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LEADERSHIP STYLES AND CONFLICT MANAGEMENT: AN EXPLORATORY ANALYSIS OF BEHAVIORAL PROFILES AND TEMPERAMENT AMONG HUMAN RESOURCES STUDENTS

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Leadership Styles and Conflict Management: An Exploratory Analysis of Behavioral Profiles and Temperament among Human Resources Students

Cătălin-George FEDOR¹, Mariana POPOVICI²

Abstract

This study aims to examine the relationships between leadership styles, conflict management strategies, and temperamental typologies, as well as to identify distinct respondent profiles emerging from the interaction of these variables. The research is grounded in the premise that leadership behavior is shaped by both individual characteristics and situational dynamics, particularly the ways in which individuals approach and regulate conflict situations. An exploratory research design was employed, based on a sample of 30 respondents from diverse academic fields. Data were collected using standardized instruments assessing conflict management styles, self-perceived leadership, classical leadership typologies, and temperamental dimensions. Given the nature of the variables and the sample size, nonparametric statistical methods were applied. The analysis included descriptive statistics, Spearman's rank correlation coefficients to test associations, Multiple Correspondence Analysis (MCA) to explore multidimensional relationships, and Hierarchical Cluster Analysis (Ward's method) to identify homogeneous respondent groups. The findings indicate that conflict management style is the only variable exhibiting statistically significant associations, showing a moderate negative correlation with reserved personality style and a moderate positive correlation with leadership type. In contrast, temperament does not present significant relationships with any of the analyzed variables. MCA results confirm that conflict management and reserved personality styles are the main contributors to the factorial structure, whereas temperament has a marginal influence. Furthermore, cluster analysis reveals two distinct respondent profiles: a relational-participative profile, characterized by cooperation, flexibility, and engagement, and a normative-structured profile, focused on control, rule adherence, and organizational order.

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The study highlights the central role of conflict management behaviors in shaping leadership profiles, while suggesting a limited influence of temperamental traits within the analyzed framework. However, the exploratory nature of the study and the small sample size limit the generalizability of the findings, emphasizing the need for further research on larger and more diverse samples.

Keywords: leadership; conflict management; temperament; multiple correspondence analysis; behavioral profiles.

Introduction

This paper aims to analyze the relationship between leadership competencies, as perceived by individuals, and those identified through standardized instruments. The sample consists of 30 master's students enrolled in the Human Resources program at Alexandru Ioan Cuza University in Iași. The study utilized instruments targeting conflict management styles (Falikowski, 2006), perceptions of one's own leadership style (Avolio & Bass, 1995), classical leadership typologies (Lewin, Lippitt & White, 1939), as well as temperamental dimensions (Chamorro-Premuzic, 2007).

In the social and behavioral sciences literature, there is a growing interest in the relationships between leadership styles, conflict management, and personality traits. Leadership is no longer approached exclusively as a managerial competency in the narrow sense, but is viewed as a broader process influenced by psychological, social, and situational factors. These factors contribute to how individuals act and make decisions in organizational or educational contexts (Igwe & Odii, 2020).

Conflict management is an important aspect of group dynamics, with direct implications for leadership effectiveness and relationships among group members. The styles adopted in such situations are not merely a matter of strategic choices but also reflect certain individual predispositions, such as temperamental traits or personality patterns. From this perspective, the literature emphasizes the importance of analyzing these variables together to identify behavioral patterns and potential leadership profiles (Chapman, 2024).

Although there are numerous studies that address these dimensions separately, research analyzing them simultaneously is scarce, especially among students in training. An exploratory approach is useful in this context because it allows for the identification of initial trends and structures that are less visible in the data, without imposing strict causal relationships from the outset (Creswell, 2009; Babbie *et al.*, 2010).

In this regard, the objective of the study is to examine the relationships between leadership styles, conflict management strategies, and the participants' temperamental typologies. It also aims to identify possible distinct profiles resulting from the interaction of these variables. The research is exploratory in nature and uses nonparametric statistical methods, along with multivariate techniques, to highlight relevant associations within the analyzed data.

