Factor Structure and Short Form of the Miville-Guzman Universality-Diversity Scale

JAIRO N. FUERTES
MARIE L. MIVILLE
JONATHAN J. MOHR
WILLIAM E. SEDLACEK
DENISE GRETCHEN

In 3 studies, the authors examined the factor structure of the Miville-Guzman Universality-Diversity Scale (M-GUDS) and developed a short form of the scale, the Miville-Guzman Universality-Diversity Scale–Short (M-GUDS–S).

Theorists have described psychological constructs based on universal and common aspects of human experience. For example, Carl Jung's (1968) theory of personality is based on the idea that humans inherit archetypes, or universal images, that connect them to one another and lead them to seek a wide range of experiences and activities. Yalom (1985) has described processes by which members of groups recognize universal qualities and conditions among them that allow for a shared experience that can be developmental and therapeutic.

Similarly, Vontress (1979, 1988, 1996) has written that cultural differences are important to acknowledge and integrate into social interactions, including counseling interventions. An awareness of how people are alike and different is important to effective interactions with others. Such an understanding allows one to build an alliance with others on the basis of similarities (e.g., commonality of being human) while at the same time being able to accept and value others for being different than oneself (e.g., by race, gender, or sexual orientation).

According to Vontress (1988, 1996), an awareness and acceptance of a person's similarities and differences from oneself are important for counselors who work with clients from a variety of cultural backgrounds. Effective multicultural counseling is based on the philosophical framework that human beings share commonalties with each other (based on membership in universal culture) and at the same time have important differences (based on other cultural memberships such as race or religion). Thus, communicating and interacting

Jairo N. Fuertes is an assistant professor, and Denise Gretchen is a doctoral candidate, both in the Graduate School of Education & Center for Hispanic Mental Health Research, Fordham University at Lincoln Center, New York, New York. Marie L. Miville is an assistant professor in the School of Applied Health and Educational Psychology, Oklahoma State University, Stillwater. Jonathan J. Mohr is a doctoral candidate in the Department of Psychology, and William E. Sedlacek is a professor of education and associate director of the counseling center in the College of Education, both at the University of Maryland at College Park. The second, third, and fourth authors contributed equally to this article, and the order of authorship is based on the alphabetical order of the last name. *The authors thank Charles J. Gelso, James J. Hennessy, and Vytas Lattusis for comments made on an earlier draft.* *Correspondence regarding this article should be sent to Jairo N. Fuertes, Fordham University at Lincoln Center, 113 West 60th Street, Room 1008, New York, NY 10023-7478 (e-mail: VT320@aol.com).*

successfully with clients necessarily involves focusing on both similarities and differences between oneself and another.

Vontress's (1979, 1986, 1996) assertion that effective multicultural counseling requires the simultaneous recognition that people are both similar to and different from each other forms the basis of Miville et al.'s (1999) recently introduced construct Universal-Diverse Orientation (UDO). Miville et al. defined UDO as "an attitude toward all other persons which is inclusive yet differentiating in that similarities and differences are both recognized and accepted; the shared experience of being human results in a sense of connection with people and is associated with a plurality or diversity of interactions with others" (p. 292). More specifically, UDO is conceptualized as an awareness and potential acceptance of both similarities and differences in others that is characterized by interrelated cognitive, behavioral, and affective components.

Miville et al. (1999) developed the Miville-Guzman Universality-Diversity Scale (M-GUDS) to assess the construct of UDO. The M-GUDS consists of three subscales that assess the respective cognitive, behavioral, and affective components of UDO: (a) relativistic appreciation of oneself and others, (b) seeking a diversity of contact with others, and (c) a sense of connection with the larger society or humanity as a whole (Miville, 1992).

Evidence suggests that scores on the M-GUDS, obtained with a heterogeneous sample of college students, are reliable (coefficient $\alpha = .93$; test–retest reliability = .94; Miville et al., 1999). Convergent and discriminant validity scores indicate that the M-GUDS is significantly related to measures of racial identity, homophobia, dogmatism, feminism, and androgyny in theoretically expected ways; it is not significantly related to SAT verbal scores (Miville et al. 1999). The importance of considering UDO in counseling has been investigated in a series of preliminary studies, and the results of this research suggest that UDO may be an important factor in explaining the openness and comfort of participants in counseling. For example, studies have found that UDO scores, as measured by the M-GUDS, predict respondents' preferences for diversity in psychologists (Fuertes & Gelso, 1998) and predict participants' perceptions of therapy (e.g., Fuertes, 1999; Fuertes & Gelso, 2000). Scores on the M-GUDS have been found to predict students' help-seeking behavior in college, their attitudes toward diversity of people and programs in a college setting, and their academic self-confidence (Fuertes, Sedlacek, Roger, & Mohr, 2000). With respect to personality functioning, scores on the M-GUDS have been found to relate to self-efficacy, positive thinking, and numerous coping skills, such as active coping and planning, seeking social support, and using positive reinterpretation (Miville, Romans, Johnson, & Lone, 1998).

