Leader development using group dynamic interventions: A systematic literature review

No reliable conclusions can be drawn on whether group dynamic interventions that are designed to enhance individual leadership development are effective. Given the available evidence, we recommend a focus on leadership behaviours related to interpersonal aspects, write Gerry Larsson and colleagues.

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Research on leadership is extensive, yet studies on the effectiveness of leadership development interventions are sparse and inconclusive (Day, 2000; Day et al., 2014; Dvir et al., 2002). This tendency may be regarded as surprising given the amount of time and money spent on such inputs. To illustrate, Grint (2007) estimated the yearly sum to amount to between $15 and $50 billion worldwide.

One reason for the lack of research may be the complexity of leadership development in the realm of work life. Time limits for inventions are often tight, the leaders and their co-workers face numerous job tasks and responsibilities simultaneously, antecedent conditions and outcomes at various levels may be difficult to assess, etc. Another reason may be the lasting effects of T-groups' or sensitivity training groups' criticism (Yalom & Lieberman, 1971). In such groups, participants learn about themselves through interaction with each other, including individualized feedback and role play. Such interventions were much used in the 1960s and 1970s but have almost disappeared since then. (See, for example, the review by Campbell & Dunnette, 1968, included in this study.) All combined, these tendencies indicate that ideal research designs are often difficult to implement. Such designs are suggested to be theory-based and longitudinal, they have a random assignment of participants to intervention and control groups, they use valid and reliable multilevel measurements of antecedents and outcomes in a variety of organisational contexts, etc. (Day et al., 2014; Reichard & Avolio, 2005).

There are several different approaches to interventions that are aimed at enhancing individual leadership development. Examples include lectures and readings, experiential training, games and simulation, job rotation, coaching, and mentoring (Bass & Bass, 2008). A special case involves interventions where group dynamic

exercises are used to accomplish the leadership development goal. Such interventions are typically designed to help leaders learn about themselves as well as interpersonal relationships. One illustration is a popular leadership development program in Sweden that springs from the Swedish Armed Forces and the Swedish Defence University. It is called Understanding Group and Leader (UGL), and since it began in 1981, around 100,000 people have participated. In a small country like Sweden, with about 10 million citizens, this is a relatively significant number. UGL is based on group development (e.g., Bion, 1961; Schutz, 1961; Tuckman, 1965; Wheelan, 1994) as well as on the Developmental Leadership model (Larsson et al., 2003). An important part of the one-week course entails both peer learning and learning to manage differences. The group is therefore composed of people from different work places and backgrounds, professions, ages, and genders. A course group consists of eight to twelve (initial) strangers who interact for five days in an off-work location. Two specially trained and qualified facilitators run the course.

The general lack of research on the effects of leadership development interventions also appear to apply to interventions where group dynamic exercises are used to enhance the development of individual leaders. This connection is notable considering the popularity of such courses, as illustrated by UGL. Given this situation, we aimed to synthesize the existing research on group dynamic interventions that are designed to enhance individual leadership development.

Method

The following questions formed the basis of the review: (1) What relevant studies on group dynamic interventions that are designed to enhance individual leadership development can be identified? (2) Which study designs have been used? and (3) What results have been reported on the effect of group dynamic interventions that are designed to enhance individual leadership development?

A systematic mixed studies review (Polit & Beck, 2012) with an integrated design (Sandelowski, Voils, & Barroso, 2006) was undertaken to integrate and synthesize findings from qualitative and quantitative studies and from literature reviews. The literature review was also based on the principles established by the Cochrane Collaboration (Higgins & Green, 2011) and the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Moher, Liberati, Tetzlaff, Altman, & The PRISMA Group, 2009).
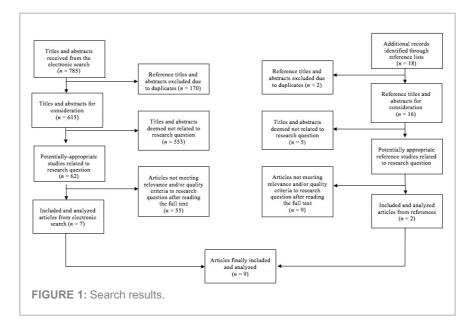
Given the scope of the review questions and the limited number of studies using the gold standard randomized control trials design, the methodological guidelines mentioned above were tailored to the integrated design. The reviews of Kennedy et al. (2014), Larsson, Berglund, and Ohlsson (2016), and Sansdalen, Hov, HØye, Rystedt, and Wilde-Larsson (2015) also methodologically inspired our review.

