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BEN-GURION UNIVERSITY OF THE NEGEV

Guilford Glazer Faculty of Business and Management

DEPARTMENT OF Business Administration

More than individual characteristics: The contribution of accumulated leadership experience and motivation to lead to leadership emergence

Thesis submitted in partial fulfillment of the requirements for the M.B.A degree

Geut Ninari

October 2024

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אוניברסיטת בן-גוריון בנגב

הפקולטה לניהול ע״ש גילפורד גלייזר

המחלקה לניהול

**יותר מתכונות אישיות: תרומתם של ניסיון מנהיגותי מצטבר ומוטיבציה להנהיג להופעת מנהיגות**

חיבור זה מהווה חלק מהדרישות לקבלת תואר מוסמך במנהל עסקים M.B.A

גאות נין-ארי

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| תאריך: | אישור יו״ר ועדת הוראה מחלקתית: |
| תאריך: | אישור יו״ר ועדת הוראה של בית הספר: |

**Abstract:**

Leadership emergence refers to the process by which an individual is perceived as a leader by their peers. Understanding the factors contributing to leadership emergence in organizations is essential for leadership and organizational effectiveness. Most studies in the field of leadership emergence focus on the relationship between individual characteristics and leadership emergence. However, scholars suggest that other factors, such as leadership experience and motivation to lead, can contribute to leadership emergence.

Our research aims to expand the understanding of leadership emergence by exploring a model in which accumulated leadership experience is related to leadership emergence through affective motivation to lead, with leadership self-efficacy as a moderator. The research consists of three studies that explore the model. Study 1 sampled 98 employees in a field setting and examined formal leadership emergence. Study 2 (103 participants) and Study 3 (72 participants) examined informal leadership emergence in a lab setting.

The results show that accumulated leadership experience was related to formal and informal leadership emergence through affective motivation to lead. However, we did not find a moderating effect of leadership self-efficacy on this relationship. The implications of these findings are discussed.

**Key words:** Leadership, Leadership Emergence, Affective Motivation to Lead, Leadership Self-Efficacy, Leadership Development.

**תקציר**

הופעת מנהיגות מתייחסת לתהליך שדרכו אדם נתפס כמנהיג על ידי עמיתיו. הבנת הגורמים התורמים להופעת מנהיגות בארגונים חיונית ליעילות מנהיגותית וארגונית. רוב המחקרים בתחום הופעת המנהיגות מתמקדים בקשר שבין תכונות אישיות לקריטריון זה. עם זאת, חוקרים מציינים שגורמים נוספים, כגון ניסיון מנהיגותי ומוטיבציה להנהיג, יכולים לסייע להופעת מנהיגות.

המחקר שלנו שואף להרחיב את ההבנה של הופעת מנהיגות ולחקור מודל מחקר שבו ניסיון מנהיגות מצטבר קשור להופעת מנהיגות דרך מוטיבציה רגשית להנהיג, כאשר חוללות עצמית מנהיגותית משמשת כגורם אשר ממריץ את הקשר הזה. המחקר כולל שלושה מחקרים הבוחנים את מודל המחקר. מחקר 1 דגם 98 עובדים בסביבה ארגונית וחקר את הופעת המנהיגות הפורמלית. מחקר 2 (103 משתתפים) ומחקר 3 (72 משתתפים) חקרו הופעת מנהיגות בלתי פורמלית במעבדה.

התוצאות מראות שניסיון מנהיגות מצטבר היה קשור להופעת מנהיגות פורמלית ובלתי פורמלית דרך מוטיבציה רגשית להנהיג. עם זאת, לא מצאנו השפעה ממריצה של חוללות עצמית מנהיגותית על קשר זה. בעבודה נדונות ההשלכות של ממצאים אלו.

**מילות מפתח:** מנהיגות, הופעת מנהיגות, מוטיבציה רגשית להנהיג, חוללות עצמית מנהיגותית, פיתוח מנהיגות.

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# Introduction:

Leadership is defined as the ability to influence others and drive collective efforts toward shared objectives ([Yukl, 2013](#_ENREF_74)). Effective leadership fosters followers' motivation, enhances individual, team, and organizational productivity, and contributes to organizational success ([Kotter, 2007](#_ENREF_41); [Northouse, 1999](#_ENREF_57)).

Within leadership studies, leadership emergence refers to the process by which an individual is perceived as a leader by their peers, regardless of whether they hold a formal leadership position. [Badura et al. (2021)](#_ENREF_6) describe leadership emergence as “the process through which an individual becomes influential to relevant others in a manner that involves the implicit or explicit granting of the leader role.” This conceptualization includes both those who are formally designated as leaders and those who are informally perceived as leaders through group interactions.

Effective leadership emergence is related to effective organizational performance ([Luria et al., 2019](#_ENREF_52)). Hence, organizations invest resources in leadership programs and mentoring ([Badura et al., 2021](#_ENREF_6)). Understanding the origins of leadership emergence is essential for effective leadership development in organizations ([Gardner et al., 2024](#_ENREF_27)). Therefore, extensive research has been conducted to understand leadership emergence ([Acton et al., 2019](#_ENREF_2); [Badura et al., 2021](#_ENREF_6); [Gardner et al., 2024](#_ENREF_27)).

Most studies, however, have focused on individual characteristics related to leadership emergence. Traits such as general intelligence ([Ilies et al., 2004](#_ENREF_38)), personality ([Judge et al., 2002](#_ENREF_39)), and emotional intelligence ([Berson et al., 2006](#_ENREF_13)) were found to be related to leadership emergence. Nevertheless, scholars have suggested that additional factors can contribute to leadership emergence. Popper et al.’s "leadership equation" model ([Popper et al., 2007](#_ENREF_63)) and Chan and Drasgow’s (2001) leadership emergence model suggested that leadership emergence is a function of combined potential to lead (i.e., individual characteristics), motivation to lead, and leadership development.

Leadership experience is essential for a leader’s development ([Thomas & Cheese, 2005](#_ENREF_70)). Both formal and informal leadership experiences allow individuals to gain knowledge, skills, and abilities related to leadership ([Thomas & Cheese, 2005](#_ENREF_70)). [Lord and Hall (2005)](#_ENREF_50) argue that leadership development involves improving information processing and expanding one's knowledge base, which is critical for identifying with the leadership role and enhancing leadership capabilities. Furthermore, the theories of positive emotions (Fredrickson, 2001) and Self-Determination Theory (SDT; Deci & Ryan, 2012) highlight how leadership experience influences intrinsic motivations, such as the affective motivation to lead, where individuals enjoy leading others and are driven by internal emotions to lead ([Luria & Berson, 2013](#_ENREF_51)).

Leadership development and motivation to lead might not be sufficient for leadership emergence. Self-efficacy, which is people's conviction about their capabilities to produce desired levels of performance ([Bandura, 1977](#_ENREF_9)), can facilitate the relationship between motivation and performance (Locke, 1991). Leadership self-efficacy is an individual's belief in their ability to successfully exert leadership by setting a direction for the group, building relationships, and overcoming obstacles ([Paglis & Green, 2002](#_ENREF_60)), and it can facilitate the positive effects of intrinsic motivation (AMTL) on leadership roles (Luria et al., 2019; Tackett et al., 2023).

Our work aims to explore the relationships between accumulated leadership experience, AMTL, and leadership emergence, as well as the moderating role of LSE (see Figure 1). Hence, this study contributes to the leadership emergence literature in several ways. First, it offers a broader view of leadership emergence beyond merely examining various traits. It does so by exploring theoretical models that emphasize the role of motivation and development in the leadership emergence process. Furthermore, the research utilizes long-term data to examine the development of leaders, incorporating both past and present information.

Accumulated Leadership Experience

AMTL

LSE

Leadership Emergence

Figure 1. *Research Model*

# Literary review and Hypothesis presentation

## Leadership Emergence

Leadership is defined as the process of influencing others as well as facilitating individual and collective efforts to accomplish shared objectives ([Yukl, 2013](#_ENREF_74)). Within the extended research of leadership, a main construct that has been explored is *leadership emergence* ([Guastello, 2007](#_ENREF_17" \o "Guastello, 2007 #137) ).

