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2013

## Conceptualizing Group Dynamics From Our Clients' Perspective: Development of the Conceptualization of Group Dynamics Inventory

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### Recommended Citation

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# Conceptualizing Group Dynamics from Our Clients' Perspective: Development of the Conceptualization of Group Dynamics Inventory

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## Abstract

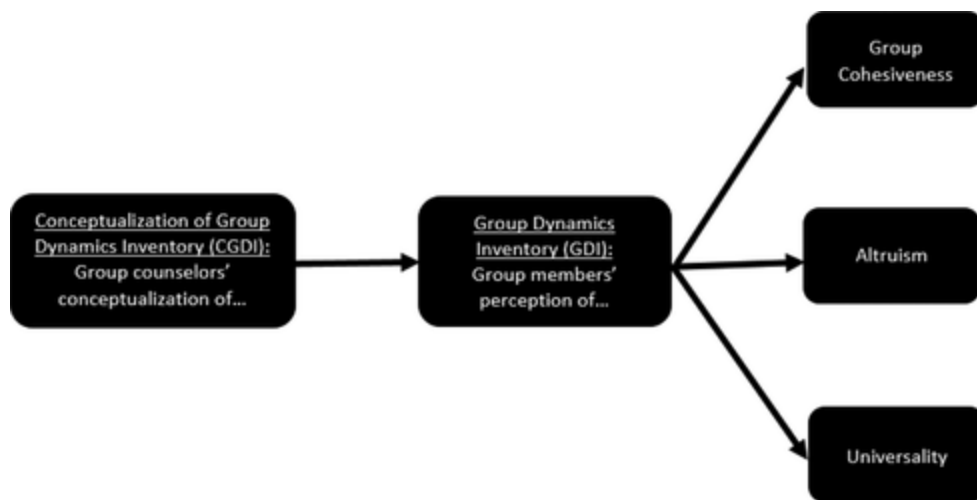
There is a clear call in group counseling practice and training for evidence-based practice (ACA, 2005; ASGW, 2008; CACREP, 2009). At the same time, group counselors also are asked to keep clients' experience at the center of their work (ASGW, 2012). This article outlines the authors' effort to develop and study an instrument designed to measure group counselors' conceptualization skill using group members' subjective perceptions as a foundation. Descriptions of the instrument's internal reliability, construct validity, and generalizability will be presented, as well as suggestions for conducting research on this instrument in future studies.

## Keywords:

counselor competency, group counseling, instrument development

The call for evidence-based practice in counseling (ACA, 2005), counselor training (CACREP, 2009), and in the larger field of mental healthcare (Committee on Quality Health Care in America, 2001), requires group counselors and group counselor educators to provide data about their work and effectiveness thereof. At the same time, the group counseling profession has dedicated itself to positioning clients and their experiences at the hub of group counseling best practices (ASGW, 2000, 2008, 2012; Bemak & Chung, 2004; Okech & Rubel, 2007). The goal of this study was to develop an instrument capable of assessing the abilities of group counselors to accurately conceptualize group members' subjective perceptions of important group dynamics (i.e., group cohesiveness, universality, and altruism). This was done by adapting an existing measure (Group Dynamics Inventory; Phan, Torres Rivera, Volker, & Garrett, 2004) in order to create this new assessment (Conceptualization of Group Dynamics Inventory: CGDI). The CGDI was designed to assess group counselors' conceptualization of group members' phenomenological (i.e., subjective) experience of important group dynamics. See Figure 1 for an illustration of this measurement model.

Figure 1 Conceptual model of CGDI/GDI assessment method.



Specifically, this study addressed the following two issues. First, this study investigated the psychometrics properties of the CGDI (reliability and internal construct validity). Second, this study addressed the relevance of using this instrument across important demographic categories, as assessment instruments should be valid culturally and contextually across populations (Suzuki, Ponterotto, & Meller 2008).

## CONCEPTUALIZATION IN GROUP COUNSELING

Conceptualization is a central component of effective and ethical group counseling. The Association for Specialists in Group Work (ASGW) recognizes and advocates for the importance of case conceptualization ability in their Professional Standards for the Training of Group Workers (ASGW, 2000). These standards state that group counselors should:

demonstrate skill in observing and identifying group process, observing the personal characteristics of individual members in a group, developing hypotheses about the behavior of group members, and employing contextual factors (e.g., family of origin, neighborhood of residence, organizational membership, cultural membership) in interpretation of individual and group data. (ASGW, 2000, B.2.a.–d.)

In essence, ASGW is highlighting the need for competence in using observations of, and data about, group members to form conceptualizations about a particular group.

Many group counselor training models also identify the development of case conceptualization skill as an important focus in training effective group counselors (Bemak & Chung, 2004; Delucia-Waack, 2002; Granello & Underfer-Babalis, 2004; Okech & Rubel, 2007; Orr & Hulse-Killacky, 2006; Rubel & Okech, 2006). These models include factors that are unique to case conceptualization in group counseling including group development (Delucia-Waack, 2002; Granello & Underfer-Babalis, 2004), group dynamics (Delucia-Waack, 2002), the multiple levels of interaction and communication in groups (Okech & Rubel, 2007; Rubel & Okech, 2006), and unique multicultural influences on group process (Bemak & Chung, 2004; Okech & Rubel, 2007). In short, these models are based on the assumption that conceptualization skill in group work should be a key component of effective group counselor training.

