



Research Paper

Unraveling the Interplay of Learning Agility, Burnout, and Executive Function in Fostering Agile Leadership among Millennial Leaders

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Abstract

In the rapidly evolving business landscape, agile leadership, especially among millennial leaders, has become pivotal. However, a comprehensive understanding of how Learning Agility, Burnout, and Executive Function interact to shape this leadership style is still limited, with burnout potentially impeding agile leadership development. This study aimed to elucidate the interplay between Learning Agility, Burnout, Executive Function, and their collective contribution to Agile Leadership among millennial leaders. We selected 121 millennial leaders from five different companies for this purposeful study. Utilizing Model 8 in Process Macro Hayes, we tested four hypotheses to evaluate the relationships between Learning Agility (LA) and Agile Leadership (AL), the mediating role of Executive Function (EF), the moderating effect of Burnout, and the conditional indirect impact of EF at various burnout levels. The results revealed a significant positive correlation between Learning Agility and Agile Leadership when Burnout was extremely low ($p < 0.01$). Still, this relationship was not significant at neutral and high burnout levels. While executive function emerged as a crucial mediator, it did not significantly mediate the Learning Agility-Agile Leadership relationship. Burnout was found to moderate this relationship, accounting for an additional 4.96% of the variability in Agile Leadership ($p < 0.01$), I would write $p < .01$). The overall model explained 17.18 (17.2) % of Agile Leadership variability ($F = (6.0150 =) 6.02$, ($p = 0.0002$), $p < .001$). However, the conditional indirect effects of Learning Agility on Agile Leadership were not statistically significant at different burnout levels. It can be concluded that Burnout is a significant moderator variable between Learning Agility and Agile Leadership among millennial leaders, emphasizing the need for Burnout reduction strategies to optimize the influence of Learning Agility on Agile Leadership. Future research is required to fully understand the mediating role of Executive Function in this relationship.

Keywords: *Agile Leadership; Burnout; Executive Function; Learning Agility; Millennial Leaders*

INTRODUCTION

In the evolving leadership landscape, agile leadership has emerged as pivotal, enabling strong stakeholder relationships (Darlington, 2018). Such leaders adeptly discern societal patterns, a trait underscored by events like the COVID-19 pandemic, which expedited digital shifts (Bick et al., 2020; Gurrieri & Del Chiappa, 2020). Agile leaders, characterized by adaptability, resilience, and responsiveness, are paramount amidst growing VUCA environments (Hale et al., 2020; Joiner and Josephs, 2007; Joiner, 2009).

Next, technological innovations, including the Internet and AI, have reshaped the way people communicate (West, 2019). Organizations, therefore, need strategies responsive to this type of shift (Schwab, 2017), with agile leadership central to strategic decisions. Learning agility is at the heart of agile leadership: the ability to quickly assimilate and deploy new knowledge in novel contexts (Mitchinson & Morris, 2012; De Meuse, Dai, & Hallenbeck, 2010). However, modern workplace pressures may cause burnout in leaders, affecting their adaptability (Maslach & Jackson, 1981).

At the heart of agile leadership is learning agility, the ability to quickly assimilate and deploy new knowledge in novel contexts (Mitchinson & Morris, 2012; De Meuse, Dai, & Hallenbeck, 2010). However, modern workplace pressures can cause leader burnout, affecting adaptability (Maslach

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& Jackson, 1981).

Indonesia's labour force, largely comprised of millennials (BPS, 2022), faces unique challenges given their digital-native upbringing. Burnout risks from continuous adaptation demands frequently offset the workforce's natural adaptability (Smith & Greenberg, 2020). As millennials ascend to leadership roles, understanding burnout's impact on their adaptive qualities is crucial, especially given the negative repercussions of prolonged work stress on mental and psychological health, as well as on cognitive function (Schaufeli & Bakker, 2004; Arnsten & Shanafelt, 2021; Maslach & Leiter, 2016).

LITERATURE REVIEW

Learning agility and agile leadership are intrinsically connected. Both emphasize rapid adaptation and knowledge acquisition from experiences. Learning agility entails gleaning insights from diverse experiences, and applying them effectively across contexts (DeRue, Ashford, & Myers, 2012). Agile leadership, meanwhile, champions organizational adaptability and continuous learning (Darlington and Rahimnia, 2015; Doz and Kosonen, 2010). Hence, individuals exhibiting high learning agility inherently display agile leadership traits, utilizing past learnings to navigate change. Thus, we propose:

Hypothesis 1: A significant correlation exists between learning agility and agile leadership.

The modern leadership arena has seen a significant shift in addressing challenges driven by globalization and swift technological progress. Grasping the intricacies of today's leadership is crucial, especially concerning the prevalent ideas of learning agility and agile leadership.