[Badura et al. (2021)](#_ENREF_6) defined leadership emergence as “the phenomenon of an individual becoming a leader within their team, organization, or among others to whom the prospective leader’s actions matter, regardless of the formality of the leadership role.” This definition refers to individuals becoming leaders whether they were granted a formal position or emerged as informal leaders within the group of which they are a part.

Hence, leadership emergence is a phenomenon in which an individual becomes a group leader through interactions driven by the cognitive and perceptual processes of group members. Informal emergent leaders are individuals being perceived as leaders by others informally (e.g., peers in leaderless groups; [Badura et al., 2020](#_ENREF_7); [Hogan et al., 1994](#_ENREF_31); [Hollander et al., 1977](#_ENREF_32); [Judge et al., 2002](#_ENREF_39); [Lisak & Erez, 2015](#_ENREF_45)). Formal emergent leaders are nominated by their group or organization to a leadership position ([Reichard et al., 2011](#_ENREF_64)).

Though leadership emergence has been extensively studied ([Guastello, 2007](#_ENREF_28)), most of the focus has been on the contribution of individual characteristics to leadership emergence ([Foti & Hauenstein, 2007](#_ENREF_25); [House & Aditya, 1997](#_ENREF_35); [Lord et al., 1986](#_ENREF_49)). Despite the contribution of these studies to the understanding of the phenomenon, theories suggested that other factors are related to leadership emergence. The “leadership equation” model ([Popper, 2000](#_ENREF_62); [Popper et al., 2007](#_ENREF_63)) , suggests that leadership emergence is an accumulative function of a potential to lead, motivation to lead, and leadership development, which interact to facilitate leadership emergence (see also Chan & Drasgow, 2001).

According to [Badura et al. (2021)](#_ENREF_6), the combination is essential for leadership emergence because its compartments shape individuals' ability and willingness to take on leadership roles. Individual traits, such as confidence and social intelligence, provide the foundational potential for leadership, while motivation facilitates individuals to pursue leadership opportunities ([Badura et al., 2021](#_ENREF_6)). Leadership development enhances leadership skills, creating a dynamic where individuals are better equipped to emerge as leaders in formal and informal settings ([Badura et al., 2021](#_ENREF_6)).

In our work, we will focus on exploring the two factors of Popper et al.’s (2007) “equation” that received less attention in the literature (i.e., motivation to lead (MTL) and leadership development, reflected by leadership experience) and their relationship with leadership emergence.

## Accumulated Leadership Experience

A Leader’s development is “the process by which one increases his or her ability to exercise influence in leadership situations” ([Liu et al., 2021, p. 3](#_ENREF_47)). Leader development is an intrapersonal, interpersonal, and organizational level-influenced process across an individual’s lifespan that consists of on-the-job experience, deliberate practice, and leadership development programs ([Liu et al., 2021](#_ENREF_47)). Leadership experience, encompassing both formal and informal aspects, is part of leader's development. Through leadership experiences, individuals gain knowledge, skills, and abilities ([Lord & Hall, 2005](#_ENREF_50)). [Lord and Hall (2005)](#_ENREF_50) explain that skill development involves improving how information is processed, while knowledge plays a vital role in identifying with the leadership role and amplifying leadership abilities. Experinces as job assignments, mentoring, feedback, and training promote effective leadership development ([Fitzsimmons & Callan, 2020](#_ENREF_24)).

Using experience effectively for leadership development is complex due to the diverse nature of experiences ([Fitzsimmons & Callan, 2020](#_ENREF_24)). To address this complexity, some organizations develop frameworks that link experiences, competencies, relationships, and learning capabilities to support leadership development ([Liu et al., 2021](#_ENREF_47)).

## Affective-Identity Motivation to Lead

Motivation can be defined as a complex, intra-personal process that predicts three aspects of behavior: a) direction, which is the decision to invest effort in a specific task; b) intensity, which is the decision of how much effort to invest in that task; and c) persistence, which is the decision to continue investing effort in that task over time (Kanfer, 1990). Relying on this definition, [Chan and Drasgow (2001)](#_ENREF_16) defined Motivation To Lead (MTL) as “an individual difference construct that affects a leader’s or leader-to-be’s decision to assume leadership training, roles, and responsibilities and that affect his or her intensity of effort at leading and persistence as a leader” (p.482).

[Chan and Drasgow (2001)](#_ENREF_16) posited three distinct MTL factors. The first is Social-Normative MTL (SNMTL), which is the motivation to lead for social-normative reasons, such as a feeling of commitment to a group. It is characterized by leading out of a sense of duty or obligation, where individuals feel compelled to lead based on external expectations or perceived needs ([Badura et al., 2020](#_ENREF_7)). The second is Noncalculative MTL (NCMTL), which is viewed as a continuum: the more calculative the motivation is, the more the individual will be motivated to lead to enjoy the benefits related to that position.

The last is Affective-Identity MTL (AMTL), which reflects the idea that “some individuals just like to lead others” ([Chan & Drasgow, 2001, p. 482](#_ENREF_16)). AMTL is considered an intrinsic approach whereby individuals enjoy opportunities to lead ([Luria & Berson, 2013](#_ENREF_51)) and are driven to do so by internal emotions or natural tendencies ([Hong et al., 2011](#_ENREF_33)). This indicates that individuals high in AMTL are more likely to seek leadership roles due to their intrinsic enjoyment and identification with leadership ([Badura et al., 2020](#_ENREF_7)).

AMTL is stable over time ([Chan & Drasgow, 2001](#_ENREF_16)), and it is less affected by situational aspects compared to social normative MTL or Noncalculative MTL. Additionally, AMTL stands out as a more significant predictor of various leadership outcomes, such as leadership emergence, behaviors, and effectiveness ([Badura et al., 2020](#_ENREF_7)) compared to SNMTL and NCMTL ([Badura et al., 2020](#_ENREF_7)). Hence, we will only explore AMTL in this study.

## The relationship between accumulated leadership experience and affective-identity MTL

The theory of positive emotions ([Fredrickson, 2001](#_ENREF_26)), suggests an explanation for the relationship between experience and motivation. According to this theory, positive feelings broaden individuals' immediate thought-action possibilities, encouraging actions such as exploration, learning, and creativity. Conversely, negative emotions narrow these possibilities, prompting defensive actions like avoidance or aggression ([Fredrickson, 2001](#_ENREF_26)). Hence, affective reactions drive conscious attention, influencing cognitive processes such as decision-making and goal-setting ([Seo et al., 2004](#_ENREF_66)).

Aligning with these principles, the Self-Determination Theory ([SDT; Deci & Ryan, 2012](#_ENREF_17)) underscores the impact that autonomy and competence deriving from experience have on intrinsic motivation. The theory explains that autonomy, the sense of control over one’s actions, enhances intrinsic motivation by allowing individuals to engage in activities that align with their interests and values, thus fostering a deeper connection to the activity and making it inherently satisfying ([Deci & Ryan, 2012](#_ENREF_17)). Leadership experiences often involve autonomy, as leaders have the power to make decisions and direct actions. When they feel in control of their work and can exercise their judgment, their need for autonomy is fulfilled, fostering intrinsic motivation, initiative, innovation, and engagement driven by personal choice rather than external pressures ([Deci & Ryan, 2012](#_ENREF_17)).

Competence, the need to feel adequate and masterful, further boosts intrinsic motivation by providing a sense of accomplishment since engaging in optimally challenging tasks and receiving positive feedback reinforces this sense of competence, leading to greater intrinsic motivation ([Deci & Ryan, 2012](#_ENREF_17)). Leadership experiences that involve decision-making, problem-solving, and skill application reinforce a leader's sense of competence when successful, which, in turn, enhances motivation to continue leading, tackle future challenges, and develop abilities ([Deci & Ryan, 2012](#_ENREF_17)).

Chan and Drasgow (2001) highlighted past leadership experience as antecedent to Motivation to Lead (MTL), emphasizing its role in shaping a leader's performance through various mechanisms, such as the impact on the individual's competence and sense of autonomy ([Deci & Ryan, 2012](#_ENREF_17))They claim that leadership experiences provide developmental opportunities for a sense of leadership self-efficacy that contributes to the integration of leadership qualities into individual self-concept and to the willingness to assume leadership responsibilities.