Methodology

Sample

The study was conducted on a sample of respondents from fields such as Social Sciences (specializations: Sociology, Human Resources, Social Work, and International Relations), Education (Psycho-Pedagogy), Humanities (Letters), Law (Legal Studies), and Medical Sciences (Nutrition and Dietetics). Although the sample size is relatively small ($N = 30$), the literature emphasizes that there is no generally applicable sample size for all research designs; rather, sample size is determined by the objectives of the study and the chosen methodology (Babbie *et al.*, 2010). In exploratory research, small samples are considered appropriate for identifying preliminary relationships or tendencies, with results having a primarily indicative character (Creswell, 2009).

Therefore, the present study has an exploratory character, and the results obtained cannot be generalized to the wider population; instead, they should be interpreted as indications of possible relationships among the analyzed variables.

Types of Variables

The statistical analysis was conducted based on a set of variables referring to leadership style, conflict management strategy, and temperamental typology of respondents. The variables are nominal, with the exception of the evaluation of leadership type, which includes an ordinal component reflecting the ranking of leadership performance (Igwe and Odii, 2020). In sociological research, nominal and ordinal variables are recognized as fundamental levels of measurement and are analyzed using proper statistical techniques, such as frequency tables and contingency analysis, which allow for the identification of relationships among categories (Chapman, 2024).

The objective of the study is to identify relationships among leadership style, conflict management strategies, and temperamental typology of respondents, without assuming causal relationships.

Specific hypotheses

H1: There is a significant association between leadership style and conflict management strategies.

H2: Temperamental typology is associated with conflict management strategies

H3: There is an association between leadership style and respondents' temperamental typology.

H4: Based on leadership style, conflict management strategies, and temperamental typology, distinct respondent profiles can be identified.

Statistical analysis methods

The statistical analysis of the data collected through the questionnaire was conducted using XLSTAT Premium 2019.2.1. Considering the small sample size ($N = 30$) and the nature of the variables analyzed, nonparametric statistical tests were employed, as they are less restrictive regarding application conditions and are equally suitable for exploratory studies (Contador and Senne, 2016; Fitzgerald *et al.*, 2001; Garrocho-Rangel *et al.*, 2024).

The analysis of the questionnaire responses began with an assessment of the relative frequencies of the investigated variables, providing a general description of their distributions and identifying the main trends in responses of participants.

To test the hypotheses concerning the relationships among leadership style, conflict management strategies, and temperamental typology (H1, H2, H3), Spearman's rank correlation coefficients (ρ) were calculated to evaluate the strength and direction of the associations between the analyzed variables. The use of Spearman's coefficient is justified, as previously mentioned, by the ordinal nature of the data and the sample size. The literature indicates that this coefficient provides valid estimates under these conditions (Bonett and Wright, 2000).

For the hypothesis regarding the identification of distinct respondent profiles (H4), Multiple Correspondence Analysis (MCA) was applied. This is an exploratory technique commonly used in the social sciences to highlight patterns and complex relationships among qualitative variables, relying on the χ^2 distance (Atkinson, 2024; Carrasco-Bonal *et al.*, 2025). MCA allows for dimensionality reduction of the data and the identification of relationships among variable categories without assuming normal distributions.

The factorial coordinates obtained through MCA were used as the basis for cluster analysis, with the selection of principal axes based on the proportion of explained inertia, so as to reflect the variables contributing most significantly to the data structure.

The description of respondent groups with similar response profiles was performed using Hierarchical Cluster Analysis, employing Ward's method (Landau

and Ster, 2010; Ward Jr, 1963) and Euclidean Distance, applied to the first three factorial axes, which account for the majority of explained inertia.

For all statistical tests, the threshold for significance was set at $p < 0.05$.

Results

Descriptive Analysis

The sex distribution indicates an overrepresentation of women in the sample (approximately 93%), compared to a smaller proportion of men (approximately 7%) (Fig. 1a).

Regarding field of study (Fig. 1b), Human resources (HR) accounts for the largest part of respondents (33%), followed by Sociology (SOC) and Letters (LIT) (17% each). International relations (IR) and Social work (SW) show moderate representation (10%), while Law (LAW), Nutrition and dietetics (N&D), and Psych pedagogy (PSY) are underrepresented.

This distribution indicates that the sample is predominantly oriented toward social and humanistic fields.