While these two concepts are often mentioned in tandem in organizational contexts, they have distinct characteristics and applications. A recurring question is a precise nexus between these two ideas and their unifying element (Harvey and De Meuse, 2022). The often-underrated "executive functions" (EF), a rather popular concept in cognitive neuropsychology, might provide insights into this gap (Prezenski et al., 2017; Morelli et al., 2022; Czajkowska et al., 2017).

Executive functions refer to one's ability to plan, control, oversee, and modify behavior. As Diamond (2013) noted, this includes various cognitive skills such as inhibitory control, working memory, and cognitive adaptability. In an organizational setting, executive function pertains to the cognitive and leadership skills required for strategic decision-making, overcoming challenges, and adjusting to changing environments. Given learning agility's definition as the quick uptake of knowledge from past experiences for diverse applications, it's evident that those with high learning agility effectively leverage their executive function to organize learning and apply new skills (DeRue, Ashford, & Myers, 2012).

To foster adaptability, collaboration, and ongoing progress in organizations, leaders require solid executive capabilities (Darlington and Rahimnia, 2015). Executive functions likely mediate the link between learning agility and agile leadership. Based on the data provided:

Hypothesis 2 suggests that executive functions mediate the relationship between leadership agility and learning agility.

However, "burnout," characterized by chronic emotional and physical exhaustion, cynicism, and reduced professional efficacy, could influence this relationship (Maslach, Schaufeli, & Leiter, 2001). Even leaders with high learning agility might struggle to exhibit agile leadership qualities when bothered by burnout symptoms. Burnout is a major threat to leaders since they are under pressure to produce more and more, often lacking sufficient resources.

Hypothesis 3 posits that burnout moderates the link between learning agility and agile leadership. With increased burnout, individuals with strong learning agility might not effectively exhibit agile leadership attributes.

The interplay between learning agility, agile leadership, and executive function is pivotal in understanding leadership efficacy in contemporary contexts. Central to this discussion is the mediating role of executive function, a set of cognitive processes crucial for organizing, planning, and task execution (Diamond, 2013). This cognitive function potentially bridges the transition from learning agility to agile leadership. However, burnout, characterized by chronic exhaustion, cynicism, and diminished professional effectiveness (Maslach, Schaufeli, & Leiter, 2001), might modulate this mediation. At high burnout levels, the executive function's mediation between learning agility and agile leadership might be diminished.

Hypothesis 4 (H4) thus suggests that executive function mediates the relationship between learning agility and agile leadership, a process potentially moderated by burnout levels.

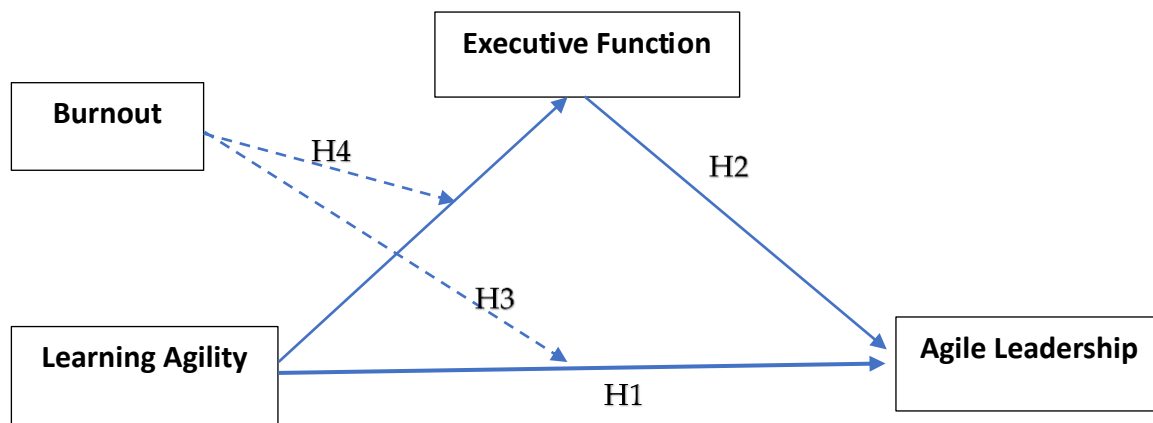


Figure 1. Conceptual Framework

RESEARCH METHOD

The present study involved the participation of 121 leaders from various firms who belong to the millennial generation. The selection criteria for these individuals included their age and a minimum of one year of experience in a leadership role—research assistants who had received training collected the data. The participants were allocated roughly 30 minutes to complete the EF test, which encompassed the assessment of learning agility, agile leadership, and burnout scores.

