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Relational depth as an indicator of group-process change: a daily-diary study in interpersonal training

Głębina relacyjna jako wskaźnik zmian w procesie grupowym:
badanie dzienniczkowe treningu interpersonalnego

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Abstract

Introduction and objective: This study aimed to explore relational depth as a key indicator of the development of group processes during a five-day interpersonal training. The focus was placed on how participants' experiences of relational depth changed from day to day throughout the training. In addition, the study examined whether specific relational qualities – such as openness, empathy, and understanding – could serve as early predictors of increased relational depth on subsequent days.

Materials and methods: Data were collected from 278 adult participants who completed the Relational Depth Frequency Scale (RDFS) daily over the five-day group training. To examine trends over time and predictive relationships across days, repeated-measures ANOVA and stepwise multiple regression were applied. **Results:** Perceived relational depth increased significantly over time, $F(4, 268) = 262.34, p < 0.001, \eta^2 = 0.797$, with a strong linear trend. However, regression analyses showed that relational qualities from prior days had limited predictive power. Only specific aspects – such as “understanding” on Day 1 and “openness” on Day 3 – emerged as significant predictors of later relational depth, yet the overall explained variance remained below 10%. **Conclusions:** The findings support the effectiveness of group-based interpersonal training in deepening relational experience. However, the results also point to the contextual and emergent nature of relational depth, which appears to depend less on prior relational states and more on present-moment dynamics.

Keywords: relational depth, interpersonal training, group process, daily diary study, psychological closeness

Streszczenie

Wprowadzenie i cel: Niniejsze badanie miało na celu zbadanie głębi relacyjnej jako kluczowego wskaźnika rozwoju procesów grupowych podczas pięciodniowego treningu interpersonalnego. Autorzy skoncentrowali się na tym, jak doświadczenia uczestników związane z głębią relacyjną zmieniały się z dnia na dzień w trakcie całego procesu. Dodatkowo sprawdzono, czy określone cechy relacyjne – takie jak otwartość, empatia i zrozumienie – mogą odgrywać rolę wczesnych predyktorów głębi relacyjnej w kolejnych dniach treningu. **Materiał i metody:** Dane zebrano od 278 dorosłych uczestników, którzy codziennie przez pięć dni wypełniali Skalę Częstotliwości Doświadczania Głębiny Relacyjnej (Relational Depth Frequency Scale, RDFS). Aby zbadać trendy w czasie i zależności predyktoryjne między dniami, zastosowano analizę wariancji z powtarzanymi pomiarami (ANOVA) oraz krokową regresję wielokrotną. **Wyniki:** Postrzegana głębina relacyjna istotnie wzrosła w czasie, $F(4, 268) = 262.34, p < 0.001, \eta^2 = 0.797$, wykazując wyraźny trend liniowy. Jednak analizy regresji wykazały, że cechy relacyjne z poprzednich dni miały ograniczoną moc predykcyjną. Tylko wybrane aspekty – takie jak „zrozumienie” w dniu 1 i „otwartość” w dniu 3 – okazały się istotnymi predyktorami późniejszej głębi relacyjnej, lecz ogólny

poziom wyjaśnionej wariancji nie przekroczył 10%. **Wnioski:** Wyniki potwierdzają skuteczność grupowego treningu interpersonalnego w pogłębianiu doświadczenia relacyjnego. Jednocześnie wskazują na kontekstualny i emergentny charakter głębi relacyjnej, która wydaje się w mniejszym stopniu zależna od wcześniejszych stanów relacyjnych, a w większym – od dynamiki obecnej chwili.

Słowa kluczowe: głębia relacyjna, trening interpersonalny, proces grupowy, badanie dziennikowe, bliskość psychologiczna

INTRODUCTION

Group training originated in the mid-20th century with Kurt Lewin's "T-groups", which examined communication, leadership, and role behaviour (Lippitt, 1949), as well as Carl Rogers's person-centred "encounter groups", which emphasised authenticity, empathy, and emotional expression (Rogers, 1957). In Poland, Mellibruda (1974) adapted this methodology into an interpersonal training approach. This intentionally initiated, intensive group experience is designed to develop communication competencies and intrapersonal qualities that foster more effective interpersonal understanding and self-awareness. It functions as a laboratory for experiencing, examining, and cultivating relationships with others, the group, and oneself (Mellibruda, 1987; Sokół-Jedlińska et al., 2019). Interpersonal training is intended for individuals without active emotional or communicative disorders who are capable of self-reflection, receptive to others, and committed to exploring personal and interpersonal dynamics, including psychologists, prospective therapists, helping professionals, team members, and individuals seeking to enhance their self-awareness and relational understanding (Sokół-Jedlińska, 2023; Sokół-Jedlińska et al., 2019).

