

Amount and Consistency, Two Components of Group Norms: An Actor Partner Interdependence Analysis of Intimate Behaviors in Groups

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This study presents a new conceptualization of behavioral norms as consisting of two components: the average *amount* of a target behavior exhibited in a group and the *consistency* of this behavior across group members. Using this conceptualization, we examined the relationship between group behavioral norms regarding intimate behaviors and individual group members' intimate behaviors in two types of groups: interpersonal growth groups and trauma recovery groups. Specifically, we used the actor-partner interdependence model (APIM; Kenny, Kashy, Manetti, Piero, & Livi, 2002) to examine the relationships between an individual group member's amount of intimate behaviors (i.e., the actor effect), the amount (i.e., group mean) and consistency (i.e., *SD*) of intimate behaviors of the other group members in both the previous and current sessions (i.e., the partner effects), the interaction of the amount and consistency of the group's previous and current intimate behaviors, and the amount of intimate behaviors exhibited by the individual group member in the current session. A hierarchical linear modeling analysis revealed that an individual group member's previous amount of intimate behaviors was positively related to her or his amount of intimate behaviors in the current session. Also, there was a significant interaction for the two components of the partner effect in the current session (i.e., group amount and consistency of intimate behaviors in the current session) such that when the consistency of intimate behaviors of the other group members was low, there was a significant, negative relationship between group amount of intimate behaviors and the individuals group member's intimate behaviors in a session. When consistency was high, however, this relationship was not significant.

Keywords: actor-partner interdependence model, group counseling, group norms, intimate behaviors

Julie, a new member, comes to her first interpersonal growth group meeting. Although the group leader prepared her by discussing what entering a new group might be like, Julie is still unsure how to behave. Because the group is functioning well, she notices most of the other group members engag-

ing in intimate behaviors. Intimate behaviors include verbal interpersonal behaviors that involve skill in dealing with the thoughts, feelings, and behaviors of the self and other group members (Shadish, 1984). For example, intimate behaviors in an interpersonal growth group include such complex interpersonal behaviors as discussing one's own positive and negative emotions and encouraging other group members to discuss their emotions as well, expressing dislike of one's own or other's behavior, disclosing personally revealing material, requesting feedback, and discussing one's relationship with other members of the group. Based on her observations of the intimate behaviors of the other group members in her new group, Julie also starts to verbally engage in these intimate behaviors.

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As in many other group contexts, Julie observes the behaviors of the other group members to determine the behavioral norms in her group, which, in turn, guide her own behavior.

Similarly, Yalom (1995) stated that, “an unwritten code of behavioral rules or *norms* must be established [in group interventions] that will guide the interaction of the group” (p. 120, italics in the original). The basic assumption is that the behavior of the *group* has an impact on the behavior of the *individual* through these established behavioral norms. In the vignette above, the other members in Julie’s group are demonstrating intimate behaviors, and thus we believe that Julie will also begin to engage in similar intimate behaviors.

This assumption, that a group’s behavior impacts the behavior of individual group members through behavioral norms, is well established in experimental social psychology (e.g., Asch, 1955; Crutchfield, 1955). While it is also an idea that is shared by group practitioners (cf., Yalom, 1995), it has rarely been empirically examined within the group psychotherapy and intervention literature. Therefore, a goal of this study was to test this assumption by examining the relationship between the behaviors of the group as a whole (i.e., the group behavioral norms), and the behaviors displayed by the individual group members in two types of groups: unstructured interpersonal growth groups, and semistructured trauma recovery groups.

According to Yalom (1995), the behavioral norms in therapy groups may differ radically from the behavioral norms in everyday social interactions. For example, behavioral norms associated with therapeutic or educational group interventions may include sharing immediate experiences and feelings, engaging in extensive self-disclosure, and giving and receiving interpersonal feedback. As described above, Shadish (1984) conceptualized these verbal behaviors as *intimate behaviors*, which he defined as ability and skill in dealing with the feelings, thoughts, and behaviors of the self and others. Shadish (1984) noted that it is through the development of the ability to behave intimately that “group members learn about themselves, others, and their interpersonal relationships” (p. 205)—a primary benefit of group interventions. Because of the importance of intimate behaviors to group interventions, the current study specifically focused on group behavioral norms around inti-

mate behaviors and the effect of these norms on individual group members’ intimate behaviors.

Behavioral Norms

As noted earlier, Yalom (1995) described group norms as “an unwritten code of behavioral rules” (p. 120). He suggested that group behavioral norms are rarely discussed explicitly, and thus group members learn these norms by observing the behavior of the other group members. Similarly, Lieberman, Golant, and Altman (2004) defined group behavioral norms as “implicit or explicit shared agreement[s] among group members about relevant behaviors, ways of thinking, and modes of affective expression” (p. 265). They suggested that, in general, adherence to group behavioral norms provides predictability and stability in interpersonal interactions within the group.

The specific behavioral norms of a group are generally considered to be the product of interactions between group members, who each bring their own set of behavioral norms to the group from their primary referent group (Lieberman et al., 2004). It may be this negotiation between the behavioral norms of the individual’s primary referent group and the behavioral norms of the “new” group that is both central to, and necessary for, behavioral change and growth for individual group members. However, there are currently no conceptual models, and little empirical research, on the role specific group behavioral norms play in influencing the behaviors of individual group members.

The literature that does exist has generally measured individual group member and group leader *perceptions* of group behavioral norms, rather than focusing on how these norms are expressed as observable behaviors within the group (for a review, see Lieberman et al., 2004). For example, Lieberman et al. (2004) examined congruence in individual group members’ and facilitators’ perceptions of group behavioral norms. They found that greater congruence between an individual group member’s and the facilitator’s perceptions of group behavioral norms was related to better outcomes for the individual group members (i.e., self-reported ratings of quality of life and depressive symptoms). Unfortunately, Lieberman et al. examined only the relationship between group mem-

bers' and facilitators' *perceptions* of the group behavioral norms and individual group member outcomes; they did not examine actual, in-session behaviors of the group members.

There is also evidence that perceptions of group behavioral norms are related to individual group member behavior. Specifically, if group members believe that there is a norm for a behavior, they will conform their behavior to fit that norm. For example, Postmes, Spears, and Cihangir (2001) found that group members were more likely to carefully and critically examine information when the group norms support this (i.e., when the group norms involved being critical, vs. coming to consensus). While this study provides evidence that perceptions of group behavioral norms may be related to the behavior of individual group members, Postmes et al. did not examine whether the actual behaviors of the other group members related to the behavior of individual group members.

