 2003; Webb & Ser-gison 2003; Majumdar et al. 2004; Moffat & Tung 2004; Beach et al. 2005; Cooper-Brathwaite 2005; Price et al. 2005; Schim et al. 2005; Stanhope et al. 2005; Cooper-Brathwaite 2006; Cooper-Brathwaite & Majumdar 2006; Thom et al. 2006) are shown in Table 2.

Most of the studies were published after 2000 and all of the participants were health professionals working in

TABLE 2

Characteristics of studies in which cultural-competence training programs for professionals were evaluated

1991-1999	3	18%
2000-2006	14	82%
Journal type		
Rehabilitation	3	18%
Cultural studies	2	12%
General health (incl. medicine)	2	12%
Medicine	4	24%
Psychology	2	12%
Nursing	5	29%
Setting (n = 15)		
Mental health	5	29%
Primary and community-based care	7	41%
Mixed (systematic reviews)	3	18%
Study type (n = 15)		
Systematic review	3	18%
RCT	2	12%
Quasi-experimental	3	18%
Evaluation	6	35%
Other	1	6%
Training focus (n = 15)		
Specific cultural competence	12	71%
Mixed (systematic reviews)	3	18%
Outcomes measured^a (n = 12)^b		
Knowledge	7	41%
Attitudes	3	18%
Cultural competence	6	35%
Sustainability of training	7	41%
Patient satisfaction	4	24%
Other patient outcomes	4	24%
Level of evidence (n = 15)		
I	3	18%
II	0	0%
III	5	29%
IV & V	5	29%

Note: RCT = randomized controlled trial ^aCan be more than one option; ^bExcluding systematic reviews.

community-based settings including mental health or primary care. Most of the studies were non-experimental evaluative studies with no control group, a historical control, two or more single-arm studies, or interrupted time series without a parallel control group.

The educational training interventions studied varied from single training sessions to 3-day sessions, and included such educational formats and media such as lectures, workshops, small groups and audiovisual aids. All of the studies included measurement of health professional outcomes (cultural knowledge, attitudes, cultural competence, and skills) with only four studies including measurement of patient outcomes (patient satisfaction or service usage). The planned meta-analysis of the studies was not done because it was not possible to quantitatively combine the outcomes of the studies. In addition, the tools used to measure the outcomes were an array of cultural assessment tools with different levels of validity and reliability.

Of the 17 articles, three were systematic reviews. Two reviews (Beach et al. 2005; Price et al. 2005) were by the same authors on the same set of articles with Price et al. (2005) focusing on the methodologic rigor of the studies included in the other review. This review was subsequently excluded. The other review by Anderson et al. (2003) was also excluded because it was focused on studies of cultural-competent health systems. Three articles (Cooper-Brathwaite 2005; Cooper-Brathwaite 2006; Cooper-Brathwaite & Majumdar 2006) reported on the same study and were therefore treated as one study.

After data abstraction, a further eight studies were excluded because of poor design and methodologic rigor. Exclusions included cross-sectional studies, small sample size, studies with no comparison groups or studies with interventions and outcomes not clearly described.

Studies for Systematic Review

Systematic reviews can include reliable summaries of data that address targeted questions and can include less-biased estimates of treatment effects if they are methodologically rigorous (Sheldon et al. 1998). One systematic review (Beach et al. 2005) was included in this study. The aim of the systematic review was to synthesize the findings of evaluations of training interventions to improve cultural competence of health professionals (Beach et al. 2005). This systematic review was evaluated against the criteria and was found to be of reasonable quality. Inclusion and exclusion criteria were clearly identified, the search strategy was extensive (though non-English studies and grey literature were not accessed), the assessment of validity of underlying studies was addressed, heterogeneity was explored in a separate systematic review (Price et al. 2005),

TABLE 3
Summary of effectiveness (Beach et al. 2005)

LEVEL OF EVIDENCE	OUTCOME
Excellent	Provider knowledge (17/19 studies)
Good	Provider attitudes (21/25 studies)
	Provider skills (14/14 studies) and patient satisfaction (3/3 studies).
Poor	Patient adherence
None	Impact on health
	Which training is most effective

and no pooling of data was done. A summary of findings is shown in Table 3.

Possible bias in the review was the exclusion of non- English articles and grey literature, and the poor quality and heterogeneity of underlying studies. Most of the studies included in the secondary review of study quality by Price et al. (2005) did not meet the criteria for high study quality and less than a third of the studies had detailed descriptions of the targeted providers or

interventions. The broad inclusion criteria resulted in inclusion of both undergraduate and professional training; studies in which the cultural content was not specified; and the lack of a model for the review made the systematic review less relevant to our study.