The training is conducted in small groups of 10–14 participants over a five-day (40-hour) period, under the guidance of a non-directive trainer who fosters a safe and autonomous learning environment (Jedliński et al., 2008; Sokół-Jedlińska et al., 2019). Participants agree on norms, including confidentiality, sobriety, regulated openness, punctuality, and non-violence, and adopt first-person, non-judgmental, and feeling-focused communication (Sokół-Jedlińska, 2023). Throughout the training, they progressively engage with one another, observe and share emotional reactions, experiment with open contact, give and receive feedback, and support each other. Personal and group learning unfold in three phases: (1) orientation and dependency (*Forming*), (2) conflict and rebellion (*Storming*), and (3) cohesion and cooperation (*Norming*) (Tuckman, 1965). In Phase 1, with the trainer withdrawn, participants gradually share emotions and responses until differentiation and initial clashes emerge, marking the transition to Phase 2. Here, emotion-focused tools and the trainer's facilitation help navigate disagreements, showing that complex feelings can be expressed and heard without rupturing contact. Phase 3 is characterised by free self-expression, mutual (and even challenging) feedback, and support, which fosters closeness and gratitude (Jedliński et al., 2008).

Relational depth is "a state of profound contact and engagement between two people in which each person is fully real with the other, and able to understand and value the other's experiences at a high level" (Mearns and Cooper, 2005, p. xii). Originally studied in the therapist–client dyad, their qualitative research emphasised therapists' openness, empathic attunement, and sensitivity to non-verbal cues as essential conditions for depth. Knox and Cooper (2010) further confirmed that such moments correspond to clients' experiences of trustworthiness, genuineness, and positive regard. More recently, Di Malta et al. (2024) found that high relational depth in close relationships is linked to improved subjective well-being.

Group relational depth remains an underexplored phenomenon. Wyatt (2013) studied it through qualitative interviews with 17 practitioners – ten person-centred therapists and seven facilitators – focusing on moments of presence, authenticity, and deep understanding in groups. Using thematic analysis of field notes and participant writings, the researcher identified key conditions and expressions of depth. Lemaitre (2025) followed with semi-structured phenomenological interviews with eight experienced group therapists to examine how profound connections arise between therapist and members, among participants, and at the group level. Both retrospective, thematically driven studies underscore the need for future mixed-methods or quantitative research.

Interpersonal training provides an excellent opportunity to explore relational depth as a key indicator of group-process development. Its emphasis on authenticity, mutual understanding, openness, empathic attunement, and engagement aligns with Rogers's concept of the "close encounter" (Rogers, 1970, 1991). Within this environment, participants form immersive dyadic bonds – where profound contact, as described by Mearns and Cooper, can emerge – while also benefiting from the amplifying effects of multi-directional interactions. Furthermore, mutual understanding, present-moment engagement, and deep reciprocal contact gradually strengthen from the beginning to the end of the five-day programme, making interpersonal training a unique space for cultivating profound relational experiences.

This study aimed to explore relational depth as an indicator of how group processes develop over a five-day interpersonal training session. Drawing on Mearns and Cooper's (2005) definition of relational depth, daily changes in participants' perceptions of closeness within the group were assessed using the Relational Depth Frequency Scale (RDFS).

The study investigated whether these experiences showed linear growth. This research contributes to the growing literature on short-term relational dynamics by applying a daily-diary approach within a training-group setting.

METHOD

Participants and procedure

The study involved 278 adult participants. No demographic data were collected, as the analysis focused on group-level patterns rather than individual differences. This decision was made deliberately to minimise procedural intrusions that could affect participants' sense of relational safety and openness during the training. Nonetheless, based on internal enrolment records from the training centre, it can be estimated that most participants were in early to mid-adulthood (approximately 25–45 years old) and were professionally active. It is also estimated that around 75–80% of participants were women, which is consistent with the demographic composition typically observed in developmental and educational group formats of this kind.

