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Fostering Cohesion in Volunteer Teams: Leadership Processes in Nonprofit Sport Organizations

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Abstract

This study addresses a persistent difficulty faced by many organizational leaders: how to build and sustain workforce cohesion. By situating the investigation within sports club volunteering, it examines how leaders can strengthen cohesion among volunteer groups. The outcomes offer insights that extend beyond this context and can be applied in a variety of organizational environments. A multilevel research design was employed to examine how autonomy-supportive and structuring leadership practices influence social and task cohesion at the group level in volunteer teams. The sample consisted of 557 volunteers embedded within 52 nonprofit sports clubs in the Flemish region of Belgium, providing a solid empirical foundation for the analysis. The results show that regular volunteers function as “true groups”, characterized by notable differences between groups in social and task cohesion, alongside strong agreement within groups. In addition, autonomy-supportive leadership emerged as a key predictor of cohesion, positively associating with both social and task cohesion at the group level. The study highlights that volunteer teams, like paid teams in for-profit organizations, actively engage in interpersonal exchanges that foster a shared sense of unity and goal alignment. Such interactions can be strengthened when leaders cultivate an autonomy-supportive climate in which individuals feel confident to express opinions and contribute ideas. The findings further suggest that leadership effectiveness is contingent on both task demands and contextual conditions, with structuring behaviors also playing a meaningful role. These insights enable leaders across different organizational settings to support the development of cohesive groups more effectively.

Keywords: Autonomy support, Nonprofit, Self-determination theory, Structure, Volunteer group cohesion

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Introduction

Across many organizations, leaders continue to struggle to manage and retain their workforce effectively [1, 2]. A central factor linked to workforce performance and commitment is group cohesion [3-5]. Within organizations, cohesion refers to both the interpersonal relationships among members and their shared commitment to collective objectives. When cohesion is high, individuals tend to function more effectively together, which is associated with stronger performance outcomes and improved retention [3-5].

This study primarily aims to examine which leadership styles are most effective in fostering group cohesion. The empirical context is sports club volunteering, in which board members assume leadership roles. These leaders rely heavily on volunteers who perform essential roles such as administrative support, facility maintenance, and coaching, typically with little or no



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financial reward [6]. To understand how cohesion can be enhanced in this setting, we adopt a multilevel analytical approach that generates insights relevant not only to sports clubs but also to broader organizational contexts.

Before analyzing how leadership relates to cohesion, it is necessary to clarify the concept and unpack its dimensions.

Literature review

Group cohesion: a multi-dimensional construct

Group cohesion is generally conceptualized as an ongoing, evolving process through which individuals remain integrated and collectively committed to both goal attainment and socio-emotional fulfillment [3]. Rather than being a single attribute, it is widely regarded as a multi-dimensional phenomenon, with social and task cohesion representing its core components [4, 5, 7]. Social cohesion concerns the extent to which members experience mutual liking and enjoyment in each other's presence, which fosters emotional attachment and a shared sense of belonging [7]. Task cohesion, in contrast, reflects the collective commitment to achieving group objectives, emphasizing coordination, communication quality, and joint effort toward performance outcomes [5].

Balancing these two dimensions is often complex and requires careful attention [5, 8]. Groups may sometimes drift toward prioritizing social harmony, investing heavily in interpersonal relationships at the expense of task progress. Alternatively, a strong focus on task execution without sufficient relational investment may weaken interpersonal bonds and generate feelings of social distance among members. As such, groups that effectively integrate both dimensions are more likely to develop stable dynamics, achieve higher performance, and successfully reach shared objectives.

Existing research consistently underscores the relevance of both cohesion dimensions. In volunteer environments—the focus of this study—quantitative evidence indicates that volunteers, including those in sports clubs, who report stronger levels of both social cohesion [3, 7] and task cohesion [3, 4] tend to demonstrate higher effectiveness, greater satisfaction, and stronger retention intentions. Similar patterns have been confirmed in meta-analytic studies across diverse contexts, including corporate teams, military units, and sports organizations [4, 5]. Complementing this, qualitative research in sports settings has emphasized that maintaining equilibrium between the two forms of cohesion is critical; excessive task focus can heighten performance-related stress, whereas overly strong social cohesion may create conformity pressures within the group [9].

