Path-Goal Theory and Followers' Work Engagement: An Empirical Exploration of the Situational Leadership Approach

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Abstract: By adopting a path-goal theory approach, this study tests in a sample of Italian employees (N=181) whether a framework considering at the same time leadership style, follower characteristics, and task characteristics explains work engagement levels in followers. The study provides new empirical evidence supporting path-goal theory and offers insights into the role of situational factors in the leader-follower relationship.

Keywords: Path-Goal Theory; Situational Leadership; Followership; Work Engagement

1. Introduction

Contingent leadership models, such as the path-goal theory, highlight how leaders can adjust their style to align with followers' needs and situational demands, thereby enhancing performance and satisfaction. Developed by Robert House in 1971, the path-goal theory suggests that leaders can boost motivation, empowerment, and satisfaction by clarifying paths to goals, removing obstacles, and offering support (House, 1971). The theory outlines four leadership styles—directive, supportive, participative, and achievement-oriented—that leaders can adopt based on the nature of the task and follower characteristics (House & Mitchell, 1974). This flexibility helps address team needs and fosters a productive work environment (Northouse, 2018). For example, a directive style is effective for ambiguous tasks, while a supportive style works well in stressful situations (Schaufeli & Bakker, 2010). Despite its strengths, the theory has gaps, such as a limited focus on situational contingencies, vague descriptions of leader behaviours, and insufficient consideration of follower characteristics and preferences (Fabac, Kokot & Bubalo, 2022; Northouse, 2018; Yukl, 1994).

2. Theoretical Background

The path-goal theory, developed by Robert House (1971, 1996) and refined by House and Mitchell (1974), explores how leaders can motivate followers by aligning leadership styles with followers' characteristics and the organizational environment. Unlike the situational approach (Hersey & Blanchard, 1996; Meirovich & Gu, 2015), which adapts to followers' developmental levels, path-goal theory emphasizes matching leadership styles to followers' motivational needs, thereby enhancing work engagement (Schaufeli & Salanova, 2010). The theory identifies four main leadership behaviours: directive, supportive, participative, and achievement-oriented, which are used based on the specific needs of followers and the situational context (Northouse, 2018).

Directive leadership provides clear instructions on tasks, methods, and timelines, which helps to eliminate ambiguity and improve focus. Supportive leadership emphasizes a friendly and approachable demeanor, focusing on followers' well-being, boosting confidence, and creating a positive work environment. Participative leadership involves followers in decision-making, enhancing their commitment and group performance. Achievement-oriented leadership sets high standards and encourages continuous improvement, demonstrating confidence in followers' abilities (House & Mitchell, 1974).

These leadership styles can be combined and adapted to different situations. For instance, supportive leadership should be effective for followers with a high need for affiliation (NfA), who value close relationships and approval from peers and leaders. This approach creates an empathetic environment that addresses followers' social needs (Kong et al., 2017; Linando & Halin, 2024; Mathieu, 1990). However, research has shown mixed results; while the need for affiliation does not always moderate the effects of leadership on satisfaction (Mathieu, 1990), it can influence the relationship between leader behaviour and followers' commitment to the supervisor (Linando & Halin, 2024).

Supportive leadership is also hypothesized to benefit unsatisfied followers by enhancing job satisfaction and work engagement through empathy and encouragement (House, 1996; Schaufeli & Salanova, 2010). However, recent literature suggests this relationship may be mediated by organizational practices like communication and collaboration (Uman et al., 2024), raising questions about whether job satisfaction is a cause or effect of leader behaviour (Kauppila, 2024). Additionally, the nature of followers' tasks influences the effectiveness of supportive leadership; it can reduce disengagement in repetitive or mundane tasks by improving the work environment

(House & Mitchell, 1974; Lorinkova, Pearsall & Sims, 2013). However, other research indicates that supportive leadership may be more effective at reducing task ambiguity rather than monotony (Cheng & Osman, 2023).