[Lord and Hall (2005)](#_ENREF_50) claimed leadership experience enhances individuals’ identity as leaders, encouraging them to participate in leadership roles and positions. They explain that, as individuals gain experience in leadership roles, they navigate complex situations, solve problems, and interact with diverse teams, which enhances their knowledge and skills ([Lord & Hall, 2005](#_ENREF_50)). This progression from novice to expert leader, involves a shift in identity, where the leader increasingly sees themselves as a competent and integral part of their organization or community ([Lord & Hall, 2005](#_ENREF_50)). This self-view as a leader becomes a central aspect of their identity, driving them to seek further opportunities to lead and improve their capabilities ([Lord & Hall, 2005](#_ENREF_50)).

Affective Motivation to Lead (AMTL) in particular, is influenced by leadership experience. The SDT explains that when individuals feel that their actions are self-determined and effective, they are more likely to persist in and enjoy these activities ([Deci & Ryan, 2012](#_ENREF_17)), which aligns closely with the motivations inherent in AMTL. This alignment is evident in the emphasis on intrinsic satisfaction derived from self-determined and practical actions ([Deci & Ryan, 2012](#_ENREF_17)). Leaders who find satisfaction in their roles are more likely to remain motivated and effective. Therefore, as individuals accumulate leadership experiences, they are likely to reinforce and solidify their intrinsically oriented motivations, enhancing their AMTL over time ([Badura et al., 2020](#_ENREF_7)).

**Hypothesis 1:** *Accumulated leadership experience will be positively related to AMTL.*

## The relationship between AMTL and leadership emergence

According to Locke and Latham’s goal-setting theory (1990), specific and challenging goals lead to higher performance by guiding behavior and efforts toward goal achievement. Motivated individuals set goals that align with their values and aspirations, and these goals play a crucial role in linking motivation with performance.

MTL conveys behavioral intentions based on leaders’ valence, norms, and altruism ([Hong et al., 2011](#_ENREF_33)). [Luria and Berson (2013)](#_ENREF_51) proposed that the direct relationship between MTL and leadership outcomes is supported by early motivation theories, such as Vroom’s theory, which posits that motivation to act is influenced by the expected outcomes and their value to the individual ([Vroom, 1964](#_ENREF_71)). New leaders’ initial willingness to assume a leadership role (i.e., MTL) enhances the relationship between power beliefs and their subsequent behaviors in the role ([London & Sherman, 2021](#_ENREF_48)).

Research shows that people are perceived as leaders when they engage in behaviors aligned with agentic leader prototypes, such as voicing ideas ([Leaper & Ayres, 2007](#_ENREF_43); [Mullen et al., 1989](#_ENREF_53)), and that individuals high in MTL are more likely to display these prototypical leader behaviors, which increases their chances of emerging as leaders ([Badura et al., 2020](#_ENREF_7)).

We claim that AMTL is related to leadership emergence by aligning individuals' subjective attitudes toward leadership with their intrinsic motivations. Specifically, AMTL, characterized by intrinsic enjoyment and identification with leadership roles, strongly predicts leadership emergence because those with high AMTL are more proactive in seeking and assuming leadership positions, making them more likely to be perceived as leaders ([Badura et al., 2020](#_ENREF_7)).

[Badura et al. (2020)](#_ENREF_7), claimed that individuals high in AMTL are likely to internalize the leader role into their self-concept and seek external validation as leaders, leading them to engage in proactive behaviors that distinguish them as potential leaders. This intrinsic drive means that those with high levels of AMTL not only seek out leadership opportunities but also perceive these roles as integral to their self-concept, actively striving to attain them ([Auvinen et al., 2020](#_ENREF_5); [Badura et al., 2020](#_ENREF_7)). This motivation contributes to both formal and informal leadership emergence, as individuals with a strong desire to lead are more likely to become leaders in various situations ([Badura et al., 2021](#_ENREF_6)).

Thus, we claim:

**Hypothesis 2:** *AMTL will be positively related to leadership emergence.*

## The indirect relationship between accumulated leadership experience and leadership emergence.

The Self-Determination Theory ([SDT; Deci & Ryan, 2012](#_ENREF_17)), provides a framework for understanding how experience influences behavior, with motivation acting as a mediator. As individuals gain experience in a particular activity or domain, they develop a sense of competence or mastery, which enhances their intrinsic motivation. This intrinsic motivation, driven by the satisfaction of competence and autonomy, in turn, leads to sustained engagement in the activity, improved performance, and the achievement of desired outcomes ([Deci & Ryan, 2012](#_ENREF_17)).

When individuals have opportunities to practice leadership roles, leadership is more likely to become a stable part of their self-concept ([Tackett et al., 2023](#_ENREF_68)). This suggests a positive relationship between leadership experience and leadership emergence ([Tackett et al., 2023](#_ENREF_68)).

As novice leaders take on leadership roles, they encounter various challenges and opportunities that allow them exercise different leadership behaviors. These experiences help them reflect on their abilities and effectiveness, gradually building their self-confidence and deepening their understanding of what it means to be a leader ([London & Sherman, 2021](#_ENREF_48)).

[Badura et al. (2020)](#_ENREF_7) proposed that past leadership experience is a distal antecedent to leadership emergence, with MTL acting as a proximal antecedent or mediator in the relationship. They explain that past leadership experience shapes an individual's skills, knowledge, and confidence, forming a foundation that indirectly influences leadership outcomes. MTL directly affects an individual's propensity to seek and embrace leadership roles. Consequently, individuals with extensive leadership experience often develop strong MTL, which translates their historical experiences into proactive leadership behaviors and increases their visibility as leaders ([Badura et al., 2020](#_ENREF_7)).

We aim to show that AMTL is particularly significant. Individuals with a high level of AMTL are intrinsically motivated to pursue leadership roles and typically have extensive past leadership experience, suggesting they find leadership positions meaningful ([Auvinen et al., 2020](#_ENREF_5); [Badura et al., 2020](#_ENREF_7)).

Hence, we claim:

**Hypothesis 3:** *Accumulated leadership experience will be positively related to leadership emergence through AMTL.*

## Leadership Self-Efficacy

Self-efficacy is defined as people's conviction about their ability to produce desired levels of performance ([Bandura, 1977](#_ENREF_9)) . This concept relates to beliefs about one’s perceived abilities and not to one’s actual performance ([Waddington, 2023](#_ENREF_72)). Moreover, self-efficacy is adaptive to change ([Murphy & Johnson, 2016](#_ENREF_54)). Therefore, self-efficacy influences many aspects that are related to self-perceptions, such as feelings, thoughts, motivation, and behaviors ([Bandura & Wessels, 1994](#_ENREF_11)).

According to [Bandura and Wessels (1994)](#_ENREF_11), people's beliefs about their efficacy can be developed by four primary sources of influence: mastery experiences (generating successful experiences that build a robust in one’s efficacy), vicarious experiences provided by social models (seeing people similar to oneself succeed raises the observer's beliefs that they, too, can succeed), social persuasion (verbal persuasion that one can succeed is likely to mobilize greater effort), and reducing people's stress reactions and altering their negative emotional misinterpretations of their physical states.

Leadership self-efficacy is a specific form of self-efficacy. Leadership self-efficacy (LSE) is defined as a “person’s judgment that he or she can successfully exert leadership by setting a direction for the workgroup, building relationships with followers in order to gain commitment to change goals, and working with them to overcome obstacles to change” ([Paglis & Green, 2002, p. 217](#_ENREF_60)).

Various factors, including individual traits and situational factors, influence the development of LSE. Research highlights that personality traits such as extraversion and conscientiousness are positively correlated with higher LSE, while neuroticism tends to have a negative impact​ ([Dwyer, 2019](#_ENREF_20)). Additionally, contextual factors like job autonomy, availability of resources, and a supportive organizational culture play significant roles in shaping LSE​ ([Paglis, 2010](#_ENREF_59)). These elements create an environment that fosters confidence and efficacy among leaders, enabling them to perform more effectively.