The review steps could be summarized as follows: (1) identification of criteria for including studies; (2) identification of literature according to an explicit search strategy; (3) selection of studies according to inclusion criteria; (4) conduction of data extraction by all authors; and (5) generation of a hierarchical system of codes, categories, and superior categories from data (the content of the selected articles) in an ongoing and iterative thematic analysis.

Search strategy and results of search

The search strategy consisted of a combination of the following two sets of descriptors: (1) ("leader development" OR "leadership development" OR "leadership training" OR "personal development"); and (2) step 1 AND (group* OR "small group*" OR "temporary group*" OR "working group*" OR cohesion OR trust OR "group dynamics").

The literature was first retrieved by identical searches in the following databases in May 2018: CINAHL, ERIC, Medline, PsycINFO, and Sociological Abstracts (covering the entire time period of each database). We limited our search (inclusion criteria) to peer-review research articles. Only articles written in English were called for. We conducted the searches using the descriptors listed above, specified as keywords as well as free text words. The strategy also included a hand search of the reference lists in the studies that were selected from the electronic search.

FIGURE 1: Search results.

Selection of literature – A flow chart (Figure 1) shows the identification and selection process as recommended by Moher et al. (2009). The electronic database searches identified 785 records, with 18 additional records found in the reference lists. This identification process yielded a total of 631 records after duplicates had been removed. Titles and abstracts were then screened to ensure that the inclusion criteria and study aim were met. As a result, 558 records were rejected because they did not involve group-based interventions that were designed to enhance individual leadership development. Thus, 73 articles remained. These were assessed in full text. From there, an additional 64 records were rejected because they were evaluated as having low levels of relevance. We made no specific assessments of group dynamic interventions that were designed to enhance individual leadership development or that were rated as being of low quality. (See Review process below.) This process rendered nine papers for inclusion. (See Figure 1.)

Review process and quality assessment – We assessed the quality of each included study using a contextually adapted version of Nordström's and Wilde-Larsson's (2006) scheme, which, in turn, is a modified version of the Critical Appraisal Skills Programme Tools (CASP) for qualitative and quantitative studies (Public Health Resource Unit, 2006), and AMSTAR. AMSTAR is a tool used to assess the methodological quality of systematic reviews (Shea et al., 2007). The scoring form used included data on study design, participant characteristics, settings, ethical considerations, analyses, and findings. Based on these data, studies were then rated to be of high, medium or low quality. All steps in the selection process and the appraisal and data extraction were performed by two or three independent researchers, as recommended by Higgins and Green (2011). Any differences or uncertainties were discussed by the research team as a whole (four members) until agreement was reached.

We synthesised and analysed the extracted findings according to the analysis stages specified by Whittemore and Knafl (2005). This descriptive thematic analysis consists of data reduction, data display, data comparison, conclusion, and verification. The format of the data reduction and display steps was guided by the system used. (See above.) The comparison step then showed great resemblances to the process titled "open coding" in the constant comparative method tradition (Glaser & Strauss, 1967). Coding of the data displays took place and codes regarded as related were combined into categories. Following this coding process, we compared categories and developed superior categories. We constantly checked codes, categories, and superior categories against the data displays and original articles.

Results – tabular form

A summary of the articles that were finally included and analysed is given in Table 1.

TABLE 1: Description of selected studies in the literature review.