Given these insights and the gaps in existing research, the study proposes two hypotheses:

H1a: Follower characteristics (e.g., job satisfaction, need for affiliation) and task characteristics (e.g., repetitive, challenging, mundane tasks) mediate the relationship between supportive leadership style and work engagement.

H1b: The supportive leadership style explains a greater percentage of work engagement compared to other styles, given equal conditions regarding followers and task characteristics.

Participative leadership involves followers in decision-making, fostering a sense of ownership over their work and increasing their commitment and performance (House, 1996). Research confirms that participative leadership positively correlates with work commitment, characterized by dedication and vigor (Sarti, 2014). According to path-goal theory, participative leadership is especially effective for followers with high autonomy and a strong need for control, as it fulfils their desire to influence decisions, enhancing job satisfaction and intrinsic motivation (Northouse, 2018).

Participative leadership is also beneficial for followers who need clarity, particularly in ambiguous or unstructured tasks (Cheng & Osman, 2023). These tasks often lack well-defined goals or methods, leading to confusion. By involving followers in decision-making, leaders help clarify task requirements and roles, reducing uncertainty and boosting confidence in managing complex tasks (House & Mitchell, 1974). This approach leverages diverse perspectives, fosters innovative solutions, and empowers followers, making them feel valued and integral to the organization (House, 1996).

However, the path-goal theory has theoretical limitations. It presumes that followers always desire participation in decision-making, which may not be universally true; some followers might prefer clear, directive guidance, especially in high-stress situations, overlooking situational nuances and individual differences (Evans, 1996). The theory's emphasis on aligning leadership style with task characteristics, such as ambiguity, might oversimplify the complexities of real-world tasks, which often involve multiple layers and require a balanced approach between participation and timely decision-making (Yukl, 2013). Empirical evidence supporting the relationship between participative leadership and follower performance is mixed, raising questions about the generalizability of the theory across different contexts (Wang, Hu & Li, 2022).

Given these considerations, the study proposes two additional hypotheses:

H2a: Followers' characteristics (e.g., autonomy, need for control, need for clarity) and task characteristics (e.g., ambiguous, unstructured tasks) mediate the relationship between participative leadership style and work engagement.

H2b: The participative leadership style explains a greater percentage of work engagement compared to other styles, given equal conditions regarding followers and task characteristics.

Control variables in this study include age, tenure, and gender.

3. Research

The data was collected through self-administration of an online questionnaire active on the Qualtrics platform. The data were collected starting from social networks such as Facebook, LinkedIn, and asking the compilers to disseminate the link to the questionnaire. Data collection began in December 2023 and ended in January 2024.

3.1 Measured Variables

Leadership style was measured with the Italian version of the Path–Goal Leadership Questionnaire (Northouse, 2018). Since this tool had never been validated in Italian, a CFA analysis was carried out, which confirmed the validity of the model. The $\chi 2/df$ score (=2.89, $p<0.001$) is within acceptable limits (below 5; Harrison and Rainer, 1996). The GFI score (=0.935) is acceptable (Bollen and Long, 1993). The CFI score (=0.853) is close to the 0.9 threshold, thus acceptable. The TLI (=0.829) is acceptable (Hair *et al*., 1998), and the SRMR (=0.08) value is below the 0.1 threshold (Hair *et al*., 1992).

Followers characteristics (autonomy, need for control, need for clarity) were measured with a 6-items ad-hoc questionnaire (Cronbach's Alpha = 0.79)

*Task characteristics (*Ripetitive, Challenging, Mundane, Ambiguous, Structured) were measured with a 10-items questionnaire (Cronbach's Alpha = 0.80).

Ned for affiliation was measured with the Italian version of the Need for Affiliation scale of Jackson (1984) (Cronbach's Alpha = 0.84).