Leadership and cohesion

Establishing and maintaining a balanced cohesion profile requires effective leadership intervention [10]. Leaders can influence this balance by integrating both relationally oriented and task-focused leadership behaviors, thereby supporting environments that simultaneously encourage interpersonal connection and ensure task accomplishment.

Although leadership within volunteer teams remains relatively under-investigated see [6], its relevance to group cohesion has been widely acknowledged across multiple research streams. Studies indicate that leadership is particularly influential in shaping social cohesion within military contexts [11], task cohesion in organizational work teams operating in the for-profit sector [12], and both dimensions of cohesion in sports teams [13].

Despite this growing body of evidence, many studies have not clearly differentiated the distinct effects of relationship-oriented versus task-oriented leadership on social and task cohesion, even though this distinction is crucial for understanding leadership's role in cohesion formation [10]. Furthermore, cohesion has often been treated as an individual-level perception, despite increasing recognition that it is fundamentally a shared, collective experience among group members [14]. To properly examine cohesion as a collective construct, a multilevel analytical approach is required [14]. This allows researchers to determine whether groups qualify as “true groups”, meaning socially interactive units characterized by shared cohesion perceptions, typically evidenced through meaningful between-group differences. In addition, this perspective enables investigation into whether group-level leadership—understood as the collective climate shaped by leaders through consistent behavioral patterns toward members—can influence these shared cohesion experiences.

Examining the role of leadership in volunteer group cohesion: a multilevel perspective using Self-determination theory

Responding to existing shortcomings in the literature on leadership and cohesion, this study aims to develop a layered, comprehensive understanding of how leadership contributes to group cohesion, particularly within voluntary sports organizations. To do so, Self-determination theory SDT; [15, 16] is used as the guiding framework to deepen understanding of how leadership styles oriented toward relationships and tasks are connected to volunteers' experiences of both social and task cohesion in sports club settings. SDT is a widely recognized meta-theory of motivation that distinguishes between two key leadership orientations: autonomy-supportive (i.e., relationship-oriented) and structuring (i.e., task-oriented) styles [17, 18]. Autonomy-supportive leaders tend to adopt an open, receptive, and adaptable stance toward volunteers' needs, interests, and preferences. In volunteer environments, this is particularly important, as individuals are more willing to contribute time

and effort when they feel ownership and empowerment, which strengthens both motivation and well-being within the organization [1, 2].

Alongside autonomy support, SDT emphasizes the importance of structure [18]. This is achieved when leaders ensure tasks match volunteers' capabilities and offer guidance and support when needed. Even in flexible volunteering environments, the provision of structure remains crucial for enabling volunteers to function effectively, perform well, and achieve shared objectives.

This study employs multilevel analytical techniques to explore how autonomy-supportive and structuring leadership behaviors relate to group cohesion. More specifically, the analysis focuses on the group level, examining whether consistent leadership behaviors—expressed through autonomy support and structure—are associated with volunteers' shared perceptions of cohesion [14]. The hypotheses are outlined below:

First, we propose that volunteers, although operating in less formally regulated environments than employees in for-profit organizations, still function as true groups characterized by collectively shared perceptions of cohesion [19]. These shared perceptions are shaped by both formal interactions (e.g., meetings) and informal exchanges (e.g., social activities) within the organization (i.e., H1; [3]).

Second, we argue that nonprofit leaders, despite having less formal authority than leaders in for-profit organizations, can still influence collective perceptions of cohesion [6]. Building on the importance of fostering volunteer autonomy [1, 2], we suggest that leaders who consistently empower volunteers by providing options, explaining decisions, and valuing their input are more likely to strengthen cohesion in volunteer teams. This approach is expected to primarily enhance social cohesion, as empowered volunteers tend to engage more collaboratively and work more harmoniously toward shared goals (i.e., H2a).