Perceptions of the group behavioral norms are undoubtedly important, but equally, or perhaps more powerful maybe the ways in which these perceptions of behavioral norms relate to the actual observable behaviors within the group. However, we found no research on how the observable behaviors of the other group members as a whole (i.e., the group behavioral norms) relates to the behavior of individual group members in group intervention. As such, a main aim of the current study was to examine the relationship between group behavioral norms for intimate behaviors (expressed as observable behaviors in the group) relates to the intimate behaviors exhibited by an individual group member.

Specifically, based on the findings that the perception of group behavioral norms relates to the behavior of individual group members (e.g., Postmes et al., 2001), we hypothesized that group members in the current study would engage in more intimate behaviors when the mean level of intimate behaviors of the other group members was high, as this suggests to individual group members that engaging in intimate behaviors is the group's behavioral norm. That is, we hypothesized in the current study that the mean amount of intimate behaviors by the other members of the group, in both the previous and current sessions, would be positively related to the amount of intimate behaviors exhibited by

an individual group member in the current group session.

Consistency of Behavioral Norms: A New Conceptualization of Behavioral Norms

In the example of Julie's entry into a group, it is easy to see that if the entire group is engaging in all or most of the intimate behaviors described by Shadish (1984), Julie would see these intimate behaviors as a group behavioral norm, and therefore appropriate for her to engage in, as well. However, what would Julie do if some group members are engaging in a large number of intimate behaviors and other members are engaging in few or no intimate behaviors? In this situation how does Julie decide what are the group's behavioral norms for intimate behaviors? This scenario suggests that it may not be enough to know the mean amount of intimate behaviors among the other group members in a session; it may also be important to know how consistently intimate behaviors are displayed across the other group members in the session. Therefore, a focal aim of the current study is to suggest a new conceptualization of group behavioral norms as consisting of both the mean amount of the behavior among the other group members *and* the consistency with which the other group members are engaging in that behavior.

Researchers examining perceptions of group behavioral norms face a similar dilemma to the one Julie faced in her group: They have to decide what degree of consistency in behaviors among members or leaders constitutes a behavioral norm. For example, Lieberman et al. (2004) pointed out that, "there is no agreed-on method among investigators of how to assess group norms" (p. 270). As such, in their study they defined a group norm as existing when 75% group leaders agreed that a behavior was appropriate or inappropriate. We believe that using an arbitrary criterion, like 75% agreement, is not the best way to deal with the issue of consistency of behavioral norms. We argue instead that a new approach to defining norm consistency is important for understanding the impact of the group on the individual.

We believe that consistency of group behavioral norms is similar to another construct, *climate strength*, which has received recent research attention in the applied psychology

literature. Schneider, Salvaggio, and Subirats (2002) defined climate strength as the within-group variability in peoples' perceptions of their group's climate. Specifically, they operationalized climate strength as the within-group *SD* in climate perceptions, with a smaller within-group *SD* defining a stronger climate. In this model, climate is the average or most typical way that people in the group describe the climate, and climate strength is the within-group agreement in climate perceptions. Schneider et al. examined average workplace climate perception and climate strength from 134 bank branches as predictors of customer ratings of quality of service. They found that climate strength (with regard to managerial practices) moderated the relationship between a group's averaged perceptions of customer service climate and customer satisfaction. Specifically, they found that when climate strength was strong (i.e., there was more agreement among employees about the climate regarding managerial practices), the relationship between employee climate ratings and customer ratings of service was intensified.

In the current study, we similarly operationalized group behavioral norm consistency as the *SD* of intimate behaviors within a group within a session. Based on the findings of Schneider et al. (2002), we hypothesized that the consistency with which the other group members engaged in intimate behaviors (operationalized as the *SD* for intimate behaviors) would be significantly, positively related to the amount of intimate behaviors exhibited by an individual group member. That is, we hypothesized that when consistency in intimate behaviors is high among the other group members (i.e., the *SD* is low), an individual group member is more likely to engage in intimate behaviors her or himself. In sum, in the current study we conceptualized group behavioral norms as consisting of both the *amount* (i.e., the group mean) of intimate behaviors in a group in a session, and the *consistency* (i.e., the group *SD*) with which group members engage in intimate behaviors across a group in a session.

Modeling the Group's Impact on the Individual

A traditional multilevel approach examining the effects of the group's behavior on the indi-

vidual group member's behavior would precipitate using data at the individual level (level 1) and the group level (level 2) (Bryk & Raudenbush, 1992). If this traditional model were used in the current study to examine the group effect, the group's mean amount of intimate behaviors in the current and previous sessions would be used as group level (level 2) predictors of the individual group member's amount of intimate behaviors in the current session (level 1).

However, Kenny, Khasy, Mannetti, Pierro, and Livi (2002) pointed out the shortcomings of this method for analyzing data from small groups. Specifically, they stated that this method does not take in to account the nonindependence inherent in group data. As such, they propose an adaptation of multilevel modeling, the actor-partner interdependence model (APIM) because it takes into account the interdependence of small group data. Rather than simply using the group mean amount of the behavior of interest as a level 2 predictor in a multilevel model, the APIM uses the group mean amount *excluding the focal individual group member* as a level 1 (i.e., session level) predictor in the multilevel model. This level 1 predictor represents the *partner effect*, or the effect that the other group members have on the behavior of the individual group member of interest. The individual's own previous level of the behavior of interest (e.g., the amount of the behavior that the individual engaged in during the previous session) also serves as a level one predictor of the outcome variable. This represents the *actor effect*. In the current study, therefore, we used the APIM to examine the relationships between an individual group member's own amount of intimate behaviors in the previous session (i.e., the actor effect), the intimate behaviors of the other group members in the previous and current session (i.e., the behavioral expression of the group's norms, or the partner effect), and the intimate behaviors of the focal individual group member in the current session.

Only one other study (Bonito, DeCamp, Coffman, & Fleming, 2006) has used the APIM to examine the group's effect (i.e., the partner effect), and the effect of an individual her or himself (i.e., the actor effect) on the individual group member's behavior. Specifically, Bonito and colleagues examined both the actor and partner effects on the amount of participation of

individual group members. They found that both the group's mean amount of interpersonal control (i.e., "the ability to influence what is being talked about and by whom during discussion," p. 18), and an individual group member's amount of interpersonal control, influenced the individual's amount of participation in the group, highlighting the importance of examining both actor and partner effects. However, this study did not examine the effect of consistency across group members (i.e., the group's *SD*) in the use of interpersonal control and its effect on an individual group member's behavior.