## The moderating role of leadership self-efficacy and how it facilitates the indirect relationship between accumulated leadership experience and leadership emergence

High LSE enhances resilience and persistence ([Djourova et al., 2020](#_ENREF_18); [Pillay et al., 2022](#_ENREF_61); [Schunk & DiBenedetto, 2021](#_ENREF_65)), enabling intrinsically motivated individuals (i.e., individuals with high AMTL) to overcome obstacles and sustain their leadership roles. This self-assurance promotes proactive behaviors ([Abuelhassan & AlGassim, 2022](#_ENREF_1)). Thus, individuals with high LSE are more likely to use their motivation to demonstrate leadership actions, facilitating leadership emergence. Conversely, for individuals with low self-efficacy, the relationship between motivation and action is weakened because they do not believe in their ability to succeed, which impedes their willingness to take on challenges, persist in complex tasks, or invest effort ([Schunk & DiBenedetto, 2021](#_ENREF_65)).

**Hypothesis 4:** *The relationship between accumulated leadership experience and leadership emergence through AMTL will be moderated by leadership self-efficacy, so that accumulated leadership experience will have a stronger relationship to leadership emergence under high rather than low leadership self-efficacy.*

# Study 1

This study aimed to explore the research model in a field setting. We used formal leadership emergence as a criterion.

## Method

Sample and Procedure

Data were collected using the CloudSearch platform. This platform was chosen due to its high data quality compared to other platforms, such as MTurk ([Douglas et al., 2023](#_ENREF_19)). Using the Qualtrics program, participants signed an electronic consent form and then completed a 15-minute web-based questionnaire (in English, see Appendix 1).

The original sample contained 148 participants who currently work in organizations in the USA. This sample was chosen because it represents a large field setting, allowing for testing the emergence of formal leadership compared to non-leadership roles. Fifty participants (33.8%) were excluded from the sample due to incomplete answers. The final sample included 98 participants (of which 68.4% were men; average age 37.2; SD=8.3). 76.53% of participants are currently in management positions in various fields (e.g., education, tech, security, and construction), with an average work tenure of 5.84 years (SD=4.69).

Measures

*Predictor.* *Leadership* *Accumulated Experience*. We used the accumulated experience scale ([Burns, 2020](#_ENREF_15)). This is self-reported biographic data that measures the accumulated number of leadership positions since joining the workforce.

*Mediator.* *Affective Motivation to Lead (AMTL)*. We have used the AMTL subscale from [Chan and Drasgow (2001)](#_ENREF_16)’s Motivation to Lead Questionnaire (MTLQ). This subscale consists of 9 items on a Likert-type scale (1="Strongly disagree”; 7=”Strongly agree”). Sample item: "While working in a team, I usually prefer to be the leader rather than a follower." (α=.87).

*Moderator.* *Leadership Self-Efficacy (LSE)*. We used the leadership self-efficacy scale by [Ng et al. (2008)](#_ENREF_56). It consists of 11 items on a Likert-type scale (1=”not at all confident”; 7=”extremely confident”). Sample items: “planning ability” and “setting direction.” (α=.96).

*Criterion.* *Leadership Emergence*. Based on previous studies ([Anghel et al., 2004](#_ENREF_4); [Sherman et al., 2012](#_ENREF_67)), we measured formal leadership emergence as the number of the leaders’ direct followers (starting from zero—no formal leadership position).

*Control Variables.*

*Age.* Individuals' age has a distinct effect on their experiences ([e.g, Accumulated Leadership Experience; Walter & Scheibe, 2013](#_ENREF_73)), which can be related to leadership emergence ([Lehman, 2017](#_ENREF_44)).

*Familial Socio-Economic Status.* Studies have identified a link between leadership and development ([Engelbert & Wallgren, 2016](#_ENREF_21); [Hossain, 2008](#_ENREF_34); [Kaluyu, 2015](#_ENREF_40); [Özdemir et al., 2024](#_ENREF_58)). One key finding is that early exposure to poverty can impact children’s cognitive, behavioral, and emotional development, which may indirectly influence their likelihood of occupying leadership roles later in life ([Barling & Weatherhead, 2016](#_ENREF_12)). Furthermore, it was found that individuals, and specifically women, from lower socioeconomic backgrounds, face barriers such as limited resources, heavy domestic workloads, and lack of education, which hinder their leadership aspirations and opportunities ([Kaluyu, 2015](#_ENREF_40))​. Additionally, students from lower-income families face fewer academic and leadership opportunities due to limited cultural capital and school resources, indicating that low socioeconomic status hampers leadership development by restricting access to educational and extracurricular activities that nurture leadership ([Özdemir et al., 2024](#_ENREF_58)). To measure familial socio-economic status, we used the Family Affluence Scale ([FAS-III; Hobza et al., 2017](#_ENREF_30)) which consists of 6 items. A sample item is, “Did your family own a car or another motorized vehicle?” The FAS is calculated as an aggregated FAS index ranging from 0 to 13.

## Results

### Descriptive statistics

Table 1 presents means, standard deviations, and the correlation matrix for study 1.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Table 1 - Descriptive statistics for Study 1  *Means, standard deviations, and correlations* | | | | | | | | |
|  | M | SD | 1 | 2 | 3 | 4 | 5 | 6 |
| 1. Familial Socio-Economic Status | 8.26 | 2.54 | - |  |  |  |  |  |
| 2. Age | 32.81 | 8.25 | .05 | - |  |  |  |  |
| 3. Accumulated Leadership Experience | 1.39 | 1.85 | .27\*\* | .15 | - |  |  |  |
| 4. Affective-Identity MTL | 4.57 | 1.55 | .27\*\* | .02 | .28\*\* | - |  |  |
| 5. Leadership Self-Efficacy | 5.60 | 1.02 | .17 | -.08 | .24\* | .73\*\*a | - |  |
| 6. Formal Leadership Emergence | 3.89 | 6.11 | -.14 | -.03 | .19 | .25\* | .19 | - |
| Note: N=98, \*p<.05, \*\*p<.01   1. *Although the correlation with transformational leadership may seem high, the standardized partial correlation, when controlling for the rest of the variables, is .68.* | | | | | | | | |

### Hypothesis Testing

To test whether accumulated leadership experience is positively related to AMTL (Hypothesis 1), we used multiple linear regressions. In the first step, we regressed AMTL on our control variables: familial socio-economic status at childhood and age. In the second step, we added accumulated leadership experience. A significant positive relationship was found between accumulated leadership experience and AMTL (ß=.23, p<.05), supporting hypothesis 1.

Next, to test whether AMTL is positively related to leadership emergence (Hypothesis 2), we followed the same process and used multiple regression, regressing leadership emergence on our control variables, as mentioned above, and then added AMTL for step 2. We found a positive relationship (ß=.31, p<.01) between AMTL and formal leadership emergence.

To test the mediated effect of AMTL between accumulated leadership experience and leadership emergence (Hypothesis 3), we conducted a bootstrap analysis using the “PROCESS” model 4 for SPSS ([Hayes, 2013](#_ENREF_29)), controlling for age and familial socio-economic status. The results for the mediation effect were significant (B=.20, 95% CI=(.02,.69)). Moreover, we didn’t find a direct effect of accumulated leadership experience on formal leadership emergence (B=.67, 95% CI=(-.01, 1.34)). These results supported hypothesis 3.

Finally, to test the moderated indirect relationship between accumulated leadership experience and formal leadership emergence through AMTL under high and low levels of leadership self-efficacy (Hypothesis 4), and controlled for familial socio-economic status and age, we conducted a bootstrap analysis using the “PROCESS” model 14 for SPSS ([Hayes, 2013](#_ENREF_29)).

A 5000-bootstrap sample with 95 percent bias-corrected confidence intervals (95% CI) revealed a non-significant index of moderated mediation (IMM=-.02, CI=(-.11,.03)), therefore, the fourth hypothesis was not supported.

## Study 1 Discussion

The first study explored the research model in a field setting. As expected, we found a positive relationship between accumulated leadership experience and formal leadership emergence and found that AMTL mediated this relationship. Nevertheless, we did not find support for our hypothesis that LSE moderates this relationship. A possible explanation for this finding is the high correlation between AMTL and LSE in study 1, which might overshadow the possible effect of LSE. Additionally, LSE may have a lower effect on the relationship between AMTL and formal leadership emergence than the relationship between AMTL and informal leadership emergence. Unlike informal leadership, nomination to a formal leadership position is not just related to individual aspects but also organizational needs and constraints. Hence, self-beliefs about leadership might play a lower role in the nomination process.

