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The Multicultural Orientation Inventory–Group Version-8: Development and Validation of a Brief Scale to Measure Cultural Processes in Group Therapy

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Objective: The brief form measure has been identified as an important aspect of routine outcome monitoring in clinical practice with its ability to provide timely and actionable feedback and data to providers and patients. However, there remains a paucity of brief forms for measuring processes in group therapy, especially multicultural processes. This study aimed to develop a brief form of the Multicultural Orientation Inventory–Group Version (MCO-G), a 27-item measure of the group's multicultural orientation, to allow for continuous monitoring of the group's MCO session-by-session. ***Method:*** This study was conducted using an archival data set consisting of 387 clients within 129 interpersonal process therapy groups. Item response theory analysis based on the graded response model was utilized to analyze the MCO-G inventory. Multilevel modeling was used to test the concurrent and predictive validity of the brief inventory, specifically by examining the association between the brief inventory and Patient's Estimate of Improvement and Therapeutic Factor Inventory–8. ***Results:*** A brief eight-item measure of the MCO-G was found to have good psychometric properties. Additionally, concurrent and predictive validity was found for the MCO-G-8. ***Conclusions:*** Preliminary evidence suggests the MCO-G-8 is a reliable and valid measure. The MCO-G-8 may prove beneficial to group therapy facilitators and researchers interested in monitoring cultural processes over the course of therapy groups.

Highlights and Implications

- This study developed and tested the psychometric properties of a brief form of the Multicultural Orientation Inventory–Group Version to used in routine clinical practice to assess cultural processes in therapy groups longitudinally.
- Item response theory analysis based on the graded response model indicated an eight-item brief form was the best fit for this data. In addition, concurrent and predictive validity was found for the Multicultural Orientation Inventory–Group Version-8 (MCO-G-8) Brief Form.
- The MCO-G-8 Brief Form is suitable for capturing cultural processes as they develop and fluctuate over the course of therapy groups. The MCO-G-8 brief form may be a useful instrument to provide continuous feedback and process measurement of cultural processes to assist group therapy practice and training.

Keywords: multicultural orientation, item response theory, brief form, group therapy, cultural processes

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In the past decade, the multicultural orientation (MCO) framework has received increasing attention within the field of psychotherapy due to its practical guidance on engaging multicultural counseling (J. J. Owen et al., 2011). One of the most important advancements within the MCO literature is the development and validation of measures to assess the three pillars of the MCO framework, cultural humility, cultural comfort, and cultural missed opportunities (Hook et al., 2013; J. J. Owen et al., 2011, 2016). Additionally, the MCO framework has been applied to a group therapy context to further examine the role of a group's MCO on members' perceptions of various group factors, such as cohesion, and improvement in group therapy (Grimes & Kivlighan, 2022; Kivlighan et al., 2019). Despite this advancement, the majority of MCO research, including MCO group research, has utilized cross-sectional retrospective designs, and researchers have called for more longitudinal studies to examine how cultural processes change over the course of therapy (Kivlighan et al., 2019; J. Owen, 2013; J. Owen et al., 2014). Unfortunately, routinely monitoring cultural processes session-by-session is impractical without brief form measures (Slade et al., 1999); however, to date, no brief MCO group measure exists. Therefore, this study seeks to apply item response theory (IRT) to develop a brief form of the Multicultural Orientation Inventory–Group Version-8 (MCO-G-8).

Multicultural Orientation Framework

In the past three decades, multicultural competences have received increased attention within the mental health field. In fact, since the inception of Sue et al. (1982) model of multicultural competences (MCC), the American Psychological Association (2002, 2003) has underscored the importance of MCC and developed guidelines for multicultural training, education, and practice. Recently, J. J. Owen et al. (2011) introduced the MCO framework to address criticisms of the MCC literature and provide practical guidance for therapists on processes that may underlie multicultural competencies. The MCO framework consists of three pillars: cultural humility (Hook et al., 2013; Tervalon & Murray-García, 1998), cultural (missed) opportunities (J. Owen et al., 2016), and cultural comfort (J. Owen et al., 2017). Within an individual therapy context, a series of retrospective studies has shown a positive association between therapists' MCO and treatment outcomes (Hook et al., 2013, 2016; J. Owen et al., 2014, 2016). This research provides empirical support for the MCO framework as well as several psychometrically sound measures informed by the MCO framework, such as the Cultural Humility Scale (Hook et al., 2013), Cultural Missed Opportunities (J. Owen et al., 2016), and the Cultural Comfort Scale (J. Owen et al., 2017; Slone & Owen, 2015). Together, these measures make up the MCO Inventory.

