

A self-determination theory perspective on how autonomy-supportive and chaotic leadership relate to volunteers' need-based experiences and turnover intentions: A variable-centered and person-centered approach

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Abstract

Many nonprofit and voluntary organizations rely primarily on volunteers to deliver their services. However, they often struggle to retain their volunteers. Leadership within these organizations plays a pivotal role in addressing this issue. Therefore, this study adopted self-determination theory as a guiding framework to investigate the role of leaders in volunteers' turnover intentions (i.e., intentions to leave the organization). Specifically, in a sample of 355 Flemish sports club volunteers, this study examined the associations between volunteers' perceptions of their leaders' autonomy-supportive and chaotic style and their turnover intentions. Furthermore, it studied whether experiences of need satisfaction and need frustration could explain these relations. Structural equation modeling pointed toward the unique roles of a chaotic leadership style and experiences of need frustration in turnover intentions. Cluster analyses further confirmed that those volunteers who perceived their leaders as moderately to highly chaotic tend to report greater levels of need frustration and heightened turnover intentions.

Tom De Clerck and Leen Haerens share first authorship.

In addition, these analyses underscored the potential challenge faced by nonprofit leaders as they strive to maintain an autonomy-supportive style without inadvertently slipping into chaotic behavior. This study lays the foundation for a new research agenda which prioritizes a systematic exploration of the relation between maladaptive leadership styles and dark side variables such as experiences of need frustration and turnover.

KEYWORDS

autonomy-supportive leadership, chaotic leadership, self-determination theory, turnover intention

1 | INTRODUCTION

Turnover intentions (i.e., intentions to leave the organization) have been one of the most studied outcomes in organizational research. While most turnover research was situated in the for-profit sector (Rubenstein et al., 2018), we argue in the current paper that there is a strong need to develop a parallel research agenda on turnover in the nonprofit and voluntary sector. In many nonprofit and voluntary organizations, turnover is of great interest as these organizations often rely heavily on volunteers to deliver their services (Lee et al., 2023). At the same time, nonprofit and voluntary organizations are confronted with low retention of volunteers (Lee et al., 2023; Wicker & Breuer, 2013). Consequently, one of the biggest challenges of these organizations is reducing volunteers' turnover (Lee et al., 2023; Wicker & Breuer, 2013). For volunteers in nonprofit sectors, some of the previously examined antecedents of turnover in the for-profit context may be less relevant (e.g., pay, job alternatives), while others may be even more important (e.g., embeddedness, organizational support; Ihm & Baek, 2021). Closely related to the issue of organizational support, a growing and promising body of research stemming from theories such as transformational leadership theory (Almas et al., 2020), servant leadership theory (Eva et al., 2019), and self-determination theory (SDT; Gillet et al., 2013; Van den Broeck et al., 2016) consistently points toward the crucial role of leaders in preventing turnover.

In this paper, we start from SDT (Deci & Ryan, 2000), an influential theory on human motivation, to study volunteers' perceptions of their leaders' (de)motivating style in relation to turnover intentions. Specifically, we contribute to nonprofit and management literature by studying how two closely related motivating and demotivating leadership styles, respectively, an autonomy-supportive and chaotic leadership style, connect to volunteers' turnover intentions. Furthermore, as SDT suggests that volunteers' need for autonomy, competence, and relatedness play a crucial role in volunteers' well-being and optimal functioning (Deci & Ryan, 2000), we test whether these need-based experiences mediate the relation between the (de)motivating leadership styles and volunteers' turnover intentions. In addition to investigating the relations between these variables through a variable-centered approach, we employed cluster analyses to embrace a novel person-centered approach. We use this approach to examine the possibility of

leaders blending autonomy-supportive and chaotic leadership styles, and its impact on volunteers' need-based experiences and turnover intentions. Our study focuses on nonprofit and voluntary organizations that rely primarily on volunteers to support their operations, with a particular emphasis on nonprofit and voluntary sports clubs.

1.1 | Effective leadership in the volunteering context

The volunteering context stands in stark contrast to the for-profit setting. Volunteer work is inherently non-obligatory and can be ceased at the volunteer's discretion (Hoye & Kappelides, 2021). Unlike employees in for-profit organizations, volunteers have no formal leaders to whom to owe their obedience and they are not bound by any contractual obligations to the organization (Hoye & Kappelides, 2021). Despite the absence of a formal power structure, previous studies have revealed that leadership principles as advocated by leadership/motivational theories including transformational leadership theory (Bass & Avolio, 1995; Hannah et al., 2020), servant leadership theory (Greenleaf, 1977; van Dierendonck, 2011), ethical leadership (Brown et al., 2005), and SDT (Deci & Ryan, 2000; Oostlander et al., 2014) are also relevant in the volunteering context. More specifically, research has related transformational and servant leadership, which both involve encouraging followers to visualize the organization's future and offering compelling reasons to get followers to do things (Anderson & Sun, 2017; van Dierendonck, 2011) to positive volunteer outcomes including volunteers' satisfaction, commitment, and intentions to stay (Almas et al., 2020; Schneider & George, 2011). Recently, similar results were found by researchers relying on ethical leadership, which involves leaders adopting normatively appropriate conduct and promoting such conduct within the organization (Benevene et al., 2018).

In this study, we rely on SDT (Deci & Ryan, 2000) to study the importance of autonomy-supportive leadership. Autonomy-supportive leadership entails fostering an open and flexible attitude, enabling leaders to respond to followers' interests, preferences, and ideas (Aelterman et al., 2019; Ryan & Deci, 2017). This leadership style is highly relevant in the volunteering context since volunteers devote their time and effort to the organization without obligations and monetary compensation (Hoye & Kappelides, 2021). Therefore, it becomes imperative for leaders to extend choices to volunteers, encourage and actively seek their participation, input, and initiative, listen to their personal preferences, interests, and wishes, acknowledge their expressions of negative affect, use informational language, and provide significant rationales (Ryan & Deci, 2017).

An autonomy-supportive leadership style has been connected to positive work outcomes (Deci et al., 2017). In the specific volunteering context, it has been positively related to volunteers' motivation (Haivas et al., 2012), engagement (Allen & Bartle, 2014), and job satisfaction (Oostlander et al., 2014). However, to our knowledge, no SDT studies have examined the relation between autonomy support and volunteers' turnover intentions (i.e., intentions of volunteers to quit the volunteer work). Yet, since volunteers make up a dominant part of human resources in the nonprofit sector, this outcome requires the utmost attention (Haivas et al., 2013).

In this study, we investigate for the first time the relation between autonomy-supportive leadership and volunteers' turnover intentions. Based on previous literature connecting autonomy support to favorable volunteer outcomes (Haivas et al., 2012), we assume that an

autonomy-supportive leadership style will be negatively related to turnover intentions (Hypothesis 1a).

1.2 | The dark side of leadership in the volunteering context: The role of chaotic leadership

In this study, we also explore the role of the dark side of leadership, with a specific focus on chaotic leadership. This choice is informed by SDT which suggests that an autonomy-supportive leadership style, due to its participative nature and low directiveness, carries the risk of leaning into a chaotic leadership style (Aelterman et al., 2019). In contrast to autonomy support, a chaotic leadership style is considered to be a demotivating leadership style, undermining followers' optimal functioning and even causing maladaptive behaviors (Aelterman et al., 2019; Ryan & Deci, 2017). When being chaotic, the behavior of leaders is unpredictable, confusing, unclear, and inconsistent, making it hard for followers to know how they can effectively deal with their responsibilities (Ryan & Deci, 2017). They also fail in effectively adjusting their management approach to meet the requirements, demands, and work pace of followers and do not interfere when needed (Ryan & Deci, 2017). A chaotic leadership style, therefore, conceptually relates to permissiveness and a laissez-faire style as distinguished within transformational leadership theory (Bass, 2005; Ryan & Deci, 2017).

