

Evaluating the effectiveness of culture brokering training to enhance cultural competence of independent living center staff

John Moffat^a and Jun-Yuan Tung^b

^a*Rehabilitation Research & Training Center on Independent Living Management, Western New York Independent Living Project, Inc., 3108 Main St., Buffalo, NY 14214, USA*

Tel.: +1 716 836 0822 ext. 166; Fax: +1 716 835 3967; E-mail: jmoffat@ilm.wnyilp.org

^b*Department of Rehabilitation Science, OTR, MS, University at Buffalo, State University of New York, Buffalo, NY, USA*

Abstract. *Objectives:* Mandated to provide services to unserved and underserved minority populations, independent living centers are seeking strategies to increase their service proficiency and outreach effectiveness. This need is currently being addressed through a training and research collaboration combining a service intervention model called Culture Brokering and the examination and analysis of the effectiveness of Culture Brokering training on outreach to culturally diverse communities of people with disabilities.

Study design: 50 participants attending Culture Brokering workshops were given pre and post questionnaires to measure their knowledge gained and any change in their cultural competence resulting from application of that knowledge. The independent variable for the study was the culture brokering workshops. The dependent variables were the scores assessed by the pre – post knowledge questionnaire and competence questionnaire. Nonparametric tests were used to analyze the pre-test and post-test knowledge questionnaire scores. A paired t-test was applied to the competence questionnaire scores between pre-test and post-test.

Results: Forty-one out of 49 participants (84%) increased their knowledge scores after the workshop. Workshop participants increased their cultural competence scores on 35 items of the 36 items (97%); 25 (69%) items were increased with statistical significance. Twenty-nine out of 41 participants (71%) increased their total scores after the workshop.

Conclusions: The results of this study revealed that culture brokering workshops had positive effects on participants' culture brokering knowledge and cultural competence. More research is needed to evaluate the effectiveness of Culture Brokering training on consumer satisfaction and community outreach to minority populations.

Keywords: Cultural competency, training, evaluation, unserved minorities, outreach

1. Introduction

The Rehabilitation Act identifies standards and assurances for independent living centers receiving federal funds. Under Title VII, section 725, Sub-section C, item 10, the act specifically states that a center will provide “satisfactory assurances that: aggressive outreach regarding services provided through the center will be conducted in an effort to reach populations of individuals with severe disabilities that are unserved or under-

served by programs under this title, especially minority groups and urban and rural populations.” [14, p. 161]. The Act goes on to state in item 11, “staff at centers for independent living will receive training on how to serve such unserved and underserved populations including minority groups . . .” [14, p. 161]. These assurances establish a mandate for both independent living center management and staff. As the foreign-born population in the United States increases, the need for outreach to these populations also increases.

Culture and cultural differences are increasingly recognized as important factors that affect successful outcomes in human services. Recent Census data estimates that one in ten people living in the US is “foreign-born” [9,17]. In view of these statistics, there is a greater likelihood that independent living center staff will eventually provide services to a person with a disability from a different culture, making culture competency skills of great importance. John Stone writes, “Disability can be a challenge no matter where one is born. For a recent immigrant, the challenge is often magnified. In addition to difficulties with language, housing and employment, the person may also have difficulty understanding and accessing rehabilitation services. Most service providers recognize this, but often experience frustration arising from miscommunication and differing cultural perspectives” [9, p. i]. Culture competency training is therefore necessary for independent living (IL) staff to develop their understanding of cultural differences and to become more sensitive to and have respect for different cultural values, beliefs, customs, practices and language patterns in order to offer culturally competent services [2,3,9,16].

In response to the Rehab Act requirements for outreach to minority groups and staff training to serve those groups, the Rehabilitation Research and Training Center on Independent Living Management (RRTC-ILM) in collaboration with the Center for International Rehabilitation Research Information & Exchange (CIRRIE), developed a culture competency skills training program on culture brokering. This two-day workshop originally developed and offered to vocational rehabilitation counselors, is derived from the CIRRIE monograph *Culture Brokering: Providing Culturally Competent Rehabilitation Services to Foreign-Born Persons* [9]. RRTC-ILM’s goal is to deliver three to five independent living oriented culture brokering workshops per year over the five-year grant cycle to help IL service providers eliminate cultural barriers and provide more culturally competent services for foreign-born consumers.

The main purpose of this study was to investigate the impact of culture brokering workshops on CIL participants’ cultural competence and culture brokering knowledge. Cultural competence is defined as a continuing developmental process toward cultural proficiency. This is based on a desire for cultural awareness, knowledge, skills and encounters to develop cross-cultural intervention service strategies for consumers who are foreign-born or who are first generation Americans [1,2,9]. This was the first research study of this

kind for CIL staff participating in culture competency training. Furthermore, since the US foreign-born population increased 57 percent in a decade, from 19.8 million in 1990 to 31.1 million in 2000 [17], relevant studies are needed about the foreign-born population acclimating to the US social service system.