The internal structure of scores on the M-GUDS was initially explored by Miville (1992) and Miville et al. (1998). The total score on the M-GUDS was found to be highly correlated with its subscale scores (all correlations were approximately .90), and subscale scores were all intercorrelated above .75. On the basis of these findings, Miville et al. (1999) concluded that UDO is best conceptualized as a unidimensional construct with behavioral, cognitive, and affective components, rather than a multidimensional construct with three distinct but interrelated domains. However, no data have been published describing the factor structure of scores on the M-GUDS. Hence, the purpose of the first investigation was to examine the factor structure and selected psychometric properties of scores on the M-GUDS. Study 1 used exploratory factor analysis to investigate the factor structure of scores on the M-GUDS. Using the results of Study 1, we created a short form of the M-GUDS (i.e., the

M-GUDS–S) and used it in Study 2. In the second study, we also tested the factor structure of scores on the M-GUDS–S using confirmatory factor analysis (CFA) to provide preliminary reliability and validity evidence for scores on the short-version scale. In Study 3, we conducted a CFA of scores on the M-GUDS–S with a new sample using the short form only. We conducted the third study to account for a possible confound in Study 2, where we extracted the 15 items of the short form for the CFA from the administration of the long form. (*Author note.* Copies of the M-GUDS and the M-GUDS–S may be obtained from Marie L. Miville, Oklahoma State University, SAHEP 434 Willard, Stillwater, OK 74078; e-mail: Miville@okstate.edu).

STUDY 1

Method

Participants. Students ($N = 335$; 196 women, 139 men) enrolled in undergraduate psychology and counseling courses at a large, public research university in the Northeast participated in this study. The mean age reported for the sample was 19 years ($SD = 2.04$); 94% of the students were between the ages of 18 and 23 years. They reported an average household (i.e., parents) income of $83,000. The racial and ethnic representation among participants was as follows: 212 (63%) White, 52 (16%) Asian American, 45 (13%) African American, 12 (4%) Hispanic, 11 (3%) Other, and 3 (1%) American Indian.

Procedure. Participants were recruited through advertisements posted in the counseling and psychology departments at the university. Extra course credit was offered for participation. Students were blind to the nature of the study and were told only that they would participate in an "interpersonal processes study." After providing written informed consent, the participants completed a survey packet including both the M-GUDS and measures used for another study. The measures were counterbalanced to avoid order effects. Participants were given a written debriefing statement regarding the nature of the study.

Measures. The M-GUDS (Miville et al., 1999) is a 45-item questionnaire with items that are rated on a 6-point Likert-type scale ranging from *strongly disagree* (1) to *strongly agree* (6). The M-GUDS yields a total scale score as well as scores from three 15-item subscales (i.e., Diversity of Contact, Relativistic Appreciation, and Sense of Connection), reflecting the behavioral, cognitive, and affective components of UDO, respectively.

Miville et al. (1999) provided evidence for the reliability and validity of scores on the M-GUDS. Internal consistency and retest reliability estimates ranged from .89 to .95. The convergent validity of scores on the M-GUDS was evidenced by significant correlations in theoretically predicted ways with measures of racial identity, empathy, healthy narcissism, feminism, androgyny, homophobia, and dogmatism (the last two correlations were negative; Miville et al., 1999). Discriminant validity was evidenced by the absence of a correlation between M-GUDS scores and measures of verbal aptitude and social desirability.

Results and Discussion

We used principal components analysis to examine the factor structure of the 45-item M-GUDS. On the basis of a priori expectations, an examination of the scree plot, and factor interpretability (Tinsley & Tinsley, 1987), we extracted three factors and rotated them using the varimax method. Eigenvalues and percentage of variance explained after rotation were as follows: Factor 1, eigenvalue = 8.37, 19%;

Factor 2, eigenvalue = 4.57, 10%; and Factor 3, eigenvalue = 4.37, 10%. All of the items, their structure coefficients, and communalities are presented in Table 1.