Especially in nonprofit and voluntary organizations, leaders may be reluctant to be too directive toward volunteers who devote substantial amounts of their free time to the organization. The risk of leaning toward a passive, conflict-avoidant style (i.e., chaotic style) may thus be more prevalent in this context (Rowold & Rohmann, 2009; Ryan & Deci, 2017).

The maladaptive effects of chaotic leadership have only recently appeared on the research agenda of SDT scholars (but see De Clerck et al., 2021a,b; Haerens et al., 2022). Evidence of the downsides of chaotic leadership is mainly available from the literature on transformational leadership theory, with a laissez-faire leadership style being considered the most ineffective leadership style (Bass, 2005). In nonprofit and voluntary organizations, elements of this leadership style were associated with volunteers' diminished effort, effectiveness, and satisfaction (Rowold & Rohmann, 2009). However, specific to volunteers' turnover intentions, evidence is limited.

In this study, we focus for the first time on the relation between chaotic leadership and volunteers' turnover intentions. Based on previous literature (Rowold & Rohmann, 2009), we hypothesize that volunteers perceiving their leaders as chaotic will report greater turnover intentions (Hypothesis 1b).

SDT researchers further posit that negative work-related outcomes such as turnover intentions are more likely to occur when leaders actively rely on a chaotic style as opposed to merely refraining from an autonomy-supportive style (De Clerck et al., 2021b; Gillet et al., 2013; Van den Broeck et al., 2016). This is because volunteers who perceive their leaders as exhibiting unclear and incoherent behavior are more prone to experiencing distress and dysfunction within the organization. In contrast, a lack of autonomy support primarily impedes positive work outcomes because it hinders volunteers' well-being and optimal functioning within the organization.

Therefore, we assume that when an autonomy-supportive and chaotic leadership style are simultaneously modeled, the latter style will show a stronger relation with volunteers' turnover intentions (Hypothesis 1c).

1.3 | SDT and basic psychological needs: The underlying mechanism

Fundamental to SDT is that positive work-related outcomes are expected when leaders are autonomy-supportive because followers' three basic psychological needs for autonomy, competence, and relatedness get satisfied (Deci & Ryan, 2000). The need for autonomy refers to the need to experience psychological freedom, volition, and ownership. The need for competence refers to the need to interact effectively with and exert influence on one's environment. The need for relatedness refers to the desire to experience positive social relationships and connectedness to important others.

SDT also suggests that negative work-related outcomes such as turnover are expected when the leaders adopt a chaotic style because these same needs get frustrated (Deci et al., 2017; Van den Broeck et al., 2016; Vansteenkiste & Ryan, 2013). When leaders are perceived as chaotic, their followers may feel pressured and coerced (autonomy frustration) because they are left with too many responsibilities and they may also experience doubts as to how to handle these responsibilities (competence frustration). Also, when leaders react unpredictably to their followers' input, this may cause feelings of rejection (relatedness frustration) or incompetence (competence frustration). Importantly, need frustration does not denote the mere absence of need satisfaction as the psychological needs must be actively thwarted for need frustration to occur (Vansteenkiste & Ryan, 2013).

SDT's theoretical premises were confirmed by research in the organizational context (Van den Broeck et al., 2016), including the volunteering context (Haivas et al., 2012; Oostlander et al., 2014). These studies consistently demonstrated that when leaders rely on an autonomy-supportive style, their followers reported higher levels of need satisfaction. Interestingly, previous studies also connected transformational leadership and servant leadership (Chiniara & Bentein, 2016; Deci et al., 2017), which are both closely related to autonomy-supportive leadership (Deci et al., 2017), to followers' need satisfaction. To our knowledge, only three studies examined the relations between chaotic leadership and need frustration. These studies among volunteers in sports clubs (De Clerck et al., 2021b), teachers (Haerens et al., 2022) and nurses (Trépanier et al., 2019), confirmed that the active reliance of leaders on a chaotic style related positively to followers' need frustration.

In line with the existing body of SDT research, we hypothesize that volunteers perceiving their leaders as more autonomy-supportive will report higher levels of need satisfaction (Hypothesis 2a), while volunteers perceiving their leaders as more chaotic will report higher levels of need frustration (Hypothesis 2b).

SDT further suggests that need satisfaction leads to positive attitudes, feelings, and well-being, while need frustration leads to negative attitudes, feelings, and ill-being (Deci et al., 2017). Indeed, the satisfaction of the basic psychological needs has been associated with positive work outcomes in differential types of organizations (Deci et al., 2017; Van den Broeck et al., 2016) including nonprofit and voluntary organizations (Oostlander et al., 2014). Need frustration has only more recently received empirical attention, with studies pointing to its role in explaining negative work outcomes (Olafsen et al., 2017; Trépanier et al., 2019).

Based on this research, we expect that volunteers experiencing higher levels of need frustration will report greater turnover intentions (Hypothesis 3a). Also volunteers experiencing higher levels of need satisfaction may report lower turnover intentions, yet we expect this relation to be weaker than the relation between need frustration and turnover intentions (Hypothesis 3b).

SDT also points to the need-based experiences as important mediating mechanisms, with need satisfaction mediating the relation between the leaders' motivating style and positive work outcomes, and need frustration mediating the relation between the leaders' demotivating style and negative work outcomes (Deci et al., 2017; Van den Broeck et al., 2016).

Consequently, we hypothesize that when both an autonomy-supportive and chaotic leadership style, as well as the need-based experiences and turnover intentions are simultaneously modeled, particularly a chaotic style will relate to turnover intentions with need frustration (fully) mediating this relation (Hypothesis 4).

1.4 | Can leaders combine autonomy-supportive leadership with chaotic leadership?: A person-centered approach

To investigate our first four hypotheses, we rely on a traditional variable-centered approach, studying how autonomy-supportive and chaotic leadership relate to volunteers' need-based experiences and turnover intentions. Although this approach provides valuable insights, it ignores the dynamic interplay between autonomy-supportive and chaotic leadership within one person. This is an important issue since theory (Aeltermann et al., 2019) and SDT research in other contexts (e.g., education; Haerens et al., 2022) suggests that both leadership styles, that are characterized by lower levels of directiveness, may easily co-occur. Indeed, autonomy support implies that leaders leave the opportunity to their followers to take initiative. Yet, such an approach may also evolve into a demotivating chaotic style when leaders become too awaiting or permissive (Aeltermann et al., 2019; Haerens et al., 2022). For example, when leaders organize a meeting with volunteers, it is important that volunteers are given the opportunity to voice their opinion. At the same time, it is equally important that leaders do not leave all initiative to provide input to volunteers, particularly if they do not want that, as this would be indicative of a chaotic style (Aeltermann et al., 2019; Haerens et al., 2022). Therefore, we also bring a substantive-methodological advancement to nonprofit leadership literature by creating profiles based on the leadership styles. More specifically, we rely on person-centered analyses (i.e., cluster analyses) to identify naturally occurring leadership styles based on different configurations of autonomy-supportive and chaotic leadership.