The primary research question was whether CIL staff members have more culture brokering knowledge and higher cultural competence after attending the culture brokering workshops. Two self-assessment instruments were used to identify the level of culture brokering knowledge and cultural competence.

2. Method

2.1. Study design

The study employed a one-group pre-test, post-test quasi-experimental design. The culture brokering workshops were designed to bring about changes in participants’ understanding, attitudes and behavior toward the cultural differences of foreign-born persons with disabilities. The literature suggests that effective data collection can be carried out immediately following workshops as well as one-to-two or more months after workshops [4,10–12,15]. The Culture Brokering Pre Post Questionnaire (knowledge questionnaire, Appendix A) was given at the beginning of the workshop and, again at the conclusion, to determine if there was any increase in culture brokering knowledge as a result of the training. The questionnaire, developed to measure changes in cultural competence acquisition, was called *Promoting Cultural Diversity and Cultural Competency for Personnel Providing Services in Centers for Independent Living* (competence questionnaire). This self-assessment instrument was administered to participants prior to the workshop. Allowing participants to have time to apply what they learned in the workshops, and, in an attempt to improve the response rate, each participant had approximately two months to complete the follow-up (post) assessment.

2.2. Culture brokering workshops

Culture brokering workshops were developed to help CIL staff members identify and eliminate cultural barriers between themselves and foreign-born consumers with disabilities, and to provide more culturally competent services. The workshops were offered to independent living centers across the nation. In the spring of

2002, the California Foundation for Independent Living Centers (CFILC) requested three culture brokering workshops in three locations. These were scheduled for July 2002 in Garden Grove, San Jose and Sacramento, California. Workshop presenters were from the RRTC-ILM and CIRRIE.

The instructional design of the workshops included lecture, video vignettes, case studies, group activities and discussions to help participants understand the concepts and exchange experiences. On the first day, participants were introduced to the concept of culture brokering and the differences between race, culture and ethnicity. Participants discussed disability culture and the culture of independent living. The first day's activities also included the history of cultural brokering. Participants discussed cultural differences and world-views including cross-cultural myths, stereotypes, and barriers to cultural awareness. The concepts and process of cultural competence were introduced with the aid of a videotape titled *Careers in Cambodia*, followed by a small group activity. In the afternoon, participants discussed attitudes toward disability and talked about the varied perspectives of the US rehabilitation system and independent living.

At the beginning of the second day, participants were paired to share a self-awareness activity and discussed what they learned about their own ethnicity and culture. The culture brokering model was introduced, and, for the remainder of the workshop, case study examples were used in small groups to help participants comprehend the model and its application. In general, the workshop had two emphases. The first day focused on overall cultural perspectives related to foreign-born consumers and how those perspectives may become barriers to providing service. The second day focused on the culture brokering model and the process used by culture brokers to identify, eliminate or overcome potential barriers to culturally competent disability services for foreign-born consumers.

2.3. Participants

Participants for this study were recruited from the three culture brokering workshops held in California during July 2002. All of the CIL staff members in attendance at the workshops were invited to join the study; 50 agreed to participate. Workshop participants came from the centers located in Garden Grove, San Jose and Sacramento as well as centers in the surrounding geographic area. Only those participants who completed both days of the workshop participated in the study.

2.4. Variables

The independent variable for this research study was the intervention of the culture brokering workshops. The dependent variables were the scores that were assessed by the pre-post knowledge questionnaire (Appendix A) and competence questionnaire (Appendix B).

2.5. Instruments

The knowledge questionnaire was used to assess the acquisition and retention of the content of the workshops (Appendix A). RRTC-ILM and CIRRIE presented similar workshops in other locales, prior to this study. Questions were generated based on the previous workshops and were reviewed by a group of experts involved in the development and delivery of those workshops. Thirteen questions were developed to evaluate participant knowledge of cultural perspectives and twelve questions to evaluate the culture brokering model. The first question was a fill-in-the-blank question with five blanks and the remaining 24 were true and false answers. Higher scores in the post-test would indicate more knowledge of providing culturally competent services to foreign-born consumers.