There also has been a significant amount of research about case conceptualization in the context of group counseling (Browne, 2005; Christensen & Kline, 2000; Hines, Stockton, & Morran, 1995; Kivlighan, Martin, Stahl, & Salahuddin, 2007; Kivlighan & Quigley, 1991; McPherson & Walton, 1970; Okech & Kline, 2006; Rubel & Kline, 2008). These findings suggest that group counselors' case conceptualizations differ in terms of cognitive organization and complexity (Kivlighan et al., 2007; Kivlighan & Quigley, 1991; McPherson & Walton, 1970), professional experience and feelings of competence (Hines et al., 1995; Okech & Kline, 2006), and thematic content (Browne, 2005; Hines et al., 1995). These studies reveal a significant breadth and depth of information about group counselors' thoughts and perceptions about their groups.

This body of literature provides rich information regarding professional standards related to group-based conceptualizations, best practices for training group counselors in regard to conceptualization, as well as some research elucidating the qualities and cognitive structure of group counselors' conceptualizations. Even so, there is little research that specifically addresses the skill with which group counselors conceptualize group members' perception of group dynamics. Addressing this gap in research is particularly important given the need to understand group members' context-specific experience of a group (Arredondo et al., 1996; ASGW, 2012; Okech & Rubel, 2007), the influence of client perception on group process (Martin, Garske, & Davis, 2000; Pan & Lin, 2004), as well as the distinct possibility that group counselor and group member perceptions of group dynamics may be incongruent (Lee, Cohen, Hadley, & Goodwin, 1999; Lovett & Lovett, 1991; MacKenzie, 1983).

### Conceptualizing Group Members' Perception of the Group Counseling Process

There are myriad factors and foci included in a complete group-based conceptualization. As stated earlier, these include factors such as group development (Granello & Underfer-Babalis, 2004), the multiple levels of interaction and communication in groups (Okech & Rubel, 2007; Rubel & Okech, 2006), unique multicultural influences on group process (Bemak & Chung, 2004; Okech & Rubel, 2007), and group dynamics (Delucia-

Waack, 2002). In addition to these factors, it also is crucial that group counselors be able to conceptualize group members' subjective experience of the group in which they are participating.

Understanding the subjective experience of group members is a necessary component of culturally competent group counseling (Arredondo et al., 1996; ASGW, 2012; Okech & Rubel, 2007). The Multicultural Counseling Competencies (Arredondo et al., 1996) assert that counselors' skill in understanding clients' unique cultural experience of the counseling process is critical. ASGW (2012) also asserts the need for group counselors to have awareness, knowledge and skill in relation to understanding the unique experiences and contexts of the diverse range of clients they will encounter in their group counseling practice. Okech and Rubel (2007) encourage group counseling supervisors to focus on trainees' skill development in conceptualizing the unique perceptions and experience of group members based on members' cultural background. These guidelines for culturally competent group counseling and supervision suggest that it is quite important for group counselors to understand their group members' subjective experience of the group counseling process.

There also is research that supports the importance of understanding group members' subjective perceptions of the group counseling process. A meta-analysis by Martin et al. (2000) suggests that clients' perceptions of the counseling relationship remains relatively stable over time, which may indicate that “because patients tend to view the alliance consistently throughout treatment, they are more likely to view the alliance as positive at termination if their initial assessment was positive” (p. 447). This suggests that counselors must be keenly attentive to the perceptions clients have about their experience of the group counseling process, particularly given the finding in the same meta-analysis that shows a positive relationship between counseling outcomes and client perceptions of the therapeutic relationship. Pan and Lin (2004) found that group members' perception of leaders' behaviors and their overall experience of the group were positively correlated with Yalom's (2005) therapeutic factors. Finally, research has shown that group members' perception of their experience in groups differed from the perception of the group leaders (Lee et al., 1999; Lovett & Lovett, 1991; MacKenzie, 1983). This body of research suggests that group members' perception of the group counseling process is related to therapeutic factors, a stable therapeutic alliance, and positive counseling outcomes. Finally, it seems that group counselors' perceptions of the group process are sometime incongruent with group members' perceptions.

Given the importance of understanding group members' subjective experience of the group counseling (Martin et al., 2000; Pan & Lin, 2004), as well as evidence that suggests group counselors may have incongruent perceptions of this process (Lee et al., 1999; Lovett & Lovett, 1991; MacKenzie, 1983), we argue that it is necessary to develop a method for assessing group counselors' ability to conceptualize group members' subjective experience of the group counseling process. Although there are many lenses through which one might focus such conceptualizations, there are particularly important group dynamics group counselors may use to frame their conceptualizations of group members' subjective experiences of the group counseling process.