The Current Study

In the current study, we used the APIM to examine the relationships between a group's intimate behaviors (i.e., the group's behavioral norms for intimate behaviors, or the partner effect), an individual group member's previous behavior (i.e., the actor effect), and the individual group member's amount of intimate behavior in the current session. As described above, we are conceptualizing group behavioral norms (i.e., the partner effect) as consisting of two parts. First, we were concerned with whether a focal group member's amount of intimate behavior in the current session is related to the mean *amount* of intimate behaviors of all of the other group members in the previous and current sessions, excluding that focal individual's amount of intimate behavior. In this case, the partner effect involves how the mean amount of the other group members' intimate behaviors in the previous and current sessions impacts the focal individual's amount of intimate behaviors in the current session.

Based on the climate strength literature discussed above, we were also concerned with whether the *consistency* with which the other group members engaged in intimate behaviors in the previous and current sessions would impact the amount of intimate behaviors of the individual group member in the current session. In this case, the partner effect involves how the consistency of the other group members' intimate behaviors in the previous and current sessions, operationalized as the group *SD*, impacts the focal individual's amount of intimate behaviors in the current session.

An individual's previous behavior is thought to be the best predictor of her or his future

behavior (e.g., Ouellette & Wood, 1998). As such, our first hypothesis, regarding the actor effect, was that an individual group member's amount of intimate behaviors in the previous session would be positively related to her or his amount of intimate behaviors in the current session.

In addition, we had two hypotheses with regard to the partner (i.e., group) effect. Based on previous research examining the group's effect on individual group member's behavior (e.g., Postmes, Spears, & Cihangir, 2001), we hypothesized that there would be a positive relationship between the group's mean amount of intimate behaviors in the previous and current sessions, and an individual's amount of intimate behaviors in the current session.

Following Schneider et al. (2002), we also hypothesized that consistency in intimate behaviors of the other group members in the previous or current session would moderate the relationship between the group's amount of intimate behaviors in the previous or current session, respectively, and the individual's amount of intimate behaviors in the current session. Specifically, we hypothesized that when the amount of intimate behaviors exhibited in the previous or current session was more consistent across the group members (i.e., there was a lower *SD*), the positive relationship between the group's amount of intimate behaviors in the previous or current session and the individual's amount of intimate behaviors in the current session would be stronger.

In addition to the hypotheses described above, we were also interested in whether the amount of intimate behaviors of the individual group member, and the group amount and/or consistency of intimate behaviors varied over time. Stage models of group development suggest that groups progress through the stage of forming, storming, norming, and performing (Tuckman, 1965). Given that "norming" takes place only after the group has spent sufficient time forming a group identity and managing issues related to the purpose and functioning of the group (e.g., Tuckman), and that research suggests engagement in groups increases and avoidance of decreases over time (e.g., Miles & Kivlighan, 2008; Paquin & Kivlighan, 2010), we hypothesized that the amount of intimate behaviors of the individual group member, and

both the amount and consistency in the group intimate behaviors would increase over time.

A final research question was whether any observed effects of the group on the behavior of individual group members (i.e., partner effects) would be consistent across types of groups. As such, an additional research question that we examined was whether the effect of the group on the individual group member's intimate behaviors was consistent across the interpersonal growth groups and the trauma recovery groups. We believed that the operation of group norms regarding intimate behaviors would be similar across types of groups, given that both types of groups address interpersonal issues. In addition, given the small sample size, any effect of group type would need to be interpreted tentatively.

Method

Participants

To maximize external validity, we combined data from groups in two different settings. First, data were collected from five interpersonal growth groups facilitated on a university campus. Second, archival data from three trauma recovery groups at a women's correctional institution were also examined. The combined sample consisted of a total of eight groups ranging from five to 12 participants, for a total of 66 group participants (10 men and 56 women). The group participants ranged in age from 19 to 58 years. Forty-eight participants were White, 15 were African American, two were Latina, and one was Asian American.

Interpersonal growth groups. The five interpersonal growth groups were conducted as part of an elective course on group processes at a large, Midwestern university. The course also contained a lecture portion, separate from the interpersonal growth groups. The interpersonal growth groups were each led by a single graduate student leader enrolled in a year-long group practicum at the same university.

Groups were led using an interpersonal and interactional model (Yalom & Leszcz, 2005). Goals for the group experience included increasing members' ability to communicate effectively, and increasing their willingness and capacity to trust others. Group leaders attempted to promote the awareness of interpersonal and interactional issues, encourage inter-

personal feedback, and reframe the way group members perceived their relationships.

Growth group members. The group members were the 30 students enrolled in the elective course on group processes. Group members' ages ranged from 19 to 35 years ($M = 23.7$, $SD = 6.0$). Ten of the students were men and 20 were women. Twenty-seven participants were White, one was African American, one was Asian American, and one was Latina. Four group members were sophomores, 11 were juniors, seven were seniors, and eight were master's students. Sixty-seven percent of the participants had had previous individual counseling, and 50% had participated as clients in group counseling prior to taking this group process course. Participation in this research was not a course requirement. The 30 group members were placed into groups in such a way that maximized gender diversity in each group; the 5 groups each had six members (two men and four women). All group members signed statements of informed consent to participate in this study.

Growth group leaders. Groups were facilitated by the five doctoral students in counseling psychology who were enrolled in the year-long group counseling practicum. There was one male leader (a 28 year-old, White doctoral student) and four women leaders (ages 27 to 45; all White; three doctoral students and one master's student).

Before leading the groups, all group leaders had satisfactorily completed two courses in group theory and practice, and one semester of group practicum. All group leaders were relatively novice, having facilitated one or two previous groups. Group leaders were supervised during the study, both individually and in a group, for approximately one-and-a-half and four hours per week, respectively, by a licensed psychologist with over 20 years of group counseling experience.

Trauma recovery groups. The current study also used data collected on three trauma recovery groups by the mental health services division of a Midwestern women's state correctional facility. This institution's data collection was aimed at evaluating program effectiveness of a trauma treatment currently offered by the facility. A portion of these data were completely de-identified and made available to the second author of this study.