The second test, *Promoting Cultural Diversity and Cultural Competency for Personnel Providing Services in Centers for Independent Living*, (competence questionnaire, Appendix B), was a modified self-assessment tool used to identify the level of cultural competence among participants. No cultural competency instruments for this particular population and research design existed prior to this study. The self-assessment instrument was adapted from four self-assessment checklists developed for assessing cultural competence among different health care and service providers [5–8]. The purpose of these assessments is to help human service providers recognize and improve their cultural awareness, sensitivity and competence in the practices that promote a culturally diverse and culturally competent service delivery environment. Each of the four instruments has three domains and shares some similar statements. The modified competence questionnaire instrument for this study included the same three domains: domain 1 – physical environment, materials & resources (eight items), domain 2 – communication styles (nine items), and domain 3 – values & attitudes (nineteen items) along with general statements from all four instruments. Respondents scored each item on a scale from A. – “Things I do all the time” (100%) to

E. – “Things I never do” (0%). Since the original assessments were developed for training purposes, there were no strict scoring systems. Therefore, results in this study were recorded and analyzed according to participants’ answers. Higher scores demonstrated that personnel provided more culturally competent services to foreign-born consumers.

Relevant demographic and background information were collected including gender, age, education, cultural background, work locale, disability, the cultural diversity within the participants’ service community, staff members and consumers, and length of time and experience working with foreign-born consumers.

2.6. Procedure

Participants received a demographic information form, a knowledge questionnaire (pre-test) and a competence questionnaire (pre-test) from the workshop presenter to complete at the beginning of the workshops. At the end of the workshops, participants were asked to complete the knowledge questionnaire (post-test) and were reminded that they would receive a questionnaire through the mail in a few weeks. Participants were not told that the second competence questionnaire (mailed post-test) would be the same as the first one. They were provided a postage paid envelope to return the completed competence questionnaire (post-test) to the investigators. All forms and questionnaires were available in accessible and electronic formats.

2.7. Data analysis

Nonparametric tests were used to analyze the results of the pre-test and post-test knowledge questionnaire. Wilcoxon signed-rank test was used to compare the difference in score for question one (fill in the five blanks). For questions two to twenty-five (true – false), the increase of correct answers from pre-test to post-test was examined by McNemar test.

A paired t-test was applied for comparison of competence questionnaire scores between pre-test and post-test (returned after 4 to 6 weeks). Alpha level was set at 0.05 for all the statistical processes performed in this study.

3. Results

3.1. Characteristics of participants

Fifty CIL staff participated in the study, finishing both questionnaires during the pre-test period. Among these participants, 49 (98%) completed the post-test knowledge questionnaire at the conclusion of the workshops. 42 (84%) participants completed the post-test competence questionnaire one month later. Participants, who did not complete the post-test, were initially equivalent in their demographic characteristics and questionnaire scores to those who did complete the post-test.

Participant background and demographic information is described in Table 1. 62% of the participants were female and the average age of the study population was 40 years old. More than half of the participants (62%) had a bachelor’s degree or higher and the majority (60%) were people with disabilities. More than one-quarter of the workshop attendants (30%) reported that either they, or one of their parents, were born outside of the United States, most (eight people) from Latin American countries. When asked about the percentage of foreign-born persons in their community, two-thirds of the participants (64%) stated that at least 30 percent of consumers in their community were foreign-born. Few staff (only 18%) worked at centers where 30 percent or more of their colleagues were foreign-born. However, one-third (30%) of center staff worked with consumers where 30 percent or more were foreign-born. The majority of participants (80%) provided services to foreign-born consumers for at least one year.

3.2. Impact of culture brokering workshops

Comparison results of knowledge questionnaire scores between pre-test and post-test are shown in Table 2. After the workshops, participants increased their scores on 21 of the 25 items (84%), and their gain in score on individual items ranged from a 2% increase on one item to a 49% increase on another. Forty-one out of 49 participants (84%) increased their scores after the workshop. Scores increased among 20 true/false items. Twelve items showed an increase of 20% or less, seven items improved between 21 and 40%, and one item achieved more than a 40 percent increase. The items with 20 or more percent increase had statistical significance. At the pre-test, nine items (five related to cultural perspectives) were correct for 80% or more of

Table 1
Demographic information of participants ($N = 50$)

	Characteristics	Frequency (Percentage)
Gender	Female	31 (62%)
	Male	19 (38%)
Age ($n = 46$)	Mean	40.0
	Under 30	11 (24%)
	30–39	13 (28%)
	40–49	12 (26%)
	50 and above	10 (22%)
Education	High school graduate	10 (20%)
	Associate degree	9 (18%)
	Bachelor's degree	28 (56%)
	Master's or Doctoral degree	3 (6%)
Cultural Background	Born outside the US	11 (22%)
	Parent born outside the US	13 (26%)
Disability	Yes	30 (60%)
	No	20 (40%)
Years Providing Services to Foreign-Born Consumers	Never	5 (10%)
	< 1 year	10 (20%)
	1–5 years	20 (40%)
	5–10 years	8 (16%)
	> 10 years	7 (14%)
Work Environment Feature		
Foreign-born persons in the community	< 10%	7 (14%)
	10%–30%	11 (22%)
	30%–50%	21 (42%)
	> 50%	11 (22%)
Foreign-born staff in the working place	None	16 (32%)
	< 10%	16 (32%)
	10%–30%	12 (24%)
	30%–50%	4 (8%)
	> 50%	2 (4%)
Foreign-born consumers that were served	None	5 (10%)
	< 10%	10 (20%)
	10%–30%	20 (40%)
	30%–50%	8 (16%)
	> 50%	7 (14%)