### Group Dynamics: Importance of Inclusion in Conceptualizations

Yalom's (2005) discussion of therapeutic factors is central to the practice of group counseling. Three of these dynamics present themselves as particularly important in terms of effective group counseling—group cohesiveness, altruism, and universality. In fact, Phan and colleagues (2004) rank, “altruism, cohesiveness, and universality as the top three therapeutic factors in a working group” (p. 235). Each of these dynamics will be defined and discussed in terms of its importance in the context of group counseling, and an argument will be made for the importance of understanding these dynamics from the perspective of group members.

#### Group cohesiveness

Yalom (2005) defines group cohesiveness as “the group therapy analogue to relationship in individual therapy” (p. 53), and more specifically as the attraction that group members feel for a particular group. Kivlighan and Lilly

(1997) investigated a construct conceptually related to group cohesiveness (i.e., engagement), and found that this construct was a significant predictor of therapeutic outcomes. Additionally, as highlighted earlier, research has shown that group members' subjective experience of the therapeutic alliance is a significant predictor of client outcomes (Martin et al., 2000).

### Universality

Universality describes the dynamic wherein group members discover that there are others who have experiences, thoughts, and feelings that are similar to their own (Yalom, 2005). Theoretical arguments (Yalom, 2005) as well as research findings (Kivlighan & Mullison, 1988) support the importance of universality in the early stages of a group. Yalom (2005) also argues for the importance of this dynamic in regard to the subjective experience of culturally diverse group members when he states, "cultural minorities in a predominately Caucasian group may feel excluded because of different attitudes towards disclosure, interaction, and affective expression" (p. 8).

### Altruism

Altruism refers to the process where "members gain through giving, not only in receiving help as part of the receiving-giving reciprocal sequence, but also on profiting from something intrinsic to the act of giving" (Yalom, 2005, p. 11). Research has shown that this dynamic was perceived as significant to those with particular interpersonal problems (MacNair-Semands & Lese, 2000), and that altruism remains a significant group dynamic across different types of groups (Waldo, Kerne, & Kerne, 2007). Yalom (2005) also argues for the cultural importance of this dynamic, as many cultural and societal systems of healing involve service and dedication to the community as well as to the self (e.g., praying for others, community service, and the Alcoholics Anonymous programs).

### Group counselor vs. group member perceptions

Yalom (2005) argues that group members' perceptions of such group dynamics often differs from these of the group counselor. He cites various studies (e.g., Lee et al., 1999; Lovett & Lovett, 1991) that illustrate this divergence in perceptions of group dynamics, including group cohesiveness, universality, and altruism. He states that, "these findings compel us to pay close attention to the client's view of the most salient therapeutic factors" (p. 108).

Guidelines for culturally competent group counseling (Arredondo et al., 1996; ASGW 2012; Okech & Rubel, 2007), as well as research about group members' experience of the group counseling process (MacKenzie, 1983; Martin et al., 2000; Pan & Lin, 2004), suggest that group counselors' conceptualizations should include an accurate understanding of group members' subjective perception of the group counseling process. Further, group counseling theory (Phan, Torres Rivera, Volker, & Garrett, 2004; Yalom, 2005) and research (Kivlighan & Lilly, 1997; Kivlighan & Mullison, 1988; Macnair-Semands & Lese, 2000; Martin et al., 2000; Waldo et al., 2007) suggest that group cohesiveness, universality, and altruism are important dynamics to include in group-based conceptualizations. Finally, Yalom (2005) urges group counselors to be attentive to group members' subjective experience of these group dynamics, including the effect culture and context have on these perceptions. Considered together, these streams of thought provide evidence for the importance of group counselors' skill in understanding group members' subjective perception of group cohesiveness, universality, and altruism.

Conceptualization of groups is a complex endeavor and may include many factors in addition to group cohesiveness, universality, and altruism (e.g., diagnoses or family history). However, group counselors' conceptualizations are likely to be more accurate if group members' subjective perceptions of these three dynamics are assessed. Accurate conceptualization becomes very important in light of the call for evidence-

based practice in counseling (ACA, 2005; ASGW, 2008; CACREP; 2009), and mental health services in general (Committee on Quality Health Care in America, 2001).

## Evidence-Based Practice and Conceptualization Skill

The call for evidence-based practice in counseling and counselor education is ubiquitous. CACREP (2009) has updated its standards for the education of future counselors to include measures of learning outcomes for key competency areas, including group work and case conceptualization. The ACA (2005) code of ethics requires “counselors [to] use techniques/procedures/modalities that are grounded in theory and/or have an empirical or scientific foundation” (C.6.e.). ASGW's Best Practice Guidelines (2008) also state that “group workers include evaluation (both formal and informal) between sessions and at the conclusion of the group” (B.7). On a larger scale, there has been a call for evidence-based mental health practice in general (Committee on Quality Health Care in America, 2001). This movement toward evidence-based practice has direct implications for the practice and study of group counseling. Although research has suggested that group counselors' conceptualizations of their groups should include an accurate understanding of their clients' subjective experience of important group dynamics (Martin et al., 2000; Pan & Lin, 2004), there is no current method for assessing group counselors' ability to achieve this goal. The goal of this study was to develop and study an instrument that will allow for evidence-based conceptualization of important group dynamics (i.e., group cohesiveness, universality, and altruism) from the perspective of group members.