Author	Study group(s)	Intervention	Design	Summary of relevant findings
Black & Westwood (2004)	One group with nine team leaders in health care	Three sessions, each 1½ days long	Qualitative, retrospective study	The participants stated the training had benefited their: (1) understanding others as people or being understood as a person, (2) formation of personal connections with others, (3) a sense of belonging/acceptance/inclusion, (4) a sense of safety and trust in communication, (5) sensitivity to perceived level of team member commitment, (6) an appreciation of the facilitation of the group, (7) an experience of group morale, both increased and decreased, and (8) reciprocity and demonstration of support.
Campbell & Dunnette (1968)	Numerous T-groups[a] consisting mostly of lower-level mangers; Usually 10–15 participants in each group; Several hundred participants altogether	Group dynamic T-group[a] interventions	Review	Some support of: 1. Increased self-awareness concerning your own behaviour and its meaning in a social context. 2. Increased sensitivity to the behaviour or others. 3. Increased awareness and understanding of the types of processes that facilitate or inhibit group functioning. 4. Heightened diagnostic skills in social, interpersonal, and intergroup situations. 5. Increased action skills. 6. Learning how to learn.
Cherniss, Grimm, & Liautaud (2010)	170 entry-, mid- and executive-level U.S. mangers from nine companies; 81 participants in 9 experimental groups and 89 in a control group	Standardized procedure with monthly three-hour meetings over a two-year period	Longitudinal, randomized study with intervention and control groups	The intervention groups improved more than the controls on all emotional intelligence variables.
Clark, Wood, Kuehnel, Flanagan, Mosk, & Northrup (1985)	27 "first-line" or "second-line" supervisors within health care, 19 in the experimental group and 8 in the control group	One day (approximately eight hours) of lecture, demonstration, practice, and feedback	Longitudinal intervention (one day) with control group design	The experimental groups' post-training scores improved significantly from their pre-training level on 8 of 14 specific behavioural categories, while the control group did not change significantly from their pre-training level.
House (1967)	Numerous T-groups[a] consisting mostly of lower-level managers; Usually 10–15 participants in each group; Several hundred participants altogether	Group dynamic T-group[a] interventions	Review	Some support for: 1. Better listening. 2. More supportive behaviour. 3. More considerate managers. 4. More sensitive people. 5. Less need for dependence. Risks of anxiety-provoking exercises. Requires careful selection of participants and trainers.
Author	Study group(s)	Intervention	Design	Summary of relevant findings
Hunt & Baruch (2003)	High-level leaders (n = 252) from 48 organisations; 14 groups with approx. 18 participants in each group	Intensive training five days in a row using a standardized program	Longitudinal pre/post questionnaire study	The skills most responsive to training were easy to describe, stated clear objectives and outcome criteria, and, in practice, could be segmented into a step-by-step-step routine based on a memorable model or theory. The "soft and feely" skills proved to be the most difficult to statistically improve.
Hurley (1989)	Small mixed-gender groups of relative strangers; In total, 63 groups with 374 college students; Approx. 8 participants in each group	Two 90-minute sessions a week for 10 weeks and a 12-hour session during the third and seventh weekends; In addition, a 50-minute lecture discussion each week	Longitudinal questionnaire study with two assessments (early and late in the intervention)	The participants indicated that the meetings were effective. On the item "Everything considered, I gained something of value from today's session," given at the end of each session, group members were more positive than leaders: 4.49 on a five-point scale, M = 4.49 vs. 4.23. Participants also scored higher on a 10-item affiliative composite scale than the leaders did.
Hurley (1997)	Small mixed-gender groups of relative strangers; In total 111 groups and 868 participants (psychology students); Approx. 8 participants in each group	Two 90-minute sessions a week for 10 weeks and a 12-hour session during the third and seventh weekends; In addition, a 50-minute lecture discussion each week	Longitudinal pre/post questionnaire study with two assessments (early and late in the intervention)	1. Gains in self-acceptance. 2. Several outcome measures correlated negatively with the percentage of males in groups. 3. Perceived group leader's warmth contributed positively.
Wolf (1996)	144 registered nurses; Number of groups and participants in each group unclear	A four-day leadership development program	Longitudinal pre/post intervention comparison	Significant leadership style changes, specifically the majority of participants increased their scores of leadership styles that are more participative and follower-directed in that they employ two-way communication. The author also presents a critical result evaluation from an adult learning perspective.

[a]T-group or training group (sometimes referred to as sensitivity-training group, human relations training group, or encounter group

Table 1 shows that most studies are carried out among lower-level leaders, followed by mid- and executive-level leaders and student groups. The selected articles include six longitudinal studies, two literature reviews, and one retrospective, cross-sectional study (a qualitative interview study). The dominant study findings are summarized below.

Results – summary and discussion of themes generated

In the following sections, we present the superior categories together with their underpinning categories and codes.

TABLE 2: Superior categories (themes), subcategories, and

examples.