Personality style analysis shows a dominance of the Owl type (63%; Fig. 1c), while the Shark (17%) and Chameleon (13%) styles appear moderately, and the Fox style is poorly represented (7%).

At the level of Reserved personality style (RPS), the Chameleon type is most frequent (40%), followed by Fox (26%) (Fig. 1d). The Owl, Shark, and Tortoise styles occur at lower frequencies (10-14%).

Self-perceived leadership style (SPL) is dominated by Participative leadership (PL) (45%; Fig. 1e), followed by Charismatic leadership (18%) and Transformational leadership (15%). Transactional (12%) and Laissez-Faire (7%) styles are underrepresented in the analyzed sample.

The distribution of leadership typologies (Fig. 1f) shows a high concentration in the SLP and AT category (34%), followed by Ideal democrat (ID) (30%). The SLP category appears in approximately 10% of cases, while the SLP and LFT, MA/DR, and LFT/DR typologies collectively account for lower frequencies. High Authoritarian (HA) leadership is minimally represented (3%).

About temperament (Fig. 1g), the Sanguine-Choleric (SA/CH) combination is dominant (40%), followed by other mixed types with frequencies ranging between 3% and 10%.

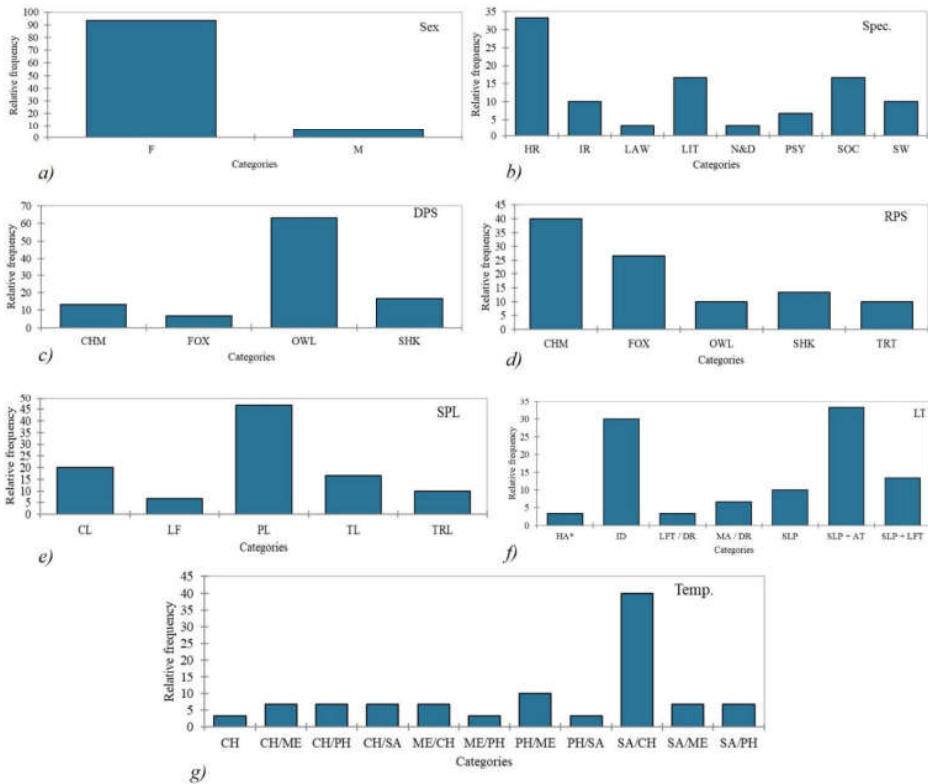


Figure 1. Relative frequency distributions of the studied variables

Note: a - **Sex**; b - Field of specialization (**Spec.**); c - Dominant personality style (**DPS**); d - Reserved personality style (**RPS**); e - Self-perceived leadership style (**SPL**); f - Leadership typology (**LT**); g - Temperament (**Temp.**).