In addition, given the necessity of structure in nonprofit settings [18], we propose that leaders who offer clear guidance, monitor task execution, and provide ongoing constructive feedback will positively influence overall cohesion. This leadership style is expected to be especially relevant for strengthening task cohesion, as volunteers working within clear structures are more likely to show stronger task commitment and higher motivation to achieve collective goals (i.e., H2b).

Materials and Methods

Sample

The dataset for this study was collected from nonprofit sports clubs located in Flanders, the Dutch-speaking region of Belgium. In Belgium, the sports sector represents a major domain of volunteer activity, accounting for 18.2% of all volunteering engagement [20]. This corresponds to more than 735,000 individuals, or 7.8% of the population aged 15 and above, who are actively volunteering. On a global level, sports rank among the five most significant volunteering sectors, underlining their broad relevance and impact [21].

To recruit participating clubs, invitations were distributed to sports club leaders (i.e., board members) via the Flemish Sports Federation, which functions as the umbrella organization for all Flemish sports federations. To increase reach, the Federation also included the invitation in its newsletter. After agreeing to participate, board members shared an online questionnaire with their volunteers. To maximize visibility, the survey was also promoted through club newsletters and social media platforms. Throughout the process, confidentiality of responses was assured to board members to encourage participation and trust. The volunteers in the study were regular contributors who performed roles such as coaching teams, providing administrative support, or maintaining sports facilities. They evaluated their perceptions of social and task cohesion among fellow volunteers, as well as their views on leadership within the club.

Within each club, at least three regular volunteers participated in the survey [22]. The number of respondents per club ranged from 3 to 31 volunteers. Overall, the sample included 557 volunteers nested within 52 sports clubs [23]. Among participants, 58% were male, closely matching the broader volunteering population in which men represent 54% of volunteers [21]. The mean age was 40.77 years ($SD = 13.52$), and participants had an average of 6.37 years of club volunteering experience ($SD = 8.66$). A quarter (25%) were young adults aged 15-29 years. This age distribution aligns with previous findings indicating that older adults are more likely to engage in sustained volunteering activity [21].

To account for sampling uncertainty, a 95% confidence level was applied using a critical t-value of 1.97 (555 df), indicating that the true population parameter is expected to fall within ± 1.97 standard deviations of the observed sample estimates with 95% confidence.

Measures

Motivating leadership styles

Board leadership behaviors related to autonomy support and structuring were assessed using a validated, scenario-based measure developed by [6, 17]. The instrument presents seven realistic situations that commonly occur in sports club environments. For each scenario, respondents rated how well the board demonstrated autonomy-supportive (8 items) and/or

structuring (5 items) behaviors on a seven-point Likert scale ranging from 1 (does not describe my board at all) to 7 (does describe my board extremely well).

For example, one scenario described a board-led meeting intended to evaluate club activities. Volunteers then indicated whether the board encouraged their participation in discussion (autonomy support) and whether it clearly communicated the meeting's purpose and expectations (structure). Reliability analysis indicated strong internal consistency, with Cronbach's alpha values of 0.91 for autonomy support and 0.84 for structure.

Social and task cohesion

To capture perceptions of cohesion among volunteer peers, the study employed the 18-item Group Environment Questionnaire by [3]. Originally developed for sports executive committees, the wording was adapted by replacing "Committee work" with "Volunteer work" and "(Members of the) Committee" with "Volunteers". In this study, volunteers were fellow participants who regularly contributed to the sports club.

Social cohesion was operationalized as the degree of interpersonal attraction and integration within the volunteer group (9 items; $\alpha = 0.89$; e.g., "There are good relationships among volunteers"; "I enjoy socializing with other volunteers"). Task cohesion reflected shared commitment to group objectives and task-related unity (9 items; $\alpha = 0.92$; e.g., "Volunteers are united in trying to reach goals", "I feel a sense of accomplishment from my volunteer work"). All responses were recorded on a seven-point scale ranging from 1 (does not describe me/the club at all) to 7 (does describe me/the club extremely well).