Examination of item structure coefficients indicates that Factor 1 consisted of items from the original Diversity of Contact scale that reflect an interest in and commitment to participating in diverse, internationally focused social and cultural activities. Hence, this factor emphasizes a behavioral component of UDO, although not all items described behaviors. For example, some of the items in this scale were from the original Sense of Connection subscale, which was conceptualized as tapping an affective component of UDO (e.g., "It deeply affects me to hear persons from other countries describe their struggles of adapting to living here"). Nonetheless, all of the items suggest a sense of engaged interaction with diverse people and practices. Thus, the label *Diversity of Contact* was retained to describe this factor.

Factor 2, *Relativistic Appreciation*, is primarily defined by items that reflect an appreciation of both similarities and differences in people and the impact of these similarities and differences on one's self-understanding and personal growth (e.g., "Persons with disabilities can teach me things I could not learn elsewhere"). Thus, the factor emphasizes what was originally conceptualized as a cognitive component of UDO. Nearly all of the top structure coefficient items on this factor were from the original Relativistic Appreciation subscale.

Factor 3 had its highest structure coefficients on items reflecting degree of comfort with diverse individuals (e.g., "Getting to know someone of another race is generally an uncomfortable experience for me"). Hence, this factor emphasizes an evaluative, affective component of UDO. As discussed earlier, Miville (1992) viewed the affective component of UDO as the degree to which individuals felt a sense of connection to those both similar to and different from themselves; she labeled this component *Sense of Connection*. The present analysis suggests that the affective component defined by Factor 3 is more complex than that posited by Miville (1992). To reflect this difference, we labeled this factor *Comfort With Differences*.

STUDY 2

Method

Participants. A random sample of freshman students (N = 206; 115 women, 91 men) at a large, mid-Atlantic public research university participating in orientation programs completed the measures included in this study. More than 90% of all incoming freshmen participate in freshman orientation programs at this university; thus, the sample collected is considered representative of the total group of incoming freshmen. The mean age reported for the sample was 18 years (SD = .73); 96% of the respondents were between the ages of 17 and 19 years. The racial and ethnic representation among participants was as follows: 129 (63%) White, 21 (10%) Asian American, 34 (17%) African American, 9 (4%) Biracial, 8 (4%) Hispanic, 2 (1%) American Indian, and 3 (1%) Other.

Procedure. After providing written informed consent, students completed the M-GUDS as part of a survey packet administered during the orientation for new students. Students were blind to the nature of the study and were told only to complete the questionnaires as completely as possible. Measures were counterbalanced to avoid ordering effects.

Measures. The 45-item M-GUDS described in Study 1 was used in this study. This study also used archival data from the New Student Census administered at the university from which the current data were gathered. The census included

TABLE 1

Structure Coefficients of the Miville-Guzman Universality-Diversity Scale (M-GUDS)

M-GUDS Item	Factor 1	Factor 2	Factor 3	Communality
1. I would like to join an organization that emphasizes getting to know people from different countries. (DC)	.76	.17	.04	.62
2. I would like to go to dances that feature music from other countries. (DC)	.76	.09	.00	.58
3. I often listen to the music of other cultures. (DC)	.68	.03	.02	.47
4. I am interested in learning about the many cultures that have existed in this world. (DC)	.68	.25	.09	.54
5. I attend events where I might get to know people from different racial backgrounds. (DC)	.68	.18	.14	.52
6. I feel a sense of connection with people from different countries. (SC)	.67	.15	.05	.48
7. I am interested in knowing people who speak more than one language. (DC)	.66	.26	.05	.52
8. I am interested in going to exhibits featuring the work of artists from minority groups. (DC)	.66	.26	.05	.53
9. I would like to know more about the beliefs and customs of ethnic groups who live in this country. (DC)	.66	.31	.10	.55
10. I often feel a sense of kinship with persons from different ethnic groups. (SC)	.61	.17	.19	.44
11. Becoming aware of the experiences of people from different ethnic groups is very important to me. (RA)	.58	.46	.15	.58
12. I don't know too many people from other countries. (DC)	.54	.03	.21	.34
13. If given another chance, I would travel to different countries to study what other cultures are like. (DC)	.50	.32	.14	.38
14. I have *not* seen many foreign films. (DC)	.50	−.04	−.01	.25
15. I am not very interested in reading books translated from another language. (DC)	.48	−.08	.11	.26
16. I would be interested in taking a course dealing with race relations in the United States. (DC)	.48	.35	.20	.40
17. It deeply affects me to hear persons from other countries describe their struggles of adapting to living here. (SC)	.41	.29	.13	.27
18. When I hear about an important event (e.g., tragedy) that occurs in another country, I often feel as strongly about it as if it had occurred here. (SC)	.39	.25	.27	.29