Abbreviations: (a) F = Female; M = Male; Specialization (**Spec.**) (b): HR = Human Resources; IR = International Relations; LAW = Law; LIT = Letters; N&D = Nutrition and Dietetics; PSY = Psycho-Pedagogy; SOC = Sociology; SW = Social Work; (c): CHM = Chameleon; FOX = Fox; OWL = Owl; SHK = Shark; (d): CHM = Chameleon; FOX = Fox; OWL = Owl; SHK = Shark; TRT = Tortoise; (e): CL = Charismatic Leadership; LF = Laissez-Faire Leadership; PL = Participative Leadership; TL = Transactional Leadership; TRL = Transformational Leadership; (f): HA* = High Authoritarian; ID = Ideal Democrat; LFT/DR = Laissez-Faire/Directive Leadership; MA/DR = Managerial/Directive Leadership; SLP = Supportive Leadership; SLP + AT = Supportive Leadership + Authoritative Type; SLP + LFT = Supportive Leadership + Laissez-Faire Type; (g): CH = Choleric; CH/ME = Choleric-Melancholic; CH/PH = Choleric-Phlegmatic; CH/SA = Choleric-Sanguine; ME/CH = Melancholic-Choleric; ME/PH = Melancholic-Phlegmatic; PH/ME = Phlegmatic-Melancholic; PH/SA = Phlegmatic-Sanguine; SA/CH = Sanguine-Choleric; SA/ME = Sanguine-Melancholic; SA/PH = Sanguine-Phlegmatic.

Evaluation of associations between variables

The correlation analysis indicates that field of study of respondents does not show significant associations with any other variable included in the study. Spearman coefficients between field of study and conflict management style ($\rho = -0.068$), reserved personality style ($\rho = -0.124$), leadership ($\rho = -0.047$), temperament ($\rho = -0.023$), and leader type ($\rho = 0.148$) are negligible, with 95% confidence intervals including values close to zero. This suggests that field of study of respondents does not influence their choice of conflict management strategies, reserved personality style, leadership abilities, temperamental typology, or leader type.

Regarding conflict management style (conflict style, CS), two statistically significant correlations were identified. The correlation between conflict management style and reserved personality style is moderate and negative ($\rho = -0.488$, $R^2 = 0.238$), with a 95% confidence interval of $[-0.731, -0.133]$ and $p = 0.02$. This indicates that respondents who adopt a more active conflict management style tend to exhibit a lower level of reserved personality.

Additionally, conflict management style shows a moderate positive correlation with leader type ($\rho = 0.391$, $R^2 = 0.153$, 95% CI $[0.022, 0.666]$, $p = 0.04$), suggesting that certain approaches to conflict management may be associated with more proactive or results oriented leader types.

Other correlations of conflict management style with leadership ($\rho = -0.188$), temperament ($\rho = 0.047$), and field of study ($\rho = -0.068$) are very weak and not statistically significant.

The correlations of reserved personality style with leadership ($\rho = 0.225$), temperament ($\rho = -0.107$), and leader type ($\rho = -0.201$) are weak and not statistically significant, with confidence intervals including values close to zero. This suggests that reserved personality style is not an explanatory factor for leadership style, temperament, or leader typology within the analyzed sample.

Also, correlations between leadership and the other variables show low coefficients and are not statistically significant, indicating that leadership performance is not clearly determined by reserved personality style, temperament, or field of study. Likewise, temperament of respondents does not exhibit significant correlations with any of the analyzed variables, highlighting its relative independence within this sample.

Table 1. Spearman Correlation Results

Variable Pair	ρ (Spearman)	R ²	95% CI	p-value
Field of study – Conflict style	-0.068	0.005	[-0.418, 0.300]	0.7
Field of study – Reserved style	-0.124	0.015	[-0.465, 0.248]	0.5
Field of study – Leadership	-0.047	0.002	[-0.400, 0.319]	0.8
Field of study – Temperament	-0.023	0.001	[-0.380, 0.340]	0.9
Field of study – Leader type	0.148	0.022	[-0.227, 0.484]	0.4
Conflict style – Reserved Style	-0.488	0.238	[-0.731, -0.133]	0.02*
Conflict style – Leadership	-0.188	0.035	[-0.516, 0.188]	0.3
Conflict style – Temperament	0.047	0.002	[-0.319, 0.401]	0.8
Conflict style – Leader type	0.391	0.153	[0.022, 0.666]	0.04*
Reserved style – Leadership	0.225	0.050	[-0.152, 0.544]	0.2
Reserved style – Temperament	-0.107	0.011	[-0.450, 0.265]	0.6
Reserved style – Leader type	-0.201	0.041	[-0.526, 0.175]	0.3
Leadership – Temperament	0.107	0.012	[-0.264, 0.451]	0.6
Leadership – Leader type	0.283	0.080	[-0.094, 0.589]	0.15
Temperament – Leader type	0.140	0.019	[-0.234, 0.477]	0.5