Of the three trauma recovery groups included in this study, one had 13 participants, one had 11 participants, and one had 12 participants. The group treatment was based on the Trauma Recovery and Empowerment Model (TREM), a manualized group treatment protocol (Fallot & Harris, 2002; Harris, 1998). The TREM was developed primarily to treat adult patients with comorbid substance use and trauma disorders. Like other group therapy treatment models for posttraumatic stress disorder (PTSD), these groups included an emphasis on developing coping skills, recalling or reprocessing traumatic memories, focusing on interpersonal functioning, and fostering a climate of safety and support (Ford, Courtois, Steele, Van der Hart, & Nijenhuis, 2005). At this facility, closed groups are offered on an ongoing basis, throughout the year. Potential group members are given the option of engaging in group therapy if they report a history of trauma or meet criteria for PTSD at the time of the intake interview (L. Drogosz, personal communication, June 9, 2009). Participation in the recovery groups is completely voluntary and optional (Drogosz, personal communication, June 9, 2009).

Trauma recovery group members. The group members were 36 incarcerated women participating in trauma treatment at a Midwestern, minimum to medium security state prison. Group members' ages ranged from 21 to 58 years. Twenty-one participants were White, 14 were African American, and one was Latina. Participants were described by the group leader as having experienced at least one interpersonal trauma in their lives, such as child abuse or domestic violence (Drogosz, personal communication, May 2010). The majority of the participants experienced complex trauma involving multiple events from childhood through adulthood (Drogosz, personal communication, May 2010).

Trauma recovery group leader. All three groups were lead by the same White, 40-year-old female doctoral-level counseling psychologist with 6 years of group therapy experience and 8 years of experience treating clients recovering from exposure to interpersonal trauma (Drogosz, personal communication, August 2010). The group leader completed a 3-day intensive training in the model upon which the groups were based, which included observer

ratings of treatment fidelity, peer feedback, didactic, and skills training.

Measures

Interpersonal Relations Scale checklist (IRScI). The IRScI is a 20-item, observer-rated behavioral checklist developed by Shadish (1984) to assess the construct of intimacy (knowledge and skills in dealing with feelings, thoughts, and behaviors of self and of others). The items on the checklist include behaviors such as discusses self and relationship to others, requests feedback, expresses positive feelings, accepts/likes self, communicates directly and effectively with others, takes risks by revealing feelings, expresses change of attitude, expresses closeness to others, expresses negative feelings, discusses others' feelings, and understands what happens between others (Shadish, 1984). Shadish (1984, 1986) reported several studies on the development of the pool of items and the determination of the concurrent and discriminant validity of the checklist, showing higher IRScI total scores were related to positive group outcome.

Group leaders recorded the intimate behaviors that each group member engaged in during each group session by checking off the corresponding behavior on the IRScI. A total score obtained by summing the number of items checked represents the number of different intimate behaviors a group member enacts during a single session. Scores for each session can range from 0 to 20.

Group leaders were chosen to provide the IRScI ratings for several reasons. First, educational and family researchers, who often employ teachers or parents to make classroom or child observations and ratings, argue that using participant-observers of this sort is one of the most objective direct methods for assessing behavior (e.g., Volpe, DiPerna, Hintze, & Shapiro, 2005). Similarly, using group leaders as participant-observers may also offer the most objective and direct measurements of in-session group member behaviors. In addition, Hoyt and Kerns' (1999) meta-analysis of studies examining bias in observer ratings showed that frequency counts (the methodology used by group leaders in making IRScI ratings) contained negligible bias variance. This suggests that a single group leader would be able to make accurate

and reliable ratings using the IRScl. Interrater reliability studies conducted with untrained raters reported reliabilities ranging from .85 to .99 (Shadish, 1984, 1986). Kivlighan, Jauquet, Hardie, Francis, and Hershberger (1993) examined the reliability of different numbers of judges using the IRScl. They found that the reliability for one judge was almost as good as the reliability for two or three judges; .88, .91, and .93, respectively. Given these equivalent reliabilities we used one judge, the group leader, to make the IRScl ratings.

Procedure. Interpersonal growth groups met twice a week for 13 weeks, for a total of 26 sessions. Sessions lasted 1 hour 20 min each. After each group session the group leader completed the IRScl regarding each member of her or his group. Trauma recovery groups met twice weekly, for 22 sessions. Sessions lasted one hour and 15 min each. After every session the group therapist completed the IRScl regarding each member. The amount of intimate behaviors in a session was operationalized as the mean IRScl score for the other group members. IRScl scores for the other group members for a session were calculated by averaging the IRScl scores for the other group members attending a session excluding the IRScl score for that session for the focal group member. The consistency of intimate behaviors in a session was operationalized as the *SD* of IRScl scores for the other group members attending a session excluding the IRScl score for that session for the focal group member. For ease of interpretation the consistency scores were reversed so that a smaller *SD* was scored as higher consistency.

Results

Hierarchical Linear Model to Partition the Variance

First, a completely unconditional, three-level hierarchical linear model was run using HLM 6.0 (Raudenbush, Bryk, & Congdon, 2005), in order to partition the variance. Level 1 modeled session-level (i.e., within individual) variance of intimate behaviors (i.e., IRScl scores). The Level 1 model was:

$$Y_{iig} = \rho_{oi} + \varepsilon$$

where Y_{iig} represents the amount of intimate behaviors of Individual i in group g 's at Session t (i.e., Individual i 's IRScl score), ρ_{oi} represents Individual i 's mean amount of the intimate behaviors, and ε represents session-level error.

Level 2 modeled between group member variance. The Level 2 model was:

$$\rho_{oi} = \beta_{00} + R_o$$

where β_{00} represents the mean amount of intimate behaviors for all individuals in group g , and R_o represents individual-level error.

And Level 3 modeled between groups variance. The Level 3 model was:

$$\beta_{00} = \gamma_{000} + U_{00}$$

where γ_{000} represents the mean amount of intimate behaviors across all groups, and U_{00} represents group-level error.

Sigma-squared was .02, tau 1(pi) was .01, and tau 2(beta) was .01, indicating a total variance of .04. Therefore, 50% of the variance in IRScl scores was between sessions, 25% of the variance was between people and 25% of the variance was between groups. The γ coefficient ($\gamma = .25$, $SE = 0.039$, $t = 6.45$, $p < .001$) from this completely unconditional model indicates that, on average, the group members engaged in approximately 25% of the 20 IRScl behaviors (5 behaviors) per session, which was significantly different from zero.

Growth Curve Analyses

To examine whether the amount of intimate behavior of the individual group member, and the amount and consistency of intimate behaviors of the group varied over time, three, three-level growth curve analyses were run. For the first analysis, amount of individual group member intimate behavior served as the dependent variable. For the second analysis, amount of intimate behaviors of the other group members served as the dependent variable. For the third analysis, consistency in intimate behaviors of the other group members served as the independent variable. For all three analyses, time (i.e., session number) served as the independent variable to examine linear change in the dependent variable over time. In addition, a quadratic term

was included in each of the analyses to examine nonlinear (e.g., “U-shaped”) change in the dependent variable over time.