Based on theory suggesting tensions between an autonomy-supportive and a chaotic leadership style (Aeltermann et al., 2019), we hypothesize that leaders may indeed combine different levels of autonomy-supportive and chaotic leadership. We anticipate the identification of at least four qualitatively different leadership profiles, characterized as follows: (a) leaders who are high on autonomy support but low on chaos, (b) leaders who are high on chaos but low on autonomy support, (c) leaders who are high on both styles, and (d) leaders who are low on both styles (Hypothesis 5a). Because this is the first study that examines leadership profiles based on the combination of autonomy support and chaos, the proposed groups are tentative and we are open to finding additional groups.

An additional advantage of a person-centered approach is that it allows examining how the proposed configurations relate to volunteers' need-based experiences and turnover intentions (Haerens et al., 2022). Based on (variable-centered) SDT research pointing out a positive relation between autonomy-supportive leadership and positive work outcomes, and between chaotic leadership and negative work outcomes (De Clerck et al., 2021a,b; Gillet et al., 2013), we expect that volunteers perceiving their leaders as high on autonomy support and low on chaos will display the highest levels of need satisfaction and the lowest levels of need frustration and

turnover intentions (Hypothesis 5b), while volunteers perceiving their leaders as high on chaos and low on autonomy support will display the lowest levels of need satisfaction and the highest levels of need frustration and turnover intentions (Hypothesis 5c). Volunteers perceiving their leaders as high or low on both autonomy support and chaos are expected to display a mixed pattern of outcomes. Volunteers perceiving their leaders as high on autonomy support and chaos are expected to report more need frustration and turnover intentions when compared to volunteers who perceive their leaders as high on autonomy support only, while volunteers perceiving their leaders as low on autonomy support and chaos are expected to report less need frustration and turnover intentions when compared to volunteers perceiving their leaders as low on autonomy support only (Hypothesis 5d).

2 | METHOD

2.1 | Sample and procedure

Our research data were gathered from 40 Flemish nonprofit and voluntary sports clubs located in Flanders (Belgium). In these clubs, leadership is vested in the Board of Directors, consisting of volunteers responsible for managing the sports club. In Belgium, sports clubs fully rely on the commitment and dedication of volunteers to support their operations. They have a “flat” organization structure, with the volunteer leaders interacting regularly with other volunteers (De Clerck et al., 2021b). We recruited these participating clubs through the monthly newsletter of the Flemish Sports Federation (VSF), the umbrella federation of all Flemish sports federations. Each club was requested to distribute a personalized online questionnaire link to their volunteers via email. In total, our research involved 355 participants, comprising 170 volunteer coaches (68% men; $M_{\text{age}} = 35.94$; standard deviation [SD] = 14.36) and 185 volunteers providing logistic support (51% men; $M_{\text{age}} = 44.54$; SD = 12.02). On average, volunteer coaches had been active in their sports club for 8.78 years (SD = 9.36), while volunteers providing logistic support had on average 7.56 years (SD = 7.98) of involvement.

2.2 | Measures

2.2.1 | Board's autonomy-supportive and chaotic leadership style

To measure volunteers' perceptions of the board's reliance on an autonomy-supportive and chaotic leadership style, we used a questionnaire assessing the leaders' autonomy-supportive (8 items) and chaotic (8 items) leadership style within seven management situations that occur regularly within a sports club (De Clerck et al., 2021a,b—see Appendix). These situations, which included “The board learns that you, as a volunteer, have expectations regarding the sports club's management” and “The board organizes a meeting with volunteers to evaluate the sports club's activities” were derived from an influential management model, the Competing Values Framework (Quinn & Rohrbaugh, 1981; for more details, see De Clerck et al., 2021a, b). As an illustration, different responses to the latter situation were “The board creates opportunities for volunteers to provide input during the meeting” (autonomy support), and “The board does not spend a lot of time preparing the meeting. After all, it costs a lot of energy.” (chaotic). Volunteers were asked to indicate for each response to what extent the behavior

described what the board would do in that specific situation by rating a 7-point Likert scale, ranging from 1 (*does not describe my board at all*) to 7 (*does describe my board extremely well*). Internal reliability of the autonomy-supportive and chaotic scale, assessed by Cronbach's Alpha (α), were excellent, that is, $\alpha = 0.90$ and $\alpha = 0.79$ (respectively).

2.2.2 | Volunteers' experiences of need satisfaction and need frustration

Volunteers' need-based experiences were measured with the validated Basic Psychological Need Satisfaction Need Frustration Scale (BPNSNF, B. Chen et al., 2015). In this study, we used the stem "In my sports club," followed by 12 items (4 items per need) tapping into need satisfaction ($\alpha = 0.89$) and 12 items (4 items per need) into need frustration ($\alpha = 0.87$). Items assessing need satisfaction included "I feel that my decisions reflect what I really want" (autonomy satisfaction), "I feel capable at what I do" (competence satisfaction), and "I feel close and connected with other people who are important to me" (relatedness satisfaction). Items assessing need frustration encompassed "I feel pressured to do too many things" (autonomy frustration), "I feel insecure about my abilities" (competence frustration), and "I feel the relationships I have are just superficial" (relatedness frustration). For each of the items, volunteers were asked to indicate to what extent these items described their feelings in the sports club by rating a 7-point Likert scale, ranging from 1 (*does not describe me at all*) to 7 (*does describe me extremely well*).

2.2.3 | Volunteers' turnover intentions

Volunteers' turnover intentions were measured with a scale developed by Wayne et al. (1997) for their research in for-profit organizations. The original scale (which was translated in Dutch using the "Back-translation" technique) consisted of four negatively worded items (e.g., "I am seriously thinking about quitting my job") and one (reverse-scored) positively worded item (i.e., "I think I will be working at the organization five years from now on"). In the context of this study, the word "job" in the original items was replaced with "volunteer work". For each of the items, volunteers were asked to indicate to what extent these items described their turnover intentions in the sports club. They provided their responses on a 7-point Likert scale, ranging from 1 (*does not describe me at all*) to 7 (*does describe me extremely well*). This scale showed a reasonable internal reliability ($\alpha = 0.69$).

2.3 | Plan of analysis

Preliminary statistics were calculated to provide an overview of the means and SDs of the study variables as well as Pearson's correlation coefficients among these variables.

Given the hierarchical structure of the data with sports club volunteers being nested within 40 sports clubs, we calculated the design effect of the study variables in Mplus 8.0 (Muthén & Muthén, 2017). The design effect is approximately equal to $1 + (\text{average cluster size} - 1) * ICC$. A design effect smaller than 2 indicates that the club-level variance does not need to be accounted for and that it is sufficient to conduct single-level analyses (Muthén & Satorra, 1995). Since the design effects of all study variables were < 2 , except for an autonomy-supportive leadership style which was also relatively small (2.26), we proceeded with single-level analyses. Note, however,

that this means that there is high variability between how volunteers of the same sports club perceive the autonomy-supportive and chaotic leadership style, suggesting that volunteers' perceptions of leadership styles are based on their specific, individual interactions with the leaders rather than on collective feelings toward the organization's leadership.