Job satisfaction (JS): measured with the Italian version of the Short Index Job Satisfaction Scale of Judge, Bono & Locke (2000)(Cronbach's Alpha = 0.86)

Work Engagement was measured with the Italian version of the UWES- 9 (Balducci et al., 2010) (Cronbach's Alpha = 0.77)

Age, tenure and gender were measured with a single-items ad-hoc questionnaire.

4. Findings

A total of 181 questionnaires were collected between January and May 2024. The statistical analysis of the available preliminary data partially supported the hypotheses.

In the first scenario considered (followers' characteristics: job satisfaction, Need for Affiliation; task characteristics: repetitive, challenging, and mundane), the mediation analysis shows that no leadership style has a direct effect on work engagement. Among the followers' characteristics, only job satisfaction mediates the relationship between the supportive leadership style and work engagement: the path analysis (see Table 1) shows that the supportive leadership style increases job satisfaction ($\beta = 0.058$, $p < .001$), which subsequently enhances work engagement ($\beta = 0.540$, $p < .001$).

Regarding task characteristics, the findings indicate that the 'challenging' aspect mediates the relationship between the achievement-oriented leadership style and work engagement, contrary to what was hypothesized,. The analysis of the path coefficients (see Table 1) shows that, in the scenario considered, the achievement-oriented leadership style impacts the level of perceived challenge ($\beta = 0.068$, $p < .001$), which in turn increases work engagement ($\beta = 0.243$, $p < .001$).

These findings suggests that, to increase work engagement, a supportive leadership style is effective only when followers are satisfied, and an achievement-oriented style is effective with a challenging task. H1a is therefore partially supported.

However, all other variables being equal (followers' characteristics: job satisfaction, Need for Affiliation; task characteristics: repetitive, challenging, and mundane), the supportive style is the only one that shows a significant total effect (direct + indirect) on work engagement (estimated total effect = 0.051, $p = .002$). Thus, H1b is supported.

In the second scenario considered (followers' characteristics: autonomy, need for control, need for clarity; task characteristics: ambiguous, unstructured), the mediation analysis shows that neither follower characteristics nor task characteristics mediate the relationship between the participative leadership style and work engagement.

Regarding the direct effects of leadership styles on work engagement, the directive style has a negative effect ($\beta = -0.038$, $p = .0049$), while the supportive ($\beta = 0.033$, $p = .0025$) and achievement-oriented ($\beta = 0.049$, $p = .0013$) styles have positive effects on work engagement.

Contrary to what was hypothesized, the path analysis (see Table 2) shows that the directive leadership style, in addition to its negative direct effect on work engagement, reduces task ambiguity ($\beta = -0.098$, $p < .001$), which in turn has a negative impact on work engagement ($\beta = -0.068$, $p = .010$). This path suggests that when tasks are ambiguous, a directive style can support work engagement by decreasing ambiguity. Thus, H2a is not supported.

Furthermore, among the followers' characteristics, the need for clarity mediates the relationship between the supportive style and work engagement (estimated indirect effect = 0.019, $p = .005$). This indicates that when followers have a high need for clarity, a supportive leadership style is particularly motivating. The supportive style is the only one that shows a significant total effect (direct + indirect) on work engagement due to the mediation of the need for clarity (estimated total effect = 0.051, $p = .002$). The path analysis (see Table 2) also shows that, in this scenario, the supportive leadership style, besides having a direct effect on work engagement, decreases the need for clarity ($\beta = -0.061$, $p < .001$), which has a strong negative effect on work engagement ($\beta = -0.318$, $p < .001$). This path suggests that the supportive style, by reducing the need for clarity, mitigates its negative impact on work engagement. Thus, H2b is not supported.

5. Discussion

Path-Goal Theory, proposed by House in 1996, suggests that leaders should provide direction, support, and resources to help followers achieve their goals. This theory identifies four main leadership styles—directive, supportive, participative, and achievement-oriented—which leaders should adapt based on task characteristics and followers' needs.