For each of the three growth curve analyses, the complete model was:

$$\text{Level 1: } Y (\text{Dependent Variable}) = \rho_0 \\ + \rho_1(\text{Session}) + \rho_2(\text{Quadratic Term}) + \varepsilon$$

$$\text{Level 2: } \rho_0 = \beta_{00} + R_0$$

$$\rho_1 = \beta_{10} + R_1$$

$$\rho_2 = \beta_{20} + R_2$$

$$\text{Level 3: } \beta_{00} = \gamma_{000} + U_{00}$$

$$\beta_{10} = \gamma_{100} + U_{01}$$

$$\beta_{20} = \gamma_{200} + U_{02}$$

All predictors are at Level 1 (the session level); there are no predictors at Level 2 (the group member level) or Level 3 (the group level). Therefore, the dependent variable is a function of γ_{000} , the mean amount of the dependent variable across all sessions, members, and groups; γ_{100} , the average linear rate of change in the dependent variable as a function of session number, across all sessions, members, and groups; and γ_{200} , the average linear rate of change in the dependent variable as a function of the quadratic term, across all sessions, members, and groups.

For the analysis of the individual group member's amount of intimate behaviors, the linear slope term corresponding to session was significant ($\gamma = .006, t = .002, p = .029$) indicating that the amount of intimate behaviors engaged in by individual group members increased over time. The coefficient corresponding to the quadratic term was not significant ($\gamma < .001, t < .001, p = .059$). For the analysis of the amount of intimate behaviors of the other group members, neither the linear nor the quadratic terms were significant ($\gamma = .004, t = .002, p = .067; \gamma < -.001, t < .001, p = .066$, respectively), indicating that the mean amount of intimate behaviors of the other group members did not vary significantly over time. Finally, for the

analysis of the consistency in intimate behaviors of the other group members, neither the linear nor the quadratic terms were significant ($\gamma = .002, t = .001, p = .186; \gamma < -.001, t < .001, p = .236$, respectively), indicating that the consistency with which the other group members engaged in intimate behaviors did not vary significantly over time.

APIM Analyses

The relationship between an individual group member's previous amount of intimate behaviors, the other group member's amount and consistency of intimate behaviors in the previous and current sessions, and the individual group members' amount of intimate behaviors in the current session were examined using APIM (Campbell & Kashy, 2002; Kashy & Kenny, 2000; Kenny & Cook, 1999). As described by Kenny and his colleagues (2002), data for individuals in groups are (a) not independent and (b) the product of that individual group member's previous behaviors and those of her or his other group members (cf., Bonito, DeCamp, Coffman, & Fleming, 2006). The APIM can be used to address the nonindependence problem by nesting sessions within individual group members, and individual group members within groups in a multilevel model. The influences of time (i.e., session), the individual group member her- or himself, and the rest of the group on an individual group member's behavior in a session are then modeled by including both the individual's amount of the behavior in the previous session (this represents the actor effect), and the group's amount of the behavior in the previous and current sessions (i.e., the mean amount of the behavior in the group during the previous and current sessions, excluding the focal individual's amount of the behavior; this represents the partner effect) in the analysis. In this way, the APIM analysis models the effects of both the individual group member her- or himself, and the group, without confounding the individual's own effect with that of the group.

In the APIM model used in the current study, an individual group member's intimate behaviors (i.e., IRScl score) in a given session served as the dependent variable. The predictor associated with the actor effect was the individual group member's own previous amount of intimate behaviors (i.e., the individual group mem-

ber's IRScl score from the previous session). In the model, this was labeled Individual's Previous Intimate Behaviors. As described above, the current study also included an expanded conceptualization of the partner (i.e., group) effect. Specifically, following the work of Schneider et al. (2002) on climate strength, the predictors associated with the partner effect included both the mean *amount* of the intimate behaviors exhibited by the other group members in the previous and current sessions (i.e., mean IRScl score for the group in the previous and current sessions, excluding the focal individual's IRScl score) and the *consistency* with which the other group members engaged in intimate behaviors (i.e., the *SD* of IRScl scores of the other group members in the previous and current sessions, excluding the focal individual). In the model, these were labeled Previous Group Amount, Current Group Amount, Previous Group Consistency, and Current Group Consistency, respectively. In addition, we examined the interactions of previous group amount and previous group consistency, and current group amount and current group consistency. In the model, these predictors were labeled Previous Group Amount \times Consistency, and Current Group Amount \times Consistency, respectively.

The complete model was:

Level 1: Y (Individual's Intimate Behaviors) = $\rho_0 + \rho_1(\text{Current Group Consistency}) + \rho_2(\text{Current Group Amount}) + \rho_3(\text{Individual's Previous Intimate Behaviors}) + \rho_4(\text{Previous Group Consistency}) + \rho_5(\text{Previous Group Amount}) + \rho_6(\text{Current Group Amount} \times \text{Consistency}) + \rho_7(\text{Previous Group Amount} \times \text{Consistency}) + \varepsilon$

Level 2: $\rho_0 = \beta_{00} + R_0$

$$\rho_1 = \beta_{10} + R_1$$

$$\rho_2 = \beta_{20} + R_2$$

$$\rho_3 = \beta_{30} + R_3$$

$$\rho_4 = \beta_{40} + R_4$$

$$\rho_5 = \beta_{50} + R_5$$

$$\rho_6 = \beta_{60} + R_6$$

$$\rho_7 = \beta_{70} + R_7$$

As seen in the model, all predictors are at Level 1 (the session level); there are no predictors at Level 2 (the group member level). Y represents the intimate behaviors in a session for an individual group member in a specific group. Because there are no Level 2 predictors, the intimate behaviors in a session are a function of β_{00} , the mean amount of the intimate behaviors across all sessions, members, and groups; β_{10} , the average linear rate of change in intimate behaviors as a function of current group consistency of intimate behaviors, across all sessions, members, and groups; β_{20} , the average linear rate of change in intimate behaviors as a function of the current group amount of intimate behaviors, across all sessions, members, and groups; β_{30} , the linear rate of change in intimate behaviors as a function of the individual's own previous intimate behaviors; β_{40} , the average linear rate of change in intimate behaviors as a function of previous group consistency in intimate behaviors; β_{50} , the average linear rate of change in intimate behaviors as a function of previous group amount of intimate behaviors; β_{50} , the interaction between current consistency in intimate behaviors of the other group members and current group amount of intimate behaviors, across all sessions, members, and groups; and β_{70} , the interaction between previous consistency in intimate behaviors of the other group members and previous group amount of intimate behaviors, across all sessions, members, and groups.