We relied on three different sorts of analyses to examine the study aims and hypotheses. First, we examined the relations between the study variables using structural equation modeling (SEM) with latent variables in Mplus (i.e., Hypotheses 1–4). The measurement model consisted of 5 latent (study) variables: an autonomy-supportive and chaotic leadership style, need satisfaction and need frustration, and turnover intentions. For scales with more than 5 items (i.e., autonomy-supportive leadership style, chaotic leadership style, need satisfaction, and need frustration), we created parcels. A parcel is an aggregate-level indicator of a latent variable comprising the average score of two or more items (Little et al., 2013). Creating parcels and using these as parameters of latent variables (or factors) are commonly used techniques to enhance the reliability and stability of the SEM model (Little et al., 2013). Compared with item-level data, SEM models based on parceled data are more reliable because the factors have higher communalities estimates. In addition, parcel-based SEM models are more stable since fewer parameters are needed to define the factors and consequently the entire model. In creating the parcels, we tried to derive equally balanced parcels by aggregating weaker loading items with stronger loading items from the same scale. Only items with factor loadings higher than 0.40 were retained (Little et al., 2013). An autonomy-supportive and chaotic leadership style consisted of four two-item parcels. Need satisfaction consisted of three three-item and one two-item parcels. Need frustration consisted of four three-item parcels. All original items were used, except for one weak loading item of the need satisfaction scale.

Next, the theory-based structural models were tested. Initially, direct relations between the autonomy-supportive and chaotic leadership style, and turnover intentions were investigated. Subsequently, need satisfaction and frustration were included as potential mediators within the mediation model. Within the mediation model, both symmetrical relations (e.g., between the autonomy-supportive leadership style and need satisfaction) and cross-paths (e.g., between the autonomy-supportive leadership style and need frustration) were investigated. To investigate indirect effects, we relied on the model indirect command in Mplus. The indirect effect was significant at $p < 0.05$ if the 95% confidence intervals (CIs) obtained by bootstrapping do not include the value of zero (Hayes, 2009). To evaluate the fit of the models, we relied on the comparative fit index (CFI); the root mean squared error of approximation (RMSEA), and the standardized root means square residual (SRMR). For CFI, a critical value above 0.90 is acceptable, whereas values above 0.95 are deemed good. For the SRMR and RMSEA, a value between 0.06 and 0.08 is considered reasonable and a value below 0.06 is considered good (Hooper et al., 2008; Hu & Bentler, 1999).

Second, we performed a cluster analysis in SPSS version 25 to examine whether profiles could be defined based on the autonomy-supportive and chaotic leadership style (i.e., Hypothesis 5a). For this purpose, we relied on the standardized scores of the volunteers' perceptions of an autonomy-supportive and chaotic leadership style. Since cluster analyses are sensitive to outliers in the data that can lead to undesirable combinations of clusters that persist throughout the analysis, we first removed univariate outliers (i.e., values of more than three SDs above or below the mean), and multivariate outliers (using the Mahalanobis distance; Garson, 2014). Subsequently, we conducted a two-step cluster analysis. In the first step, we performed a hierarchical cluster analysis utilizing Ward's clustering method (Garson, 2014). In Ward's hierarchical cluster analysis, each person started out as his or her own cluster and the

closest persons were combined into a new aggregate cluster in subsequent steps. This process continued till a single homogeneous cluster was formed. Based on previous research, three-, four-, five- and six-cluster solutions were considered (Howard et al., 2016). Only cluster solutions which explained at least 50% of the variance in an autonomy-supportive and chaotic leadership style were retained for the following step (Milligan & Cooper, 1985). In the second step of the cluster analysis, we conducted a non-hierarchical, iterative k-means clustering procedure using an a priori determined number of clusters based on Ward's hierarchical method (Asendorpf et al., 2001; Gore, 2000). In each analysis, all individuals were assigned to the most similar cluster on the basis of their Euclidean distances from the initial cluster centers (i.e., the means of the data points belonging to the initial clusters). Subsequently, new cluster centers were computed and once again individuals were assigned to the most similar cluster based on their Euclidean distances from these newly calculated cluster centers. This iterative procedure was terminated when convergence was achieved due to no change in the cluster centers. With this procedure, unlike cluster assignment in Ward's hierarchical cluster analysis, individuals might be reassigned. Thus, whereas Ward's hierarchical cluster analysis represents a means of obtaining the optimal number of clusters, non-hierarchical k-means cluster analysis is a way of optimizing the preliminary cluster solution through an iterative process (Gore, 2000; Tan et al., 2006). To examine the stability of the remaining cluster solutions, a double-split cross-validation procedure was implemented by randomly splitting the total sample into halves and applying the two-step procedure (Ward and k-means) in each subsample (Garson, 2014). Next, the participants in each half of the sample were assigned to new clusters based on their Euclidean distances to the cluster centers of the other half of the sample. These new clusters were then compared for agreement with the original clusters by means of Cohen's kappa (K). The two resulting kappas were averaged. An average Cohen's kappa of at least 0.60 was considered acceptable (Asendorpf et al., 2001).

Third, we relied on a multivariate analysis of variance (MANOVA) with post hoc tests using the Bonferroni method to explore differences in the autonomy-supportive and chaotic leadership style between the retained clusters, as well as differences between the retained clusters in terms of need satisfaction, need frustration, and turnover intentions (i.e., Hypotheses 5b–d). Effect sizes (partial η^2) above 0.01 were considered small, above 0.06 moderate, and above 0.14 large (Cohen, 1988).

As a supplementary analysis, we conducted Harman's one-factor test (Podsakoff et al., 2003) to detect the possible presence of common method variance. First, we used an exploratory factor analysis (unrotated principal axis factoring analysis) to determine the number of factors that are necessary to account for the variance in all self-report indicators. If a substantial amount of common method variance is present, either (a) a single factor will emerge from the factor analysis, or (b) one general factor will account for the majority of the covariance among the variables. Second, we relied on the confirmatory factor analysis to examine whether the variables loaded onto one factor. If common method variance is largely responsible for the relations among the variables, the one-factor CFA model should fit the data well.

3 | RESULTS

Descriptive statistics and Pearson's correlations are reported in Table 1.

In all analyses (SEM, cluster), the findings remained identical after taking into account relevant covariates (i.e., age, gender, years of volunteering experience within the club). As such, results of analyses without covariates are reported.

The results obtained from SEM indicated that an autonomy-supportive leadership style was negatively related to volunteers' turnover intentions ($\beta = -0.26$, $p < 0.01$; Hypothesis 1a supported), while a chaotic leadership style was positively related to volunteers' turnover intentions ($\beta = 0.46$, $p < 0.001$; Hypothesis 1b supported; Note that these bivariate relations are slightly different from the correlations presented in Table 1 since they are derived from SEM which accounts for measurement errors). However, in the direct relations model encompassing both an autonomy-supportive and chaotic leadership style simultaneously (see Figure 1), an autonomy-supportive leadership style was no longer related to turnover intentions ($\beta = 0.04$, $p = 0.62$), while a chaotic leadership style related significantly and positively to turnover intentions ($\beta = 0.49$, $p < 0.001$; Hypothesis 1c supported).

The findings derived from SEM further revealed strong positive relations between an autonomy-supportive leadership style and need satisfaction ($\beta = 0.65$, $p < 0.001$; Hypothesis 2a supported), and between a chaotic leadership style and need frustration ($\beta = 0.70$, $p < 0.001$; Hypothesis 2b supported). In the mediation model incorporating all relations between an autonomy-supportive and chaotic leadership style, need-based experiences, and turnover intentions (see Figure 2), the positive relations between an autonomy-supportive leadership style and need satisfaction ($\beta = 0.52$, $p < 0.001$), a chaotic leadership style and need frustration ($\beta = 0.79$, $p < 0.001$) remained significant. In addition, the SEM results showed a robust, positive relation between need frustration and turnover intentions ($\beta = 0.57$, $p < 0.001$; Hypothesis 3a

TABLE 1 Means, standard deviations (SDs) of the study variables, and Pearson's correlations between the study variables ($n = 355$).