The study was conducted between June 2023 and October 2024 during regularly scheduled training cycles at the INTRA Centre for Psychotherapy and Psychological Education (Warsaw, Poland). Data were collected from 23 interpersonal training groups, each consisting of 11 to 14 participants. All groups followed a five-day structure, with eight hours of interpersonal interaction each day, totalling 40 hours of training. Groups were categorised into two types: (1) open groups, composed of participants who did not know each other before the training, and (2) educational groups, consisting of first-year students enrolled in various psychological and psychotherapeutic training programmes. The dataset comprised eight open groups and fifteen educational groups.

All participants were screened before participation in accordance with standard procedures for developmental group formats. Individuals currently experiencing a mental-health crisis or presenting with severe psychological or personality disorders were excluded to prevent disruption of group dynamics. In open groups, participants registered voluntarily but were required to complete an individual qualification interview with a trained specialist from the INTRA Centre to assess readiness for group participation. In educational groups, participants had previously met similar psychological suitability criteria during the recruitment process for professional training programmes. Before the training began, all participants received detailed information about the study and provided verbal informed consent. They were informed that participation was entirely voluntary, anonymous, and would not affect their training in any way.

After each training day, participants completed the RDFS in paper-and-pencil format. To ensure anonymity, completed questionnaires were placed into specially prepared envelopes. Trainers did not review or become familiar with

participants' responses, either during the training or after its completion. This procedure was designed to preserve relational safety and authenticity within the group, particularly during its early stages, and to prevent any influence of the data-collection process on group dynamics. Although the same individuals participated throughout the five days, data collection was entirely anonymous, and no linkage was possible between individual responses across days. For this reason, only aggregated group-level patterns were analysed. No participants refused to take part in the study. Three individuals discontinued their participation due to withdrawing from the training itself. Thus, the completion rate remained very high across all five days.

The study received approval from the Institutional Ethics Committee at the university of the fourth author (Decision No.: KEBN 39/2025).

Measures

Relational depth was assessed using the RDFS (Di Malta et al., 2020). The study used the Polish version (Zarzycka et al., 2022), which was slightly adapted to fit the group-based training setting. Participants completed the scale at the end of each training day, indicating how often they experienced different forms of relational depth during that day's group sessions. Before completing the scale, participants were asked to reflect on their interpersonal experiences throughout the day and to specify how often they encountered moments described in each of the six statements. Responses were recorded on a 5-point scale from 1 (*never*) to 5 (*most of the time or all the time*). The items capture the essential elements of deep interpersonal encounters, including mutual presence, openness, emotional connection, and authenticity. An example item reads: "I felt that the other person and I were fully present with each other". Daily RDFS scores were calculated as the average of the six items. The Polish RDFS demonstrated strong internal consistency ($\alpha = 0.90$ for therapists, $\alpha = 0.81$ for clients) and a one-factor structure confirmed via confirmatory factor analysis. Partial metric invariance was found between therapists and clients. Convergent validity was supported by correlations with the total score of the Scale to Assess the Psychotherapeutic Relationship (STAR), reinforcing the interpretability of RDFS scores in relation to therapeutic relationship quality (Zarzycka et al., 2022). In the present study, the scale demonstrated high internal consistency across all five training days, with Cronbach's alpha coefficients ranging from 0.84 to 0.91, indicating strong reliability in this intensive, short-term group setting.

Statistical analysis

Statistical analyses were conducted using IBM SPSS Statistics, Version 29.0. The unit of analysis was the individual's daily response; that is, each RDFS score provided by a participant at the end of a training day was treated as a separate

observation. Because data collection was fully anonymous, responses could not be linked across days within individuals. Therefore, although the same participants took part across all five days, each day's data were treated as independent. To assess changes in relational depth over the five-day training period, a one-way analysis of variance (ANOVA) was employed. Post-hoc comparisons were conducted to evaluate the direction and consistency of changes in mean scores over time. Assumptions of normality were assessed using the Shapiro–Wilk and Kolmogorov–Smirnov tests, supplemented by visual inspection of histograms and Q–Q plots. Although statistical tests indicated deviations from normality for most variables, particularly on later training days, the distributions remained reasonably symmetrical and unimodal, especially in the initial days. Additionally, the sample size ($N = 272$) was sufficiently large to justify the application of parametric tests. Consequently, ANOVA was deemed suitable.