Considering this possible explanation, we conducted a second study that explored the research model using the criterion of informal leadership emergence.

# Study 2

## Method

### Sample and procedure

The sample consisted of 103 undergraduate management students from Southern Israeli University (of which 9.70% were men, average age=24.48 (SD=1.23)). The participants were invited to the laboratory. First, they answered a Hebrew web-based questionnaire that included accumulated leadership experience, LSE, and AMTL scales. Then, they were randomly divided into leaderless discussion groups (LDGs) of four participants. LDGs have been used to study informal leadership emergence ([Ensari et al., 2011](#_ENREF_22)). This style of discussion results in the exchange of ideas, group interaction, and opportunities for members to take on leadership roles ([Ensari et al., 2011](#_ENREF_22)).

The LDGs completed a task based on the “Survivor on the Moon” game (National Aeronautics and Space Administration; see Appendix 3) that lasted approximately 15 minutes. This task requires group consensus building that highlights leadership aspects in teams ([Hong et al., 2011](#_ENREF_33)). At the end of the group task, all participants were requested to fill out a second web-based survey answering the leadership emergence scale about their team members. Lastly, they were debriefed about the study and asked not to discuss it with their peers. The subjects received an extra course credit for their participation.

### Measures

All scales, except the criterion, were similar to those of Study 1 (see Appendix 2). However, the Age variance was small and insignificant (SD=1.26), hence, we excluded this control.

*Criterion.* *Informal Leadership Emergence*. An emergent informal leader is an individual perceived by other team members as a potential leader, who can exert more influence than other members of the same group ([Lisak & Erez, 2015](#_ENREF_45)). Accordingly, we have asked team members to rate their teammates’ leadership emergence level using five items ([Nahrgang, 2009](#_ENREF_55)), adapted from the leadership emergence scale of [Taggar et al. (1999)](#_ENREF_69). These items were on a 7-point Likert-type scale (1=“almost never”; 7=”almost always”). An example item: “This team member exhibits leadership in the team.” (α=.96).

As leadership emergence was measured at the team level, we used fit indices to measure agreement. Fit indices provided evidence of a good fit (= 119, p < . 01, df=87; Comparative Fit Index (CFA)=.97; Tucker-Lewis Index (TLI)=.97; Root Mean Square Error of Approximation (RMSEA)=.060), as was suggested in the literature (Lower then .07 for RMSEA and higher than .90 for CFI and TLI, e.g., [Browne & Cudeck, 1992](#_ENREF_14); [Hu & Bentler, 1999](#_ENREF_36)). Hence, the agreement between team members about leadership emergence was satisfying.

## Results

### Descriptive statistics

Table 2 presents the mean and standard deviations for the variables in Study 2, as well as the correlation matrix.

Table 2 - Descriptive statistics for Study 2

*Means, Standard deviations, and correlations*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | M | SD | 1 | 2 | 3 | 4 | 5 |
| 1. Familial Socio-Economic Status | 9.55 | 2.03 | - |  |  |  |  |
| 2.Accumulated Leadership Experience | .88 | .91 | .00 | - |  |  |  |
| 3. Affective-Identity MTL | 4.96 | 1.02 | .19 | .07 | - |  |  |
| 4. Leadership Self-Efficacy | 5.63 | .67 | .14 | .06 | .46\*\* | - |  |
| 5. Formal Leadership Emergence | 4.65 | .93 | -.17 | .06 | .26\*\* | .09 | - |
| Note: N=102, \*p<.05, \*\*p<.01 | | | | | | | |

### Hypothesis Testing

The data analysis used methods similar to those in Study 1. We used multiple linear regressions to test whether accumulated leadership experience is positively related to AMTL (Hypothesis 1). In the first step, we regressed AMTL on familial socio-economic. In the second step, we added accumulated leadership experience as a predictor. The relationship between accumulated leadership experience and AMTL was not significant (ß=.08, n.s.). Therefore, Hypothesis 1 was not supported.

Next, to test whether AMTL positively relates to informal leadership emergence (Hypothesis 2), we regressed leadership emergence on AMTL, controlled by familial socio-economic status. A positive relationship between AMTL and informal leadership emergence was found (ß=.27, p<.01), supporting Hypothesis 2.

Although Hypothesis 1 was not supported, we explored the relationship between accumulated leadership experience and leadership emergence. We conducted a bootstrap analysis using the “PROCESS” model 4 for SPSS ([Hayes, 2013](#_ENREF_29)), controlled for familial socio-economic status. The results for the direct effect of accumulated leadership experience on informal leadership emergence were insignificant (B=.05, 95% CI=(-.15,.24)), nor with the mediator (AMTL (B=.02, 95% CI=(-.03,.12)). Hence we did not find either a direct or an indirect (Hypothesis 3) significant relationship between accumulated leadership experience and informal leadership emergence.

Finally, to test the indirect relationship between accumulated leadership experience and leadership emergence through AMTL under varying levels of LSE (Hypothesis 4), we conducted a bootstrap analysis using the “PROCESS” model 14 for SPSS ([Hayes, 2013](#_ENREF_29)). The process was controlled for familial socio-economic status. A 5000-bootstrap sample with 95 percent bias-corrected confidence intervals (95% CI) did not reveal a conditional effect for the relation between accumulated leadership experience and formal leadership emergence through AMTL, with a non-significant index of moderated mediation (IMM=-.01, CI=(-.04,.04)), therefore, the fourth hypothesis was not supported for informal leadership emergence.

## Discussion – Study 2

The second study explored the research model in a lab setting. In this study, we did not find a relationship between accumulated leadership experience and informal leadership emergence, neither direct nor indirect (through AMTL). However, we found a positive relationship between AMTL and leadership emergence, supporting our claim that AMTL will be positively related to leadership emergence in both formal and informal positions.

Moreover, we did not find support for our claim that LSE moderates this relationship, although the correlation between AMTL and LSE was significantly lower than in Study 1. The small variance in the participants’ LSE scores is a possible explanation for this finding. Hence, we conducted a third study, using an LSE manipulation to create a higher variance between participants. This study in the same lab setting, will allow us to re-explore the relationship between accumulative leadership experience and informal leadership emergence.

# Study 3

## Method

### Sample and Procedure

72 undergraduate management students from a southern university in Israel participated in this study (of which 15.28% were men, Average Age=25.56 (SD=1.54)). The participants were invited to the laboratory, where we manipulated their LSE. They filled out a web-based leadership skills test, after which they were given false negative or positive random feedback about their test scores (negative or positive; [Bandura, 1997](#_ENREF_10); [Hutchinson et al., 2008](#_ENREF_37)).

After receiving that feedback, participants answered a web-based LSE questionnaire. Then, they were divided into LDGs consisting of four participants each: two of them received positive feedback, and the others received negative feedback. They were then asked to complete a task based on the “Survivor on the Moon” game (National Aeronautics and Space Administration; Appendix 3), as in Study 2. At the end of the group task, participants were asked to complete an additional web-based survey that included measures of accumulated leadership experience, AMTL, and leadership emergence. Although AMTL is believed to be shaped by experience, we have opted to assess it after the task, under the assumption that it will not undergo significant changes. This approach ensures that both the testing and manipulation of LSE remain neutral, minimizing the potential influence of prior questionnaires on responses to the LSE scale.

### Measures.

All scales were similar to those in Study 2. As in Study 2, we calculated fit indices for leadership emergence. Fit indices provided evidence of a good fit (=152, p<.01, df=87; CFA=.92; TLI=.91; RMSEA=.07). Hence, the agreement between team members about leadership emergence was satisfying.

### Manipulation test.

Participants filled out a web-based leadership skills test (appendix 4), after which they were given random feedback (negative or positive; Bandura, 1997; Hutchinson et al., 2008) about their test scores, thus creating a manipulation on their LSE ([Fast et al., 2014](#_ENREF_23)). The manipulation was anticipated to temporarily affect participants' LSE, leading to noticeably lower or higher scores depending on the feedback they received.