A theoretical assumption of the path-goal theory is that a supportive leadership style, which creates an empathetic environment and provides encouragement, is suitable for dissatisfied followers, increasing their work engagement (Schaufeli & Salanova, 2010). Recent literature suggests that the relationship between supportive leadership and job satisfaction is mediated by organizational practices such as communication and collaborative working (Uman et al., 2024). Path analysis from this study indicates that the relationship can also be direct, and that supportive leadership behaviour is an antecedent of job satisfaction, not vice versa, as suggested by Kauppila (2024).

Tasks that are repetitive, unchallenging, or mundane negatively affect work engagement (Kawada et al., 2024; Schaufeli & Salanova, 2014). Supportive leadership can mitigate these negative feelings (House & Mitchell, 1974; Lorinkova, Pearsall & Sims, 2013). The study reveals that leadership style directly influences how challenging a task is perceived, which in turn positively impacts work engagement. Finally, unlike the hypothesis by Cheng & Osman (2023), supportive leadership does not affect perceived task ambiguity.

A second assumption of Path-Goal Theory is that participative leadership is most effective when followers are autonomous, have high needs for control and clarity, and the task is ambiguous or unstructured. However, findings contradict previous assumptions (House & Mitchell, 1974; Sarti, 2014), showing that participative leadership does not significantly impact work engagement. Instead, supportive leadership helps reduce the need for clarity, which otherwise negatively affects work engagement. This suggests that participative decision-making does not automatically enhance work engagement, highlighting that task characteristics play a crucial role.

Task ambiguity negatively impacts work engagement (Cheng & Osman, 2023; House & Mitchell, 1974), but the directive style helps reduce this ambiguity, thereby increasing work engagement. While House and Mitchell (1974) suggested that participative leadership fosters innovative solutions by leveraging diverse perspectives, this study finds no such evidence. Instead, a direct leadership leadership style positively impacts how structured a task is perceived but does not affect work engagement levels.

These findings indicate that while Path-Goal Theory provides a framework for understanding leadership dynamics, there are significant gaps, particularly in the relationship between participative leadership and followers' performance, and the role of task characteristics. Further research is needed to explore these complexities and refine the theory's application in diverse settings (Wang, Hu & Li, 2022).

6. Conclusion

This study suggests that while Path-Goal Theory is a sophisticated approach, it faces challenges in empirical validation. The theory's premise that leaders can adapt their style based on situational variables and followers' needs may be overly simplistic (Evans, 1996). It heavily relies on leaders' ability to understand and respond to individual differences, which is problematic in large or diverse teams where balancing conflicting needs can lead to inconsistent leadership behaviour (Schriesheim & Neider, 1996). Moreover, the theory's focus on the dyadic relationship between leader and follower neglects broader organizational contexts and influences such as culture, structure, and external pressures, limiting its applicability in complex settings (House, 1996). Although some aspects of the theory were validated, overall empirical support is mixed, questioning its generalizability and practical utility (Indvik, 1986). Additionally, the theory's mechanistic view oversimplifies the dynamic nature of leader-follower interactions, ignoring how followers' behaviours and feedback influence leadership over time (Yukl, 2013).

7. Theoretical Contributions

This study provides empirical evidence supporting elements of the path-goal leadership model, which has been largely theoretical. It identifies four paths that partially align with existing literature, offering precise insights into the relationships between leadership style, task characteristics, and followers' characteristics to support motivation. The goal-oriented style suits challenging tasks, the supportive style benefits dissatisfied followers or

those needing clarity, and the directive style is effective for ambiguous tasks. These findings help clarify the direction and intensity of these relationships, enhancing the understanding of how different leadership styles can motivate followers.

8. Limitations and Suggestions for Further Research

This study offers valuable insights but has limitations that affect its generalizability and depth. The sample of 181 Italian employees restricts the applicability of the findings to other cultural and organizational contexts. Future research should involve a more diverse sample to enhance the universality of the results.

Additionally, the study uses a static approach to leadership analysis, overlooking the dynamic nature of leader-follower relationships over time. Longitudinal studies could better capture how these relationships evolve and how the effectiveness of leadership styles changes.