(*table continued on next page*)

TABLE 1 (Continued)

Structure Coefficients of the Miville-Guzman Universality-Diversity Scale (M-GUDS)

M-GUDS Item	Factor 1	Factor 2	Factor 3	Communality
19. I feel comfortable getting to know people from different countries. (SC)	.38	.07	.33	.26
20. For the most part, events around the world do not affect me emotionally. (SC)	.33	.30	.24	.26
21. Persons with disabilities can teach me things I could not learn elsewhere. (RA)	.23	.62	.08	.44
22. I can best understand someone after I get to know how he/she is *both* similar and different from me. (RA)	−.03	.58	−.14	.36
23. Knowing how a person differs from me greatly enhances our friendship. (RA)	.19	.56	.19	.40
24. Knowing someone from a different ethnic group broadens my understanding of myself. (RA)	.44	.54	.12	.51
25. In getting to know someone, I like knowing *both* how he/she differs from me and is similar to me. (RA)	.09	.54	.01	.29
26. Knowing about the experiences of people of different races increases my self-understanding. (RA)	.38	.53	.12	.45
27. Knowing about the different experiences of other people helps me understand my own problems better. (RA)	.07	.53	.09	.29
28. When I listen to people of different races describe their experiences in this country, I am moved. (SC)	.38	.51	.28	.49
29. It grieves me to know that many people in the Third World are not able to live as they would choose. (SC)	.18	.40	.25	.26
30. I would be interested in participating in activities involving people with disabilities. (DC)	.37	.40	.15	.32
31. I place a high value on being deeply tolerant of others' viewpoints. (RA)	.34	.38	.26	.33
32. In getting to know someone, I try to find out how I am like that person as much as how that person is like me. (RA)	.07	.30	−.14	.12
33. Getting to know someone of another race is generally an uncomfortable experience for me. (SC)	.15	.21	.70	.56
34. I am only at ease with people of my own race. (SC)	.02	.06	.69	.48
35. It's really hard for me to feel close to a person from another race. (SC)	.27	.11	.68	.56
36. It is very important that a friend agrees with me on most issues. (RA)	−.06	.06	.59	.36

(*table continued on next page*)

TABLE 1 (Continued)

Structure Coefficients of the Miville-Guzman Universality-Diversity Scale (M-GUDS)

M-GUDS Item	Factor 1	Factor 2	Factor 3	Communality
37. I often feel irritated by persons of a different race. (SC)	.31	.15	.57	.45
38. I have friends of differing ethnic origins. (DC)	.37	.15	.50	.41
39. It does not upset me if someone is unlike myself. (SC)	.17	.24	.50	.34
40. Knowing how a person is similar to me is the most important part of being good friends. (RA)	−.01	−.09	.46	.22
41. It's often hard to find things in common with people from another generation. (RA)	.17	−.22	.41	.25
42. I am often embarrassed when I see a physically disabled person. (SC)	−.07	.17	.37	.17
43. Placing myself in the shoes of a person from another race is usually too tough to do. (RA)	.21	−.09	.36	.18
44. It's hard to understand the problems that people face in other countries. (RA)	.26	−.24	.32	.23
45. I sometimes am annoyed at people who call attention to racism in this country. (SC)	.09	.19	.27	.11

Note. DC = Diversity of Contact Scale of the M-GUDS; RA = Relativistic Appreciation Scale of the M-GUDS; SC = Sense of Connection Scale of the M-GUDS. The M-GUDS items are from *Defining and Measuring Universal Orientation*, by M. L. Miville, 1992, unpublished master's thesis, University of Maryland, College Park. Copyright 1992 by Marie L. Miville. Items reprinted with permission from the author.

102 items that assess a variety of variables considered to be relevant to college life, including study habits, future plans, computer use, attitudes related to diversity issues, religious orientation, and interpersonal style. The census also included items that measure demographic variables, such as age, race and ethnicity, sex, and intended major.