the respondents and did not show significant increases at the post-test. Three items (all associated with culture brokering) where 20 percent or fewer respondents selected the correct answers, showed a significant increase at the post-test. In summary, the data indicates that the two-day culture brokering workshops helped participants gain knowledge and awareness of the general cultural perspectives and the concepts of culture brokering.

Comparison of pre-post scores for the competence questionnaire are shown in Table 3. Participants returned the second questionnaire (post-test) within one to two months after the workshops. Among the 36 items on the questionnaire, workshop participants increased their self-assessed scores on 35 items (97%); 25 (69%) items were increased with statistical signif-

icance. Twenty-nine out of 41 participants (71%) increased their total scores after the workshop. Within the three domains of the competence questionnaire: in the physical environment, materials and resources domain, scores in seven out of eight items (88%) improved significantly; for scores within the communication styles domain, four of nine (44%) items increased, and, within the values and attitudes domains, 14 of 19 (74%) items were significantly increased. Overall, 17 items showed an increase of 10 percent or less, 15 items had more than 10 but less than 20 percent increase, two items advanced between 20 and 30 percent, and one item reached more than a 30 percent increase. Thirty-seven of 42 participants (88%) improved their performance in one or more domains. In brief, CIL staff could apply the culture brokering knowledge and

Table 2
Comparison of knowledge questionnaire scores between pre-test and post-test ($n = 49$)

Item	Pre-test Mean		Post-test Mean		Difference Correct	Significance ^a
	Correct	Incorrect	Correct	Incorrect		
1	2.27		3.00		0.73	0.001**
2	32 (65%)	17 (35%)	43 (88%)	6 (12%)	11 (23%)	0.007**
3	38 (78%)	11 (22%)	49 (100%)	0 (0%)	11 (22%)	0.001***
4	1 (2%)	48 (98%)	5 (10%)	44 (90%)	4 (8%)	0.125
5	29 (59%)	20 (41%)	40 (82%)	9 (18%)	11 (23%)	0.019*
6	41 (84%)	8 (16%)	44 (90%)	5 (10%)	3 (6%)	0.549
7	14 (29%)	35 (71%)	38 (78%)	11 (22%)	24 (49%)	0.000***
8	42 (86%)	7 (14%)	47 (96%)	2 (4%)	5 (10%)	0.180
9	35 (71%)	14 (29%)	36 (73%)	13 (27%)	1 (2%)	1.000
10	47 (96%)	2 (4%)	45 (92%)	4 (8%)	-2 (-4%)	0.687
11	14 (29%)	35 (71%)	18 (37%)	31 (63%)	4 (8%)	0.523
12	20 (41%)	29 (59%)	38 (78%)	11 (22%)	18 (37%)	0.000***
13	18 (37%)	31 (63%)	20 (41%)	29 (59%)	2 (4%)	0.791
14	26 (53%)	23 (47%)	43 (88%)	6 (12%)	17 (35%)	0.000***
15	22 (45%)	27 (55%)	38 (78%)	11 (22%)	16 (33%)	0.000***
16	37 (76%)	12 (24%)	42 (86%)	7 (14%)	5 (10%)	0.267
17	40 (82%)	9 (18%)	44 (90%)	5 (10%)	4 (8%)	0.289
18	47 (96%)	2 (4%)	46 (94%)	3 (6%)	-1 (-2%)	1.000
19	34 (69%)	15 (31%)	45 (92%)	4 (8%)	11 (23%)	0.007**
20	7 (14%)	42 (86%)	7 (14%)	42 (86%)	0 (0%)	1.000
21	39 (80%)	10 (20%)	41 (84%)	8 (16%)	2 (4%)	0.791
22	42 (86%)	7 (14%)	44 (90%)	5 (10%)	2 (4%)	0.687
23	47 (96%)	2 (4%)	47 (96%)	2 (4%)	0 (0%)	1.000
24	43 (88%)	6 (12%)	45 (92%)	4 (8%)	2 (4%)	0.754
25	3 (6%)	46 (94%)	6 (12%)	43 (88%)	3 (6%)	0.250

^aItem 1 was calculated by Wilcoxon signed-rank test. Items 2 to 25 were calculated by McNemar test.