In an attempt to extend the MCO framework to the group therapy literature, Kivlighan et al. (2019) adapted the MCO Inventory to assess MCO in therapy groups. Kivlighan et al. (2019) provided initial evidence for the estimated internal and convergent validity of the MCO-G, as measured by clients' perceptions of a higher order group therapeutic factor. Moreover, the group's cultural humility and cultural missed opportunities were significantly related to members' improvement in therapy, providing evidence of predictive validity for the MCO-G. Whereas this study highlights the importance of cultural processes within therapy groups, this study utilized a retrospective and cross-sectional design. Given this limitation, Kivlighan et al. (2019) called for longitudinal designs that have the potential to assess cultural processes within therapy groups over time. However, longitudinal designs necessitate brief and practical measures that can be utilized routinely on a session-by-session basis.

The Need for Brief Measures

The brief form measure has been identified as an important aspect of research across a variety of fields. Regarding the psychometric benefits of brief measures, brief forms have the potential to increase completion rate (Spitzer et al., 2006) and decrease completion time and participant burden (Blais et al., 2010; Slade et al., 1999). Within a clinical context, brief measures are essential to provide timely and actionable feedback and data to providers and patients. In fact, Boswell et al. (2015) noted that both providers and patients prefer relatively brief scales. Brief scales also allow for repeatedly assessing processes and

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outcomes in psychotherapy to track client progress (Lambert & Shimokawa, 2011). This is important, as Lambert and Shimokawa (2011) found that providing feedback on clients' progress to therapists improves therapy processes and outcomes, especially for clients who are deteriorating. The use of brief outcome measures to provide feedback to therapists on their clients' progress in therapy is critical to alert therapists of clients who are not responding to treatment as expected, or worse, deteriorating. However, without brief measures to simultaneously assess session-to-session therapeutic processes, such as the alliance, therapists may not know why clients are not responding to treatment as expected or how to intervene effectively.

As such, researchers have noted the need to assess therapeutic processes, such as the working alliance, on a session-by-session basis to aid in the identification of alliance ruptures and intervene accordingly (Swift et al., 2015). Similarly, in a recent special issue on ruptures and repairs in group psychotherapy in *Group Dynamics: Research, Theory, and Practice*, Kivlighan (2021) demonstrated how routinely monitoring alliance session-by-session can aid in the identification of ruptures in a group therapy setting. In this same issue, Miles et al. (2021) provided practice recommendations for addressing microaggressions or cultural ruptures as they occur in therapy groups and noted the difficulty in detecting microaggressions as they occur in a group setting. Given this challenge for group leaders and the detrimental effect of microaggressions for group members when they occur (Kivlighan et al., 2021), the ability to routinely monitor cultural processes on a session-by-session basis may aid in the process of identifying cultural ruptures, similar to the process of identifying alliance ruptures with routine alliance monitoring in group therapy. However, brief measures of cultural processes are needed to assess and provide actionable feedback to therapists regarding their clients' perceptions of their MCO and possible cultural ruptures.

Presently, the MCO-G Inventory consists of 27 items, which makes it impractical to use in longitudinal research or to routinely monitor cultural factors in clinical practice. Therefore, the purpose of this study is to create a brief form of the MCO-G to be used in longitudinal research and clinical practice.