Data analysis

The analytical process began with the computation of descriptive statistics for autonomy support, structure, social cohesion, and task cohesion, followed by multilevel correlation analyses among these variables.

To determine whether multilevel modeling was appropriate, we examined the extent to which variance in the data existed at the group level by calculating ICC(1) and ICC(2) coefficients across all constructs [24]. ICC(1) reflects the proportion of total variance attributable to differences between groups and indicates whether individual responses are representative of their group context [19]. ICC(2) evaluates the reliability of group means while adjusting for group size.

Significance testing using an ANOVA-based framework [25] showed meaningful clustering at the group level. ICC(1) values ranged from 0.13 (social cohesion) to 0.18 (autonomy support), while ICC(2) values ranged from 0.62 (social cohesion) to 0.70 (autonomy support).

Additionally, within-group agreement was assessed using rwg(j) [25], which compares observed within-group variability with expected variability under a null condition of no agreement [24, 25]. Values ranged from 0.70 (structure) to 0.89 (task cohesion), indicating strong consensus among volunteers regarding both leadership perceptions and cohesion experiences [24]. Overall, these results support aggregating individual responses and applying multilevel modeling at the group level.

The multilevel analysis proceeded in four stages. First, null models were estimated to partition variance in social cohesion (Model 0a) and task cohesion (Model 0b) into within-group and between-group components.

Second, control variables were added. Age, gender, and years of volunteering were included in models predicting social cohesion (Model 1a) and task cohesion (Model 1b). These covariates were selected because demographic factors such as age and gender may influence volunteering behavior [21], and prior studies have linked volunteering tenure to volunteer attitudes and behavior (e.g., [3]).

We also tested whether the volunteer role affected perceptions of cohesion [6]. Two categories were distinguished: operational volunteers (e.g., administration, maintenance; $n = 287$) and sports-technical volunteers (e.g., coaching; $n = 270$).

T-tests revealed a significant difference in task cohesion between these groups, with sports-technical volunteers reporting higher scores ($M = 5.43$, $SD = 1.03$) than operational volunteers ($M = 5.21$, $SD = 1.14$; $t = 2.46$ (554) = 2.46, $P < 0.05$). Therefore, the volunteer role was included as a control variable in Model 1b. Despite this difference in means, individual-level overlap remained, consistent with ICC results and high within-group agreement. No significant differences were found for social cohesion ($t = 0.33$ (554), $P = 0.74$), so the volunteer role was excluded from Model 1a for parsimony.

In the third step, individual-level perceptions of leadership were controlled for by including group-mean-centered autonomy support and structure as predictors in Model 2a (social cohesion) and Model 2b (task cohesion).

Finally, to address the main research question, group-level leadership effects were tested by adding grand-mean-centered autonomy support and structure as predictors in Models 3a (social cohesion) and 3b (task cohesion). All analyses were conducted using MLWin version 3.06 (Browne & Rasbash, 2009).

Results and Discussion

Descriptive statistics for all study variables together with multilevel correlation estimates are reported in **Table 1**.

Table 1. Descriptives and (multilevel) correlations between study variables

Variables	SD	M	N	4	3	2	1
1. Autonomy-supportive leadership	1.27	4.54	557	–	–	–	–
2. Structuring leadership	1.28	4.46	556	–	–	–	0.70***
3. Social cohesion	1.09	5.29	556	–	–	0.52***/0.28***	0.59***/0.33***
4. Task cohesion	1.09	5.31	556	–	0.75***	0.63***/0.34***	0.69***/0.40***

Notes: Correlations involving leadership (predictor) and cohesion (outcome) are reported separately for individual-level associations (left side) and group-level associations (right side); * $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$