The completion of these tasks was required to be done independently and individually. The research team revised the Learning Agility Scale, originally developed by Gravett (2016), to align with the International Test Commission (ITC) Guidelines (Bartram et al., 2018). The scale presented above encompasses four distinct aspects, namely people agility, mental agility, change agility, and result agility, collectively comprising 17 items. The data demonstrated a Cronbach's alpha coefficient of 0.946. Further analysis using JASP revealed a Chi-square value of 1999.211, a Comparative Fit Index (CFI) of 0.940, and a Tucker-Lewis Index (TLI) of 0.928.

The 21 items that make up the agile leadership scale are based on a list of traits created by Hayward (2021). Following the processes of exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) for validation, the obtained Cronbach's alpha coefficient was 0.982. The JASP analysis yielded the following results: Chi-square = 3616.354, RMSEA = 0.08, CFI = 0.951, and TLI =

0.942.

The measurement of burnout was conducted via the Maslach-Trisni Burnout Inventory (MTBI), which is an updated iteration and validation of the original Maslach version (Widhianingtanti and van Luijtelaar, 2022). The assessment comprises a total of 22 items that measure emotional exhaustion, depersonalization, and personal accomplishment. The study presented findings that included a McDonald's Omega coefficient of 0.807, as well as results from JASP analysis, which indicated an RMSEA value of 0.077, a CFI value of 0.957, a TLI value of 0.947, a chi-square value of 3333.488.

The measurement of executive function involved the utilization of a comprehensive set of established tests, which consisted of the Digit Span test (Moris, 2020; Hantoro, 2019; Wechsler, 2008), the Trail Making Test (Widhianingtanti et al., 2022; Sánchez-Cubillo et al., 2009; Reitan, 1958), the Stroop Test (Basu, 2023; Gutiérrez-Martínez, 2018; Stroop, 1935), the phonemic Verbal Fluency Test (Villalobos, et al., 2022; Benton et al., 1983), and the Five Point Test (Tucha, et al., 2012; Regard et al., 1982). The previously mentioned assessments exhibited a high degree of reliability for assessing executive function.

This study uses Process Macro version 8 by Andrew F. Hayes. This macro facilitates regression analysis for mediation, moderation, and moderated mediation within the same framework.

FINDINGS AND DISCUSSION

The table contains the scores of the four tests per age group of the millennials.

Table 1. Demographic variables and Means and SD of the four instruments.

Age	N	Agile Leadership		Learning Agility		Executive Function		Burnout	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD
25-30	44	95.93	11.73	69.07	14.44	54.79	10.72	27.75	28.16
31-35	16	84.88	14.57	62.25	11.30	52.25	11.82	35.69	20.05
36-40	21	81.90	16.91	67.81	9.09	50.48	9.6	30.05	21.10
41-45	40	91.50	15.89	70.90	12.25	49.04	10.83	26.20	20.38
Total	121								

To provide a deeper understanding of the connections between LA, EF, burnout, and their combined influence on AL, a linear regression analysis was performed. The variable of interaction, indicated as Int_1, was calculated by multiplying the values of learning agility and burnout. It was done to look at the potential influence of burnout on the association between learning agility and agile leadership. The regression coefficients, standard errors (SE), t-values, p-values, and 95% confidence intervals for each predictor in the model can be seen in Table 2.

Table 2. Regression Coefficients for the AL Model

Variable	Coefficient	SE	t	p	LLCI	ULCI
constant	86.40	5.71	15.14	.000	75.0976	97.7085
LA	.203	.154	1.32	.190	-.1020	.5081
EF	.040	.107	.38	.708	-.1723	.2530
Burnout	-.169	.078	-2.18	.031	-.3224	-.0153
Int_1	-.010	.004	-2.64	.010	-.0168	-.0024

The first hypothesis posited a significant correlation between learning agility (LA) and agile leadership (AL). A regression analysis revealed a coefficient of 0.2030 for LA but with a p-value of 0.1900 ($p > 0.05$), indicating no significant association between LA and AL, thus invalidating

Hypothesis 1. The EF variable yielded a coefficient of 0.0404 ($p = 0.7077$), also showing insignificance. Conversely, the burnout variable had a significant coefficient of -0.1689 at $p=0.0314$.

Table 3. Regression Coefficients for the EF Model

Variable	Coefficient	SE	t	p	LLCI	ULCI
constant	51.40	1.2540	40.99	.000	48.9182	53.8851
LA	.171	.1317	1.30	.196	-.0894	.4321
Burnout	.118	.0658	1.80	.074	-.0117	.2491
Int_1	.003	.0031	.89	.377	-.0034	.0089

The model's R^2 value of 0.0356 suggests it accounts for only 3.56% of the variance in EF, with a non-significant p-value of 0.2350. The constant is 51.4016. While the LA variable has a coefficient of 0.171 ($p > .05$) and burnout has a coefficient of 0.119 ($p > .05$), both relationships aren't statistically significant. The interaction between LA and burnout yielded a not significant coefficient ($> .05$)

The second hypothesis proposed is that EF mediates the link between LA and AL. The outcomes of the mediation regression analysis, see Table 3 showed no significant indirect effect of LA on AL through EF, even when considering burnout. The p-value for this indirect effect exceeded the 0.05 threshold. Consequently, Hypothesis 2 is not supported.