Method

Participants

This study was conducted using an archival data set from several previously published studies examining the group's MCO in group therapy (Grimes & Kivlighan, 2022; Kivlighan et al., 2019, 2021). The archival data set consisted of 438 clients across 129 therapy groups at 13 university counseling centers in the United States. MCO data were missing for 51 clients, resulting in a final sample of 387 clients from 129 therapy groups. Of this final sample, the mean age was 22.19 years (range from 18 to 57, with $SD = 4.06$). Regarding gender identity, 218 (56.3%) identified as cisgender women, 145 (37.5%) as cisgender men, 17 (4.4%) as nonbinary, six (1.6%) as transgender, and one (0.3%) preferred not to answer. Regarding race/ethnicity, 222 (57.4%) identified as White, 39 (10.1%) as African American, 41 (10.6%) as Asian/Asian American, 31 (8%) as Latino/Hispanic, 26 (6.7%) as multiracial, and 28 (7.2%) self-identified race/ethnicity outside of these racial groups. Regarding sexual orientation, 251 (64.9%) identified as heterosexual/straight, 52 (13.4%) as bisexual, 22 (5.7%) as gay, 20 (5.2%) as queer, 11 (2.8%) as lesbian, eight (2.1%) as asexual, one (0.3%) as pansexual, and 21 (5.4%) self-identified their sexual orientation outside of these identities. Out of the final sample of 387 clients, 25 (6.5%) identified as international students. Therapy groups included in the data set were all interpersonal process groups.

Measures

MCO-G

The 27-item MCO-G is a self-report measure designed to assess individual group members' perceptions of their group's cultural humility, cultural comfort, and cultural missed opportunities (Kivlighan et al., 2019). Within the 27 items, 10 items assess cultural comfort (e.g., Overall, how comfortable did the members of your group appear to you as it relates to dialogue around cultural identity or cultural issues?), 12 items assess cultural humility (e.g., Regarding the core aspect(s) of my cultural background, the other group members are respectful.), and five items assess cultural missed opportunities

(e.g., Regarding the core aspect(s) of my cultural background, I wish the other group members would have encouraged me to discuss my cultural background more.). The MCO-G items are rated on a 5-point Likert scale that ranges from 1 (*strongly disagree*) to 5 (*strongly agree*). In previous work, the three factors had coefficient α values between .79 and .94 (Kivlighan et al., 2019), indicating adequate internal consistency for the scales (Clark & Watson, 1995).

Patient's Estimate of Improvement (PEI)

The PEI (Hatcher & Barends, 1996) is a 16-item self-reported measure designed to assess client's improvement during psychotherapy. The PEI consists of 15 items rated on a 9-point Likert scale that ranges from 1 (*very much worse*) to 9 (*very much better*) and one open-ended question. A sample item for the PEI is, how unhelpful or helpful has group therapy been to you? A total score is calculated by averaging the 15 Likert-type items with higher scores representing greater improvement in therapy. In this archival data set, the measure was adapted to assess participants' improvement in group therapy as opposed to an individual therapy context. Previous research has documented significant associations between the PEI and various therapeutic factors, including therapeutic alliance (Clemence et al., 2005), therapist techniques (J. Owen & Hilsenroth, 2014), and pre–post symptom change (J. Owen & Hilsenroth, 2011). Additionally, prior research has demonstrated strong internal consistency of the PEI (Cronbach's $\alpha = .95$; Slone & Owen, 2015). In this study, the Cronbach's α for the PEI was .92, indicating good internal consistency (Clark & Watson, 1995).

Therapeutic Factor Inventory–8

The Therapeutic Factor Inventory–8 (TFI-8; Tasca et al., 2016) is an eight-item brief instrument that was developed from the TFI, which measures individual group members' perceptions of four broad therapeutic factors: instillation of hope, secure emotional expression, awareness of relational impact, and social learning (Macnair-Semands et al., 2010). The TFI-8 consists of two items from each of the four therapeutic factors from the TFI. An example item is, *in group, I've learned that I have more similarities with others than I would have guessed*. Items are rated on a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). A total score is calculated by averaging all eight items, which represents a group member's perception of a global therapeutic factor. Previous research has documented adequate evidence of the internal, concurrent, and predictive validity of the TFI-8 (Tasca et al., 2016). In this study, the Cronbach's α for the TFI-8 was .92.