Studies for Review (Level I, II, or III Studies)

Only five studies (Wade & Bernstein 1991; Smith 2001; Majumdar et al. 2004; Cooper-Braithwaite 2005; Thom et al. 2006) met the criteria for inclusion in this review (either an RCT or a quasi-experimental study with two groups, and before and after tests; Table 4). This indicated the scant number of high-quality intervention studies, which have been conducted on this topic. Of these five studies, only two (Wade & Bernstein 1991; Smith 2001) were included in the systematic review by Beach et al. (2005) discussed earlier.

Designs

The studies in this review included quasi-experimental study designs and two were clinical trials (Smith 2001; Majumdar et al. 2004). Both trials were of moderate quality with no evidence of concealed allocation of treatment, nor high loss to follow up (Majumdar 2004) or inadequate follow up (Smith 2001). All the studies included a control group, except Cooper-Braithwaite (2005) who used a historical same-group control.

Samples

The five studies included data from 345 providers and 884 patients in general-health settings. Only three of the studies included patients in the samples and most of the studies had small samples (from 8 to 114 providers) and did not include information on sample power. Random sample selection and randomisation of allocation groups were noted in only two studies (Smith 2001; Majumdar et al. 2004), making convenience sampling the most common sampling method and method of allocation to groups. Investigators in two studies (Majumdar et al. 2004; Thom et al. 2006) reported attrition data, with Majumdar reporting a high loss to follow-up at 3 and 6 months.

Interventions

The studies included a variety of teaching programmes. They ranged from 4 to 36 hours, offered once to once-a-week for 5 weeks and included lectures, workshops, small group work, and audiovisual aids. The programmes were also based on different cultural models, though two were based on the Campinha-Bacote cultural-competence model (Campinha-Bacote 1998).

Outcomes Reported

Most of the studies cited positive provider outcomes though they used different instruments and statistical methods. Differences between groups (changes between pre- and post-tests) were measured using relevant parametric and nonparametric tests and in some studies outcomes were converted to Cohen's effect size. Statistical significance was reported in all studies, mostly with use of p values. The main provider outcomes reported were cultural knowledge, attitude, and competence. The main patient outcome was patient satisfaction.

Cultural knowledge and attitude

The most common reported outcome was cultural knowledge, which is consistent with the findings of Beach et al. (2005). Majumdar et al. (2004) reported a significant improvement in cultural understanding of multiculturalism ($p = .0001$), cultural awareness ($p = .0001$), understanding of cultural differences ($p = .001$), and cultural beliefs ($p = .004$). Smith (2001) reported that "cultural school" participants showed significantly more cultural knowledge and attitudes ($p < .001$) and Cooper-Braithwaite (2005) showed an increase from 3.77 to 4.5 ($p < .01$) on the Cultural Knowledge Score. Thom et al. (2006) did not show any significant changes in knowledge or attitude. This might be because the study design, which was underpowered because of high attrition rates and possibly bias because of feedback on practice to both intervention and control groups.

Cultural competence

Cultural competence is often a composite concept, which might differ depending on the cultural competence model used. Only two of the studies included measurement of cultural competence using the same standard tool and this provides uncertainty around the validity of combining this evidence. Cooper-Brathwaite (2005) using the IAPCC (Campinha-Bacote 1998) showed statistically significant ratings for cultural competence at post-test and 3 months.

TABLE 4
Characteristics of five studies reviewed

FIRST AUTHOR (YEAR) SETTING	PARTICIPANTS	STUDY DESIGN	INTERVENTION	OUTCOMES	LEVEL
Thom et al. (2006). 4 Primary care practices (academic, community, rural & inner city).	Primary care physicians (n = 53).	QE(PP).	Feedback on practice & brief 4.5 hours module.	-Cultural competence (<i>physician cultural competency scale (PRPCC)</i>).	II
	Primary care patients (n = 471).	(2) Intervention groups (2) Control groups [feedback]	Model: culture brokering model.	-Patient satisfaction. -Patient trust. -Patient biological variables (e.g., BP). T1-T3 = 3 months. T4 = 6 months.	Moderate quality (high loss to follow-up).
Cooper-Braithwaite (2005). Public health department in South Ontario.	Public health nurses (n = 76)	QE(PP)	Training program	-Cultural knowledge*	III
		(1) Group repeated measures.	2 hours duration over 5 weeks + 1 booster session 1 month post	-Cultural competence* (<i>inventory for assessing cultural competence among health professionals (IAPCCj (Campinha-Bacote 1998)</i>).	Moderate quality
		Historical control.	Model: Campinha-Bacote Cultural competence model (1998).	T1a = 1 week before T1, T2, T3 = 3 months.	Convenience sample
Majumdar et al. (2004). Two home care agencies & 1 hospital in urban South Ontario.	Nursing and home care providers (n = 114)	RCT(PP)	36-hour cultural sensitivity program	-Attitudes (<i>Rokeach Dogmatism scale</i>)	Historical control III
	Patients (n = 133)	Intervention & control groups.	Model: Campinha-Bacote cultural competence model (1998).	-Cultural awareness [<i>self report cultural awareness scale</i>]' -Client satisfaction (<i>client satisfaction questionnaire</i>). -Client health measures (<i>measures of functioning (physical and mental health questionnaire)</i>). T1, T3 = 3 months, 6 & 12 months.	Moderate quality High loss to follow-up.