## DEVELOPING A CLIENT-CENTERED MEASURE OF CONCEPTUALIZATION SKILL

Research on group counselor conceptualization has not included a method based on group members' subjective perspectives. Other instruments such as the Working Alliance Inventory (WAI; Horvath & Greenberg, 1989) account for both client and counselor perspectives, but none focus specifically on group counseling or conceptualization skills. Accordingly, the goal of this study was to develop an instrument capable of assessing group counselors' ability to accurately conceptualize group members' subjective perceptions of important group dynamics (i.e., group cohesiveness, universality, and altruism). This was done by adapting a current measure of group dynamics (Group Dynamics Inventory: GDI, Phan et al., 2004) in order to create a new assessment tool (Conceptualization of Group Dynamics Inventory: CGDI). See Figure 1 for a conceptual map of this assessment model. Hinsz's (1995) framework for group members' experience in group contexts provides a coherent model for creating such a tool.

Hinsz's (1995) *mental models* framework provides an ideal frame for investigating group members' subjective experience of group dynamics. These mental models represent individuals' phenomenological (i.e., subjective) experience of a group to which they belong. Further, these mental models “do not [necessarily] represent reality, but rather the individual's subjective perception of reality” (Hinsz, 1995, p. 203). Hinsz posits these mental models are (a) dynamic (i.e., they change over time with respect to changes in the individual and the system in question), (b) specific to a particular system, (c) gained through experience, and (d) idiosyncratic to the individual group member. Although this framework has been applied across several contexts (e.g., juries or work groups), it has specific implications for group counseling and the understanding of group counselor conceptualization.

A major implication of the mental models framework for group counseling is that the group members and group counselor(s) may, in fact, have different perceptions of what is occurring in a group at a given moment (MacKenzie, 1983). Such discrepancies in perceptions are important given the influence client perceptions have on counseling process and outcomes (Kivlighan & Lilly, 1997; MacNair-Semands & Lese, 2000; Martin et al., 2000; Pan & Lin, 2004). Thus, the goal of this research study was to develop an instrument that would measure group counselors' ability to conceptualize the levels of group cohesiveness, universality, and altruism

present in a given group, using the phenomenological perspective of group members as a foundation for determining the accuracy of group counselors' conceptualizations.

An important point to make about this study is that the CGDI was not developed to completely measure accurate group-based conceptualizations by group counselors. By building on Hinsz's (1995) framework, this instrument is specifically designed to measure group counselors' ability to understand group members' phenomenological experience of group cohesiveness, altruism, and universality in a particular group with which they are working (see Figure 1). This approach to assessing group-based conceptualization is a necessary yet insufficient approach to building an evidence-based understanding of the more global construct of group counselor conceptualization skill. If successfully developed, the CGDI would serve as one component in a larger system of assessment of accurate and effective group-based conceptualization.

## METHODS

This section will highlight the development and initial investigation of the Conceptualization of Group Dynamics Inventory (CGDI). First, this study will address the basic psychometric study of the CGDI.

1.	Does the CGDI's proposed factor structure fit the data collected in this study? (internal construct validity)
2.	Is the CGDI a reliable measure of the constructs it was designed to assess?

Second, this study will address the relevance of using this instrument across important demographic categories that have been shown to be relevant to effective group-based conceptualization (Arredondo et al., 1996; ASGW, 2012; Hines et al., 1995; Okech & Kline, 2006; Okech & Rubel, 2007). This was done due to the importance of creating assessment instruments that are culturally and contextually relevant (Suzuki et al., 2008).

3.	Does the CGDI seem to be validly measuring the constructs it was intended to assess across the following demographic variables?
a.	Group counselor racial/ethnic identification
b.	Group member racial/ethnic categorization
c.	Group counselor gender identification
d.	Group counselor experience level.

### Development of the CGDI

Phan, Torres Rivera, Volker, and Garrett (2004) developed the Group Dynamics Inventory (GDI) to measure group members' phenomenological perception of group cohesiveness, universality, and altruism. The GDI was used as the foundation for creating the CGDI, and was adapted to measure group counselors' ability to conceptualize group members' perception of these three dynamics.

#### The group dynamics inventory

The theoretical foundation for the GDI (Phan et al., 2004) was built on Yalom's (2005) therapeutic factors, and in particular the dynamics of group cohesiveness, universality, and altruism. The GDI consists of 20 items, each of which is a statement about group members' feelings or behaviors regarding the group to which they belong. These items were generated from existing instruments, and pared from 60 to 20 items by an expert panel. The Likert scale responses to the CGDI range from 1 (*strongly disagree*) to 4 (*strongly agree*), with higher scores on each construct-specific item corresponding to a higher level of that dynamic in a group. An exploratory factor analysis (EFA) on the GDI revealed 3 factors. Factor 1 (labelled *cohesiveness*) included ten items, Factor 2 (labelled *altruism*) included five items, and Factor 3 (labelled *universality*) consisted of five items. The internal consistency of all items on the GDI was calculated at .94 using Cronbach's (1951) alpha coefficient.