Theme 1. Intervention focus	
Categories	**Subcategories**
Management skills	Problem-solving techniques
	Planning and structuring skills
Inner processes	Self-awareness
	Self-acceptance and trust
	Sensitivity to interpersonal processes
Interpersonal competence development	Emotional and social competence
	Interpersonal communication
	Group morale and support
	Conflict management
	Assertiveness training

Theme 2. Enablers and neutralizers		
	Examples of indicators	
Categories	**Enablers**	**Neutralizer**
Group characteristics	Group size – 12 or less	Members who are reluctant to disclose information about themselves
Facilitator qualities	Warmth	Poor structuring skills
Goals and focus	Clear and understandable goals	Lack of clarity concerning scales used as part of the intervention
Safe climate	Feedback and support	Cold atmosphere between group members
Practice	Role playing	Lack of practice of skills

Table 2 shows the two superior categories (themes) generated in the qualitative analysis. The first theme is labelled *"intervention focus."* It consists of the categories "management skills," "inner processes," and "interpersonal competence development." These categories are, in turn, underpinned by several subcategories.

The category "management skills" deviates from the other two categories by focusing on specific management-related practical skills such as problem-solving techniques and planning and structuring skills. Interventions tailored to the improvement of this type of skills show the most clearly defined effectiveness results. Such outcomes were explicitly addressed in three of the nine studies, and all report significant improvements (Campbell & Dunnette, 1968; Clark et al., 1985; Hunt & Baruch, 2003). Group dynamic processes *per se* may be less important in such

interventions. Whereas group heterogeneity is generally favoured in group dynamic interventions (see below), group homogeneity appears to be fruitful for this type of targeted training (Knauss, 2005). One example would be to pick a group of newly appointed middle managers in a large organisation and provide them with this type of skills training. Drawing on findings from research on psychoeducational interventions (Free, 1999), we assume that management skills training can benefit from using a combination of large group lectures and small group hands-on training sessions. This type of intervention will not be discussed further here. If designed well and carried out proficiently, such interventions appear to be effective.

The category "inner processes" is a synthesis based on the three subcategories "self-awareness" (Campbell & Dunnette, 1968; Cherniss, Grim, & Liautaud, 2010), "self-acceptance and trust" (Black & Westwood, 2004; Campbell & Dunnette, 1968; Cherniss et al., 2010), and "sensitivity to interpersonal processes" (Black & Westwood, 2004). Common underlying aspects here are intentions to increase participants' awareness of themselves, to strengthen their self-confidence in their leadership roles, and to make them more aware of group dynamic processes. Looking at the category as a whole, five of the nine studies addressed inner processes. Three cases reported clear favourable results (qualitative or quantitative). In two cases, the results were unclear.

No clear effectiveness pattern in the results was found related to the third and final superior category "intervention focus," namely "interpersonal competence development." This consists of the five subcategories "emotional and social competence" (Black & Westwood, 2004; Cherniss et al., 1968), "interpersonal communication" (Clark et al., 1985, Hurley, 1989, 1997), "group morale, feedback, and support" (Black & Westwood, 2004; Campbell & Dunnette, 1968; House, 1967, Hurley, 1989, 1997), "conflict management" (Black & Westwood, 2004), and "assertiveness training" (Wolf, 1996). The two last-mentioned subcategories show resemblances to the specific management-related skills discussed above. However, they focus more on interpersonal aspects. Only one study each explicitly addressed them. In those articles, the effectiveness remained unclear, and they will not be further discussed here.

The evidence value of the reported effectiveness of interventions that aim to develop "softer" interpersonal issues (e.g., emotional and social competence, interpersonal communication, and leaders' ability to enhance group morale, feedback, and support) is evaluated as limited (Hunt & Baruch, 2003). Combined, eight of the

articles addressed such issues, with positive findings in five, a mixed outcome in three, and negative findings in two. (The same study could report different outcomes on different subcategories.) Possible reasons for this discrepancy include these aspects being more abstract and difficult to translate into clear goals and it taking longer than a few days' intervention to reach valid leader development here (Hunt & Baruch, 2003). Thus, given time-limited interventions (one week or less) and the available evidence, we recommend a focus on leadership *behaviours* related to interpersonal aspects.

The second generated superior category (see Table 2) is labelled *"enablers and neutralizers."* Related to individual and/or group processes and outcomes, enablers consist of favourable promoting aspects and neutralizers include offsetting or counteracting aspects. This second category consists of the subcategories "group characteristics," "facilitator qualities," "goals and focus," "safe climate," and "practice." The foundation of these subcategories is less stable compared to the subcategories under the superior category *"intervention focus."* Thus, rather than speaking of subcategories here, each category has just a few indicators.