A short form of the M-GUDS was created by selecting the five highest structure coefficients in each of the three factors identified in Study 1. Items with structure coefficients over .30 on more than one factor were not selected. The item numbers (from the original M-GUDS; see Table 1) for the three subscales are as follows: Diversity of Contact (Items 1, 2, 3, 4, 5), Relativistic Appreciation (Items 21, 22, 23, 25, 27), and Comfort With Differences (Items 33, 34, 35, 36, 37). Descriptive statistics for the short form (hereafter referred to as M-GUDS–S), including internal consistency reliability estimates, are listed in Table 2. The correlation between the total score of the short form and the long form was .77 ($p < .001$), indicating considerable overlap and shared variance between the two forms.

Results and Discussion

CFA was used to examine the factor structure of the M-GUDS–S. Two models were tested: the three-factor model identified in the previous study and the

TABLE 2

Internal Consistencies, Means, Standard Deviations, and Intercorrelations of M-GUDS–S Subscales and Overall UDO Level

Factor	α	N	M	SD	1	2	3	4
1. Diversity of Contact	.82	185	21.83	4.85	—			
2. Relativistic Appreciation	.59	185	24.17	2.97	.21**	—		
3. Comfort With Differences	.92	184	21.64	7.21	−.04	−.14*	—	
4. M-GUDS–S total score	.77	184	59.35	9.66	.53**	.52**	−.76**	—

Note. M-GUD–S = Miville-Guzman Universality-Diversity Scale, Short Form; UDO = Universal-Diverse Orientation.
*p = .05.**p = .01.

original one-factor model. CFA was conducted using the covariance analysis of linear structural equations procedure in SAS (Version 6.09; SAS Institute, 1990). Many indices and statistics have been created to describe the degree to which a model fits the variation observed in the data. As recommended by Tanaka (1993), we used multiple indicators of fit: the model chi-square test, Bentler-Bonnet Nonnormed Fit Index (NNFI), Goodness of Fit Index (GFI), and the Comparative Fit Index (CFI). A good fit is indicated by a nonsignificant chi-square test and by test indices above the .90 level; several authors have noted, however, that the model chi-square test is often an unacceptably conservative test of fit (Bollen, 1989; Byrne, 1994).

We first tested the three-factor model that included intercorrelations among the three factors. All of the indicators of fit suggested only a marginally acceptable fit of the data to this model, $\chi^2(87, N = 206) = 247.28$, $p < .001$; NNFI = .83; GFI = .81; CFI = .86. As noted by Byrne (1994), marginally acceptable fit is sometimes due to unspecified correlations between pairs of measured-variable error. Two theoretically plausible correlations were added to the model sequentially on the basis of inspection of Lagrange multiplier modification indices, which provide an estimate of the improvement in model fit that results from freeing fixed paths (Loehlin, 1992). Specifically, errors associated with Items 22 and 25 and Items 2 and 3 were allowed to correlate. A close inspection of these pairs of items shows considerable similarity of content and phrasing.

The process of model respecification resulted in signs of excellent fit in all indicators with the exception of the overly conservative chi-square test, $\chi^2(85, N = 206) = 143.84$, $p < .001$; NNFI = .94; GFI = .92; CFI = .95. This analysis indicated an acceptable fit of the data to the model. The one-factor model was tested next. All of the indicators of fit were well below optimal levels, $\chi^2(88, N = 206) = 335.58$, $p < .001$; NNFI = .74; GFI = .79; CFI = .78. Regarding the three-factor model, the data provided a significantly better fit than the one-factor model, $\chi^2(1, N = 206) = 191.74$, $p < .001$.

To provide preliminary validity evidence for scores from the M-GUDS–S, we examined race and ethnicity differences on the measure as well as correlations of scores on the measure with census items related to diversity. First, we compared racial and ethnic groups on M-GUDS–S scores; only data from White,

Asian American, and African American participants were analyzed because of the small number of participants in other racial and ethnic groups. Individuals in racial and ethnic minority groups might be expected to have higher levels of UDO given their greater likelihood of having contact with people outside of their racial or ethnic group. No statistically significant differences were found on the total M-GUDS–S score, $F(2, 181) = 2.26$, $\chi^2 = .01$; the Relativistic Appreciation subscale, $F(2, 181) = 0.59$, $\chi^2 = .00$; or the Comfort With Differences subscale, $F(2, 181) = 0.52$, $\chi^2 = .00$. A statistically significant difference was found, however, on the Diversity of Contact subscale, $F(2, 181) = 5.99$, $p < .01$, $\chi^2 = .05$. Pairwise comparisons using Tukey's honestly significant difference test revealed that Asian American students had significantly higher scores on this subscale than White students.