Results of the HLM analysis are listed in Table 1. The intercept was significant ($\gamma = 0.168$, $t = 3.433$, $p = .013$) indicating that an individual at midtreatment, with an average number of previous intimate behaviors, and who is in a group where the other members had an average amount of previous intimate behaviors and an average level of consistency, is expected to engage in about 20% of the 20 behaviors in the IRScl. The slope term for previous intimate behaviors of the individual group member was also significant ($\gamma = 0.061$, $t = 3.380$, $p = .049$) indicating positive relationship between amount of intimate behaviors by an individual group member in the previous session and amount of intimate behaviors by that individual in the current session (this represents the actor effect).

Table 1
Gamma Coefficients, SEs, t Ratios, and p Values for the Three-Level Hierarchical Linear Modeling Analysis

Fixed effect	Gamma coefficient	SE	t Ratio	p
Intercept	0.168	0.049	3.433	.013
Consistency of intimate behaviors of the other group members in the current session	-1.123	.140	-8.035	<.001
Group amount of intimate behaviors in the current session	.388	.111	3.501	.012
Previous amount of intimate behaviors of the individual	.061	.026	2.380	.049
Previous consistency in intimate behaviors of the other group members	.049	.104	.472	.651
Previous amount of intimate behaviors of the other group members	-.125	.056	-2.235	.060
Current amount of intimate behaviors of the other group members by current consistency in intimate behaviors of the other group members interaction	4.640	.403	11.506	<.001
Previous amount of intimate behaviors of the other group members by previous consistency in intimate behaviors by the other group members interaction	-.035	.141	-.252	.808

The slope term for the interaction between the current amount of intimate behaviors by the other group members and the current consistency in intimate behaviors for the other group members was also significant ($\gamma = 4.640$, $t = .403$, $p < .001$). Because this interaction was significant the main effects for the current amount of intimate behaviors by the other group members and the current consistency in intimate behaviors for the other group members will not be discussed individually, as these main effects are implicated in the interaction.

The computational tools for probing interactions in HLM analyses, described by Preacher, Curran, and Bauer (2006), were used to calculate simple intercepts and simple slopes for this significant within-level interaction. Figure 1 illustrates the significant interaction effect. When the consistency with which the other group members' engaged in intimate behaviors in the current session was low, there was a significant relationship between their current amount of intimate behaviors and the current amount of intimate behaviors of the individual group member (simple slope_{low consistency} = $-.799$ [$SE = .147$], $t = 5.430$, $p = .001$). However, when the consistency with which the other group members' engaged in intimate behaviors in the current session was moderate or high, there was not a significant relationship between their current amount of intimate behaviors and the current

amount of intimate behaviors of the individual group members (simple slope_{moderate consistency} = $-.427$ [$SE = 0.161$], $t = -2.652$, $p = .033$; simple slope_{high consistency} = $-.056$, [$SE = .180$], $t = -.312$, $p = .764$). Only when the other group members were inconsistent in the degree to which they engaged in intimate behaviors in a session was there a relationship between the amount of intimate behaviors by the other group members in the session and the amount of intimate behaviors of the individual group member in the same session. When there was a high amount of intimate behaviors among the other group members, but the consistency with which the other group members are engaging in this behavior is low (i.e., the high amount of intimate behaviors is driven by one or a few group members engaging in a lot of intimate behaviors), an individual group member is less likely to engage in intimate behaviors. This significant interaction represents the partner effect.

Because there were two distinct types of groups in this data set, the HLM model was run a second time with type of group (0 = *trauma groups conducted in the prison*, 1 = *interpersonal growth groups conducted on a college campus*) as a group-level predictor. We were especially interested in seeing if the interactions between the previous and current amount of intimate behaviors by the other group members

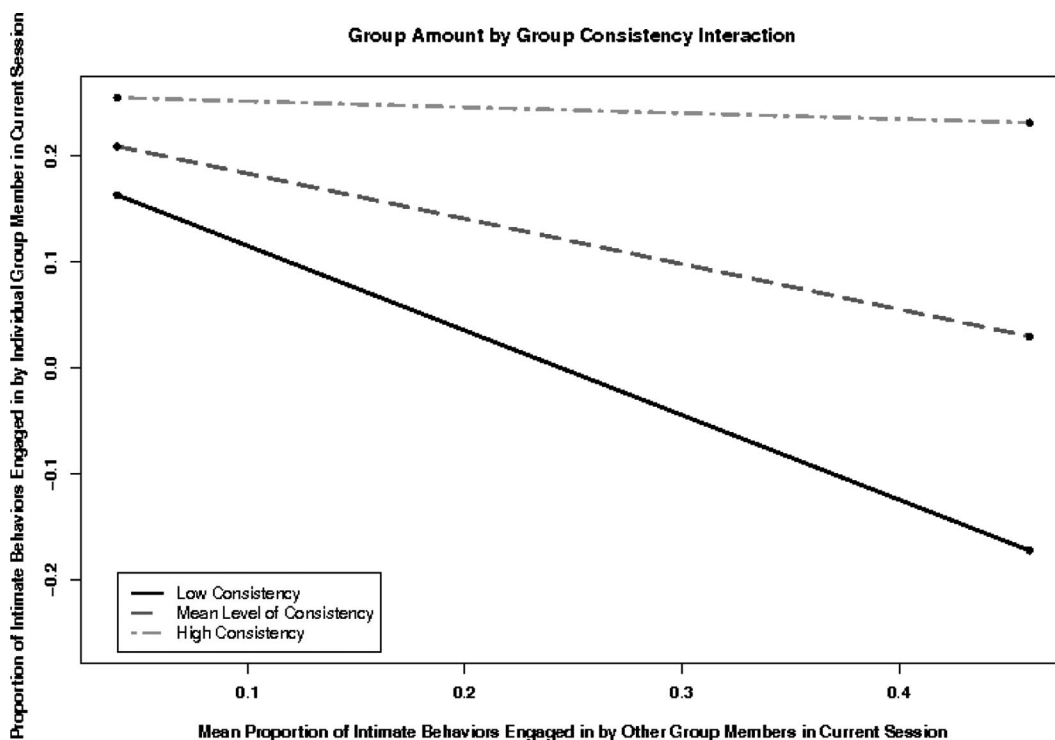


Figure 1. Proportion of intimate behaviors from the Interpersonal Relations Scale checklist (IRScI) exhibited by individual group members as a function of the proportion of intimate behaviors from the IRScI exhibited by the other group members in the previous session and the consistency with which other group members engaged in intimate behaviors across group members in the previous session.

and the previous and current consistency in intimate behaviors for the other group members were consistent across the two types of groups. The type of group was significantly related to the intercept for current intimate behaviors ($\gamma = 0.11, t = 22, p = .038$), indicating that the members of the interpersonal growth groups had more intimate behaviors in a session than members of the trauma groups conducted in the prison. The type of group was not significantly related to any of the other terms in the model. The lack of significance indicates that the form of the interaction between the previous or current amount and consistency of intimate behaviors by the other group members was consistent across the two types of groups.