## Constructing items for the CGDI

In order to adapt the GDI (Phan et al., 2004) for the Conceptualization of Group Dynamics Inventory (CGDI), it was necessary to re-write the items to reflect the attitudes of counselors rather than the attitudes of group members. For example, an item that addresses the construct of group cohesiveness on the GDI (e.g., “I felt a sense of belongingness to the group and that the group accepted me”), was reworded on the CGDI to reflect the perception of the group counselor (e.g., “I perceive that the group members feel a sense of belongingness to the group and that the group accepts them”). The final CGDI items consisted of 24-point Likert scale items intended to measure altruism (items 1–5), group cohesiveness (items 6–15), and universality (items 16–20).

A note should be made here about content validity. During the initial study on the GDI (Phan et al., 2004), the content validity of the items was verified via a panel of group counseling experts. These items were rewritten for the CGDI, with the only change being the point of view of the question changing from the group member to the group counselor. The theoretical basis of each item was not altered, which means that the same constructs are being measured by the CGDI that were being measured by the GDI. As such the content validity from the GDI is assumed to carry over to the CGDI.

## Demographic questionnaire

A demographic questionnaire was administered in tandem with the CGDI in order to determine the influence of participants' gender, ethnic/racial identity, and group counseling experience on responses to the CGDI. This questionnaire gathered data about the participants' race/ethnicity and the race/ethnicity of the group members in the participants' group. The categories were Hispanic/Latino, African American/Black, Asian American/Asian, Native American or Alaska Native, Native Hawaiian or Other Pacific Islander, White, and Other (with an option for giving an open ended response for the Other category). There also were questions that assessed the extent of the counselors' group counseling-related experience (years of experience facilitating groups, number of group-focused academic courses, and number of group-focused continuing education hours).

## Participants and Their Groups

After receiving approval to conduct this study from a university IRB board, the CGDI was sent out in electronic format to respondents via email. Participants were considered eligible for the study if they were currently leading a group (e.g., counseling group or group supervision) at the time they received the invitation email for the study. This was set as a restriction due to the intended use of the CGDI as an instrument to be used in applied settings. Subjects were recruited via targeting CACREP accredited counseling programs, non-profit community counseling agencies, university counseling centers that conducted or supervised group counseling, as well as via the Association for Specialists in Group Work (ASGW) and CESNET counselor education listserves. A total of 223 eligible participants responded to the CGDI items. This number met Gable and Wolf's (1993) 10:1 ratio of 10 items to each 1 participant when conducting a construct study. Two-hundred and eighteen of these respondents also completed the demographic questionnaire. These respondents self-identified as follows: 157 as male, 61 as female, 176 as White, 14 as African American/Black, 8 as Asian American/Asian, 11 as Latino/Hispanic, and 9 as Other. Respondents also reported the racial/ethnic proportional makeup of the groups they used as a reference point for responding to the CGDI items. In other words, respondents reported what the percentage of each of the following groups comprised their group: Hispanic/Latino, African American/Black, Asian American/Asian, Native American or Alaska Native, Native Hawaiian or Other Pacific Islander, and White. The descriptive statistics for this data can be found in Table 1. Finally, the results from the three measures of group counselor's level of experience (years of experience facilitating groups, number of group-focused academic courses, and number of group-focused continuing education hours) can be found in Table 2. A significant note to consider is that there was a malfunction in the survey software used (Survey Monkey™), which resulted in the question about years of experience not collecting data for a significant amount of responses (a total of 77 responses were missed).

**Table 1 Group Member Race/ethnicity (as a Percentage of Group)**

	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>
Hispanic/Latino	144	0	100	13.83	16.198
African American/Black	153	0	100	24.18	23.350
Asian American/Asian	106	0	50	7.23	9.517
Native American/Alaskan	94	0	20	1.90	4.220
Native Hawaiian/Pacific Isl.	88	0	15	.93	2.959
White	213	0	100	70.81	24.687

**Table 2 Counselor Level of Experience**

	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>
Years Experience	142	0	42	9.87	9.397
Classes	218	0	20	1.94	1.896
Continuing Ed Hours	218	0	1000	34.52	109.209

## ANALYSIS

The CGDI item responses were subjected to a confirmatory factor analysis (CFA) to study the internal structure of the CGDI, which is one of the five types of validity evidence proposed by professional standards (Standards for Educational and Psychological Testing, 1999). Further, a CFA “is a valuable tool for evaluating construct validity” (Kline, 2005, p. 60), and was therefore the analysis used to study the construct validity of the CGDI. A CFA is used to confirm a theoretically proposed model for a psychometric instrument. As such, the CFA method was used due to the assumption that the CGDI measures group cohesiveness, altruism, and universality. This assumption is based on the fact that the CGDI items were adapted directly from the GDI (Phan et al., 2004). The items from the GDI were developed and chosen based on an expert panel process, as well as an exploratory factor analysis. The LISREL software program (Jöreskog & Sörbom, 1993) was used to conduct the CFA. Two models, a one-factor and a three-factor model, were studied. This comparative approach was used on the basis of Marsh, Hau, and Wen's (2004) assertion that goodness-of-fit studies using so-called “cut-off” values are not as effective as comparing competing models when studying factor structure from a CFA perspective. Ultimately, this approach suggests that meaningful results can be reached by “comparing the performances of alternative, competing models of the same data” (Marsh et al., 2004, p. 340). In addition, Hu and Bentler's (1999) guidelines for acceptable values for the root mean square error of approximation (RMSEA), Nonnormed Fit Index (NNFI), Comparative Fit Index (CFI), and standard root mean squared residual (SRMR) were used as a secondary method of assessing goodness-of-fit for these two models. Hu and Bentler (1999) suggest the following values are reflective of a good model fit: RMSEA < 0.06, NNFI > 0.95, CFI > 0.95, and SRMR < .08. This secondary approach to assessing goodness-of-fit was used in order to consider multiple methods of assessing the construct validity of the CGDI because there are several competing approaches to such analyses in the literature (Marsh et al., 2004).