Variables	Mean	SD	Range	1	2	3	4	5
1. Autonomy support	4.57	1.26	1–7					
2. Chaos	3.08	1.06	1–6	−0.52**				
3. Need satisfaction	5.39	0.86	2–7	0.57**	−0.38**			
4. Need frustration	2.13	0.89	1–7	−0.31**	0.60*	−0.49**		
5. Turnover intentions	1.87	0.89	1–5.6	−0.25**	0.39**	−0.39**	0.51**	

* $p < 0.05$; ** $p < 0.01$.

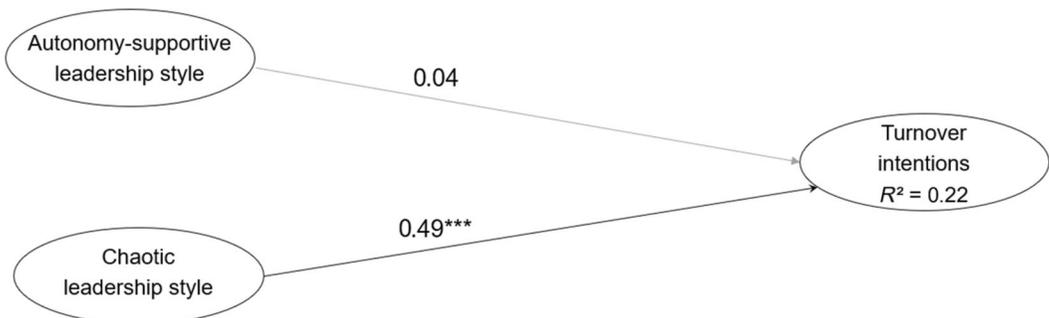


FIGURE 1 Direct relations model. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

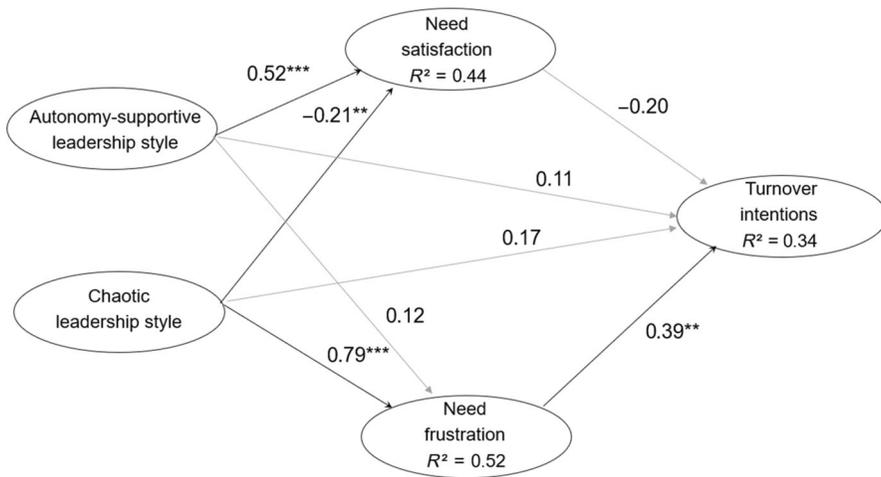


FIGURE 2 Mediation model. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

supported), and a somewhat weaker negative relation between need satisfaction and turnover intentions ($\beta = -0.42$, $p < 0.001$; Hypothesis 3b supported). In the mediation model, the relation between need frustration and turnover intentions ($\beta = 0.39$, $p < 0.001$) remained significant while this was not the case for the relation between need satisfaction and turnover intentions. Though not hypothesized, the SEM findings also pointed to moderate negative connections between an autonomy-supportive leadership style and need frustration ($\beta = -0.34$, $p < 0.001$), and between a chaotic leadership style and need satisfaction ($\beta = -0.45$, $p < 0.001$). In the mediation model, only the negative connection between a chaotic leadership style and need satisfaction ($\beta = -0.21$, $p < 0.01$) remained significant. The negative relation between an autonomy-supportive leadership style and need frustration was no longer significant. Finally, the direct positive relation between a chaotic leadership style and turnover intentions was no longer significant when accounting for need frustration as a mediator, with results of the mediation model pointing to full mediation of need frustration in the relation between a chaotic leadership style and turnover intentions ($\beta = 0.31$, $CI = 0.12\text{--}0.55$; Hypothesis 4 confirmed). In all SEM-analyses, both the measurement and structural models provided a reasonable fit to the data, with $CFI \geq 0.92$, and $RMSEA/SRMR \leq 0.08$.

Overall, the results supported our Hypotheses 1–4. Most importantly, they revealed that heightened perceptions of a chaotic style were associated with elevated levels of need frustration, and in turn higher turnover intentions.

As for the cluster analysis, six multivariate outliers (as identified using the Mahalanobis distance measure) were removed, while univariate outliers (values of more than three SD above or below the mean) were not found. This resulted in a final sample of 349 volunteers. The three-, four-, and five-cluster solutions derived from Ward's hierarchical cluster analysis explained sufficient variance in an autonomy-supportive and chaotic leadership style (>50%), yet only the three- and four-cluster solutions provided good stability (Cohen's kappa > 0.60). The four-cluster solution was retained because it explained a substantial additional variance in the chaotic style (13 percentage points; Milligan & Cooper, 1985).

The graphical results for the four-cluster solution derived from the non-hierarchical k-means cluster analysis are presented in Figure 3 (based on standardized scores) and Figure 4 (based on absolute scores).

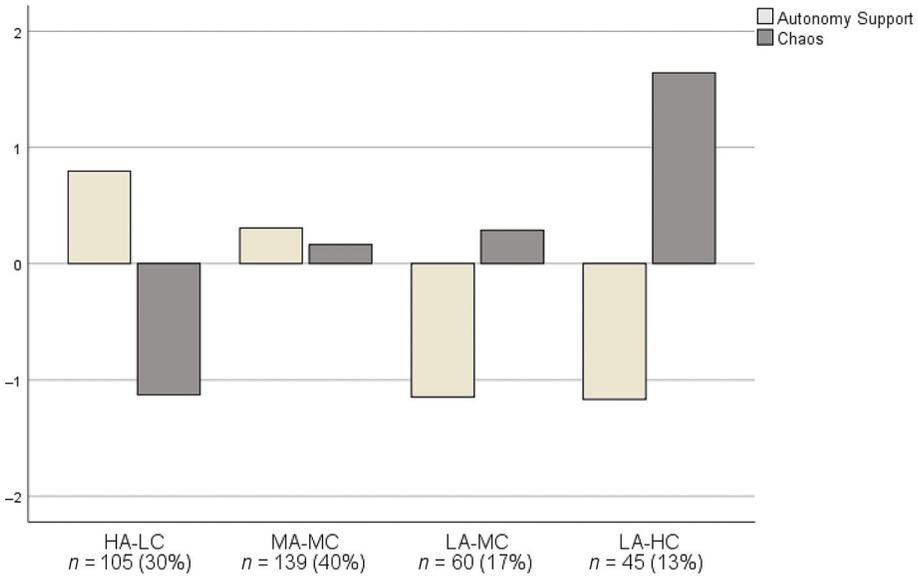


FIGURE 3 Four-cluster solution based on standardized scores for an autonomy-supportive and chaotic leadership style. HA-LC, high autonomy support-low chaos group; MA-MC, moderate autonomy support-chaos group; LA-MC, low autonomy support-moderate chaos group; LA-HC, low autonomy support-high chaos group.