*Significant at $p < 0.05$ level; **Significant at $p < 0.01$ level; ***Significant at $p < 0.001$ level.

strategies they learned from the workshops after two months of service to consumers.

4. Discussion

The results of this study revealed that culture brokering workshops had positive effects on participants' culture brokering knowledge and cultural competence. For culture brokering knowledge assessed by the knowledge questionnaire, 84 percent of the participants increased their scores in 21 out of 25 items (84%). Results of the competence questionnaire showed a 71 percent increase in participant cultural competence scores on 35 of 36 items (97%), the most significant of which was in the physical environment, materials and resources domain where participants showed a significant increase in seven of eight items (88%). This may indicate that adjustments to the environment reflecting greater cultural sensitivity and diversity may often be overlooked and be the easiest first step. Changing communication styles (44% of items had statistically

significant improvement), and changing values and attitudes (74% of items had statistically significant improvement) may require increased exposure to foreign-born consumers with disabilities and their cultural differences.

The need for a better assessment tool was recognized. Some questions in the knowledge questionnaire should be modified or improved due to a possible ceiling effect and ambiguity. Eighty to 96 percent of participants selected the correct answer for nine items (36% of total items) at the pre-test. This might skew the potential for increasing one's overall score at the post-test. The nine items include these examples: "Generally, the mainstream culture in the US tends to place importance on independence," and "It is important for the provider to understand how the consumer perceives and lives with his/her disability," and "Since foreign-born Americans came to the US, they are willing to accept the mainstream American culture."

Similar phenomenon also happened in each participant's total correct answers. Eight participants did not raise their scores after the workshop, and five had at

Table 3
Comparison of competence questionnaire scores between pre-test and post-test

Category	Item	n	Pre-test	Post-test	Difference	Sig. ^a
Physical Environment, Materials & Resources	1	42	41.07	72.62	31.55	0.000***
	2	42	61.91	73.21	11.30	0.039*
	3	42	48.21	63.69	15.48	0.003**
	4	42	75.00	80.95	5.95	0.125
	5	42	49.41	63.69	14.28	0.007**
	6	42	42.86	64.88	22.02	0.001***
	7	42	52.98	64.88	11.90	0.024*
	8	42	47.62	64.88	17.26	0.003**
Communication Styles	9a	42	91.07	97.02	5.95	0.012*
	9b	42	86.31	94.05	7.74	0.015*
	9c	42	75.60	89.29	13.69	0.004**
	10	42	76.79	82.14	5.35	0.165
	11	42	60.12	58.93	-1.19	0.419
	12	42	73.81	75.00	1.19	0.398
	13	42	57.14	61.31	4.17	0.222
	14	42	70.24	77.98	7.74	0.078
	15	42	75.00	87.50	12.50	0.010*
Values & Attitudes	16	41	71.34	92.07	20.73	0.000***
	17	41	50.61	64.63	14.02	0.011*
	18	42	73.21	78.57	5.36	0.127
	19	42	81.55	88.10	6.55	0.101
	20	42	87.50	93.45	5.95	0.071
	21	42	84.52	93.45	8.93	0.017*
	22	42	80.95	95.83	14.88	0.000***
	23	42	86.91	97.02	10.11	0.003**
	25	42	88.69	97.62	8.93	0.004**
	26	42	88.69	97.02	8.33	0.009**
	27	42	86.31	97.62	11.31	0.002**
	28	42	76.19	83.93	7.74	0.048*
	29	42	54.76	58.33	3.57	0.269
	30	42	60.12	72.02	11.90	0.012*
	31	42	74.41	89.29	14.88	0.000***
	32	42	53.57	60.12	6.55	0.119
	33	42	82.14	89.88	7.74	0.034*
	34	42	68.45	83.93	15.48	0.001***

^aSignificance was determined by paired t-test.

*Significant at $p < 0.05$ level; **Significant at $p < 0.01$ level; ***Significant at $p < 0.001$ level.

least 17 correct answers (71%) at the pre-test, which meant that these participants had less opportunity to improve their scores in the post-test. On the other hand, three items showed only a 10 to 14 percent improvement at the post-test, which could be due to the introduction of new terminology or ambiguous questions. They were: "Negotiating is the strategy that culture brokers use when conflict occurs and a person is needed to resolve or minimize, and in some instances, prevent conflicts between consumers and the independent living service delivery system," and "The broker needs to have knowledge of and be able to function in either culture system (the foreign culture of the consumer as well as the culture of the US rehabilitation and/or independent living system)" and "Mediating is a strategy used when brokering is needed to reach an agreement. This activity involves conferring with the consumer in

order to come to terms with the consumer's perception of his/her need for specific services."