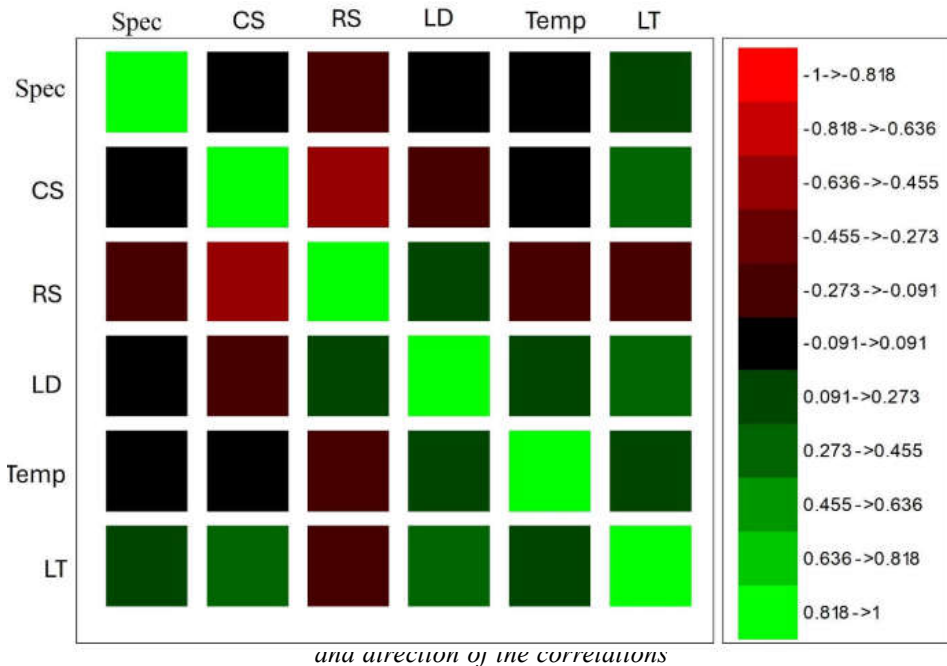
R^2 = coefficient of determination; 95% CI = 95% confidence interval; * statistic significant.

Multiple Correspondence Analysis (MCA)

While the bivariate correlations highlighted specific pointwise associations, MCA allowed for an exploration of the total structure of interdependencies among the variables.

The MCA identified five axes, together explaining 100% of the total variability in the dataset. The first three axes, accounting for 76.56% of the variance, are the most relevant for interpreting relationships among the analyzed variables.

Axis 1 explains 36.67% of the variance and is dominated by Conflict style (CS) (-2.00863), which is clearly separated from the other variables. Reserved personality style (RS) and Leadership (LD) have positive scores (1.1288 and 1.04625), indicating a positive correlation between them. Field of study (Spec.) and Leader type (LT) show moderate negative scores, while Temperament (Temp.) has a minor influence on this axis.



Note: green represents strong positive correlations, red indicates strong negative correlations, and black represents correlations close to zero, indicating no significant relationship between the variables.

Axis 2 accounts for 21.97% of the variance, primarily influenced by Field of study (Spec.) (1.62238), which correlates positively with Leadership (LD) (-1.27248). Conflict Style (CS) and Leader type (LT) have moderate negative correlations with this axis, while Reserved style (RS) and Temperament (Temp.) exert minimal influence.

Axis 3 explains 17.92% of the variance and shows a negative correlation between Reserved style (RS) (-1.25551) and Temperament (Temp.) (-0.52611), whereas Leadership (LD) (1.15822) contributes positively. Field of study (Spec.) and Leader type (LT) have moderate positive correlations along this axis.

Axis 4 (12.17%) and Axis 5 (11.28%) explain smaller portions of the variance but highlight significant influences of Leadership (LD), Conflict style (CS), and Leader type (LT) on these dimensions.