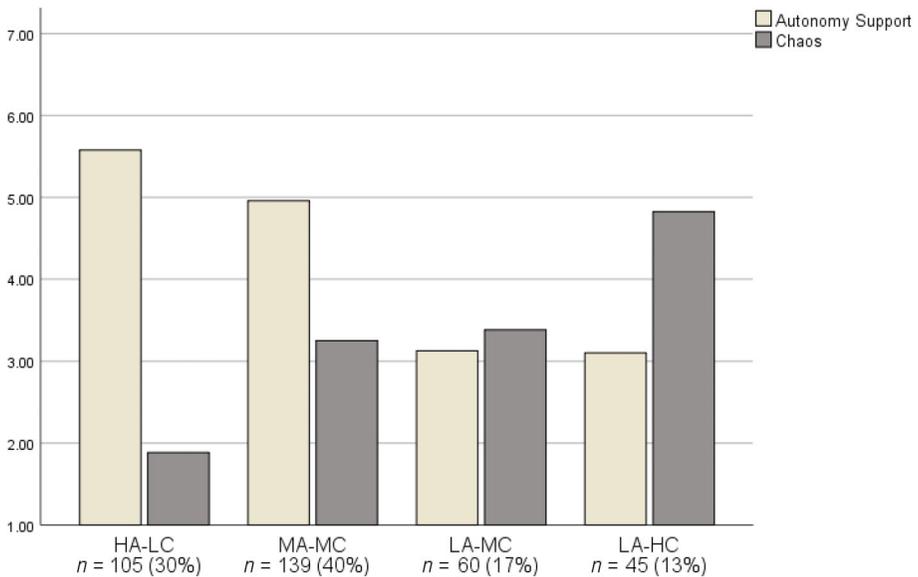


FIGURE 4 Four-cluster solution based on absolute scores for an autonomy-supportive and chaotic leadership style. HA-LC, high autonomy support-low chaos group; MA-MC, moderate autonomy support-chaos group; LA-MC, low autonomy support-moderate chaos group; LA-HC, low autonomy support-high chaos group.

The standardized and absolute scores of the four clusters, and Bonferroni pairwise comparisons (including partial η^2 and F -values) for an autonomy-supportive and chaotic leadership style, are presented in Table 2.

Profile 1 consisted of volunteers perceiving relatively high levels of autonomy support and low levels of chaos from their leaders ($n = 105$, 30%), and was labeled the high autonomy support-low chaos group (HA-LC). Profile 2 comprised volunteers perceiving their leaders to be moderately high on both autonomy support and chaos ($n = 139$, 40%), and was referred to as the moderate autonomy support-chaos group (MA-MC). Profile 3 comprised volunteers perceiving their leaders to be low on autonomy support and moderately high on chaos ($n = 60$, 17%), and was referred to as the low autonomy support-moderate chaos group (LA-MC). Finally, profile 4 consisted of volunteers perceiving their leaders to be low on autonomy support and high on chaos ($n = 45$, 13%), and was labeled the low autonomy support-high chaos group (LA-HC).

In general, the results of the cluster analysis largely matched our Hypothesis H5a, pointing to two opposing profiles, namely a high autonomy support-low chaos group (HA-LC) and a low autonomy support-high chaos group (LA-HC). Furthermore, we found a profile with volunteers perceiving their leaders to be moderately high on both styles (MA-MC) which aligned with our Hypothesis H5a to find a profile with leaders showing equal levels of an autonomy-supportive and a chaotic style (yet not high or low but moderately high). We were also open to finding additional groups, and we did find a profile with volunteers perceiving their leaders to be low on autonomy support and moderately high on chaos.

Next, we conducted a MANOVA comparing the clusters in terms of need satisfaction, need frustration, and turnover intentions. The multivariate test of the MANOVA was significant, Wilks' Lambda = 0.62, $F(9, 835) = 20.30$, $p < 0.001$. Bonferroni pairwise comparisons between the clusters were performed. F -values and univariate effect sizes (partial η^2) are reported in Table 2. The results indicated that the HA-LC group (characterized by volunteers who perceived their leaders as high on autonomy support and low on chaos) displayed the most optimal pattern of outcomes as indexed by the highest levels of need satisfaction and lowest levels of need frustration and turnover intentions when compared with the other profiles (Hypothesis 5b confirmed). In contrast, the LA-HC group (characterized by volunteers who perceived their leaders as high on chaos and low on autonomy support) generally showed the least optimal pattern of outcomes as indexed by the lowest levels of need satisfaction (except when compared to the LA-MC group), and highest levels of need frustration and turnover intentions (Hypothesis 5c confirmed).

The MA-MC group (characterized by volunteers who perceived their leaders as moderately high on autonomy support and chaos) and LA-MC group (characterized by volunteers who perceived their leaders as low on autonomy support and moderately high on chaos) displayed a mixed pattern of outcomes, which aligned without our Hypothesis 5d. The MA-MC group showed a somewhat better pattern of outcomes than the LA-MC group as they reported higher levels of need satisfaction.

Overall, the results of the MANOVA largely supported our Hypotheses 5a–d, providing proof that the HA-LC group was the most optimal, good quality leadership profile, while the LA-HC group was the least optimal, poor quality leadership profile. The MA-MC group and LA-MC group were in-between these profiles.

In a set of supplementary analyses, common method bias was examined using Harman's single factor test. After performing an exploratory factor analysis on all 45 items used in the primary analyses, nine factors with eigenvalues near or greater than one emerged and no single factor accounted for more than 28% of the variance. When the number of factors was held fixed

TABLE 2 Cluster mean scores, *F*-values, and effect sizes (partial η^2) for an autonomy-supportive and chaotic leadership style, need satisfaction and frustration, and turnover intentions.

	1	2	3	4	
	HA-LC	MA-MC	LA-MC	LA-HC	
	<i>n</i> = 105 (30%)	<i>n</i> = 139 (40%)	<i>n</i> = 60 (17%)	<i>n</i> = 45 (13%)	<i>F</i>
					<i>F</i>(3, 345)
Leadership styles					
Autonomy-supportive style					
Z-score	0.80 (0.58) ^{2,3,4}	0.30 (0.48) ^{1,3,4}	-1.14 (0.56) ^{1,2}	-1.17 (0.84) ^{1,2}	214.55***
Abs score	5.58 (0.74) ^{2,3,4}	4.96 (0.61) ^{1,3,4}	3.13 (0.70) ^{1,2}	3.10 (1.06) ^{1,2}	
Chaotic style					
Z-score	-1.13 (0.45) ^{2,3,4}	0.16 (0.45) ^{1,4}	0.29 (0.46) ^{1,4}	1.64 (0.45) ^{1,2,3}	424.82***
Abs score	1.88 (0.48) ^{2,3,4}	3.25 (0.48) ^{1,4}	3.39 (0.49) ^{1,4}	4.82 (0.48) ^{1,2,3}	
Mediators/outcomes					
Need satisfaction	5.84 (0.68) ^{2,3,4}	5.51 (0.70) ^{1,3,4}	4.76 (0.88) ^{1,2}	4.80 (0.84) ^{1,2}	37.20***
Need frustration	1.54 (0.50) ^{2,3,4}	2.16 (0.72) ^{1,4}	2.33 (0.80) ^{1,4}	2.99 (1.02) ^{1,2,3}	45.36***
Turnover intentions	1.50 (0.63) ^{2,3,4}	1.87 (0.83) ^{1,4}	1.98 (0.89) ^{1,4}	2.56 (1.11) ^{1,2,3}	17.61***
					Partial η^2

Note: Standard errors are reported in parentheses. Numbers in superscript (1–4) refer to significantly different groups.