Procedure

University counseling centers were asked to participate in this study if their websites indicated that they offered a large number of group services during the academic year and if the center agreed to distribute study materials to potential participants. Participants were invited to participate in this study if they were currently participating in group therapy at one of the 13 participating university counseling centers in the United States. Participants consented to study procedures and completed study materials via paper–pencil methods at the end of their group therapy treatment. Participants were instructed to complete the measures simultaneously and return them in a sealed envelope to the group leaders or an administrative staff member in the counseling center. Participants were recruited between 2017 and 2019, and all responses were anonymous. This study and all procedures were approved through the authors' university institutional review board.

Data Analysis

IRT Analysis

IRT analysis based on the graded response model was used to analyze the MCO Inventory, given that the MCO items represent ordinal response categories (Embretson & Reise, 2000; Samejima, 1969). As the first step of the IRT analysis, we checked model fit by assessing items' local dependency and unidimensionality for the original MCO-G Inventory. Then, we conducted the IRT analysis on the archival data set and selected eight items based on this result. Items' local dependency and unidimensionality were checked again for the MCO-G-8. The assumption of local independence of the eight items of the MCO-G-8 was checked through the analysis of the marginal fit chi-square and standardized local dependence X^2 matrix produced

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as outputs from the flexMIRT program (Cai, 2012). This procedure indicated that the items were not related to each other. Unidimensionality was further tested with an exploratory factor analysis using the maximum likelihood method of extraction, with the oblique rotation method being Geomin.

The output of the analysis contained values and graphics. Values included one item-level discrimination value (α) and four item-level difficulty values (β) per item. The item discrimination value is used to monitor how well the item performs in measuring certain traits. Absolute discrimination value ranges from 0 to .24, .25 to .64, .65 to 1.34, 1.35 to 1.69, and greater than 1.70 are considered very poorly discriminating, poorly discriminating, moderately discriminating, highly discriminating, and very highly discriminating, accordingly (Baker, 2001). The item difficulty value is used to indicate the range of the trait of a given item. The value typically ranges from −3 to +3 with a rising pattern. The greater the value is, the higher the level of talent trait is required for a certain response from this item (DeMars, 2010). Graphics included an item information curve (IIC), item characteristic curve (ICC), and the test information curve (TIC; Baker & Kim, 2014). Both IIC and ICC provide information for each item, and TIC provides information for the whole scale. An IIC shows the quantity of statistical information each item provides. An ICC depicts item difficulty and discrimination along with the range of ability/traits. The item difficulty shows in which ability/traits range item functions—for example, an easy item functions among examinees with lesser traits. The item discrimination then illustrates how well an item differentiates examinees having traits below versus above the item location. Last, the TIC indicates the reliability of scale at a certain degree of the latent trait as well as the degree of measurement error of the scale.

Multilevel Modeling

Concurrent and predictive validity was tested by examining the association between the MCO-G-8 and TFI-8 and PEI. Hierarchical linear modeling was used to conduct a two-level model wherein clients were nested within therapy groups. This approach allowed us to examine the association between the MCO-G-8 and the TFI and PEI while controlling for the statistical dependency of our nested data. Hierarchical linear modeling-7 was used for these analyses.

Result

Discrimination values of all items from the MCO-G are reported in Table 1. The discrimination parameters ranged from $a = 0.38$ to $a = 2.82$. Items 3, 4, 9, and 23 had poor discrimination; Items 2, 5, 6, 7, 8, 13, 15, 22, 24, 25, 26, and 27 had moderate discrimination; Items 10, 12, 18, and 21 had high discrimination; and Items 1, 11, 14, 16, 17, 19, and 20 had very high discrimination. Based on the original analysis, eight items were selected out of the original inventory for further IRT analysis under polytomous graded response model. The number of items selected was based on the items' discriminatory and