Discussion

A main purpose of this study was to suggest a new conceptualization of group behavioral

norms as consisting of both the amount of the target behavior (i.e., the mean amount of the behavior in the group) and the consistency with which group members engage in the target behavior (i.e., the group *SD* from the mean of the target behavior), and to present an analysis of the potential usefulness of this new conceptualization, as it applies to intimate behaviors in interpersonal growth and trauma recovery groups.

Using the actor-partner interdependence model (Campbell & Kashy, 2002; Kashy & Kenny, 2000; Kenny & Cook, 1999), we examined whether an individual's own past level of intimate behaviors, and the amount and consistency with which the other group members engaged in intimate behaviors in both the past and current sessions related to the amount of intimate behaviors an individual group member engages in during the current session. The actor-partner interdependence model was used in

to address the issue of nonindependence in the group data. The APIM allows for an examination of the effects of both the individual group member her- or himself (i.e., the actor effect), and the other group members, excluding the focal individual group member (i.e., the partner effect), on the focal group member's behavior. A major advantage of this model is that the group effect is not confounded with the effects of the individual's own previous behavior.

Because an individual's previous behavior is thought to be the best predictor of her or his future behavior (e.g., Ouellette & Wood, 1998), we hypothesized that the amount of intimate behaviors engaged in by an individual group member would be significantly, positively related to the amount of intimate behaviors she or he engaged in during the current session. This hypothesis, representing the actor effect in the APIM was supported, suggesting that individual's behavior is relatively stable over time when it comes to intimate behaviors. Given that many of the intimate behaviors on the IRScl involve significant interpersonal risks, it follows that an individual would engage in a similar amount of intimate behaviors from week to week, as this may reflect the trait comfort level of that individual group member with the interpersonal risk. This is also consistent with interpersonal theory, which suggests that individuals develop patterns of interacting with others in early relationships, and these patterns are generalized and carried out in other relationships throughout the individual's life (e.g., Teyber, 2000). At the same time, however, as an individual becomes more comfortable with her or his group, it makes sense that she or he would gradually begin to feel more comfortable taking more interpersonal risks, and engaging in more intimate behaviors over time. This is consistent with the growth curve analysis in the current study, which suggests that, over time, the amount of intimate behaviors engaged in by individual group members significantly increased over time.

Based on previous research examining the group's effect on individual group member's behavior (e.g., Postmes, Spears, & Cihangir, 2001), we also hypothesized that there would be a positive relationship between the amount of intimate behaviors by the other group members in the previous and current sessions and the amount of intimate behaviors by an individual

group member in the current session. Finally, based on the climate strength literature (e.g., Schneider et al., 2002), we hypothesized that the consistency with which the other group members engaged in intimate behaviors in the previous and current sessions would moderate the relationships between the amount of intimate behaviors of the other group members in the previous and current sessions, respectively, and the intimate behaviors of the individual group member in the current session. As hypothesized, consistency of intimate behaviors across the other group members in the current session moderated the relationship between the amount of intimate behaviors of the other group members in the current session and the intimate behaviors of the individual group members in the current session. That is, the interaction between consistency and amount of intimate behaviors in the current session accounted for unique variance in individual group member intimate behaviors in the current session after controlling for main effects. However, contrary to our hypothesis, when group consistency in intimate behaviors in the current session was moderate or high, the relationship between the amount of intimate behaviors of the other group members in the current session and intimate behaviors of an individual group member in the current session was not significant. When the consistency with which the other group members engaged in intimate behaviors was low in the current session (i.e., a weak group norm), the relationship between the amount of intimate behaviors engaged in by the other group members in the current session, and the amount of intimate behaviors engaged in by an individual group member was significant and negative. In other words, when the group norm was weak, a group member was more likely to "clam up." The interaction between group consistency and amount of intimate behaviors in the previous session, and the amount of intimate behaviors engaged in by an individual group member in the current session was not significant. In other words, the strength or weakness of a group norm in the previous session appeared to have no bearing on how a group member decides to behave in the following session.

It is reasonable to expect that, when the consistency with which the other group members are engaging in intimate behaviors in the current session is low, it may be more difficult for an

individual group member to determine what the group norms are around intimate behaviors, and she or he may be less likely to make her or himself vulnerable by choosing to engage in more intimate behaviors. However, if the consistency with which the other group members are engaging in intimate behaviors in the current session is moderate or high, the extent to which an individual group member engages in intimate behaviors appears to be driven more by her or his own propensity to engage in intimate behaviors than by the behavior or the other group members, as evidenced by the significant relationship between an individual's previous and current amount of intimate behaviors. Rather than consistency strengthening a positive relationship between the amount of intimate behaviors in the group and the amount of intimate behaviors of an individual group member, it appears that *inconsistency* drives a negative relationship between the amount of intimate behaviors of the group in the current session and the intimate behaviors of an individual group member in the current session.

Clinically, a high amount of intimate behaviors along with a low amount of consistency may be explained by the fact that, sometimes, in the course of treatment, one (or a few) group member(s) can become the focus of a particular session. This may be because of processes considered therapeutic, such as "giving the floor" to one group member to work through a problem. This same pattern of a high amount intimate behaviors, but low consistency in intimate behaviors also may be because of therapy-interfering behaviors such as one or a few members verbally dominating the session. Both scenarios may be explanations for what is occurring when intimate behaviors are high, but consistency is low.

At the same time, it is reasonable to argue that even when there is no clear behavioral norm, the context of a group therapy situation creates a demand for intimacy (Murray, 1938). Therefore, if this demand is not being met, a vacuum is created and a group member might perceive that there is "space" (or pressure) in the group to engage in a higher amount of intimate behaviors. The finding that group consistency in a behavior (or inconsistency, as in the case of the current study) is an important factor, in addition to group amount of a behavior, in determining an individual group mem-

ber's behavior in a session is consonant with the climate strength literature (e.g., Schneider et al., 2002), and suggests that research on group norms should examine both group amount and consistency of the behavior of interest.