Source: Authors' own work

Table 2 summarises the multilevel regression results for social cohesion. The variance components from the empty model indicated that both the within-group and between-group variances were significantly greater than zero. None of the included control variables reached statistical significance for social cohesion. At the individual level, autonomy support [$B = 0.39$, S.E. = 0.05, $\chi^2(1) = 53.83$, $P < 0.001$] and structure [$B = 0.12$, S.E. = 0.05, $\chi^2(1) = 5.65$, $P < 0.05$] were both positively and significantly associated with social cohesion. At the group level (the main focus of the study), only autonomy support showed a significant effect [$B = 0.52$, S.E. = 0.13, $\chi^2(1) = 17.18$, $P < 0.001$].

Table 2. Multilevel model predicting social cohesion ($n = 556$)

	Model 3a		Model 2a		Model 1a		Model 0a
	B (S.E.)	β	B (S.E.)	β	B (S.E.)	β	B (S.E.)
Fixed effects							
Intercept	5.38 (0.18)		5.43 (0.19)		5.65 (0.22)		5.30 (0.07)
Gender	0.08 (0.08)	0.08	0.06 (0.08)	0.06	0.01 (0.10)	0.01	
Age	−0.01 (0.00)	−0.09	−0.01 (0.00)	−0.09	−0.01 (0.00)	−0.13	
Years of volunteering	0.01 (0.01)	0.01	0.01 (0.01)	0.01	0.01 (0.01)	0.01	
Individual autonomy support	0.39 (0.05)***	0.50	0.39 (0.05)***	0.50			
Individual structure	0.13 (0.05)*	0.16	0.12 (0.05)*	0.16			
Group autonomy support	0.52 (0.13)***	0.34					
Group structure	0.03 (0.13)	0.02					
Random effects							
Between-group variance	0.04 (0.02)		0.19 (0.05)**		0.15 (0.05)**		0.15 (0.05)**
Within-group variance	0.70 (0.04)***		0.69 (0.04)***		1.02 (0.06)***		1.03 (0.07)***
Model fit							
Deviance	1400.05		1438.86		1634.39		1641.56
$\chi^2(df)$	38.81 (2)***		195.53 (2)***		7.17 (3)		26.95 (1)***

Notes: * $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$

Source: Authors' own work

A similar pattern emerged in the multilevel analysis of task cohesion (**Table 3**). The null model again demonstrated significant variance at both the individual and group levels. None of the control variables included in the model was significantly related to task cohesion. At the individual level, both autonomy support [$B = 0.40$, S.E. = 0.05, $\chi^2(1) = 69.29$, $P < 0.001$] and structure [$B = 0.22$, S.E. = 0.05, $\chi^2(1) = 19.90$, $P < 0.001$] were significant predictors of task cohesion. At the group level, only autonomy support remained significant [$B = 0.69$, S.E. = 0.11, $\chi^2(1) = 38.80$, $P < 0.001$].

Table 3. Multilevel model predicting task cohesion ($n = 556$)

	Model 3b		Model 2b		Model 1b		Model 0b
	B (S.E.)	β	B (S.E.)	β	B (S.E.)	β	B (S.E.)
Fixed effects							
Intercept	5.29 (0.55)		5.31 (0.18)		5.69 (0.21)		5.32 (0.08)
Gender	0.02 (0.07)	0.02	0.01 (0.08)	0.02	0.00 (0.10)	0.00	
Age	0.00 (0.00)	−0.03	0.00 (0.00)	−0.03	0.00 (0.00)	−0.04	
Years of volunteering	0.01 (0.01)	0.08	0.01 (0.01)	0.07	0.01 (0.01)	0.05	
Volunteer role	0.03 (0.08)	0.03	0.04 (0.08)	0.03	−0.20 (0.10)	−0.20	
Individual autonomy support	0.40 (0.05)***	0.51	0.40 (0.05)***	0.51			
Individual structure	0.22 (0.05)***	0.27	0.22 (0.05)***	0.27			