This analysis demonstrates that while some variables, such as Conflict style and Reserved personality style, exhibit strong associations along specific axes (e.g., Axis 1), the Multiple Correspondence Analysis (MCA) provides a more nuanced understanding of multidimensional relationships, revealing complex

patterns that bivariate correlations alone cannot capture. The MCA plot reveals distinct patterns and groupings within the data, supporting the hypothesis of varying respondent profiles. This justifies the use of factorial coordinates for cluster analysis, enabling the identification of homogeneous groups based on the qualitative variables explored.

Figure 3 illustrates the positioning of variables Specialization (Spec.), Conflict style (CS), Reserved personality style (RS), Leadership (LD), Temperament (Temp.), and Leader type (LT) along the first three MCA axes, emphasizing their interrelationships and relative distances. The distribution of variables relative to the respondent group shows that Conflict style (CS) and Reserved personality style (RS) are positioned at a considerable distance from the respondent circle, suggesting a clear separation between these two traits. This indicates that respondents with an active conflict management style tend to exhibit a less reserved personality style. In contrast, Specialization (Spec.) is moderately associated with the respondent profile, indicating a significant, yet not strong, connection between the field of specialization and individual traits.

Temperament (Temp.), located in the circle area (respondents), shows a relatively weak influence on the other variables, suggesting that temperament plays an irrelevant role in shaping the relationships between the variables.

Table 2. Eigenvalues and Explained Variance for MCA Axes

Axis	Eigenvalue	% of total	Cumulative
1	0.089093	36.674	36.674
2	0.053363	21.966	58.64
3	0.043522	17.915	76.555
4	0.029565	12.17	88.725
5	0.02739	11.275	100

Table 3. Factorial Coordinates of Variables on MCA Axes

Variable	Axis 1	Axis 2	Axis 3	Axis 4	Axis 5
Spec.	-0.19441	1.62238	0.840416	0.237142	0.185774
CS	-2.00863	-0.4356	-1.25282	0.504001	1.34343
RS	1.1288	0.119117	-1.25551	0.695359	-0.44971
LD	1.04625	-1.27248	1.15822	0.108379	1.44679
Temp	0.096317	0.060135	-0.52611	-2.61354	-0.09099
LT	-0.75035	-0.93978	0.731761	0.241013	-1.57898

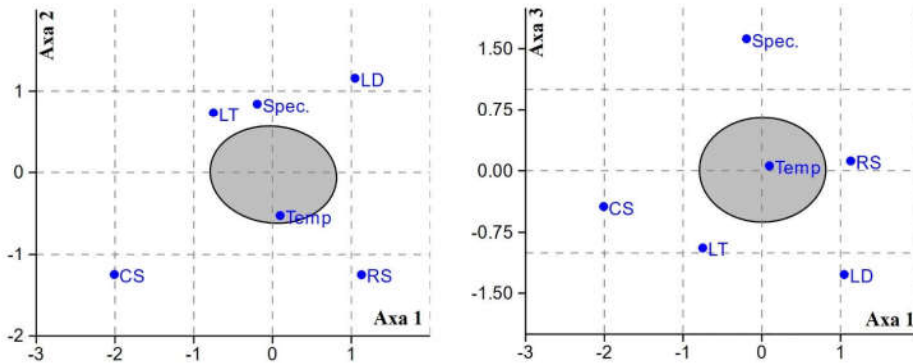


Figure 3. MCA Biplot showing the distribution of variables on the Axes 1-2 (left), and Axes 1-3 (right).

Moreover, Hierarchical Cluster Analysis identified two main respondent groups, which align with the structures revealed by the MCA: one group is oriented toward collaboration and engagement, while the other focuses on organization, rules, and control (Figure 4).

Cluster 1 includes respondents with participative or transformational leadership, a positive self-perception of their ability to lead a group, balanced conflict management styles, and a sanguine temperament. These respondents show a strong orientation toward cooperation and engagement, adopting flexible strategies in conflict resolve, and emphasize interpersonal relationships.

Cluster 2 is more heterogeneous and can be subdivided into two typologies: the first is characterized by authoritarian leadership and a choleric temperament, with a strong focus on control; the second includes individuals with transactional leadership and a choleric-melancholic temperament, oriented toward rule adherence. Despite these internal differences, both typologies share a general orientation toward organization and control, emphasizing order and adherence to rules, which clearly distinguishes them from Cluster 1.