Continued.

Patient outcome measures: Three of the studies included measurement of patient or client satisfaction (Wade & Bernstein 1991; Majumdar et al. 2004; Thom et al. 2006). Only Wade and Bernstein (1991) reported increased satisfaction of clients with their counselors ($p < .001$). However, the sample was small (eight counselors) and individual factors might have biased the results. Other patient outcome measures such as adherence to treatment (visits), mental and physical health and functioning, were only included in Wade and Bernstein's (1991) study, showing a statistically significant return to follow up (2.88 vs. 1.9 out of three visits).

Threats to Validity of the Systematic Review

This systematic review was conducted following a standard systematic procedure (Cook et al. 1997) but no statistical synthesis of the quantitative data could be done. The data were not extracted and combined because of the heterogeneity of study interventions and outcomes, and poor methodologic rigor. Most of the evidence available was from poor-quality studies, which could introduce biases that lead to over- and under-estimates of intervention effectiveness (Cook et al. 1997).

Only two studies included an RCT design (Smith 2001; Majumdar et al. 2004) and neither had blinded allocation. Of the other three quasi-experimental designs, the reliability of the intervention effects was reduced by the lack of randomisation and the use of a historical control in one study (Cooper-Brathwaite 2005). Thom et al. (2006) reported over 50% loss to follow up. Internal validity was compromised in all studies to varying degrees, with convenience sampling being a common method of selecting participants. Heterogeneity of study interventions and outcomes also compromised the validity of the review with investigators in only three studies measuring patient outcomes. Though two of the studies used the IAPCC, instrument reliability was a threat to the studies measuring knowledge and competence. Sustainability of the results was difficult to assess because of the inconsistent time frames in study follow-up and post-testing, which might also contribute to confounding.

DISCUSSION

Although there has been extensive descriptive research and reviews in the literature regarding the importance of cultural-competence training for health professionals, few rigorous empirical studies have been conducted that show the effectiveness of cultural-competence training in health professionals in rehabilitation or community-based care.

No Cochrane Reviews were identified, but a systematic review on health care provider education interventions in cultural competence had been conducted for the Johns Hopkins Evidence Practice Centre (Beach et al. 2005). This review was heterogeneous (included undergraduate training, programmes differed, and were delivered at different times) with poor study designs (mostly low level of evidence (Level III studies), but reports of positive outcomes were noted.

Based on Beach et al.'s (2005) review and the five included studies, reasonable evidence exists to indicate that cultural-competence training can increase the knowledge, attitudes, and skills of health professionals. Some evidence seems to indicate that cultural-competence training affects patient satisfaction, but little evidence that it improves patient care.

Most the studies (except Thom et al. 2006) reviewed were from the United States. While these studies might be a good background regarding the issues involved in training for cultural competence, the relevance for the South African context should be questioned. Like the United States, South Africa is a multi-cultural society. However, in South Africa, African people form the majority of the population but most health care professionals (including African health professionals) have been trained in Western traditions of helping. The challenge is how to provide culturally competent training that bridges the gap between Western and African worldviews in a way that promotes healing and wellness.

RECOMMENDATIONS FOR PRACTICE

Despite the methodologic limitations of the reviewed studies, sufficient evidence of benefits seems to exist to allow recommendations (using the Oxford evidence-based level of recommendations, Table 1) for providing cultural- competence training programmes for community-based professionals to increase cultural knowledge (Level B), improve cultural attitudes (Level C), and increase patient satisfaction (Level C). However, the added inconsistencies in patient outcomes measurement and non-significant patient outcomes findings, do not support the benefits of cultural- competence training programmes to improve health outcomes (Level D). Furthermore, it is unknown whether the types of training programmes evaluated would be appropriate for South Africa.

IMPLICATIONS FOR RESEARCH

The paucity of international and South-African-specific studies and the lack of empirical precision in evaluating cultural education effectiveness necessitate for future studies that are methodologically rigorous and focused on the specific setting of rehabilitation.

CONCLUSION

Attempts to improve cultural competence of health professionals should continue and educators and researchers should evaluate these interventions using methodologically rigorous studies in which bias is at a minimum and cost data are included. The paucity of well designed and reported cultural-competence training evaluations, in settings such as rehabilitation, and specifically for countries such as South Africa, is an ongoing challenge for educators and researchers.

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