Group autonomy support	0.69 (0.11)***	0.45		
Group structure	−0.01 (0.12)	0.00		
Random effects				
Between-group variance	0.03 (0.02)	0.25 (0.06)***	0.19 (0.06)***	0.19 (0.06)***
Within-group variance	0.56 (0.04)***	0.57 (0.04)***	1.02 (0.06)***	1.03 (0.07)***
Model fit				
Deviance	1278.93	1345.46	1638.93	1646.01
χ^2 (df)	66.53 (2)***	293.47 (2)***	7.08 (4)	71.41 (1)***

*P < 0.05; **P < 0.01; ***P < 0.001

Source: Authors' own work

Enhancing organizational effectiveness and sustaining members' long-term involvement requires leaders to actively build and maintain cohesion within groups [3, 4]. Because cohesion is inherently a collective-level construct [14], this study adopts a multilevel framework to explore how leadership shapes cohesion among volunteers in sports clubs, with implications for team-based settings across different sectors.

Volunteers constitute “true groups” within nonprofit organizations

The multilevel findings lend empirical support to earlier theoretical assumptions in volunteer research e.g., [3], which proposed, without direct empirical testing, that regular volunteers operate as “true groups” in nonprofit contexts. The presence of significant variation across groups in both social and task cohesion, combined with strong agreement within groups, indicates that volunteers within the same organization are meaningfully interdependent and develop shared perceptions of cohesion [19].

These results support H1, confirming that volunteer teams, similarly to formal work teams in for-profit organizations [5], engage in ongoing interpersonal exchange processes. Through these interactions, members develop a shared sense of unity, coordination, and alignment around collective objectives [14]. Prior research further indicates that groups characterized by strong cohesion—whether in employment or volunteering contexts—tend to function more effectively, report higher satisfaction, and show stronger commitment and retention [3, 4].

Autonomy support is particularly important for fostering cohesion within volunteer groups.

Multilevel regression results indicated that leaders in nonprofit settings—comparable in some respects to leaders operating in more formally hierarchical for-profit environments [10]—can build and sustain cohesive group dynamics. In line with earlier findings e.g., [13], a strong positive association emerged between leaders' autonomy-supportive behavior and social cohesion at the group level. This finding confirms H2a, suggesting that when leaders create a climate in which volunteers' choices and viewpoints are respected, decision-making is transparently justified. Members are granted meaningful input into group processes, volunteers are more likely to develop emotional attachment to the group and experience a stronger sense of cooperative harmony [4, 7]. These results are also consistent with prior research in for-profit settings, where autonomy support is identified as a key motivational leadership approach that significantly enhances employee well-being and functioning (e.g., [16]).

Unexpectedly, autonomy support also emerged as a particularly strong predictor of task cohesion, surpassing the effect of structuring leadership. This suggests that task cohesion is strengthened when leaders allow volunteers a high degree of self-direction, as this encourages greater commitment to tasks, initiative-taking, creativity, and willingness to contribute individual skills toward shared objectives. This outcome contradicts H2b and diverges from much of the for-profit literature, which typically emphasizes structured leadership as the primary driver of cohesion in employee teams [12]. One explanation for this difference may be that volunteers, who choose freely to contribute their time and effort, tend to value collaborative and self-managed forms of work more than directive structures. In such contexts, autonomy appears to energize engagement with tasks and ultimately strengthens collective effectiveness [4, 7].

At the same time, structuring leadership did show a significant correlation with task cohesion in the multilevel correlation matrix (Table 1), indicating that clear direction-setting and well-defined role allocation can still contribute positively to cohesion among volunteers. However, this relationship was no longer significant in the regression models, suggesting that autonomy support exerts a comparatively stronger influence on task cohesion.