It is interesting that, while the interaction between group amount and group consistency was significant for the current session, the same was not true regarding the interaction between group consistency and amount of intimate behavior in the previous session as it relates to an individual group member's amount of intimate behaviors in the current session. It may be that the norms of a group change over time, even from session to session, and so the way in which the group behaved previously is not as important a determinant of individual group members' behavior as how other group members are behaving in the current session.

Most research examining the effect of the group on the individual group member operationalizes the group effect as the group mean amount of the behavior of interest. Our findings suggest that using just the group mean amount of a behavior is not enough to understand the totality of the group's effect on the individual; researchers also need to measure how consistently the behavior of interest is observed across the members of the group. We believe that operationalizing consistency as the *SD* is superior to using an arbitrary cut off point to decide if there is consensus among members or leaders concerning the existence of a norm (e.g., Lieberman et al., 2004). The *SD* encompasses the whole range of data rather than discarding some data that does not meet an arbitrarily determined cutoff point. It is more important to note that our findings show that the consistency of a behavior in a group interacts with the amount of the behavior in a group; therefore, it is critical to measure consistency as a variable in its own right.

In the current study, we found a significant relationship between session number and amount of intimate behaviors that an individual group member exhibits such that group members engage in more intimate behaviors over time. This is consistent with group theory that suggests that group members work up to the "performing" phase of the group over time (Tuckman, 1965). It also is consistent with research that shows that engagement in group interventions increases over time (e.g., Miles &

Kivlighan, 2008; Paquin & Kivlighan, in preparation). It is understandable that group members would need time to get to know the other members of their group before they would feel comfortable making themselves vulnerable by engaging in intimate behaviors in the group. Group amount and consistency in intimate behaviors did not vary significantly over time, however. It may be that group amount and consistency in intimate behaviors have a more complex developmental pattern than the linear and quadratic patterns that we tested.

With regard to our research question about differences by group type, it is important to note that amount of intimate behaviors in the interpersonal growth groups was significantly greater than the amount of intimate behaviors in the trauma recovery groups. This difference may reflect the nature of the groups themselves. Specifically, it may be that the structured nature of the trauma groups limited the opportunities for intimate behaviors, or that the context of prison worked against fostering a higher degree of behaviors related to increased vulnerability. Alternatively, it may have been that group members in the interpersonal growth groups participated in more intimate behaviors because the groups were a part of a course and they may have felt that engaging in intimate behaviors was a course requirement. Future research on intimate behaviors in group interventions is needed to further examine this issue.

Still, although the interpersonal growth groups and the trauma recovery groups showed different amounts of intimate behaviors, the interaction between the current group consistency and current group amount of intimate behaviors was significant across both the interpersonal growth groups and the trauma recovery groups. This suggests that the type of group may not change the effect of group norm level and consistency in intimate behaviors on individual group member intimate behaviors. This finding also may be because of the fact that both types of groups target interpersonal behaviors and relationships, and are therefore similar in how processes involving intimate behaviors unfold. However, because of the small number of groups included in the current study, these findings should be taken tentatively. Future research should examine the effect of the amount and consistency of intimate behaviors of the group on the amount of intimate behaviors of individ-

ual group members in additional types of group interventions. In addition, future research may also examine the effect of the amount and consistency of other group behaviors on the behavior of individual group members, such as session attendance, and other types of verbal and nonverbal communication.

Strengths and Limitations

A major strength of the current study is that it is the first study that examined the group effect in terms of both the amount of the target behaviors and the consistency with which group members engaged in these target behaviors in group interventions. The significant interaction of amount and consistency across both interpersonal growth groups and trauma recovery groups highlights the need to examine both aspects of group behavior when examining the group effect on an individual group member's behavior. In addition, this study adds to a small number of studies (e.g., Bonito, DeCamp, Coffman, & Fleming, 2006; Paquin, Miles, & Kivlighan, 2011) that have used the actor-partner interdependence model to examine group and individual effects on individual group members' behavior, which accounts for the nonindependence of small group data.

It is important to address some of the limitations of the study. First, although the results involve time-series data, they are also correlational. Whereas, we can talk about the time ordering of effects it is not possible to make causal inferences. Second, because these results are based solely on a group leader observation measure, it is possible that the findings reflect the operation of mono-method bias (Campbell & Fiske, 1959). Future research on the relationship between group and individual effects on an individual group member's behavior should obtain measures of intimate behavior from outside observers or the group members themselves, and use multiple measures of intimate behavior. Finally, the results are based on a relatively small sample of groups. These results need to be replicated with larger samples.

Implications for Research

Whereas climate strength has begun to be studied (Schneider et al., 2002), this was the first study to examine group consistency as an

important component of group norms. In the climate strength literature, group consistency moderates the effect of the amount of a group dimension. It will be important for future research to replicate and extend this examination of group consistency. For example, we know little about the antecedents of group consistency.

The group's influence on the individual group member's behavior during sessions is an important area for further study. The APIM approach is a useful tool for conducting these types of analyses. Both the Bonito et al. (2006) study and the current study examined the group's influence on group member behavior. It will be important for future research to also examine the group's influence in affective and cognitive domains. For example, the APIM may be used to study emotional contagion in groups; does a group's amount of felt belonging influence the felt belonging of the individual group members? It would also be interesting to examine the group effect in different types of groups; is this group effect similar or different in task groups? We examined intimacy because of the importance of intimate behaviors in these types of interpersonal groups. It would also be important to analyze other types of behaviors that the group may affect.

Implications for Practice

Often theorists and practitioners talk about establishing norms as a focus that occurs early in the group and then recedes into the background. The results of this study point to the importance of continually paying attention to the group's behavioral norms, and emphasize the fact that establishing norms is an ongoing process.

In addition, findings from the current study suggest that rather than a more rigid "turn-taking" approach, group leaders may want to support consistent participation across group members each session, even if or when one (or a few) group member(s) becomes the focus of a session. This can be achieved by leaders making group-level interventions that reopen the floor (e.g., "what's going on for others right now?") or encouraging other group members to engage in intimate behaviors (e.g., asking another group member how she or he feels, disclosing observations about the unfolding group process,

or self-disclosing reactions to group content or process). Doing so may help to ensure that group members are engaged and invested during sessions, even when she or he may not be the "focus" of a particular session. Encouraging more consistent amounts of participation across group members during each session may minimize the chances of some members being less intimate therefore maximizing the therapeutic benefit for all group members.

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