Furthermore, the analysis of individual differences, such as personality traits and work experiences, is relatively superficial. A deeper exploration of these factors could provide richer insights into how followers respond to different leadership styles. Expanding research to include organizational practices like communication and decision-making could also offer more practical recommendations for improving leadership effectiveness in various settings.

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Parameter Estimates

Direct effects

							95% Confidence Interval	
			Estimate	Std. Error	z-value	p	Lower	Upper
Supportive	→	Engagement	0.018	0.013	1.435	0.151	-0.007	0.043
Directive	→	Engagement	-0.011	0.016	-0.656	0.512	-0.043	0.021
Participative	→	Engagement	-0.006	0.014	-0.431	0.666	-0.034	0.022
Goal-Oriented	→	Engagement	-0.007	0.017	-0.405	0.685	-0.040	0.026

Note. Delta method standard errors, normal theory confidence intervals, ML estimator.

Indirect effects

									95% Confidence Interval	
					Estimate	Std. Error	z-value	p	Lower	Upper
Supportive	→	Ripetivity	→	Engagement	2.359×10-5	5.785×10-4	0.041	0.967	-0.001	0.001
Supportive	→	Challenging	→	Engagement	-1.798×10-5	0.004	-0.004	0.997	-0.009	0.008
Supportive	→	Mundanity	→	Engagement	4.850×10-4	0.002	0.299	0.765	-0.003	0.004
Supportive	→	Job Satisfaction	→	Engagement	0.031	0.009	3.487	<.001***	0.014	0.048
Supportive	→	Need for Affiliation	→	Engagement	0.002	0.002	1.031	0.303	-0.002	0.007
Directive	→	Ripetivity	→	Engagement	-2.238×10-5	5.500×10-4	-0.041	0.968	-0.001	0.001
Directive	→	Challenging	→	Engagement	-0.008	0.006	-1.345	0.179	-0.019	0.004
Directive	→	Mundanity	→	Engagement	0.002	0.002	0.763	0.445	-0.003	0.006
Directive	→	Job Satisfaction	→	Engagement	0.003	0.010	0.270	0.788	-0.017	0.023
Directive	→	Need for Affiliation	→	Engagement	2.614×10-4	0.001	0.195	0.845	-0.002	0.003
Participative	→	Ripetivity	→	Engagement	5.558×10-5	0.001	0.041	0.967	-0.003	0.003
Participative	→	Challenging	→	Engagement	0.005	0.005	0.961	0.337	-0.005	0.015
Participative	→	Mundanity	→	Engagement	2.684×10-4	0.002	0.141	0.888	-0.003	0.004
Participative	→	Job Satisfaction	→	Engagement	0.013	0.010	1.317	0.188	-0.006	0.032
Participative	→	Need for Affiliation	→	Engagement	0.001	0.002	0.825	0.409	-0.002	0.005
Goal-Oriented	→	Ripetivity	→	Engagement	-4.122×10-6	1.149×10-4	-0.036	0.971	-2.294×10-4	2.211×10-4
Goal-Oriented	→	Challenging	→	Engagement	0.017	0.007	2.346	0.019*	0.003	0.030
Goal-Oriented	→	Mundanity	→	Engagement	3.843×10-4	0.002	0.177	0.860	-0.004	0.005
Goal-Oriented	→	Job Satisfaction	→	Engagement	0.016	0.011	1.415	0.157	-0.006	0.037

Indirect effects

					95% Confidence Interval	
	Estimate	Std. Error	z-value	p	Lower	Upper
Goal-Oriented → Need for Affiliation → Engagement	0.004	0.004	1.080	0.280	-0.003	0.012

Note. Delta method standard errors, normal theory confidence intervals, ML estimator.