A Cronbach's alpha (Cronbach, 1951) study was used to investigate the reliability of the CGDI for each of the three proposed factors that the CGDI was designed to measure. An overall reliability analysis of all of the CGDI items was also conducted to investigate the reliability of the instrument as a whole. In order to meet acceptable levels of reliability for an exploratory study of a new instrument, these analyses should yield at least a 0.7 Cronbach's alpha coefficient (Nunnally, 1978).

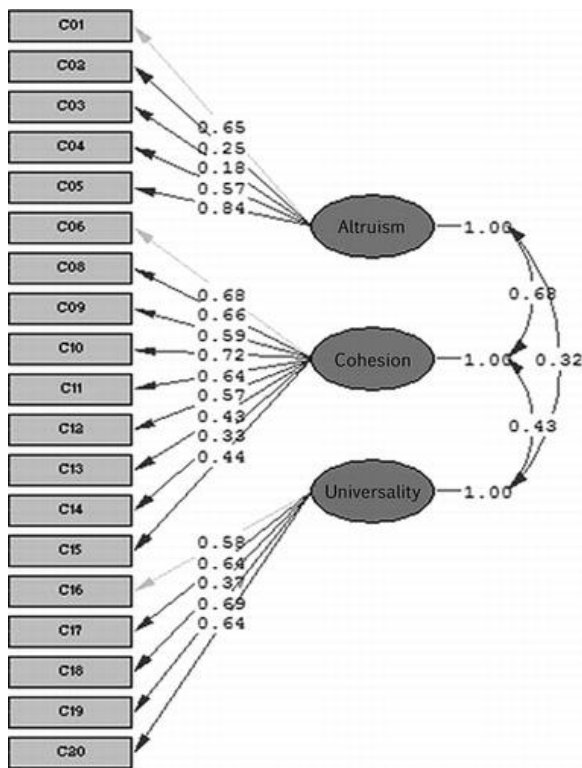
The demographic categories were studied in regard to their relationships with the three constructs the CGDI purports to measure. When analyzing group counselor racial/ethnic identification and group member racial/ethnic categorization and their relationship to the CGDI constructs, a multiple regression analysis was used wherein each racial/ethnic category was converted to a numerical dummy code, and the “White” category was used as the reference group. As such, any significant effects found using this method reflect differences between groups. A t-test was used in analyzing the relationship between group counselor gender identification and the CGDI constructs. Finally, in regard to analyzing group counselor experience level (i.e., number of years of experience facilitating groups, the number of group-focused classes taken in the respondents' academic program of study, and number of group-focused continuing education hours), the correlations between these variables and the three constructs measured by the CGDI were analyzed. The cut-off value for assessing significance of these relationships was set at  $\alpha = .01$  due to the initial development stage of this instrument.

## RESULTS

### Question 1—Construct Validity

The first model studied was a one-factor model, which held that all of the items on the CDGI were measuring one common factor. This model was chosen based on literature which suggests that the therapeutic relationship is the most significant factor contributing to counseling outcomes (Lambert, 1992). This model had an RMSEA of 0.12, an NNFI of 0.80, a CFI of 0.82, and a SRMR of .097. The three-factor model was then studied using the CFA approach. This three-factor model had an RMSEA of 0.078, a an NNFI of 0.88, a CFI of 0.90, and a SRMR of .08. While the three factor model did not meet all of Hu and Bentler's (1999) acceptable values, the three factor model was a better fit as indicated by these values. Using Marsh, Hau, and Wen's (2004) approach of comparing competing models, the three-factor model was a better fit than the one-factor model. Because this model seemed to be a better fit, a deeper analysis of the factor loadings of this model was conducted. The model diagram illustrating the factor loadings of the three-factor model generated by the LISREL program can be seen in Figure 2. These loadings indicate that some items did not meet Gables and Wolf's (1993) cut-off value for loadings  $\geq .40$ . The loadings for items 2 (.25) and 3 (.18) on the altruism construct indicate that these items may not be measuring this construct. The same is true for item 14 (.33) in relation to the group cohesiveness construct, and for item 18 (.37) in regard to the universality construct. LISREL also provides suggestions for reorganization of the model to increase the goodness-of-fit. Although such changes would make a positive change to the loadings, reduce error variance between items, and increase goodness-of-fit indices, none of the suggested changes fit with the theoretical assumptions used to construct the CGDI. As such, the suggested changes were not made based on Kline's (2005) suggestion that using a CFA in an exploratory fashion negates the design and validity of such an analysis.