This analysis indicates that the primary contrast within the sample lies between respondents with a relational-participative, flexible, and collaborative orientation (Cluster 1) and those oriented toward organization and control, applying rules in leadership activity (Cluster 2).

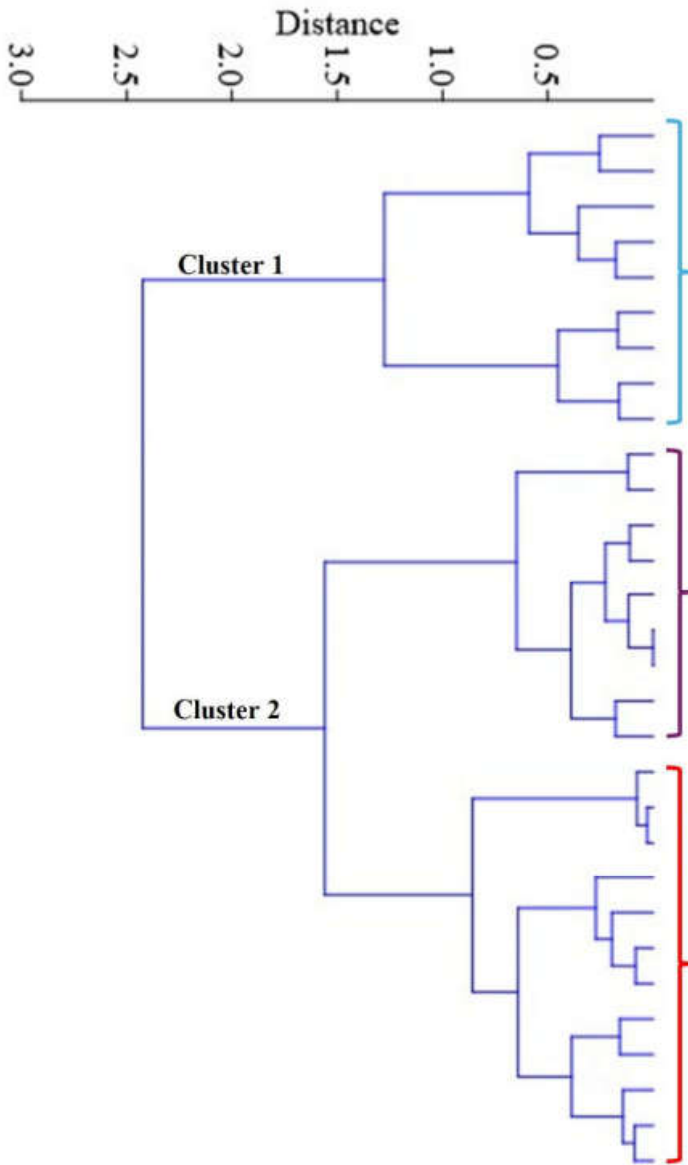


Figure 4. Hierarchical Cluster Analysis

Discussion

We observe a statistically significant relationship between conflict management style and leadership style, with the research participants tending to choose styles that involve greater engagement. In this sense, conflict management can be considered an indicator of the relational and organizational competencies demonstrated by the respondents. The moderate positive association between conflict management style and leadership type reinforces the hypothesis that leadership effectiveness is linked primarily to the individual's behavioral adaptability, rather than exclusively to formal authority structures. In contrast, the negative association observed between conflict management style and the reserved personality style suggests that respondents may be more inclined to adopt collaborative, direct, or participatory approaches in conflict situations.

On another note, the temperamental typology did not show statistically significant relationships with leadership style, conflict management, or leadership type. A possible explanation lies in the fact that leadership and conflict management are more strongly influenced by acquired social skills than by relatively stable temperamental predispositions. Another interpretation could involve the heterogeneity and relatively limited size of the sample, which could reduce the statistical significance of temperamental effects.

The MCA analysis revealed relationships and structures that could not be observed clearly enough through simple bivariate correlation analysis.

The data analysis also revealed the existence of two distinct profiles of respondents. The first profile comprises students oriented toward participatory or transformational forms of leadership, who tend to adopt balanced conflict management strategies and cooperative modes of interaction. In the second profile, the emphasis is on control, adherence to rules, and maintaining order within the organization.