## Results

To evaluate the effect of the manipulation on LSE, a Student’s t-test was performed to determine whether there was a significant difference between the LSE of participants who received positive feedback and those who received negative feedback. The manipulation check was not statistically significant for the generalized LSE scale (t(df=70)=-.78; p>.05). The scores of the positive feedback group on the LSE scale had an average of 5.64 (SD=0.77), and those of the negative feedback group had an average of 5.76 (SD=0.56). A t-test for each LSE scale item separately did not find significant results either (p>.05). These findings indicate that the manipulation did not achieve the expected effect. Hence, we analyzed the study results similarly to those of Study 2 without considering the manipulation. These results were later compared with the non-manipulated LSE scores from Study 2 for confirmation using an independent samples t-test (t(df=100)=-.76; n.s.). The data was analyzed using multiple regressions, as well as “PROCESS” models for SPSS ([Hayes, 2013](#_ENREF_29)), and simple slope analysis.

### Descriptive statistics

Table 5 presents mean and standard deviations for all variables in the study, as well as the correlation matrix.

Table 3 - Descriptive statistics for Study 3

*Means, Standard deviations and correlations*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | M | SD | 1 | 2 | 3 | 4 | 5 |
| 1. Familial Socio-Economic Status | 9.59 | 2.40 | - |  |  |  |  |
| 2. Accumulated Leadership Experience | 3.28 | 2.49 | -.08 | - |  |  |  |
| 3. Affective-Identity MTL | 4.71 | 1.15 | .05 | .25\* | - |  |  |
| 4. Leadership Self-Efficacy | 5.66 | .67 | .03 | .05 | .59\*\* | - |  |
| 5. Informal Leadership Emergence | 5.56 | 1.05 | .05 | .09 | .33\*\* | .05 | - |
| Note: N=72, \*p<.05, \*\*p<.01 | | | | | | | |

### Hypothesis Testing

As in the previous studies, we used multiple linear regressions to test whether accumulated leadership experience is positively related to AMTL (Hypothesis 1). In the first step, we regressed AMTL on familial socio-economic status in childhood. In the second step, we added accumulated leadership experience as a predictor. A significant positive relationship was found between accumulated leadership experience and AMTL (ß=.12, p<.05), supporting the first hypothesis.

Next, to test whether AMTL is positively related to leadership emergence (Hypothesis 2), we followed the same process, used multiple regression, regressing leadership emergence on familial socio-economic status in childhood, and then added AMTL for step 2. The results yielded a positive relation between AMTL and informal leadership emergence (ß=.30, p<.01), confirming that AMTL is positively related to informal leadership emergence and supporting the second hypothesis.

To test the relationship between accumulated leadership experience and leadership emergence as mediated by AMTL (Hypothesis 3), we conducted a bootstrap analysis using the “PROCESS” model 4 for SPSS ([Hayes, 2013](#_ENREF_29)), controlling for familial socio-economic status. A 5000-bootstrap sample with 95 percent bias-corrected confidence intervals (95% CI) showed that the results for the direct effect of accumulated leadership experience on informal leadership emergence were insignificant (B=.01, 95% CI=(-.09,.11)). However, the indirect effect between accumulated leadership experience and leadership emergence through AMTL was significant (B=.04, 95% CI=(.01,.09)). Hence the effect of accumulated leadership experience on informal leadership emergence is mediated by AMTL for this study.

Finally, to test the indirect relationship between accumulated leadership experience and leadership emergence through AMTL under high and low levels of LSE (Hypothesis 4), we conducted a bootstrap analysis using the “PROCESS” model 14 for SPSS ([Hayes, 2013](#_ENREF_29)), controlled for familial socio-economic status. A 5000-bootstrap sample with 95 percent bias-corrected confidence intervals (95% CI) indicated that the index of moderated mediation (IMM) was not significant (IMM=.11, 95% CI=(-.20,.51)) which means that the conditional indirect effect was not significant and the hypothesis was not supported.

## Discussion – Study 3

Study 3 aimed to explain the moderating role of LSE in the relationship between accumulated leadership experience, AMTL, and informal leadership emergence. However, the LSE manipulation did not achieve the expected effect. As in studies 1 and 2, we could not find support for the moderating role of LSE. Nevertheless, similar to studies 1 and 2, we found a positive relationship between AMTL and leadership emergence. Moreover, similar to study 1, we found a positive relationship between accumulated leadership experience and leadership emergence through AMTL, indicating that this relationship was significant for both formal and informal leadership as criteria. We will discuss the meaning of these findings in general discussion.

# General Discussion

Understanding leadership emergence mechanisms is essential for organizational effectiveness ([Badura et al., 2021](#_ENREF_6)). Nevertheless, most relevant studies in this field focused on understanding the relationship between traits and leadership emergence and were short-term in nature. Therefore, they ignored aspects such as development and motivation ([Badura et al., 2021](#_ENREF_6); [Chan & Drasgow, 2001](#_ENREF_16); [Popper et al., 2007](#_ENREF_63)).

In the current work, we adressed these gaps and explored the relationship between accumulated leadership experience (namely, leadership development) and formal and informal leadership emergence. Additionally, we explored how motivation to lead mediates this relationship. We found that AMTL mediates the relationship for both types of leadership emergence. We did not find support for the hypothesis that LSE moderates this relationship. We will discuss both the theoretical and practical implications of these findings.

## Theoretical Implications

Our finding that accumulated leadership experience is positively related to AMTL supports previous theoretical claims about the relationship between development and motivation ([Deci & Ryan, 2012](#_ENREF_17); [Lord & Hall, 2005](#_ENREF_50)). According to the Self-Determination Theory (SDT; Deci & Ryan, 2012), leadership roles enhance key elements like autonomy and competence, which in turn boost intrinsic motivation. Moreover, Lord and Hall's (2005) propose that leadership experience enhances individuals' leadership identity, motivating them to seek out more leadership roles. As leaders gain experience, they develop skills and navigate complex situations, reinforcing their sense of competence and effectiveness (Lord & Hall, 2005).

Our finding supports SDT (Deci & Ryan, 2012) by demonstrating that leadership roles fulfill core needs for autonomy and competence, helping individuals internalize leadership as part of their self-concept. This suggests that leadership development should be viewed as skill-building where experience-based learning fosters intrinsic satisfaction and persistence. Furthermore, the dynamic nature of leadership motivation, as highlighted by Lord and Hall (2005), implies that motivation to lead evolves over time and that individuals become more intrinsically motivated as they accumulate leadership experience and move from novice to expert leaders. This supports a broader application of SDT to leadership theories, providing a foundation for understanding how motivation is cultivated and sustained through leadership experiences.

Our finding of the positive relationship between AMTL and leadership emergence supports previous theoretical claims regarding the relationship between motivation and performance (Locke, 1991; Locke & Latham, 1990). According to Locke and Latham’s goal-setting theory (1990), motivated individuals set specific, challenging goals that direct attention, mobilize effort, and increase persistence, leading to higher performance. In the context of AMTL, individuals with a strong intrinsic motivation to lead set leadership-related goals that align with their aspirations, demonstrating how motivation translates into leadership emergence and performance. Similarly, Vroom's expectancy theory (1964) posits that motivation is influenced by the expected outcomes and the value placed on them. Individuals high in AMTL, who value leadership for personal fulfillment, are more likely to engage in leadership behaviors such as voicing ideas and taking initiative, supporting the idea that AMTL reflects behavioral intentions driven by the value individuals place on leadership roles (Hong et al., 2011).

The positive relationship between AMTL and leadership emergence also aligns with Luria and Berson's (2013) argument that MTL influences leadership outcomes by enhancing individuals' willingness to assume leadership roles and engage in agentic leader behaviors such as assertiveness and initiative (Leaper & Ayres, 2007; Mullen et al., 1989). Research by Badura et al. (2020) shows that individuals high in AMTL are more likely to display these behaviors, increasing their chances of being perceived as leaders. AMTL reflects an intrinsic drive where individuals internalize leadership as part of their self-concept, motivating them to engage in leadership behaviors consistent with their identity and desired outcomes. This intrinsic motivation leads individuals to actively pursue leadership roles and take initiative, reinforcing their leadership identity and enhancing formal leadership emergence (Badura et al., 2020).