Figure 2 Factor loadings for the three-factor CGDI model.



### Question 2—Reliability

As stated earlier, each of the three constructs that the CGDI was designed to measure, as well as the instrument as a whole, were subjected to a Cronbach's alpha analysis. The alpha value for the constructs were: altruism (items 1–5)  $\alpha = 0.64$ , group cohesiveness (items 6–15)  $\alpha = 0.78$ , and universality (items 16–20)  $\alpha = 0.72$ . Because of the low alpha for the altruism construct (0.64), further analyses were performed based on the factor loadings found in the CFA from research question one. When removing the two items that did not meet Gables and Wolf's (1993) cut-off value (items 2 and 3), the new Cronbach's alpha was 0.72, which meets the cut-off for acceptable reliability. Finally, the overall reliability coefficient for all items of the CGDI was found to be acceptable where  $\alpha = 0.82$ .

### Question 3—Demographics Variables

This question addressed the relationship between demographic variables and the constructs measured by the CGDI. All relationships were analysed using  $p = .01$  as a cut-off value. The first relationship investigated was between group counselors' racial/ethnic identification and the constructs measured by the CGDI, and was conducted using a multiple regression method. There was no significant relationship found between the altruism construct and counselor race/ethnicity and altruism ( $F = 2.03, p = .11$ ), or between counselor race/ethnicity and group cohesiveness ( $F = 1.42, p = .24$ ). A significant relationship was found between universality and counselor race/ethnicity ( $F = 3.50, p = .01$ ). Further investigation showed that the significance seemed to be between counselors that self-identified as African American/Black and the universality construct measured by the CGDI ( $t = 3.31, p = .001, \beta = .218$ ). Even when the item for this construct that did not meet acceptable factor loadings (item 18) was excluded from the analysis, the relationship remained significant ( $F = 3.72, p = .01$ ) with the African American/Black relationship remaining significant ( $t = 2.78, p = .01, \beta = .184$ ).

The second relationship investigated was between group members' racial/ethnic categorization and the constructs measured by the CGDI. This question was formatted such that respondents had to enter percentages

for each racial ethnic category, all of which had to total exactly 100. Using a multiple regression analysis, a significant relationship was not found between group member race/ethnicity and altruism ( $F = .24, p = .87$ ), group cohesiveness ( $F = .26, p = .86$ ), or universality ( $F = 2.16, p = .10$ ).

In order to analyze the relationship between group counselor gender identification and the CGDI constructs, a t-test was used. There was no relationship found between gender and group cohesiveness ( $t = 3.37, p = .76$ ) or universality ( $t = .98, p = .021$ ). There was a significant relationship found between gender and the altruism construct ( $t = 2.26, p = .01$ ). A further analysis of the altruism construct showed that when removing the two items that did not meet Gables and Wolf's (1993) cut-off value (items 2 and 3), there was no significant relationship between gender and the altruism construct ( $t = 2.42, p = .09$ ).

Finally, the last relationship investigated was between group counselors' level of experience and the constructs measured by the CGDI. The three categories for group counselor experience level were the number of years of experience facilitating groups, the number of group-focused classes taken in the respondents' academic program of study, and number of group-focused continuing education hours taken by each respondent. There were no significant correlations found between any of the three measures of group counselor experience, or the three constructs measured by the CGDI (see Table 3).

**Table 3 Relationship between Experience and CGDI Constructs**

	Years Experience	Classes	Continuing Ed
Altruism			
Pearson Correlation	.033	.033	-.098
Sig. (2-tailed)	.698	.628	.148
N	142	218	218
Cohesiveness			
Pearson Correlation	.046	.025	-.039
Sig. (2-tailed)	.585	.718	.563
N	142	218	218
Universality			
Pearson Correlation	.193	.013	-.087
Sig. (2-tailed)	.021	.844	.203
N	142	218	218

## DISCUSSION

### General Findings and Recommendations

The purpose of this study was to develop and conduct the initial analysis of the Conceptualization of Group Dynamics Inventory. Overall, the CGDI showed promise in terms of its psychometric performance. In terms of factor structure, the items of the CGDI seemed to fit into the proposed three factor structure (group cohesiveness, universality, and altruism) that was used to design this instrument. The items on the CGDI, for the most part, seemed to be reliable measures of their intended target constructs. Finally, this study indicates that the CGDI may be generalizable across important counselor and client demographic factors. On the whole, the CGDI shows promise for future study and assessment of group counselors' conceptualization skill.

Although the CGDI had an overall strong performance on its intended goals, some of the items did not perform well in their intended function. Specifically, items two and three did not seem to be either valid or reliable measures of the altruism construct. Further, they seemed to be problematic in terms of their relationship with

the gender identity of group counselors who responded to this study. Item 14 (designed to measure group cohesiveness construct) and item 18 (designed to measure universality construct) also proved to be poor measures of their respective target constructs. The CGDI also performed well across demographic factors. The exception to this positive performance was in regard to the relationship between the items measuring universality and study respondents (i.e., group counselors) that identified as African American/Black. There are many possible reasons for such a relationship, ranging from sample-specific variations to the possibility that these items are measuring something about African American/Black identity rather than the universality construct.