RESULTS

One-way ANOVA revealed a significant effect of training day on RDFS scores, $F(21, 1338) = 12.41$, $p < 0.001$, indicating that average levels of relational depth differed significantly across time. Post-hoc comparisons using the Bonferroni correction revealed that all pairwise differences in relational depth between training days were statistically significant ($p < 0.001$). Specifically, each successive day demonstrated a significantly higher mean relational depth score than the previous one, indicating a consistent and cumulative increase in relational depth across the training period. Levene's test for homogeneity of variances was non-significant ($p = 0.849$), suggesting no statistically meaningful differences across days. Fig. 1 presents the mean frequencies of relational-depth experiences across the training days, along with their corresponding standard deviations.

DISCUSSION

The study examined the day-to-day development of relational depth as a potential indicator of group-process change during a five-day interpersonal training. Perceived relational depth increased throughout the training, with the highest levels reported on the final day.

The observed increase indicates that relational depth responds to the gradual development of trust, emotional safety, and group cohesion. As interpersonal dynamics matured, participants appeared increasingly willing and capable of engaging in moments of genuine connection, resulting in a cumulative intensification of relational depth that was most evident in the final session. This trajectory aligns with the understanding that relational depth tends to emerge and thrive in environments that support openness, acceptance, and emotional authenticity (Mearns and Cooper, 2005). The partial continuity observed in the latter part of the training further suggests that once depth consolidates, it may attain short-term stability, reflecting the deepening integration of group processes.

This study has several limitations that should be acknowledged. First, because data collection was anonymous, it was not possible to link participants' responses across days. As a result, repeated-measures or within-person analyses could not be conducted, and intraindividual changes in relational depth could not be directly modelled. Future research may benefit from using pseudonymised or coded data that preserve anonymity while allowing for multilevel or longitudinal analysis.

Second, demographic data were not collected, limiting the ability to explore how individual-level factors – such as age, gender, or prior experience with group work – might influence relational depth. This decision was made to protect participants' anonymity and maintain the emotional safety of the training environment. Given the intensive, relationally vulnerable nature of the group process, procedural elements that might inhibit openness or cause discomfort were intentionally avoided. While this approach supported authenticity and minimised disruption, it reduced the generalisability of findings and precluded analysis of potential individual-level moderators. Future studies may therefore benefit from including selected demographic indicators and considering additional non-situational, individual-level variables – such as personality traits, attachment style, relational maturity, prior group experience, or motivation for participation. Incorporating these factors may help explain why some individuals engage in relational depth more readily or consistently, and would enable the development of richer, multidimensional predictive models.

Third, while the repeated administration of the same 6-item scale (RDFS) over five consecutive days enabled close monitoring of relational depth as it unfolded, this design may have introduced measurement-related effects such as habituation, item familiarity, or reflective bias. Although these effects may have subtly influenced responses, they may also reflect a natural integration of relational awareness during immersive group work. This dual role should be considered when interpreting the results.

Finally, although the training groups followed a standardised structure and shared institutional supervision, they were facilitated by different professionals and comprised diverse participant compositions. These contextual factors may have contributed to differences in group climate, norms, and the expression of relational depth. While all facilitators adhered to a common framework, variables such as facilitator experience, interpersonal style, or leadership dynamics were not systematically accounted for. Future research should therefore consider the facilitator profile as a potential contextual indicator influencing group outcomes.

These findings have implications for both therapeutic and non-therapeutic contexts. In therapy settings, group-based interventions may allow clients to form meaningful connections with others in ways that complement one-on-one therapy. As group psychotherapy unfolds, relational depth is likely to emerge, and watching its dynamics in action can provide valuable insights. In non-therapy settings, such as