The positive relationship between AMTL and informal leadership emergence underscores the natural tendency of individuals with high AMTL to gravitate toward leadership even in informal settings. AMTL captures an innate inclination toward leadership roles, and those high in AMTL are more likely to be perceived as leaders due to their proactive leadership behaviors (Hong et al., 2011). This finding further aligns with Badura et al.'s (2020) claim that AMTL predicts leadership emergence by connecting intrinsic enjoyment and identification with leadership to proactive behaviors. Individuals with high AMTL naturally step into leadership roles, particularly in self-managed environments where leadership is not formally assigned, making them more likely to emerge as informal leaders.

The finding that Affective Motivation to Lead (AMTL) mediates the relationship between accumulated leadership experience and leadership emergence supports the framework provided by Self-Determination Theory (SDT; Deci & Ryan, 2012), which posits that motivation acts as a mediator between experience and behavior. According to SDT, gaining experience fosters competence and autonomy, enhancing intrinsic motivation, which drives sustained engagement and improved performance. Similarly, as individuals accumulate leadership experience, they develop competence in leadership, which facilitates AMTL. This intrinsic motivation mediates the relationship by supporting the transition from leadership development to leadership emergence. This claim is in line with Badura et al. (2020) suggestion that AMTL is the proximal antecedent that drives individuals to seek and embrace leadership roles.

Lastly, we did not find support for LSE's moderating role in the indirect relationship between accumulated leadership experience and leadership emergence through AMTL. One explanation can be related to the characteristics of the sample. Specifically, the LSE variance in studies 2 and 3 was low. In these studies, most of the participants were female. Research suggests that female students tend to adjust their self-efficacy beliefs earlier in response to feedback and show less change after these initial adjustments. In contrast, males typically exhibit a more prolonged adjustment in self-efficacy, with significant changes occurring later in the course ([Lishinski et al., 2016](#_ENREF_46)). This idea is supported by findings that show gender differences in self-efficacy levels, with females generally scoring higher than males but no significant interaction between self-efficacy and gender in performance outcomes ([Kumar & Lal, 2006](#_ENREF_42)). Since many of the subjects were female, their early stabilization of LSE may have limited the effectiveness of the manipulation in study 3, as their self-efficacy beliefs were already solidified and less responsive to further changes.

## Practical Implications

Our findings can have implications for both organizational leadership selection and leadership development systems. For leadership selection systems, in addition to formal leadership experiences, organizations should consider evaluating informal leadership experince when assessing leadership potential. For example, when employees demonstrate initiative, guide others in problem-solving, mentor peers, or lead teams through challenges.

Moreover, organizations should use MTL measures in general and AMTL measures specifically as predictors of potential leadership.

Last, Organizations should design leadership development programs that foster informal leadership experiences and AMTL as factors that can facilitate the process of leadership emergence. Such programs could include participants working in cross-functional teams to solve real organizational problems, rotating through informal leadership roles based on their strengths and interests. Integrating workshops on AMTL to help participants connect their intrinsic motivations with leadership within such programs, or separately, could be beneficial. Through regular coaching and reflection sessions, workers can explore their emotional connection to leadership while receiving feedback from peers and supervisors.

## Limitations and further research

The current study is not without limitations, and some of these limitations can provide a valuable foundation for future research. One limitation concerns the participants of studies 2 and 3, who were undergraduate students from the management department. These students are likely to have a higher motivation to become managers and, as a result, might exhibit above-average levels of AMTL and LSE compared to students in other fields. Future studies should aim to include a more diverse sample, encompassing students from various faculties, to better generalize the findings across different academic and professional backgrounds.

Furthermore, the high proportion of female students in studies 2 and 3 accurately reflects the department's gender distribution, but research has shown that leadership emergence often differs by gender. Specifically, men tend to emerge into leadership roles more frequently than women ([Badura et al., 2018](#_ENREF_8)). To gain deeper insights into the gender dynamics of leadership emergence, future research should include larger and more gender-balanced samples.

The study collected biographical data to assess accumulated leadership experience that focused exclusively on formal leadership roles. However, informal leadership experiences, such as mentoring peers or leading team projects without official titles, can also significantly contribute to leadership development. Future research should incorporate assessments of both formal and informal leadership experiences to provide a more comprehensive view of participants’ leadership backgrounds.

Moreover, the current research concentrated on a specific internal source of Motivation to Lead (MTL), namely affective-identity MTL. While this focus provided valuable insights, [Chan and Drasgow (2001)](#_ENREF_16) proposed that other types of MTL, such as social-normative MTL (SNMTL) and non-calculative MTL (NCMTL), though potentially more context-dependent, may also remain stable over time and influence leadership emergence. Therefore, future studies are encouraged to explore the impact of these additional sources of MTL on both formal and informal leadership emergence.

In addition to these conceptual limitations, there is also a technical consideration regarding the potential overlap between the two primary measures used in the study: motivation and self-efficacy. It is possible that participants may have perceived these measures similarly, leading to the high correlations observed in the results. This overlap could suggest that individuals with high motivation also tend to have high self-efficacy. To address this, future research should investigate whether the high correlations between AMTL and LSE reflect a genuine relationship or if they arise from how participants interpret the scales. Employing alternative measurement techniques or disentangling these concepts in follow-up studies could provide clarity on this issue.

Finally, these limitations and proposed expansions point to the importance of continuing to refine our understanding of how motivation to lead and leadership self-efficacy interact in the context of leadership development. By addressing the technical, demographic, and conceptual gaps identified in this study, future research can build on the current findings and offer more nuanced insights into the factors that contribute to effective leadership emergence. This will ultimately help organizations design more targeted and inclusive leadership development initiatives that account for individual differences in motivation, experience, and self-perception.

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**Appendices**

1. **Appendix 1: English scales and questionnaires**
   1. **Moderator – Leadership Self-Efficacy Scale**

Please use the scale below and rate how confident you are in the following aspects of leadership:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | 1 – Not at all confident | 2 | 3 | 4 – Somewhat confident | 5 | 6 | 7 – Extremely confident |
| 1. Planning ability | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. Setting direction | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. Delegating and assigning tasks | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. Coordinating tasks | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. Ability to communicate | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. Leading by example | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. Ability to motivate others | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. Creating team spirit | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. Using rewards and punishments | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. Confidence to lead a section sized team | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. Overall leadership effectiveness | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

* 1. **Mediator – Affective Motivation to Lead**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | 1 – Strongly disagree | 2 | 3 | 4 – Neither agree nor disagree | 5 | 6 | 7 – Strongly agree |
| 1. Most of the time, I prefer being a leader rather than a follower when working in a group | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. I am the type of person who is not interested to lead others | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. I am definitely not a leader by nature | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. I am the type of person who likes to be in charge of others | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. I believe I can contribute more to a group if I am a follower rather than a leader | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. I usually want to be the leader in the groups that I work in | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. I am the type who would actively support a leader but prefers not to be appointed as leader | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. I have a tendency to take charge in most groups or teams that I work in | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. I am seldom reluctant to be the leader of a group | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

* 1. **Criteria – Informal leadership Emergence**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | 1 – Almost never | 2 | 3 | 4 - Sometimes | 5 | 6 | 7 – Almost Always |
| 1. This team member exhibits leadership in the team | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. This team member is a desirable leader of the team | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. This team member exemplifies strong leadership in the team | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. This team member assumes leadership in the team | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. This team member influences the team | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

* 1. **Control Variable – Familial Socio-Economic Status (FAS)**

1. Did your family own a car or another motorized vehicle? (No = 0; Yes, one = 1; Yes, two = 2).
2. Did you have your own bedroom? (No = 0; Yes = 1).
3. How many computers (including laptops and tablets, not including game consoles and smartphones) did your family own? (None = 0, One = 1; Two = 2; More than two = 3).
4. How many bathrooms (room with a bath/shower or both) were there in your home? (None = 0; One = 1; Two = 2; More than two = 3).
5. Did your family have a dishwasher? (No = 0; Yes = 1).
6. How many times (in average) did you and your family travel out of the state for holiday/vacation every year? (Never = 0; Once = 1; Twice = 2; More than twice = 3).
7. **Appendix 2: Hebrew scales and questionnaires**
   1. **Moderator – Leadership Self-Efficacy Scale**