Table 1
Discrimination Values and Standard Error for the MCO-G

Item	Discrimination	*SE*
Cultural comfort		
Item 1	1.71	0.28
Item 2	1.04	0.21
Item 3	0.56	0.24
Item 4	0.39	0.20
Item 5	0.75	0.20
Item 6	0.73	0.25
Item 7	0.94	0.21
Item 8	0.99	0.21
Item 9	0.55	0.22
Item 10	1.61	0.28
Cultural humility		
Item 11	2.82	0.67
Item 12	1.69	0.35
Item 13	1.02	0.18
Item 14	2.51	0.42
Item 15	1.32	0.24
Item 16	2.27	0.39
Item 17	2.33	0.33
Item 18	1.55	0.25
Item 19	2.58	0.36
Item 20	1.94	0.32
Item 21	1.38	0.24
Item 22	1.14	0.19
Cultural missed opportunities		
Item 23	0.38	0.16
Item 24	0.76	0.17
Item 25	1.17	0.20
Item 26	0.89	0.21
Item 27	1.10	0.23

Note. MCO-G = Multicultural Orientation Inventory–Group; *SE* = standard error.

Table 2
Discrimination Values and Standard Error for the MCO-G-8

Item	Discrimination	*SE*
Cultural comfort		
Item 1	1.55	0.24
Item 2	0.95	0.16
Item 10	1.51	0.22
Cultural humility		
Item 11	3.61	0.71
Item 16	3.09	0.49
Item 19	2.44	0.35
Cultural missed opportunities		
Item 24	0.74	0.14
Item 25	1.03	0.15

Note. MCO-G-8 = Multicultural Orientation Inventory–Group Version-8; *SE* = standard error.

standardized local dependency statistics across the three scales of the MCO-G Inventory. We decided to have unequal items for the three subscales to reflect the number of items included in the original MCO-G Inventory. Items 1, 2, and 10 were selected from the cultural comfort items; Items 11, 14, and 19 were selected from the cultural humility items; and Items 24 and 25 were selected from the cultural (missed) opportunity items. The discrimination values for the eight items ranged from $a = 0.74$ to $a = 3.61$ (see Table 2). Items 2, 24, and 25 had moderate discrimination, Items 1 and 10 had high discrimination, and Items 11, 14, and 19 had very high discrimination. The proportion of items in the MCO-G was maintained, and local dependence was controlled, while item discriminatory was optimized. Marginal fit chi-square and standardized local dependence X^2 statistics for the eight items are reported in Table 3.

Regarding the exploratory factor analysis, we tested four models from one-factor model to four-factor model and conducted a parallel analysis comparing the MCO-G-8 to a randomly generated data set with the same variables and cases number. The parallel analysis result (see Figure 1) supported the one-factor model to be the best fit, with 3.18 eigenvalue that accounts for 39.8% of the variance. Factor loadings ranged from .30 to .74.

Last, we examined the concurrent and predictive validity of the MCO-G-8. Multilevel analyses indicated a significant and positive association between the MCO-G-8 and the TFI-8 ($\gamma_{10} = 0.66$, $t = 5.80$, $p < .001$), providing evidence of concurrent validity. Similarly, the MCO-G-8 and PEI were significantly and positively associated ($\gamma_{10} = 0.60, t = 6.34, p < .001$), providing evidence of predictive validity. Findings from the analyses of concurrent and predictive validity are reported in Table 4.

Discussion

The aim of this study was to create a short version of the MCO-G through a psychometrically sound process. With the continued acknowledgment of the need to routinely monitor processes and outcomes throughout treatment to provide actionable feedback to therapists, researchers have noted the need for the development of brief and easily administered instruments, particularly in group therapy where the administration of measures is more complex. Moreover, brief measures allow researchers to collect longitudinal data in therapeutic settings without overly burdening