Although not the central focus of this study, multilevel analyses further revealed that both autonomy support and structure were associated with social and task cohesion at the individual level. While individual-level cohesion perceptions remain relevant for outcomes such as satisfaction and effort (e.g., [3]), it is shared perceptions at the group level that more strongly shape overall performance and collective cohesion [4, 7]. This implies that leaders who consistently apply motivating leadership behaviors are more likely to cultivate an effective group environment than those who do so inconsistently.

Harnessing the bigger picture: practical implications of the study findings

The implications of this study extend broadly into management practice, underscoring the importance of establishing autonomy-supportive environments. Such environments not only enhance the functioning of volunteer groups, as demonstrated here, but are also relevant to other collaborative contexts, including paid employment in for-profit organizations [16]. Within SDT, autonomy can be fostered through practices such as involving individuals in decision-making processes, actively considering their perspectives, and providing clear explanations for decisions [16]. When these practices are consistently applied, they support individuals' basic psychological needs for autonomy, competence, and relatedness, thereby improving both functioning and well-being. In particular, when people experience autonomy support within their organization, they tend to feel greater ownership of their work (autonomy), enhanced capability in their tasks (competence), and stronger relational connection to the group (relatedness). For this reason, extending autonomy-supportive practices across all members—rather than selectively applying them—is essential, as it reduces feelings of exclusion and reinforces a shared sense of purpose, thereby strengthening cohesion.

At the same time, although autonomy-supportive environments are important for fulfilling psychological needs, it must be acknowledged that individuals and groups differ in their preferences and motivational requirements [1]. Some individuals function optimally under conditions of high autonomy, whereas others benefit more from structured guidance to feel effective and capable. In addition, recognition and feedback may be particularly important for satisfying relatedness needs in some cases. The effectiveness of leadership styles is also shaped by task characteristics and situational demands; for instance, creative work may benefit more from autonomy, while tasks requiring precision and coordination may require stronger structure. Consequently, nonprofit leaders—as well as leaders in other contexts—need to remain flexible and responsive to varying team needs. This requires adaptive leadership capabilities and the ability to combine different leadership styles depending on both task requirements and individual differences. By aligning leadership approaches with these diverse needs, leaders can enhance engagement, satisfaction, and overall group effectiveness.

Limitations and future directions

The present study is based on data collected at a single time point, which limits the ability to draw firm causal conclusions and indicates the need for future longitudinal research designs. Subsequent studies may also consider applying (multilevel) structural equation modeling to more rigorously test the interrelationships among leadership behaviors, cohesion, and related outcomes. In addition, examining the interaction between paid executive staff and volunteer board members could deepen understanding of how different leadership layers jointly influence group functioning. Finally, while this study outlined implications for the wider management field, future research is encouraged to extend further and refine these practical contributions.

Conclusion

This research constitutes a meaningful contribution to advancing knowledge on how leadership relates to group cohesion. By focusing on the voluntary sports sector, the results demonstrated a clear and robust association between autonomy support and cohesion at the group level. This implies that leaders should consistently apply autonomy-supportive strategies—such as offering choices to members, taking their perspectives into account, and providing clear explanations when options are constrained—to foster more cohesive, well-functioning teams.

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References

1. Forner VW, Jones M, Berry Y, Eidenfalk J. Motivating workers: how leaders apply self-determination theory in organizations. *Organ Manage J.* 2020;18(2):76-94.
2. Forner VW, Holtrop D, Boezeman EJ, Slemp GR, Kotek M, Kragt D, et al. Predictors of turnover amongst volunteers: a systematic review and meta-analysis. *J Organ Behav.* 2023;45(3).
3. Doherty AJ, Carron AV. Cohesion in volunteer sport executive committees. *J Sport Manage.* 2003;17(2):116-41.