Table 3 reports the correlations of the M-GUDS–S with items from the student census. A familywise error rate of .10 was used to control the potential for Type I error caused by the large number of correlations that we tested. The resulting significance level for individual correlations was .004. Inspection of the correlations revealed that, in general, the three subscales correlated in the theoretically predicted direction, given the nature of the census item (i.e., whether it was positively or negatively worded); however, there was no identical pattern. For example, tolerance for other religions was significantly correlated with Relativistic Appreciation and Comfort With Differences, but not with Diversity of Contact. Differences in the pattern of correlations appeared to relate to substantive differences in the subscales. For example, the degree to which participants reported discussing culture with friends was related only to Diversity of Contact, which is the only subscale that assesses the degree to which individuals actively seek culture-related experiences.

STUDY 3

The purpose of Study 3 was to confirm the CFA findings obtained in Study 2, which relied on the administration of the M-GUDS. In Study 3, we administered only the M-GUDS–S.

TABLE 3

Correlations of M-GUDS–S With Selected Census Items ($N = 206$)

Census Item	DC	RA	CD	M-GUDS–S Total Score
I am tolerant of other religions.	.10	.20***	.30***	.26***
I have lesbian friends.	.32***	.14	.20***	.29***
I am *not* comfortable around gay persons.	−.31***	−.24***	−.40***	−.41***
I discuss topics related to cultural awareness with friends.	.33***	.10	.12	.25***
I have a close friend who is *not* my race.	.39***	.22***	.43***	.45***
Most of my friends are my own race.	−.31***	−.12	−.37***	−.35***

Note. See Table 2 *Note.* DC = Diversity of Contact Scale; RA = Relativistic Appreciation Scale; CD = Comfort With Differences Scale.
***$p < .004$.

Method

Participants. One hundred and eighty-six graduate students in counseling and counseling psychology (150 women, 34 men; 2 did not report sex) at a private university completed the M-GUDS–S. The racial and ethnic representation among participants was as follows: 114 (61%) White, 33 (17%) Hispanic, 21 (11%) African American, 13 (7%) Asian American, 4 (3%) Other, and 1 (1%) American Indian. In terms of status, 124 (67%) respondents reported being master's-level students, 60 (32%) doctoral-level, 1 (1%) undergraduate (1 participant did not report status). The mean age reported for the sample was 28 years (*SD* = 7); 90% of the sample was between 22 and 38 years.

Procedure. After providing written informed consent, students completed the M-GUDS–S after class and were included in a raffle for a $25 book certificate. Students were unaware of the nature of the study and were told only to complete the questionnaires as completely as possible.

Results and Discussion

CFA. Analyses were performed using the structural equation modeling program EQS (Bentler, 1995). The program reports several indices of fit between a null and user specified model, such as chi-square and the CFI. Another indicator of model fit is demonstrated in the residuals that account for the discrepancy between the hypothesized model and actual data supplied by the sample. EQS reports the standardized residuals, which indicate the consistency between the predicted covariance matrix and sample covariance matrix.

Three models were nested in an attempt to arrive at the best overall fit of the data to the model. The independence or uncorrelated variable model was the initial representation. This highly restrictive representation was used as the null model and served as the baseline for subsequent analyses. As expected, chi-square values associated with this model were large, indicating a poor fit, $\chi^2(105, N = 184) = 768.36$, $p < 001$; and the average off-diagonal absolute standardized residuals was .210.

The second model represented a saturated three-factor solution. This model was the least restrictive, and unlike the previous null model all factor-structure coefficients were freely estimated. With the exception of the chi-square, which is considered unreasonably stringent, the fit indices indicated a very good fit, $\chi^2(57, N = 184) = 89.17$, $p < .004$, CFI = .952; and the average off-diagonal absolute standardized residuals was .031.

The third model run represented the three-factor structure and loading pattern obtained in the exploratory factor analysis and tested in Study 2. This model is more constrained than the saturated model, although as with the previous model the factors were allowed to correlate. Relaxing the constraint of uncorrelated factors seemed especially prudent given the nature of the three factors underlying these data. We were interested in observing the decrement of fit associated with this new model as compared with the previous one. If the decrement in fit is too large, we find it difficult to justify adopting it. The resulting model statistics also indicated a very good fit of the data, $\chi^2(87, N = 184) = 123.43$, $p < .006$; CFI = .945; and the average absolute standardized residuals was .05. Therefore, the loss of fit associated with these additional constraints is minimal. We note that the fit statistics reported for the third model are comparable to those reported for the three-factor model in Study 2, yet the model in this study did not need to specify correlations between pairs of measured variable error, as was the case in Study 2.