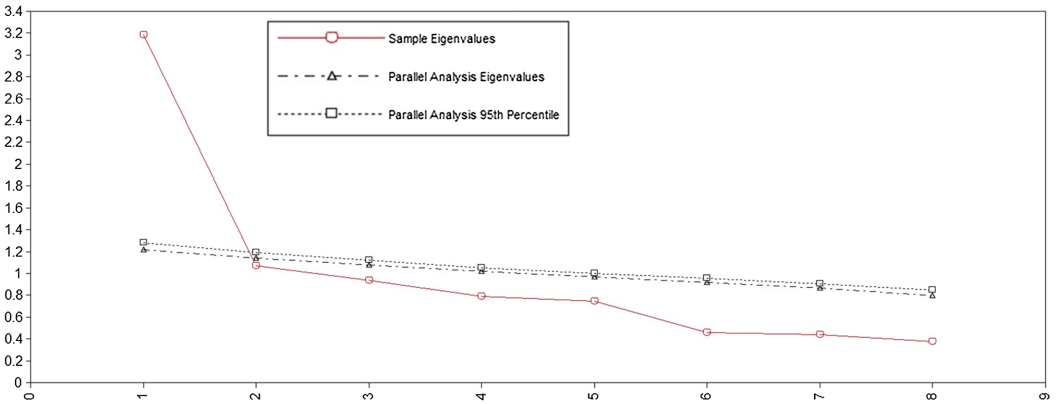
Table 3
Marginal Fit Chi-Square and Standardized Local Dependence X^2 Statistics for the MCO-G-8

Item	Marginal fit χ^2	Item 1	Item 2	Item 10	Item 11	Item 14	Item 19	Item 24
Item 1	0.2							
Item 2	0.3	9.5p						
Item 10	0.2	8.5p	7.0n					
Item 11	0.8	1.2n	4.3n	−0.4n				
Item 14	0.6	3.4n	3.5n	−0.6n	3.2p			
Item 19	0.4	3.0n	1.0n	1.5n	3.7p	2.9p		
Item 24	0.2	2.8p	1.5n	0.0p	1.1n	0.9n	0.3n	
Item 25	0.2	1.8n	1.9n	0.9p	3.7n	1.7n	2.7n	7.7p

Note. MCO-G-8 = Multicultural Orientation Inventory–Group Version-8.

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Figure 1
Parallel Analysis of the Exploratory Factor Analysis on the MCO-G-8



Note. MCO-G-8 = Multicultural Orientation Inventory–Group Version-8. See the online article for the color version of this figure.

clients or therapists. Unfortunately, currently, no brief measures exist to routinely assess cultural processes over the life of therapy groups. The creation of a psychometrically sound MCO-G brief form allows group therapists and researchers to assess MCO processes session-by-session without placing further burden on therapists or clients. This study found good to excellent item discrimination of the items of the MCO-G-8 brief form. Furthermore, TICs indicated the MCO-G-8 was able to assess and distinguish mid to low levels of perceived group MCO. Concurrent and predictive validity of the MCO-G-8 was also demonstrated.

There are a variety of practice, training, and research implications given the findings of this study. Regarding implications for practice, group leaders can utilize the MCO-G-8 session-to-session to routinely monitor members' perceptions of the group MCO and intervene when needed. Measurement-based care or routine outcome monitoring (ROM) has been suggested by many researchers, given that negative events can occur as therapy unfolds, including potential ruptures (Lambert & Shimokawa, 2011; Safran et al., 2011; Tasca et al., 2016). Despite these suggestions, there has also been reluctance to conduct ROM for fear that this evidence-based process would overburden clients and therapists (Peterson & Fagan, 2017). A brief version could possibly reduce the burden to complete questionnaires on the client end, which could further promote the implementation of ROM in a practice. Regarding the use of routinely monitoring processes to identify ruptures or negative events in psychotherapy, the use of the MCO-G-8 may be useful in the detection of microaggressions or cultural ruptures in therapy groups. For example,