Regarding the category "group characteristics," one reported enabler is group size. Smaller groups of twelve or less, preferably strangers to each other at the onset, are recommended (Campbell & Dunnette, 1968; Hurley, 1997). Neutralizers consist of group members who are "disorganized" and introverts who are reluctant to disclose information about themselves and who are less responsive to feedback (Hunt & Baruch, 2003, p.746). Groups comprised of mature and high-performing leaders may face a different measurement problem. They have favourable scores already at the onset of the intervention and so what is known as a ceiling effect may occur. This means that many of these participants have scores at or near the highest possible value, which constrains the amount of upward change possible.

Two indicators support the category "facilitator qualities." The first emphasizes "warmth" on the part of the intervention facilitator (Black & Westwood, 2004; Campbell & Dunnette, 1968). The second indicator encompasses the professional structuring of the intervention and the skills used in preventing and resolving conflicts (Black & Westwood, 2004). Both these indicators are associated with perceived intervention effectiveness.

The category "goals and focus" exhibits two indicators. First, the intervention should have understandable and clear goals (Hunt & Baruch, 2003). Second, the focus should be on the here and now. One assessment-related neutralizer was also found. Lack of clarity concerning measurements used as part of the intervention,

applicable to measures of interpersonal qualities in particular, was mentioned. An example is use of diffuse items like "is good at listening" (Hunt & Baruch, 2003).

The category "safe climate" has enablers dealing with reciprocity between group members when it comes to providing personal disclosure, feedback, and support (Black & Westwood, 2004; Campbell & Dunnette, 1968). The last category, "practice," emphasizes step-by-step routines based on theory, role playing, and repeated practice of skills (Clark et al., 1985; Hunt & Baruch, 2003).

Conclusion

The most striking result of this systematic literature review is the scarcity of studies, and more recent ones in particular. Consequently, no reliable conclusions can be drawn on whether group dynamic interventions that are designed to enhance individual leadership development are effective. However, in the case of T-groups, it should be noted that two of the sources found were research reviews summarizing the findings of several empirical studies. Two additional factors add to the difficulty in evaluating the effect size of the reported interventions. One factor is related to the subject area. The field of individual leadership development is broad and the studied interventions focused on different aspects of such development. To illustrate, none of the nine selected studies addressed all of the identified subcategories. Another factor is conceptual and methodological. Different labels for similar or nearly similar concepts were used. The same applied to measurement scales. Thus, more research is necessary following the guidelines of Day et al. (2014) and Reichard & Avolio (2005), which the introduction section summarized.

Given the above-mentioned problems, four tendencies could still be identified. First, interventions involving more practical management-related skills (e.g., problem-solving techniques) appear to be effective. However, the group dynamic element in this kind of intervention appears to be of secondary importance.

A second tendency is that interventions focusing on inner processes (e.g., self-awareness, self-acceptance, and sensitivity to group processes) appear to have some favourable effects. Third, little evidence was found regarding the effectiveness of interventions focusing on "soft" interpersonal aspects (e.g., emotional and social competence, interpersonal communication, and the leader's ability to enhance group morale, feedback, and support). Fourth, and finally, favourable conditions among the five identified enablers and neutralizers—group characteristics, facilitator qualities, goals and focus, safe climate, and practice—are assumed to be a necessary

factor for effective intervention outcomes.

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Citation

Abstract

Leader development using group dynamic interventions: A systematic literature review

This literature review aimed to synthesize the existing research on group dynamic interventions that are designed to enhance individual leadership development in organisations. Such interventions are typically intended to help leaders learn about both themselves and interpersonal relationships. A systematic mixed studies literature review with an integrated design was undertaken. The selection process resulted in nine articles that met the inclusion criteria. The scarcity of studies means that no reliable conclusion could be drawn on the sizes of effects and, thus, whether group dynamic interventions are effective or not. Given this situation, four tendencies could still be identified. First, interventions involving practical skills (e.g., problem-solving techniques) appear to be effective. Second, interventions focusing on inner processes (e.g., self-awareness, self-acceptance, and sensitivity to group processes) appear to have some favourable effects. Third, little evidence was found regarding the effectiveness of interventions aimed at improving leaders' interpersonal skills. Fourth, identified enablers and neutralizers include group characteristics, facilitator qualities, intervention goals and focus, a safe climate, and opportunities for practice. The lack of evidence regarding effectiveness does not mean that group dynamic interventions are ineffective. It means only that more research is necessary to evaluate this type of developmental intervention.

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