GENERAL DISCUSSION

These three studies contribute to refinements in the conceptualization and measurement of UDO. CFA tests of the M-GUDS–S support a tripartite conceptualization of UDO that is similar but not identical to that originally posited by Miville (1992). Our findings suggest that the M-GUDS–S measures UDO as a multidimensional construct with three distinct but modestly interrelated domains: behavioral, emotional, and cognitive (see Table 2). The apparent change in the structure of the M-GUDS–S from the long form is probably due to the procedure used to select the items for the short form. The exploratory factor analysis pulled the most distinct and defining items from each scale (i.e., the top five loading items from each scale) from the long form, enhancing the uniqueness of each scale in the short form.

Nevertheless, the three scales of the short form each appear conceptually similar to those proposed by Miville et al. (1999) for the long form, which accounts for the high intercorrelation between the scores on the short and long forms. Despite the similarities in the scales, the current set of analyses helped to redefine the affective component associated with UDO. As noted earlier, this component was originally defined as a sense of connection to humanity characterized by an emotional investment one has toward the human race as based on the interrelatedness of people (Miville, 1992). Findings from our research suggest this affective subscale comprises items that can tap two distinct but related emotional dimensions of UDO: a sense of connection with others who are different from oneself and an ambivalence and potential discomfort regarding such contact. The psychological experience of UDO for some people may be that although they approach others, particularly from different social groups, with openness, curiosity, and feelings of connectedness, they may also feel discomfort and anxiety regarding aspects that are perceived as truly different, emotionally and intellectually foreign, or simply unknown.

Our results provide preliminary evidence that scores on the M-GUDS–S are adequately reliable and valid and that they may offer researchers three advantages over the original scale. First, the M-GUDS–S is shorter and thus more quickly administered than the original form. Again, the strong, positive correlation between the long and short forms suggests that the latter measures UDO as well as the former. Second, the factor structure of scores on the short form and the relationship among its scales are more clearly delineated. Third, use of the M-GUDS–S allows for an analysis of UDO using subscale scores, which is recommended, given the current evidence that the subscale scores measure distinct aspects of UDO and that subscale scores differently predict diversity-related attitudes and behaviors.

There are many potentially fruitful avenues of further inquiry in the study of UDO. For example, differences could be examined among people who have various combinations of high and low scores on the three subscales. Consider the case of individuals who have high scores on Relativistic Appreciation. What are the differences between this group and individuals with high or low scores on Comfort With Differences? Do these two groups differ demographically and in diversity-related beliefs? How might these groups differ in response to an intervention designed to increase contact among diverse people? Studies addressing such questions begin to explore the dynamics in determining the level of each of the three dimensions of UDO among individuals. Future studies can also address how these dimensions are related to each other or whether different processes are at play in their respective development.

Miville et al. (1998) noted that UDO is a social attitude that appears to be related to certain aspects of healthy functioning and may be used as a clinical research instrument. For example, because UDO has been found to correlate negatively with measures of homophobia and dogmatism (Miville et al., 1999), it would be interesting to investigate the relationship between UDO, racial identity attitudes, and satisfaction with counseling. Are clients who score high on UDO and low on prejudice and dogmatism more satisfied with the counseling relationship? What is the relationship of a counselor's level of UDO and racial identity attitudes to a client's satisfaction with counseling?

As noted by Miville et al. (1999) and Miville, Carlozzi, Kazanecki, and Ueda (2000), UDO could be used to discover how a counselor's ability to be aware and accepting of both similarities and differences between himself or herself and the client affects the therapeutic process. For example, scores on the M-GUDS–S could be used to assess a counselor's general openness and comfort level toward clients from a variety of cultural backgrounds. It could be used as a marker of progress with respect to a client's reactivity to the social environment, particularly people who are different from him or her, including counselors. Thus, research could be directed at studying whether clients' scores on the M-GUDS–S predict their preference for seeing culturally similar or dissimilar counselors. A related question that could be examined is whether counselors' scores on the M-GUDS–S predict their preference for culturally similar or dissimilar clients? Should counselors and clients be "matched" (e.g., similar scores on the M-GUDS–S) to increase the probability of client persistence in and satisfaction with counseling?