Total effects

					95% Confidence Interval	
	Estimate	Std. Error	z-value	p	Lower	Upper
Supportive → Engagement	0.051	0.017	3.112	0.002**	0.019	0.084
Directive → Engagement	-0.007	0.021	-0.324	0.746	-0.048	0.035
Participative → Engagement	0.014	0.020	0.732	0.464	-0.024	0.053
Goal-Oriented → Engagement	0.028	0.022	1.231	0.218	-0.016	0.071

Note. Delta method standard errors, normal theory confidence intervals, ML estimator.

Total indirect effects

					95% Confidence Interval	
	Estimate	Std. Error	z-value	p	Lower	Upper
Supportive → Engagement	0.033	0.012	2.685	0.007**	0.009	0.057
Directive → Engagement	0.004	0.016	0.242	0.809	-0.027	0.035
Participative → Engagement	0.021	0.014	1.486	0.137	-0.007	0.048
Goal-Oriented → Engagement	0.034	0.016	2.089	0.037*	0.002	0.067

Note. Delta method standard errors, normal theory confidence intervals, ML estimator.

Path coefficients

					95% Confidence Interval	
	Estimate	Std. Error	z-value	p	Lower	Upper
Ripetivity → Engagement	-0.002	0.054	-0.041	0.967	-0.107	0.103
Challenging → Engagement	0.243	0.058	4.214	<.001***	0.130	0.356
Mundanity → Engagement	-0.086	0.054	-1.606	0.108	-0.191	0.019
Job Satisfaction → Engagement	0.540	0.068	7.916	<.001***	0.406	0.673
Need for Affiliation → Engagement	0.069	0.059	1.157	0.247	-0.048	0.185
Supportive → Engagement	0.018	0.013	1.435	0.151	-0.007	0.043
Directive → Engagement	-0.011	0.016	-0.656	0.512	-0.043	0.021
Participative → Engagement	-0.006	0.014	-0.431	0.666	-0.034	0.022
Goal-Oriented → Engagement	-0.007	0.017	-0.405	0.685	-0.040	0.026
Supportive → Ripetivity	-0.011	0.019	-0.579	0.563	-0.047	0.026
Directive → Ripetivity	0.010	0.024	0.429	0.668	-0.036	0.057

Path coefficients

							95% Confidence Interval	
			Estimate	Std. Error	z-value	p	Lower	Upper
Participative	→	Ripetivity	-0.025	0.022	-1.148	0.251	-0.069	0.018
Goal-Oriented	→	Ripetivity	0.002	0.025	0.075	0.940	-0.047	0.051
Supportive	→	Challenging	-7.409×10-5	0.018	-0.004	0.997	-0.035	0.035
Directive	→	Challenging	-0.032	0.023	-1.419	0.156	-0.077	0.012
Participative	→	Challenging	0.021	0.021	0.987	0.324	-0.021	0.062
Goal-Oriented	→	Challenging	0.068	0.024	2.824	0.005**	0.021	0.116
Supportive	→	Mundanity	-0.006	0.019	-0.304	0.761	-0.042	0.031
Directive	→	Mundanity	-0.021	0.024	-0.868	0.386	-0.067	0.026
Participative	→	Mundanity	-0.003	0.022	-0.142	0.887	-0.046	0.040
Goal-Oriented	→	Mundanity	-0.004	0.025	-0.178	0.859	-0.054	0.045
Supportive	→	Job Satisfaction	0.058	0.015	3.885	<.001***	0.028	0.087
Directive	→	Job Satisfaction	0.005	0.019	0.270	0.787	-0.032	0.042
Participative	→	Job Satisfaction	0.023	0.018	1.336	0.182	-0.011	0.058
Goal-Oriented	→	Job Satisfaction	0.029	0.020	1.438	0.151	-0.010	0.068
Supportive	→	Need for Affiliation	0.034	0.015	2.269	0.023	0.005	0.063
Directive	→	Need for Affiliation	0.004	0.019	0.198	0.843	-0.034	0.041
Participative	→	Need for Affiliation	0.021	0.018	1.177	0.239	-0.014	0.056
Goal-Oriented	→	Need for Affiliation	0.061	0.020	2.994	0.003**	0.021	0.100

Note. Delta method standard errors, normal theory confidence intervals, ML estimator.