Abbreviations: HA-LC, high autonomy support-low chaos group; MA-MC, moderate autonomy support-chaos group; LA-MC, low autonomy support-moderate chaos group; LA-HC, low autonomy support-high chaos group.

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

at one, this factor accounted for 27.08% of the variance. In addition, the confirmatory factor analysis revealed that the single-factor model did not fit the data well (no convergence was found). Overall, these results indicated that common method variance was not of great concern and thus is unlikely to confound the interpretations of the results.

4 | DISCUSSION

In many nonprofit and voluntary organizations, volunteers constitute an indispensable and vital group, crucial to ensuring that these organizations can deliver their services as intended (Lee et al., 2023). However, in several nonprofit and voluntary organizations, low retention of volunteers is an important issue (Lee et al., 2023; Wicker & Breuer, 2013). The leadership employed within these organizations plays a crucial role in addressing this concern (Ihm & Baek, 2021). Therefore, this study used SDT as a guiding framework to examine the role of leaders and need-based experiences in relation to volunteers' turnover intentions. Transformational and servant leadership studies already pointed to the importance of inspiring and motivating followers in the volunteering context (Anderson & Sun, 2017; Deci et al., 2017). In the current study we illuminate the potential challenge associated with motivating leadership that encourages input by exploring for the first time the tensions between autonomy-supportive and chaotic leadership in nonprofit and voluntary organizations.

4.1 | An autonomy-supportive and a chaotic leadership style in relation to turnover intentions

Our study initially examined the relation between the leadership styles and volunteers' turnover intentions. Our findings revealed that an autonomy-supportive leadership style was negatively related to turnover intentions. This result was in line with SDT research highlighting the adaptive role of an autonomy-supportive style in the volunteering context (Allen & Bartle, 2014; Haivas et al., 2012; Oostlander et al., 2014). In contrast, a chaotic leadership style related positively to turnover intentions, which was consistent with previous SDT research revealing a positive relation between a chaotic leadership style and negative outcomes (De Clerck et al., 2021b). It also confirmed the findings of studies starting from transformational theory (Bass, 2005) which reported positive relationships between a laissez-faire leadership style and negative volunteer outcomes (Rowold & Rohmann, 2009).

Yet, we also found that the relation between leaders' autonomy-supportive style and turnover intentions disappeared when we included both autonomy support and chaos in the same structural model. This finding supports calls by SDT researchers (De Clerck et al., 2021b; Gillet et al., 2013) who have advocated toward examining motivating and demotivating leadership styles within one study to demonstrate the true effects of one style while accounting for the other. This result brings new insights into the role of (de)motivating leadership for volunteers' turnover intentions. It shows that while autonomy-supportive leadership may have a mitigating role in volunteers' turnover intentions, the active reliance on chaotic leadership has an even stronger relation with volunteers' turnover intentions. Stated differently, leaders engaging in autonomy-supportive strategies such as encouraging volunteers to take initiative or offering them choices may effectively prevent volunteers from leaving the organization. Yet, leaders relying on a more permissive, laissez-faire attitude exert an even greater influence on

volunteers' intentions to depart, underscoring the pivotal role of a chaotic leadership style in driving volunteers to consider leaving the organization.

4.2 | Need-based experiences as the underlying mechanism

The current study also provided more insight into the role of need-based experiences as the underlying mechanisms influencing volunteers' turnover intentions. As expected based on theorizing (Deci & Ryan, 2000; Ryan & Deci, 2017; Vansteenkiste & Ryan, 2013) and SDT research (Van den Broeck et al., 2016), an autonomy-supportive leadership style was positively related to need satisfaction while a chaotic leadership style was most closely and positively related to need frustration. Need satisfaction in turn displayed a negative relation with turnover intentions, yet this negative relation disappeared when need frustration was accounted for (Van den Broeck et al., 2016). Clearly, need frustration was most closely and strongly related to turnover intentions, and the relation between a chaotic leadership style and turnover was fully mediated through need frustration.

Overall, these findings add to the limited evidence revealing that a chaotic leadership style not only hampers need satisfaction, but particularly engenders feelings of need frustration (De Clerck et al., 2021b; Trépanier et al., 2019). In turn, need frustration related strongly to volunteers' turnover intentions. Thus, when leaders are too awaiting, passive, unpredictable, or unavailable, volunteers are likely to experience feelings of coercion, incompetence and rejection, and may eventually leave the organization.

4.3 | The role of autonomy-supportive and chaotic leadership in need-based experiences and turnover intentions: A person-centered approach

Despite the recognition that a leadership style is typically a combination of different motivating and demotivating styles (Aelterman et al., 2019), no research has focused on the combination of an autonomy-supportive and a chaotic leadership style in the nonprofit volunteering context. Our study filled this gap, revealing that autonomy-supportive and chaotic leadership within the volunteering context were best presented via four distinct profiles. Interestingly, these profiles were similar to those recently found by Haerens et al. (2022) in their study on school boards' leadership styles. Like in the research of Haerens et al. (2022), the most remarkable finding was that a considerable number of followers (40% of the volunteers in our study) perceived their leaders as moderately high on autonomy support and chaos simultaneously, confirming theory (Aelterman et al., 2019) that both styles can indeed co-occur to some degree.

As anticipated, the results also pointed to the high autonomy support-low chaos group as the most favorable configuration, demonstrating the highest levels of need satisfaction and lowest levels of need frustration. Most importantly, this profile also exhibited the lowest turnover intentions, aligning with abundant research emphasizing the benefits of autonomy support (Van den Broeck et al., 2016). In addition, our findings corroborated the work of Haerens et al. (2022) in the school context suggesting that the most optimal outcomes are achieved not merely through autonomy support alone, but through autonomy support coupled with the absence of chaos.

An opposite pattern was found for the group who perceived their leaders as very high on chaos and low on autonomy support. The group who perceived their leaders as moderately high on autonomy support and chaos (MA-MC) reported elevated levels of need frustration and turnover intentions, while their feelings of need satisfaction were to some degree safeguarded. This was not the case in the group that perceived their leaders as low on autonomy support and moderately high on chaos (LA-MC), which also reported low levels of need satisfaction.

In summary, the results of the profile analyses showed, consistent with research of Haerens et al. (2022), that variations in volunteers' perceptions of chaotic leadership correspond with fluctuations in experiences of need frustration and turnover intentions. Given that volunteer turnover is a major concern for leaders in numerous nonprofit and voluntary organizations (Wicker & Breuer, 2013), it is, important to raise awareness about the risks of a chaotic leadership style.

5 | PRACTICAL IMPLICATIONS

This study has important practical implications for all nonprofit organizations in which leaders closely interact with volunteers. This includes most recreational sports clubs as well as many charities, social service organizations, youth organizations, and science groups. The results pointed to the adaptive role of leaders' autonomy support in their intermittent interactions with volunteers. When being autonomy-supportive, leaders appreciate volunteers' proposals, ask questions, and listen with interest to how they see things. In addition, they engage in dialogue with volunteers to determine how the organization can better accommodate their expectations or can resolve possible tensions within the organization.