These items with ceiling effects and ambiguity may not be clear to participants and should be revised in order to increase clarity for future study. In addition, the culture brokering workshop assessment tools applied in this study may not be the most suitable for measuring cultural competence. Since there was no instrument to measure the effectiveness of the culture brokering model, a knowledge-based questionnaire and a modified cultural competence questionnaire (based on existing instruments) were developed and used in this study. The results of this study may only provide a general reflection of participants' cultural competence, but not represent the true performance of the culture brokering model. Additionally, the results may not be generalized and compared with other studies.

Sample limitations may have affected the results of the study. Sample size and lack of geographic diversity may not be representative of the population. The sample was generated from participants attending the culture brokering workshops. Since the enrollment of each workshop was limited to 25 participants, there could be a potential self-selection bias, which means there might be greater motivation to improve cultural competency among participants [13].

The self-administration of the competence questionnaire creates the possibility of false responses. Even though it was emphasized that there are no right or wrong answers, participants could select an answer that they believed was desired or perceived as the best answer rather than their honest response. In addition, since the assessments were developed for the purposes of measuring self-awareness and training outcomes, the possibility of testing effects was present. Participants may gain knowledge from the pre-test, apply it to their behaviors and practice, and indirectly increase their cultural competence even without attending workshops. Separate analyses showed that eight out of 36 (22%) cultural competence items indicated the existence of testing effects. They were item numbers 1, 7, 8, 11–14 and 32, three of which showed significant improvement. As a result, the testing effect of the competence questionnaire should be adjusted in order to show the true effects.

In conclusion, this study could be considered a pilot for future research on the impact of culture brokering workshops on the culture competency of CIL staff. The findings support the benefits of these workshops in bridging the cultural gap between service providers and foreign-born consumers with disabilities. Results also indicated the need for more effective assessment tools.

4.1. Implications

This study demonstrated that culture brokering skills and cultural competence can be learned and developed as a result of training. However, there are issues for independent living staff and management that need to be addressed in order for centers to provide effective outreach. Delivering culturally competent services to foreign-born consumers is an important function of CIL staff. More research is needed to identify methods that improve service delivery to all disability groups including the foreign-born.

Building relationships with unserved and underserved minorities in the community and establishing

an atmosphere of trust and culturally sensitive service is the function of the independent living center and its management. This requires the members of the board of directors, center management and staff to identify and pursue opportunities to interact and exchange culture, ideas and awareness among the culturally diverse populations in the community for greater understanding. Applying the principles of culture brokering on a systems level can be an effective method for creating these opportunities. Research is needed to evaluate the application of culture brokering concepts and best practice models for community outreach and capacity building. This knowledge will enable independent living centers to become more integrated in the communities they serve and improve the effectiveness of their community service.

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References

- [1] G.M. Bartol and L. Richardson, Using literature to create cultural competence, *Journal of Nursing Scholarship* **30**(1) (1998), 75–79.
- [2] J. Campinha-Bacote, *The process of cultural competence in the delivery of healthcare services: A culturally competent model of care*, (3rd ed.), Cincinnati, OH: Transcultural C.A.R.E. Associates, 1998.
- [3] S.J. Forwell, G. Whiteford and I. Dyck, Cultural competence in New Zealand and Canada: Occupational therapy students' reflections on class and fieldwork curriculum, *Canadian Journal of Occupational Therapy* **68** (2001), 90–103.
- [4] L. Goddard and L. Jordan, Changing attitudes about persons with disabilities: Effects of a simulation, *Journal of Neuroscience Nursing* **30**(5) (1998), 307–313.
- [5] T.D. Goode, *Promoting Cultural Diversity and Cultural Competency for Personnel Providing Services and Supports in Early Intervention and Early Childhood Settings*. Retrieved November 4, 2002, from <http://www.georgetown.edu/research/gucdc/nccc/checklisteiec.html>, 2000.