Table 4
Fixed and Random Effects of MCO-G-8 on TFI-8 and PEI

TFI-8					
Fixed effect	Coefficient	*SE*	*t* ratio	*df*	*p*
Intercept, γ_{00}	4.79	0.14	34.49	125	<.001
MCO-G-8, γ_{10}	0.52	0.11	4.58	125	<.001
Random effect	Variance	ICC	χ^2	*df*	*p*
Intercept, u_0	2.09	0.71	767.55	88	<.001
MCO-G-8, u_1	0.09	0.11	83.63	88	>.500
Level 1, *r*	0.75				
PEI					
Fixed effect	Coefficient	*SE*	*t* ratio	*df*	*p*
Intercept, γ_{00}	6.90	0.05	151.17	126	<.001
MCO-G-8, γ_{10}	0.50	0.09	5.49	126	<.001
Random effect	Variance	ICC	χ^2	*df*	*p*
Intercept, u_0	0.02	0.03	108.13	90	.094
MCO-G-8, u_1	0.13	0.16	101.90	90	.184
Level 1, *r*	0.67				

Note. MCO-G-8 = Multicultural Orientation Inventory–Group Version-8; PEI = patient's estimate of improvement; TFI-8 = Therapeutic Factor Inventory–8; *SE* = standard error; ICC = item characteristic curve.

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if an individual group member rates group MCO lower in a particular session compared to their average ratings, this may indicate the presence of a microaggression or a cultural rupture for that individual member. Additionally, group therapists can also intervene at the group level when the group-as-a-whole reports low levels of group MCO. Leaders can use this feedback to model a positive MCO or more explicitly intervene to understand what is getting in the group's way of fostering a positive group MCO.

Regarding training, several researchers have noted the practical use of ROM data to inform clinical supervision and training (Duncan & Reese, 2015; Swift et al., 2015; Tasca et al., 2016). Specifically, Swift et al. (2015) noted that this measurement-based feedback can serve as a crucial resource for supervision of counselors-in-training, and Duncan and Reese (2015) illustrated the use of ROM data to guide and inform clinical supervision. Similarly, the use of the MCO-G-8 can inform training in multicultural group work for group therapists in training. We suggest utilizing the MCO-G-8 with group therapy trainees to provide an opportunity for trainees to learn how to implement and use ROM data in group therapy practice and garner important discussions and reflection on the role and importance of culture and diversity issues in group-based treatments. Last, the use of the MCO-G-8 can inform debriefing sessions for coleaders to discuss various cultural events and gain a deeper understanding of group members experiences of these events as they occur in the group.

Last, the development of the MCO-G-8 paves a new way for future multicultural group work research. As noted previously, the majority of group MCO research has utilized a retrospective cross-sectional research design; however, with the development of the MCO-G-8, researchers can move beyond collecting data at a single time point and utilize research designs that assess group MCO session-by-session. This research is invaluable as it will allow for a more nuanced understanding of how the group's MCO develops and if the development or fluctuation of group MCO is related to other group factors and outcomes.

Limitations and Future Directions

There are several limitations of this study that should be considered when interpreting our findings. First, our sample consisted of majority of heterosexual cisgender women at a university counseling center, which may limit the generalizability of our findings to other populations and treatment settings. Replication studies with a more diverse sample from a variety of settings are needed to further test the utility and psychometric properties of the MCO-G-8. Second, although we used IRT as a statistical approach to guide the development of a brief form of the MCO-G, we were not able to further test the psychometric properties by comparing this newly developed measure to the MCO-G long format. Future research should collect data using the MCO-G-8 to further test the psychometric properties of this brief form.

Conclusions

This study sought to adapt the MCO-G to develop a brief measure of the group's multicultural orientation. IRT was used to identify the best performing items of the MCO-G to develop the brief form. Results revealed eight items for use in the development of the MCO-G-8. This study provides preliminary evidence that the MCO-G-8 is a brief, reliable, and valid measure with concurrent and predictive validity. Group researchers and clinicians can use the MCO-G-8 to further examine how cultural processes develop and fluctuate over the course of therapy groups, as well as routinely monitor these processes session-by-session to provide feedback to group leaders about the members' ratings of the group's MCO. The MCO-G-8 may be a useful tool to provide continuous feedback and process measurement to assist group therapy practice and training; however, given the preliminary nature of this study, future research is needed to further test the psychometric properties of the MCO-G-8.

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