However, the results also suggest that autonomy support may be combined with maladaptive, chaotic behaviors with leaders entering in dialogue with volunteers, yet also being overly passive in waiting for volunteers to take the initiative and move forward. To assist nonprofit leaders in avoiding chaotic behaviors, leadership training sessions can be organized to provide guidance and monitoring to prevent this pitfall. During these sessions, autonomy-supportive leaders can learn how to effectively blend the provision of opportunities for dialogue, input, and participation with clear direction and guidance, avoiding the trap of passivity. For instance, when leaders organize a meeting with volunteers, they can provide a clear agenda and ask volunteers if they would like to add an item to the agenda. Or when volunteers are not satisfied, leaders can propose a solution to solve the problem and ask for their opinion. It could also be valuable to involve internal stakeholders such as volunteers and organizational members in these leadership training sessions as their perspective on the organization's leadership can assist leaders in refining their leadership style.

6 | STRENGTHS, LIMITATIONS, AND DIRECTIONS FOR FUTURE RESEARCH

Previous SDT-based studies mainly relied on the Work-Climate Scale to measure an autonomy-supportive leadership style (Haivas et al., 2012; Oostlander et al., 2014). However, this scale does not allow to measure leaders' chaotic style, which may be one of the reasons why this leadership style is generally ignored in SDT-based research. A major strength of the current study is the use of a newly developed questionnaire that allows assessing both autonomy-supportive

and chaotic leadership in a reliable way. Nonetheless, it is worth noting that SDT also distinguishes between a well-structured, controlling, warm, and cold leadership style. Particularly, the consideration of a structuring style would be interesting in relation to the current study. Including a measure of structure would allow distinguishing those leaders who manage to provide autonomy support in a structuring way from those who provide autonomy support in a chaotic way.

In the current study, we measured turnover intentions and not turnover behavior. Although an intention to engage in a behavior is one of the best predictors of enacting that behavior, the two are not identical and should not be treated as such. It would thus be interesting for future research to also examine actual turnover behavior. A related limitation is the full reliance on volunteers' self-reports; hereby increasing the likelihood of inflated relations due to shared method variance. The study would, therefore, benefit from more objective measures of actual turnover data and leadership styles, for instance through observations.

Another limitation of this study was the use of a single sample (i.e., nonprofit and voluntary sports clubs). While the study results were consistent with theory (Aelterman et al., 2019) and previous research (Haerens et al., 2022), testifying to the robustness of the findings, we urge researcher to provide further evidence of the tensions between autonomy support and chaos in other nonprofit contexts.

A final limitation of our study is the cross-sectional design, impeding us from drawing causal inferences. Previous studies have shown that turnover intentions change over time (G. Chen et al., 2011) stressing the need for longitudinal studies.

7 | CONCLUSION

Using SDT as a guiding framework, this study raised awareness about the risks of the reliance on chaotic leadership in nonprofit and voluntary organizations. By examining leaders' chaotic style as well as experiences of need frustration, in addition to leaders' autonomy-supportive style and experiences of need satisfaction, it became clear that particularly a chaotic leadership style and experiences of need frustration were related to volunteers' turnover intentions. When nonprofit and voluntary organizations implement leadership development programs, it is thus imperative that they also point to the pitfalls of sliding into a chaotic style. Furthermore, the results of this study set the stage for developing a new research agenda in which demotivating leadership styles and experiences of need frustration are more systematically examined in relation to turnover.

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CONFLICT OF INTEREST STATEMENT

None of the authors have a conflict of interest to disclose.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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APPENDIX

Items of the leadership scales

Situation 1: You come to the board with a (policy) proposal. The board...

...listens curiously to the proposal and asks you why you think this is so important (autonomy support).

...appreciates the proposal, asks questions, and listens with interest to how you see things (autonomy support).

...allows you to continue brooding on your proposal and decides later what the board will do with it (chaos).

Situation 2: The board organizes a meeting with volunteers to evaluate the sports club's activities. The board...

...creates opportunities for volunteers to provide input during the meeting (autonomy support).

...does not spend a lot of time preparing for the meeting. After all, it costs a lot of energy (chaos).

...announces the meeting and waits for you or other volunteers to take the initiative (chaos).

Situation 3: The board learns that you have expectations regarding the sports club's management. The board...

...takes time to explain what efforts the club is currently already making to meet your expectations and listens to how you experience things (autonomy support).

...is of the opinion that, if the club has to make additional efforts, the ball is in your court and awaits your initiatives (chaos).

Situation 4: You are not satisfied with the sports club's management. The board...

...asks you to make a proposal on how the problem can be solved (autonomy support).

...tries to get more insight into why you are not satisfied. The board assures you that your comments will be discussed during a board meeting (autonomy support).

...ignores the complaining and hopes it will be all blow over by itself (chaos).

Situation 5: There are tensions between you and other volunteers in the club. The board...

...allows you to tell your version of the facts and shows understanding for how you see the situation (autonomy support).

...does not intervene. You have to learn to deal with tensions yourselves, you are not children after all (chaos).

...does not react and waits for the tensions to calm down (chaos).

Situation 6: The board plans an activity to thank volunteers for their efforts. The board...

...offers a number of different activities and lets volunteers vote on which one they prefer (autonomy support).

...proposes to meet, but as for the concretization, the ball is in the volunteers' court (chaos).

Items of need satisfaction scale

Within the sports club...

I feel a sense of choice and freedom in the things I undertake (autonomy satisfaction)

I feel that my decisions reflect what I really want (autonomy satisfaction)

I feel my choices express who I really am (autonomy satisfaction)

- I feel I have been doing what really interests me (autonomy satisfaction)
- I feel confident that I can do things well (competence satisfaction)
- I feel capable at what I do (competence satisfaction)
- I feel competent to achieve my goals (competence satisfaction)
- I feel I can successfully complete difficult tasks (competence satisfaction)
- I feel that the people I care about also care about me (relatedness satisfaction)
- I feel connected with people who care for me, and for whom I care (relatedness satisfaction)
- I feel close and connected with other people who are important to me (relatedness satisfaction)
- I experience a warm feeling with the people I spend time with (relatedness satisfaction)

Items of need frustration scale

Within the sports club...

- Most of the things I do feel like “I have to” (autonomy frustration)
- I feel forced to do many things I wouldn't choose to do (autonomy frustration)
- I feel pressured to do too many things (autonomy frustration)
- My daily activities feel like a chain of obligations (autonomy frustration)
- I have serious doubts about whether I can do things well (competence frustration)
- I feel disappointed with many of my performance (competence frustration)
- I feel insecure about my abilities (competence frustration)
- I feel like a failure because of the mistakes I make (competence frustration)
- I feel excluded from the group I want to belong to (relatedness frustration)
- I feel that people who are important to me are cold and distant towards me (relatedness frustration)
- I have the impression that people I spend time with dislike me (relatedness frustration)
- I feel the relationships I have are just superficial (relatedness frustration)

Items of turnover intentions scale

- I am actively looking for volunteer work outside the sports club
- As soon as I can find a better volunteer work, I'll leave the sports club
- I am seriously thinking about quitting my volunteer work in the sports club
- I often think about quitting my volunteer work in the sports club
- I think I will be working at the sports club five years from now on (reverse-scored)