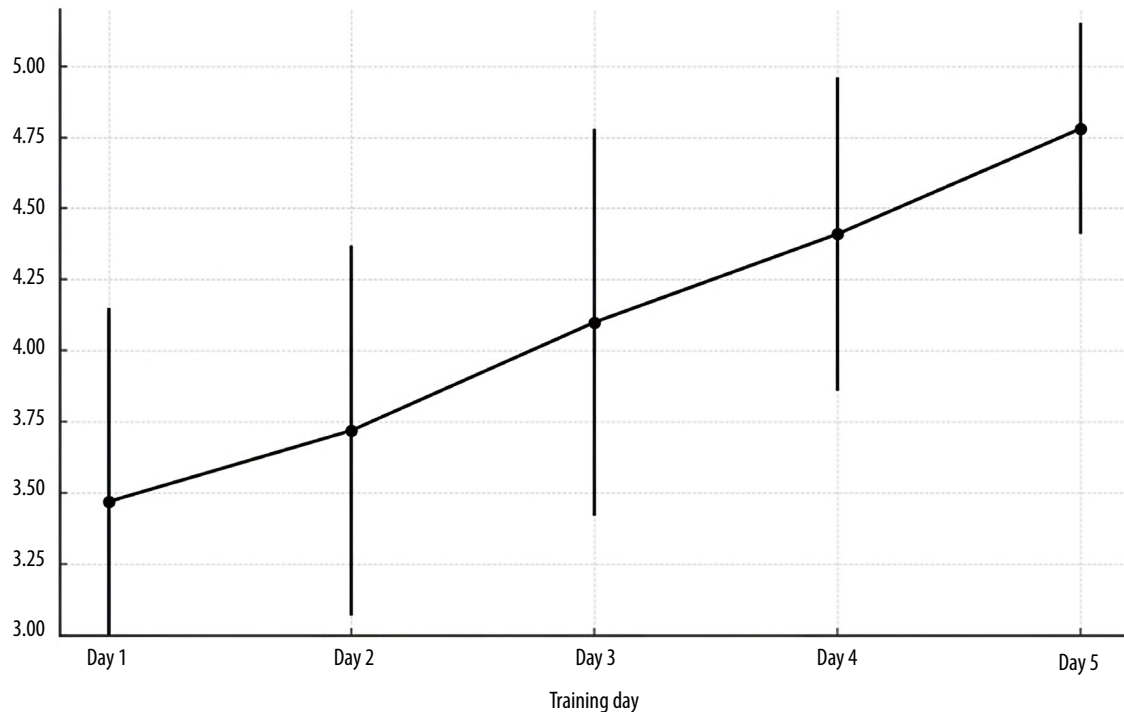


Fig. 1. Mean relational depth scores (RDFS) across five consecutive training days, with error bars representing standard deviations

schools or organisations, group-training programmes that emphasise emotional openness and genuine communication may help individuals form stronger connections and enhance their personal and professional development. Beyond its role as a process-sensitive indicator, relational depth can also be conceptualised as a proximal target of interpersonal training. Although the explicit aims of such training typically focus on enhancing self-awareness, interpersonal sensitivity, and the capacity to engage in authentic encounter, these aims are inherently linked to the development of moments of mutual presence and emotional contact that define relational depth. From this perspective, an increase in relational depth across training days may be understood not only as evidence that the group is functioning well, but also as an expression of what the training is designed to cultivate.

CONCLUSION

This study demonstrates that intensive interpersonal training can consistently enhance relational depth. The steady progress observed over five consecutive days highlights the effectiveness of structured group work in fostering deeper, more authentic interpersonal connections.

Conflict of interest

The authors do not report any financial or personal connections with other persons or organisations which might negatively affect the content of this publication and/or claim authorship rights to this publication.

Ethical approval

All procedures involving human participants were conducted in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. The research received approval from the Research Ethics Committee at the John Paul II Catholic University of Lublin, Poland (Decision No.: KEBN 39/2025).

Human and animal rights

This article does not contain any studies with animals performed by any of the authors.

Informed consent

Informed consent was obtained from all individual participants included in the study.

Data availability statement

The datasets generated and analysed during the current study are not publicly available due to the sensitivity of interpersonal data collected in anonymous group settings and the absence of participant consent for open data sharing. However, the corresponding author provides summary statistics and analysis scripts upon reasonable request.

Author contribution

Original concept of study: JSJ, KJ. Collection, recording and/or compilation of data: JSJ, KJ, JKM. Analysis and interpretation of data: JKM, BZ. Writing of manuscript: JSJ, KJ, JKM, BZ. Critical review of manuscript: BZ. Final approval of manuscript: JSJ, KJ, JKM, BZ.

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