- [6] T.D. Goode, *Promoting Cultural Diversity and Cultural Competency for Personnel Providing Services and Supports to Individuals and Families Affected by Sudden Infant Death Syndrome and Other Infant Death (SIDS/ID)*. Retrieved November 4, 2002, from <http://www.georgetown.edu/research/gucdc/nccc/checklistsids.html>, 2000.
- [7] T.D. Goode, *Promoting Cultural and Linguistic Competency for Personnel Providing Primary Health Care Services*. Retrieved November 4, 2002, from <http://www.georgetown.edu/research/gucdc/nccc/nccc11.html>, 2000.
- [8] T.D. Goode, *Promoting Cultural Diversity and Cultural Competency for Personnel Providing Services and Supports to Children with Special Health Needs and their Families*. Retrieved November 4, 2002, from <http://www.georgetown.edu/research/gucdc/nccc/nccc7.html>, 2002.
- [9] M.A. Jezewski and P. Sotnik, *Culture brokering: Providing culturally competent rehabilitation services to foreign-born persons*. Buffalo, NY: Center for International Rehabilitation Research Information and Exchange, 2001.
- [10] C.L. Lindgren and M.H. Oermann, Effects of an educational intervention on students' attitudes toward the disabled, *Journal of Nursing Education* **32**(3) (1993), 121–126.
- [11] S. Long, Primary health care team workshop: Team members' perspectives, *Journal of Advanced Nursing* **23**(5) (1996), 935–941.
- [12] F. Monaghan, M. McCoy, I. Young and E. Fraser, 'Time for teachers': The design and evaluation of a personal development course for teachers, *Health Education Journal* **56** (1997), 64–71.
- [13] L.G. Portney and M.P. Watkins, *Foundations of clinical research: Applications to practice*, (2nd ed.), Upper Saddle River, NJ: Prentice-Hall, Inc., 2000.
- [14] Rehabilitation Services Administration. US Department of Education. The Rehabilitation Act of 1973 As Amended by the Rehabilitation Act Amendment of 1993. Washington, DC: US Department of Education, 1993.
- [15] H. Sinclair, C. Bond, A.S. Lennox, J. Silcock and A. Winfield, An evaluation of a training workshop for pharmacists based on the stages of change model of smoking cessation, *Health Education Journal* **56** (1997), 296–312.
- [16] L.S. Smith, Concept analysis: Cultural competence, *Journal of Cultural Diversity* **5** (1998), 4–10.
- [17] United States Department of Commerce, US Census Bureau. Demographic Profiles: 100 percent and sample data, 2000 [Data file]. Available from US Census Bureau Web site, <http://www.census.gov>, 2002.
2. Culture, race, and ethnicity are interchangeable words.
 5. Occupations and incomes of foreign-born people differ depending on country of birth.
 6. Generally, the mainstream culture in the US tends to place importance on independence.
 7. "Everybody should work" is a part of American culture. It should be also true for foreign-born Americans.
 9. When I learn about a new culture, I am able to make broad statements about this specific cultural group.
 10. Cultural competence is a continuing developmental process.
 11. The largest wave of immigrants occurred in 1970s.
 12. Today, approximately one in ten Americans was born outside the US
 13. Today, the largest population of foreign-born Americans is Asian.
 21. It is important to know whether consumers view themselves as ill or well.
 22. Since foreign-born Americans came to the US, they are willing to accept the mainstream American culture.
 24. Culture influences how we use language to communicate. There are culturally determined nuances in the way that people communicate.

Questions related to Culture Brokering

3. The goal of cultural brokering is not to help the service provider become an expert on every culture, but to provide the process to find out those things.
4. Negotiating is the strategy that culture brokers use when conflict occurs and a person is needed to resolve or minimize, and in some instances, prevent conflicts between consumers and the independent living service delivery system.
8. Networking is the strategy where the culture broker establishes links with other professionals who can provide services to consumers.
14. The culture broker acts as a go-between, one who advocates or intervenes on behalf of another individual or group.
15. Culture brokering is essentially a conflict resolution and problem-solving model. The culture broker is a problem solver.
16. As the service provider becomes more proficient at culture brokering, potential problems will be anticipated and minimized or prevented before they occur.

Appendix A

Pre-Post Test Knowledge Questionnaire (continued)

Questions related to Cultural Perspectives

1. Please identify five countries from which the greatest number of immigrants have come to the US in recent years.
For question 2 to 25, please indicate whether each statement below is "True", "False" or "Don't Know".

17. Advocating is the strategy when the broker defines and pleads the cause of, promotes the rights of, or changes the system on behalf of an individual or group.
18. It is important for the provider to understand how the consumer perceives and lives with his/her disability.
19. Attributes necessary to be an effective culture broker include the willingness to be a risk taker, the ability to tolerate ambiguous roles and a degree of comfort functioning at the margins of various systems.
20. The broker needs to have knowledge of and be able to function in either of culture systems (the foreign culture of the consumer as well as the culture of the US rehabilitation and/or independent living system).
23. Awareness, sensitivity and knowledge are three necessary prerequisites to developing effective strategies to communicate cross-culturally.
25. Mediating is a strategy used when brokering is needed to reach an agreement. This activity involves conferring with the consumer in order to come to terms with the consumer's perception of his/her need for specific services.
4. I insure that printed information disseminated by my agency or program takes into account the average literacy levels of individuals and families receiving services.
5. I insure that tools and other accessories in reception areas and those which are used during assessment are representative of the various cultural and ethnic groups within the local community and the society in general.
6. I encourage and provide opportunities for individuals and their families to share experiences through storytelling, or other props to support the "oral tradition" common among many cultures.
7. I select videos, films or other media resources, which are culturally diverse to share with individuals and families, served by my program or agency.
8. I recognize and insure that schedules or calendars I use include traditional holidays celebrated by the majority culture, as well as those holidays which are unique to the culturally diverse individuals and families served by my program or agency.