Table 4. Conditional effects of the focal predictor at values of the moderator burnout (for outcome variable agile leadership)

Burnout	Effect	t-value (t)	p-value (p)	BootSE	Lower 95% CI (LLCI)	Upper 95% CI (ULCI)
-24.1275	.4342	2.1783	.0314	.1993	.0394	.8290
.0000	.2030	1.3184	.1900	.1540	-.1020	.5081
24.1275	-.0281	-.1849	.8536	.1520	-.3291	.2729

Table 5. The indirect effect of LA on AL through EF (conditional burnout)

Burnout	Effect	Bootstrapped SE (BootsSE)	Bootstrapped Lower 95% CI (BootsLLCI)	Bootstrapped Upper 95% CI (BootsULCI)
-24.13	.0042	.0210	-.0441	.0463
.0000	.0069	.0209	-.0390	.0490
24.1275	.0096	.0261	-.0466	.0616

Index of moderated Mediation (for Burnout): index = .0001, bootSE = .0005, BootLLCI = -.0007, BootULCI = .0012

A significant interaction was found between LA and burnout, with both a coefficient and p-value of 0.01, suggesting LA's impact on AL varies based on burnout levels. Specifically, at a burnout level of -24.1275, LA and AL exhibit a positive, significant relationship; however, this significance diminishes when burnout increases to 24.13.

The study's moderated mediation analysis found that burnout had no significant effect on the relationship between LA and AL through executive functions. It means that Hypothesis 4 is not true. The initial analysis presented a weak correlation ($R = 0.1886$) with only 3.56% variance explained by EF. With an MSE of 126.6681, an F-value of 1.4388, and $p = 0.2350$, no linear significance among variables was observed. Neither LA nor burnout significantly affected executive functions.

Further analysis indicated a weak association ($R = 0.4145$) between LA, EF, burnout, and AL,

explaining 17.18% of AL's variance. The model was significant (F-statistic = 6.0150, $p = 0.0002$). However, neither LA nor EF significantly influenced AL. Burnout showed a negative effect on AL (coefficient = -0.1689, $p = 0.0314$), and the LA-burnout interaction added 4.96% to the AL variance.

Table 6. Summary of Model Analysis Results

Outcome variable	R	R-sq	MSE	F	Df1	dft2	p
EF	.1886	.0356	126.6681	1.4388	3	117	.2350
AL	.4145	.1718	170.8584	6.0150	4	116	.0002

This study examined the relationships among LA, EF, burnout, and AL in a sample of 121 millennial leaders. Contrary to traditional views suggesting a direct link between cognitive agility and leadership capabilities, our data indicates a more intricate association. Specifically, LA and EF did not demonstrate a direct and significant effect on AL. It raises the possibility of other influential factors like emotional intelligence or prior leadership experiences shaping agile leadership.

A notable negative correlation emerged between burnout and AL, suggesting that leaders experiencing burnout may have diminished leadership efficacy. These findings align with the wider literature stressing the importance of leader well-being (Doe & Adams, 2021; Roberts, 2022). Additionally, burnout seems to moderate the LA-AL relationship (Lee & Kim, 2022), emphasizing the complexity of leadership dynamics.

CONCLUSIONS

The study's results indicate that there is no significant relationship between learning agility and agile leadership. However, burnout emerges as a significant moderator in this relationship. It suggests that the level of burnout can influence how learning agility relates to agile leadership. It provides critical insights into the importance of considering the factor of occupational exhaustion when examining the relationship between learning adaptability and agile leadership.

LIMITATION & FURTHER RESEARCH

This study's outcomes highlight the need for more comprehensive research into the relationships among Learning Agility, Executive Functions, Agile Leadership, and Burnout. Lack of support for Hypotheses 2 and 4 does not exclude potential influences from unmeasured factors or sample characteristics. Future work should consider additional variables, including the different dimensions of EF and enhanced research designs, for a more nuanced understanding. It was also observed that some dimensions within the Agile Leadership tool seemed to overlap significantly, hinting at a possible lack of differentiation. Consequently, future efforts should pair this tool with qualitative studies to better dissect these constructs and refine the measuring items. Moreover, research should explore other potential moderating variables aside from Burnout that could impact the relationship between Learning Agility and Agile Leadership and how Burnout precisely affects this relationship.

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