Several limitations of the studies must be acknowledged. The samples consisted of college students. As suggested by Miville et al. (1998), the validity of scores on the M-GUDS (and, by extension, the M-GUDS–S) should be investigated with various demographic populations. Factors such as age, socioeconomic status, gender, physical disability, and sexual orientation may relate in specific ways to subscale scores on UDO. With respect to the current studies, the validity estimates reported for scores on the M-GUDS–S are likely to be inflated because of the use of monomethod scales. Moreover, the internal consistency of scores on the Relativistic Appreciation subscale is low, and future research may be directed at rewriting items that increase the reliability of scores from this subscale. Future research may also examine the usefulness of the M-GUDS–S in varied settings (e.g., counseling centers or work environments), and future investigations of this measure might also include observer or judge-rated measures of UDO.

REFERENCES

Bentler, P. M. (1995). *EQS structural equation program manual.* Encino, CA: Multivariate Software, Inc.

Bollen, K. A. (1989). *Structural equations with latent variables.* New York: Wiley.

Byrne, B. M. (1994). *Structural equation modeling with EQS and EQS/Windows.* Thousand Oaks, CA: Sage.

Fuertes, J. N. (1999). Asian Americans' and African Americans' initial perceptions of Hispanic counselors. *Journal of Multicultural Counseling and Development, 27,* 122–135.

Fuertes, J. N., & Gelso, C. J. (1998). Asian-American, Euro-American, and African-American students' universal-diverse orientation and preferences for characteristics of psychologists. *Psychological Reports, 83,* 280–282.

Fuertes, J. N., & Gelso, C. J. (2000). Hispanic counselors' race and accent, and Euro-Americans' universal-diverse orientation: A study of initial perceptions. *Cultural Diversity and Ethnic Minority Psychology, 6,* 211–219.

Fuertes, J. N., Sedlacek, W. E., Roger, P., & Mohr, J. (2000). Correlates of universal-diverse orientation among first-year university students. *Journal of the First-Year Experience and Students in Transition, 12,* 45–59.

Jung, C. G. (1968). *The archetypes and the collective unconscious* (2nd ed., R. F. C. Hull, Trans.). Princeton, NJ: Princeton University Press.

Loehlin, J. C. (1992). *Latent variable models* (2nd ed.). Hillsdale, NJ: Erlbaum

Miville, M. L. (1992). *Defining and measuring universal orientation.* Unpublished master's thesis, University of Maryland, College Park.

Miville, M. L., Carlozzi, A., Kazanecki, S., & Ueda, M. (2000). *Empathy, universal-diverse orientation, and emotional intelligence among counselor trainees.* Paper accepted for presentation at the 108th annual meeting of the American Psychological Association, Washington, DC.

Miville, M. L., Gelso, C. J., Pannu, R., Liu, W., Touradji, P., Holloway, P., & Fuertes, J. N. (1999). Appreciating similarities and valuing differences: The Miville-Guzman Universality Diversity Scale. *Journal of Counseling Psychology, 46,* 291–307.

Miville, M. L., Romans, J. S. C., Johnson, D., & Lone, R. (1998, August). *Exploring correlates of well-functioning using the Miville-Guzman Universality-Diversity Scale.* Poster session presented at the annual meeting of the American Psychological Association, San Francisco.

SAS Institute. (1990). *SAS/STAT user's guide* (Version 6, 4th ed.). Cary, NC: Author.

Tanaka, J. S. (1993). Multifaceted conceptions of fit in structural equation models. In J. A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 10–39). Newbury Park, CA: Sage.

Tinsley, H. E. A., & Tinsley, D. J. (1987). Uses of factor analysis in counseling psychology research. *Journal of Counseling Psychology, 34,* 414–424.

Vontress, C. E. (1979). Cross-cultural counseling: An existential approach. *Personnel and Guidance Journal, 58,* 117–122.

Vontress, C. E. (1986). Social and cultural foundations. In M. D. Lewis, R. Hayes, & J. A. Lewis (Eds.), *An introduction to the counseling profession* (pp. 215–250). Itasca, IL: Peacock.

Vontress, C. E. (1988). An existential approach to cross-cultural counseling. *Journal of Multicultural Counseling and Development, 16,* 78–83.

Vontress, C. E. (1996). A personal retrospective on cross-cultural counseling. *Journal of Multicultural Counseling and Development, 24,* 156–166.

Yalom, I. D. (1985). *The theory and practice of group psychotherapy* (2nd ed.). New York: Basic Books.