Appendix B

Pre-Post Test Competence Questionnaire

Assessment of Promoting Cultural Diversity and Cultural Competency for Personnel Providing Services in Centers of Independent Living

PHYSICAL ENVIRONMENT, MATERIALS & RESOURCES

1. I display pictures, posters, artwork and other decor that reflect the cultures and ethnic backgrounds of consumers served by my program or agency.
2. I insure that magazines, brochures, and other printed materials in reception areas are of interest to and reflect the different cultures of individuals and families served by my program or agency.
3. When using videos, films or other media resources for interventions, meetings or other events, I insure that they reflect the cultures and ethnic background of individuals and families served by my program or agency.
9. When interacting with individuals and families who have limited English proficiency I keep in mind that:
 - 9a) limitations in English proficiency are in no way a reflection of their level of intellectual functioning.
 - 9b) their limited ability to speak the language of the dominant culture has no bearing on their ability to communicate effectively in their language of origin.
 - 9c) they may or may not be literate in their language of origin or English.
10. I use bilingual-bicultural staff and/or trained volunteers to serve as interpreters during interventions, meetings or other events for individuals and families who prefer or require this level of assistance.
11. For individuals and families who speak languages or dialects other than English, I attempt to learn and use key words in their language so that I am better able to communicate with them.
12. I use visual aids, gestures, and physical prompts in my interactions with individuals and families who have limited English proficiency.

13. I attempt to determine any familial colloquialisms used by individuals or families that may impact on interventions and services of my program or agency.
14. When possible, I insure that all notices and communiqués to individuals and families are written in their language of origin.
15. I understand that it may be necessary to use alternatives to written communications for some individuals and families, as word of mouth may be a preferred method of receiving information.

VALUES & ATTITUDES

16. I avoid imposing values that may conflict or be inconsistent with those of cultures or ethnic groups other than my own.
17. I screen books, movies, and other media resources for negative cultural, ethnic, or racial stereotypes before sharing them with individuals and families served by my program or agency.
18. I intervene in an appropriate manner when I observe other staff or consumers within my program or agency engaging in behaviors which show cultural insensitivity, racial biases and prejudice.
19. I recognize and accept that individuals from culturally diverse backgrounds may desire varying degrees of acculturation into the dominant culture.
20. I understand and accept that family is defined differently by different cultures (e.g. extended family members, godparents, fictive kin – people not related by birth or marriage who have an emotionally-significant relationship with an individual).
21. I accept and respect that male-female roles in families may vary significantly among different cultures (e.g. who makes major decisions for the family).
22. I understand that age and life cycle factors must be considered in interactions with individuals and families (e.g. high value placed on the decision of elders, the role of eldest male or female in families, or roles and expectation of children within the family).
23. Even though my professional or moral viewpoints may differ, I accept individuals and families as the ultimate decision makers for services and supports impacting their lives.
24. I recognize that the meaning or value of independence may vary greatly among cultures.
25. I accept that religion and other beliefs may influence how individuals and families respond to disabilities.
26. I understand that culture influences how individuals and families perceive and cope with the disability of a person.
27. I understand that the perception of wellness has different meanings to different cultural or ethnic groups.
28. I seek information from individuals, families or other key community informants that will assist in service adaptation to respond to the needs and preferences of culturally and ethnically diverse groups served by my program or agency.
29. Before visiting or providing services in the home setting, I seek information on acceptable behaviors, courtesies, customs, and expectations that are unique to the culturally and ethnically diverse groups served by my program or agency.
30. I keep abreast of the major concerns and issues for ethnically and racially diverse consumer populations residing in the geographic locale served by my program or agency.
31. I am aware of the socio-economic and environmental risk factors that contribute to the major problems of culturally, ethnically and racially diverse populations served by my program or agency.
32. I am well versed in the most current and proven practices and interventions for ethnically and racially diverse groups within the geographic locale served by my agency or program.
33. I avail myself to professional development and training to enhance my knowledge and skills in the provision of services and supports to culturally diverse individuals and families.
34. I advocate for the review of my program's or agency's mission statement, goals, policies, and procedures to insure that they incorporate principles and practices that promote cultural diversity and cultural competence.