No significant relationships were identified between the field of study (human resources) and the analysed variables; consequently, the major itself does not fully explain the differences in leadership orientation or conflict management. These competencies can also be acquired through various social and interpersonal experiences, not just within the university setting.

Overall, the findings highlight the important role that conflict management plays in shaping the leadership profiles of students pursuing careers in social work. The data suggest that leadership cannot be reduced solely to stable personality traits, but must also be viewed as the result of social interactions, communication, and the ability to adapt in various relational contexts.

Conclusion

The findings of the statistical analysis of the questionnaire data indicate that conflict management style represents the most distinctive characteristic among respondents, being closely associated with leadership type. In contrast, temperament does not appear to play a decisive role in influencing leadership style. The results further reveal the presence of two main respondent profiles: one characterized by a collaborative and engagement-oriented approach, and another defined by a structured orientation toward organization, rule adherence, and control.

Based on the analyses conducted, the results indicate mixed support for the research hypotheses. Hypothesis H1 is partially confirmed, in the sense that the relationship between leadership style and conflict management strategies is not directly significant, but appears to be mediated by leader type. In contrast, hypotheses H2 and H3 are refuted, as no significant associations were identified between temperamental typology and the other variables analyzed, suggesting a marginal role for temperament in the relational structure under investigation.

Hypothesis H4 is confirmed, with the multivariate analysis highlighting the existence of two distinct respondent profiles: one characterized by a relational-participatory orientation, based on cooperation and flexibility, and another defined by a normative-structured orientation, centered on control and adherence to rules.

The present exploratory study aimed to examine the relationships between leadership style, conflict management strategies, and temperamental typology within a small, heterogeneous sample. The findings indicate that conflict management style emerges as the most salient variable, being the only dimension that demonstrates statistically significant associations with leadership type. This result suggests that the way individuals approach and regulate conflict situations may serve as a behavioral proxy for leadership orientation, reflecting broader patterns of interaction and influence.

More specifically, an active and direct conflict management approach is associated with lower levels of reserved personality style and with more proactive, results-oriented leadership profiles. These findings support the assumption that engagement in conflict situations is linked to openness, behavioral flexibility, and action-oriented tendencies, all of which are relevant for effective leadership practices.

In contrast, temperament does not exhibit statistically significant relationships with any of the variables analyzed. The near-zero correlation coefficients and confidence intervals encompassing null values suggest that temperamental traits do not play a determining role in shaping leadership style or conflict management strategies within the present sample. Rather, temperament appears to function as a relatively independent or peripheral dimension in the observed relational structure.

The multivariate analysis further corroborates these results, indicating that conflict management style and reserved personality style are the primary

contributors to the structuring of the factorial space, whereas temperament has a marginal contribution to the explained variance. This pattern highlights the predominance of behavioral dimensions over dispositional traits in differentiating respondent profiles.

Additionally, hierarchical cluster analysis reveals the presence of two distinct respondent typologies. The first cluster is characterized by a relational and participative orientation, involving cooperative behaviors, flexible conflict management strategies, and leadership styles aligned with participative or transformational approaches. The second cluster reflects a normative and structured orientation, emphasizing control, rule adherence, and organizational order, typically associated with transactional or authoritarian leadership patterns. These findings suggest the existence of two contrasting leadership models: one centered on relational dynamics and negotiation, and the other on regulation and control.

Another relevant finding is the absence of significant associations between field of study and the analyzed variables, indicating that academic specialization does not appear to directly influence leadership styles or conflict management strategies. This may imply that such competencies are more strongly shaped by individual experiences and contextual factors than by formal education.

Despite these contributions, the study is subject to several methodological limitations, most notably the small sample size and the gender imbalance, which may affect the robustness of statistical estimates and limit the generalizability of the findings. Consequently, future research should focus on replicating the analysis using larger and more diverse samples, as well as incorporating additional variables (e.g., professional experience, organizational context) to further validate and extend the proposed framework.

Overall, the study contributes to the literature by emphasizing the central role of conflict management behaviors in the configuration of leadership profiles, while questioning the explanatory weight of temperamental traits in this context.

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