4. Castaño N, Watts T, Tekleab AG. A reexamination of the cohesion–performance relationship meta-analyses: a comprehensive approach. *Group Dyn Theory Res Pract.* 2013;17(4):207.
5. Grossman R, Nolan K, Rosch Z, Mazer D, Salas E. The team cohesion-performance relationship: a meta-analysis exploring measurement approaches and the changing team landscape. *Organ Psychol Rev.* 2022;12(2):181-238.
6. De Clerck T, Willem A, Aelterman N, Haerens L. Volunteers managing volunteers: the role of volunteer board members' motivating and demotivating style in relation to volunteers' motives to stay volunteer. *VOLUNTAS.* 2021;32(6):1271-84.
7. Horsham Z, Abrams D, Davies B, Lalot F. Social cohesion and volunteering: correlates, causes, and challenges. *Transl Issues Psychol Sci.* 2024;10(1):51.
8. Picazo C, Gamero N, Zornoza A, Peiró JM. Testing relations between group cohesion and satisfaction in project teams: a cross-level and cross-lagged approach. *Eur J Work Organ Psychol.* 2015;24(2):297-307.
9. Eys MA, Brawley LR. Reflections on cohesion research with sport and exercise groups. *Personal Psychol Compass.* 2018;12(4):e12379.
10. Anderson MH, Sun PY. Reviewing leadership styles: overlaps and the need for a new 'full-range' theory. *Int J Manage Rev.* 2017;19(1):76-96.
11. Fors Brandebo M, Börjesson M, Hilmarsson H. Longitudinal studies on cohesion in a military context – a systematic review. *Mil Psychol.* 2022;34(6):732-41.
12. Van der Voet J, Steijn B. Team innovation through collaboration: how visionary leadership spurs innovation via team cohesion. *Public Manage Rev.* 2021;23(9):1275-94.
13. Kim HD, Cruz AB. The influence of coaches' leadership styles on athletes' satisfaction and team cohesion: a meta-analytic approach. *Int J Sports Sci Coach.* 2016;11(6):900-9.
14. Forsyth DR. Recent advances in the study of group cohesion. *Group Dyn Theory Res Pract.* 2021;25(3):213.
15. Deci EL, Ryan RM. The "what" and "why" of goal pursuits: human needs and the self-determination of behavior. *Psychol Inq.* 2000;11(4):227-68.
16. Deci EL, Olafsen AH, Ryan RM. Self-determination theory in work organizations: the state of a science. *Annu Rev Organ Psychol Organ Behav.* 2017;4(1):19-43.
17. De Clerck T, Aelterman N, Haerens L, Willem A. Enhancing volunteers capacity in all-volunteer nonprofit organizations: the role of volunteer leaders' reliance on effective management processes and (de)motivating leadership. *Nonprofit Manage Leadersh.* 2021;31(3):481-503.
18. Ryan RM, Deci EL. Self-determination theory: basic psychological needs in motivation, development, and wellness. New York: Guilford Publications; 2017.
19. Burke SM, Carron AV, Patterson MM, Estabrooks PA, Hill JL, Loughhead TM, et al. Cohesion as shared beliefs in exercise classes. *Small Group Res.* 2005;36(3):267-88.
20. Hustinx L, Dudal P. Het vrijwilligerswerk in België in 2019: kerncijfers. 2020.
21. United Nations Volunteers Programme (UNV). 2022 State of the world's volunteerism report, building equal and inclusive societies. 2021.
22. Ling Q, Lin M, Wu X. The trickle-down effect of servant leadership on frontline employee service behaviors and performance: a multilevel study of Chinese hotels. *Tour Manage.* 2016;52:341-68.
23. Maas CJ, Hox JJ. Sufficient sample sizes for multilevel modeling. *Methodology.* 2005;1(3):86-92.
24. Woehr DJ, Loignon AC, Schmidt PB, Loughry ML, Ohland MW. Justifying aggregation with consensus-based constructs: a review and examination of cutoff values for common aggregation indices. *Organ Res Methods.* 2015;18(4):704-33.
25. Biemann T, Cole MS, Voelpel S. Within-group agreement: on the use (and misuse) of rWG and rWG(J) in leadership research and some best practice guidelines. *Leadersh Q.* 2012;23(1):66-80.