Given these findings, it is the authors' suggestion that items 2, 3, 14 and 18 be excluded from future use of this instrument. It also may be prudent to write new items for the altruism construct, as using only three indicators for measurement of a construct is generally not advisable (Kline, 2005). Although the universality construct showed some possible generalizability problems, there is not enough evidence to discontinue the use of all these items on the CGDI. If a sufficiently large and diverse sample of data can be collected with this revised set of items, another CFA and demographic study can be conducted to determine if the new constellation of items is a more reliable and valid measure of group cohesiveness, altruism, and universality. Given the strong performance of the majority of CGDI items, there is sufficient evidence to support this type of analysis to be conducted while also studying other properties of the CGDI such as criterion-related, discriminant, and convergent validity.

## Cultural and Contextual Implications

As highlighted earlier, culturally competent group-based conceptualizations are a necessity for ethical and effective group work (ASGW, 2012; Bemak & Chung, 2004; Okech & Rubel, 2007). This study investigated the relationship between the target variables for the CGDI (i.e., group cohesiveness, universality, and altruism) and the cultural backgrounds of group members and group counselors. This was done in an attempt to create an instrument that was valid across such dimensions for both counselors and clients. While the results showed promise for such validity, the statistical relationship between the universality construct and group counselors who identified as African American/Black suggests there may be a cultural validity problem with the CGDI. Within the current research design, it is not possible to meaningfully investigate the nature of this relationship, particularly given the small number of individuals identifying as African American/Black who participated in this study. Even so, it may be helpful to speculate about such a relationship. Pack-Brown and Fleming (2004) suggest that communalism (i.e., defining the self in relation to one's identification group) is an African-centered value that has a significant impact on group counseling. Universality is based on the idea of group members feeling that their experiences are not unlike others, and is reached through the process of identifying with fellow group members' experiences. In a more general sense, Yalom (2005) suggests that cultural/racial minority group members "may feel excluded because of different attitudes towards disclosure, interaction, and affective expression" (p. 8). This may also be a relevant idea for group counselors who are of a non-majority status. While these ideas may hold some strand of truth, further study is needed to understand this relationship.

## Next Steps in Developing the CGDI/GDI Method

The development of the CGDI was originally intended to provide a method for measuring group counselors' conceptualization of group dynamics from the subjective (i.e., phenomenological) perspective of group members. The first step in further development is to write new items for the altruism construct, given that only three of the existing items seemed to reliably measure this construct. Once these new items are written, the next step in this process is to administer the CGDI in tandem with the Group Dynamics Inventory (GDI: Phan et al., 2004) in actual group settings. Although there were some psychometric problems discovered during the analysis of the CGDI, the instrument showed enough promise to move to the next level of development. A tandem administration of the GDI and CGDI will provide opportunities to not only further study the

psychometric properties of each individual instrument, but also to begin studying the relationship between results of these instruments with counseling outcome measures such as the Outcome Questionnaire (OQ: Lambert et al., 1996). As stated earlier, it will also be important during this next stage to begin studying other forms of validity in relation to both the GDI and CGDI. For example, a widely used instrument called the Group Climate Questionnaire–Short Form (GCQ–S: MacKenzie, 1983) includes a subscale that measures the construct *engagement*. This subscale is thought to relate to Yaloms's (2005) concept of group cohesiveness. By giving this instrument in tandem with the CGDI/GDI assessment method, it can be determined if the group cohesiveness construct as measured by the CGDI/GDI is convergent with the GCQ–S subscale of engagement.

Finally, the CGDI should be administered to a much more diverse population of group counselors. While the results of this study show some promise in regard to the cultural validity of the CGDI, a much larger number of such diverse group counselors should be included in future studies. In addition, diverse group members' perception of the three target dynamics (as measured by the GDI) should be studied in relation to group counselors' conceptualization of these dynamics for such populations (as measured by the CGDI). Collecting such data will provide evidence about the cultural validity of the GDI/CGDI assessment process as a whole. In total, it will be necessary to collect data from a diverse range of group counselors and group members in order to further develop this assessment method in a culturally competent manner (Suzuki et al., 2008).

## Limitations of this Study

There are several limitations to this study. The first is the self-report nature of the data collected about group members' race/ethnicity. This study relied on group counselors to accurately determine and estimate the race/ethnicity of their group members. The number of non-White counselors that responded to this study also was low. While this may reflect the actual percentage of practicing counselors (Conwill, 2009), it makes it difficult to determine statistical significance related to these populations. If this instrument is to be considered culturally sensitive and appropriate, this limitation should be addressed in future studies of the CGDI. Another limitation of this study was caused by the malfunction of the Survey Monkey software in collecting data about group counselors' years of experience running groups (there were 77 responses missed to this question). This limits the statistical conclusions that can be drawn about this demographic category. This is a significant problem, given the importance of this demographic factor. This also must be addressed in any future study of the CGDI. Finally, respondents to this survey were limited to those leading counseling or counseling supervision groups. This limits the use of this instrument in other types of groups such as task or peer-led groups. While the CGDI may hold promise for use in such groups, this study does not support the use of the CGDI in task or peer-led groups.

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