Table 2 Mediation Analysis H2

Parameter estimates

Direct effects

							95% Confidence Interval	
			Estimate	Std. Error	z-value	p	Lower	Upper
Directive	→	Engagement	-0.038	0.019	-1.966	0.049*	-0.076	-1.235×10-4
Supportive	→	Engagement	0.033	0.015	2.244	0.025*	0.004	0.062
Participative	→	Engagement	0.025	0.017	1.439	0.150	-0.009	0.058
Goal-Oriented	→	Engagement	0.049	0.020	2.472	0.013*	0.010	0.088

Note. Delta method standard errors, normal theory confidence intervals, ML estimator.

Indirect effects

								95% Confidence Interval	
					Estimate	Std. Error	z-value	p	Lower	Upper
Directive	→	Autonomy	→	Engagement	0.005	0.005	0.946	0.344	-0.005	0.014
Directive	→	Need for Control	→	Engagement	0.004	0.003	1.106	0.269	-0.003	0.010
Directive	→	Need for Clarity	→	Engagement	0.005	0.007	0.686	0.492	-0.009	0.019
Directive	→	Ambiguity	→	Engagement	0.017	0.007	2.234	0.026*	0.002	0.031

Indirect effects

								95% Confidence Interval	
				Estimate	Std. Error	z-value	p	Lower	Upper
Directive	→	Structured	→ Engagement	0.001	0.003	0.330	0.741	-0.006	0.008
Supportive	→	Autonomy	→ Engagement	-0.003	0.004	-0.850	0.396	-0.011	0.004
Supportive	→	Need for Control	→ Engagement	0.004	0.003	1.262	0.207	-0.002	0.010
Supportive	→	Need for Clarity	→ Engagement	0.019	0.007	2.829	0.005**	0.006	0.033
Supportive	→	Ambiguity	→ Engagement	-0.002	0.003	-0.598	0.550	-0.007	0.004
Supportive	→	Structured	→ Engagement	1.907×10-4	6.802×10-4	0.280	0.779	-0.001	0.002
Participative	→	Autonomy	→ Engagement	-0.006	0.005	-1.260	0.207	-0.015	0.003
Participative	→	Need for Control	→ Engagement	-0.004	0.003	-1.131	0.258	-0.010	0.003
Participative	→	Need for Clarity	→ Engagement	-0.003	0.007	-0.435	0.664	-0.016	0.010
Participative	→	Ambiguity	→ Engagement	0.002	0.004	0.684	0.494	-0.004	0.009
Participative	→	Structured	→ Engagement	-7.475×10-5	4.913×10-4	-0.152	0.879	-0.001	8.881×10-4
Goal-Oriented	→	Autonomy	→ Engagement	0.004	0.005	0.780	0.436	-0.006	0.014
Goal-Oriented	→	Need for Control	→ Engagement	-0.005	0.004	-1.223	0.221	-0.012	0.003
Goal-Oriented	→	Need for Clarity	→ Engagement	-0.014	0.008	-1.747	0.081	-0.030	0.002
Goal-Oriented	→	Ambiguity	→ Engagement	-0.005	0.004	-1.212	0.225	-0.014	0.003
Goal-Oriented	→	Structured	→ Engagement	-8.947×10-4	0.003	-0.328	0.743	-0.006	0.004

Note. Delta method standard errors, normal theory confidence intervals, ML estimator.

Total effects

						95% Confidence Interval	
			Estimate	Std. Error	z-value	p	Lower	Upper
Directive	→	Engagement	-0.007	0.021	-0.324	0.746	-0.048	0.035
Supportive	→	Engagement	0.051	0.017	3.112	0.002**	0.019	0.084
Participative	→	Engagement	0.014	0.020	0.732	0.464	-0.024	0.053
Goal-Oriented	→	Engagement	0.028	0.022	1.231	0.218	-0.016	0.071

Note. Delta method standard errors, normal theory confidence intervals, ML estimator.

Total indirect effects

							95% Confidence Interval	
			Estimate	Std. Error	z-value	p	Lower	Upper
Directive	→	Engagement	0.031	0.013	2.458	0.014*	0.006	0.056
Supportive	→	Engagement	0.018	0.009	1.937	0.053	-2.204×10-4	0.037
Participative	→	Engagement	-0.010	0.010	-0.979	0.328	-0.031	0.010
Goal-Oriented	→	Engagement	-0.021	0.012	-1.719	0.086	-0.046	0.003

Note. Delta method standard errors, normal theory confidence intervals, ML estimator.

Path coefficients

							95% Confidence Interval	
			Estimate	Std. Error	z-value	p	Lower	Upper
Autonomy	→	Engagement	0.196	0.062	3.181	0.001**	0.075	0.317
Need for Control	→	Engagement	0.113	0.063	1.787	0.074	-0.011	0.238
Need for Clarity	→	Engagement	-0.318	0.062	-5.127	<.001***	-0.440	-0.196
Ambiguity	→	Engagement	-0.168	0.066	-2.569	0.010*	-0.297	-0.040
Structured	→	Engagement	0.020	0.060	0.333	0.739	-0.098	0.138
Directive	→	Engagement	-0.038	0.019	-1.966	0.049*	-0.076	-1.235×10-4
Supportive	→	Engagement	0.033	0.015	2.244	0.025*	0.004	0.062
Participative	→	Engagement	0.025	0.017	1.439	0.150	-0.009	0.058
Goal-Oriented	→	Engagement	0.049	0.020	2.472	0.013*	0.010	0.088
Directive	→	Autonomy	0.023	0.024	0.991	0.322	-0.023	0.070
Supportive	→	Autonomy	-0.016	0.018	-0.882	0.378	-0.053	0.020
Participative	→	Autonomy	-0.030	0.022	-1.373	0.170	-0.073	0.013
Goal-Oriented	→	Autonomy	0.020	0.025	0.804	0.421	-0.029	0.069
Directive	→	Need for Control	0.033	0.024	1.407	0.159	-0.013	0.080
Supportive	→	Need for Control	0.033	0.018	1.782	0.075	-0.003	0.069
Participative	→	Need for Control	-0.032	0.022	-1.461	0.144	-0.075	0.011
Goal-Oriented	→	Need for Control	-0.042	0.025	-1.679	0.093	-0.091	0.007
Directive	→	Need for Clarity	-0.016	0.023	-0.693	0.488	-0.061	0.029
Supportive	→	Need for Clarity	-0.061	0.018	-3.391	<.001***	-0.096	-0.026
Participative	→	Need for Clarity	0.009	0.021	0.437	0.662	-0.032	0.051
Goal-Oriented	→	Need for Clarity	0.045	0.024	1.858	0.063	-0.002	0.092
Directive	→	Ambiguity	-0.098	0.022	-4.521	<.001***	-0.141	-0.056
Supportive	→	Ambiguity	0.010	0.017	0.615	0.539	-0.023	0.044
Participative	→	Ambiguity	-0.014	0.020	-0.710	0.478	-0.054	0.025
Goal-Oriented	→	Ambiguity	0.032	0.023	1.375	0.169	-0.013	0.076
Directive	→	Structured	0.057	0.024	2.397	0.017*	0.010	0.103
Supportive	→	Structured	0.010	0.018	0.518	0.604	-0.027	0.046
Participative	→	Structured	-0.004	0.022	-0.171	0.864	-0.047	0.039
Goal-Oriented	→	Structured	-0.045	0.025	-1.797	0.072	-0.094	0.004

Note. Delta method standard errors, normal theory confidence intervals, ML estimator.