נא מלא את השאלון תוך התייחסות לרמת הביטחון שלך בביצוע האספקטים הבאים בנושא מנהיגות:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **1 – לחלוטין לא בטוח** | **2** | **3** | **4 – נייטרלי** | **5** | **6** | **7 – לחלוטין בטוח** |
| 1. יכולות תכנון | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. הכתבת כיוון | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. האצלת סמכויות וחלוקת משימות | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. תיאום משימות | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. יכולת לתקשר | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. הובלת על ידי שימוש דוגמה | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. החדרת מוטיבציה באחרים | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. יצירת רוח צוותית | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. שימוש בפרסים ועונשים | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. ביטחון להוביל צוות | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. יעילות מנהיגותית כללית | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

* 1. **Mediator – Affective Motivation to Lead**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **1 - לא מסכים במידה רבה** | **2 - לא מסכים** | **3 - לא מסכים במידה מתונה** | **4 - מסכים ולא מסכים במידה שווה** | **5 - מסכים במידה מתונה** | **6 - מסכים** | **7 - מסכים במידה רבה** |
| 1. אני אדם מהסוג שאינו מעוניין להנהיג אחרים. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. בעבודה בקבוצה אני בדרך כלל מעדיף להיות מנהיג מאשר מונהג. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. אני באופן מוחלט לא מנהיג באופיי. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. אני אדם מהסוג שנוטה "לתפוס פיקוד" על אחרים. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. אני בדרך כלל רוצה להיות המנהיג בקבוצה בה אני עובד. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. יש לי את הנטייה "לתפוס פיקוד" ברוב הקבוצות או הצוותים בהם אני עובד. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. אני מאמין שאני יכול לתרום יותר לקבוצה אם אני מונהג מאשר אם אני מנהיג. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. לעיתים רחוקות בלבד אני מסרב להיות המנהיג של קבוצה. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. אני מסוג האנשים, אשר יתמכו באופן פעיל במנהיג אבל יעדיפו לא להתמנות לתפקיד. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

* 1. **Criteria – Informal leadership Emergence**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | 1 – כמעט אף פעם | 2 | 3 | 4 – לפעמים | 5 | 6 | 7 – כמעט תמיד |
| 1. חבר הקבוצה הזה גילה מנהיגות בקבוצה | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. חבר הצוות הזה הוא מנהיג רצוי לקבוצה | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. חבר הצוות הזה הפגין מנהיגות משמעותית בקבוצה | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. חבר הצוות הזה קיבל על עצמו את הנהגת הקבוצה | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. חבר הצוות הזה השפיע על הקבוצה | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

* 1. **Control Variable – Familial Socio-Economic Status (FAS)**

1. האם למשפחתך היה רכב או כלי תחבורה אחר כלשהו? (לא = 0; כן, אחד = 1; כן, שניים = 2)
2. האם היה לך חדר שינה פרטי? (לא = 0; כן = 1)
3. כמה מחשבים (כולל מחשבים ניידים, לא כולל קונסולות משחק וטלפונים חכמים) היו למשפחתך? (לא היו = 0; אחד = 1; שניים = 2; יותר משניים = 3)
4. כמה חדרי שירותים / מקלחת היו בביתך? (לא היו = 0; אחד = 1; שניים = 2; יותר משניים = 3)
5. האם למשפחתך היה מדיח כלים? (לא = 0; כן = 1)
6. כמה פעמים (בממוצע) יצאת עם משפחתך לטיול / חופשה מחוץ לישראל בכל שנה? (אף פעם = 0; פעם אחת = 1; פעמיים = 2; יותר מפעמיים = 3)
7. **Appendix 3: “Survival on the moon” Hebrew version**

**אבודים על הירח – משימת הישרדות – נאס״א**

אתם צוות של ספינת חלל.

עפ"י התוכנית המקורית, הייתם צריכים להיפגש עם ספינת האם בצד המואר של הירח.

בשל תקלה טכנית, נאלצתם לנחות נחיתת אונס, בנקודה המרוחקת כ – 400 ק"מ מנקודת המפגש.

עקב הנחיתה הקשה, נהרס חלק גדול מציוד הספינה.

**הישרדותכם בחיים** מותנית בהגעה אל ספינת האם.

למסע בן 400 הק"מ עליכם לקחת את פריטי הציוד החיוניים ביותר.

בטבלה המצורפת, דרגו, כל אחד בעצמו, את סדר החשיבות של הפריטים השונים, ממס' 1 = הפריט החשוב ביותר להישרדותכם, ועד מס' 15 = הפריט הכי פחות חשוב להישרדותכם.

את ההחלטות האישית והקבוצתית תוכלו להשוות להחלטת צוות המומחים של סוכנות החלל האמריקאית.

אנא סמנו על גבי הדף את החלטתכם:

|  |  |  |  |
| --- | --- | --- | --- |
| רשימת הפריטים | החלטה אישית | החלטה קבוצתית | החלטת נאס"א |
| קופסת גפרורים |  |  |  |
| מזון מרוכז |  |  |  |
| 17 מ' חוט ניילון |  |  |  |
| משי למצנחים |  |  |  |
| מכשיר חימום נייד |  |  |  |
| שני אקדחים, קליבר 45 |  |  |  |
| ארגז אבקת חלב |  |  |  |
| 2 מכשירי חמצן, 50 ליטר כל אחד |  |  |  |
| מפת כוכבים של מערכת הירח |  |  |  |
| רחף הצלה |  |  |  |
| מצפן מגנטי |  |  |  |
| 25 ליטר מים |  |  |  |
| זיקוקי אור |  |  |  |
| תרמיל עזרה ראשונה, כולל מזרקים |  |  |  |
| מקלט ומשדר סולארי (מופעל ע"י כוח השמש) |  |  |  |
| הפרש ביחס לתשובות נאס״א: |  |  |  |

|  |  |  |
| --- | --- | --- |
| רשימת הפריטים | החלטת נאס"א | הסבר לשימוש המעשי של הפריטים |
| קופסת גפרורים | 15 | אין שימוש, כי על פני הירח אין חמצן לקיום השריפה |
| מזון מרוכז בכמות גדולה | 4 | חשוב לקיום מצבור האנרגיה של הגוף |
| 17 מ' חוט ניילון | 6 | עשוי להועיל בטיפוס על צוקי ירח ובגישור על תהומות |
| 10 יריעות גדולות של משי למצנחים | 8 | למסתור מפני השמש, כשעוברים לצד המואר של הירח ולכיסוי מפני הקור, בצד האפל של הירח |
| מכשיר חימום סולרי נייד | 13 | מיותר, להוציא מקרים נדירים בצד הצל של הירח ואז יאבד את מקור האנרגיה שלו מהר מאד |
| שני אקדחים, קליבר 45 ועשרים כדורים לכל אקדח | 11 | יכול לשמש ליצירת תנועה באמצעות ריאקצית דחף |
| ארגז אבקת חלב | 12 | יעיל להשלמת התזונה ע"י מהילה במים, אך תופס נפח רב יחסית |
| 2 מכשירי חמצן, 50 ליטר כל אחד | 1 | חיוני לנשימה, אפילו לטווח קצר מאד |
| מפת כוכבים של מערכת הירח | 3 | אמצעי עזר מצוין להתמצאות על פני הירח |
| רחף הצלה | 9 | ניתן להשתמש בו להתגברות על מכשולים |
| מצפן מגנטי | 14 | חסר ערך, כי לירח אין שדה מגנטי הזהה לכדור הארץ |
| 25 ליטר מים | 2 | לשתייה. חיוני לחיים |
| זיקוקי אור | 10 | לאיתות, כשהחללית תהיה בטווח ראייה |
| תרמיל עזרה ראשונה, כולל ויטמינים ומזרקים | 7 | יוכל לסייע להצלה במקרה של פגיעה ולאנשים שנחלשו, ניתן יהיה להזריק ויטמינים |
| מקלט ומשדר סולארי (מופעל ע"י כוח השמש) | 5 | בצד המואר של הירח ניתן יהיה ליצור קשר עם החללית |

1. **Appendix 4: LSE manipulation questionnaire: Hebrew version**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | 1 – תמיד | 2 – בדרך כלל | 3 – לפעמים | 4 – לעיתים רחוקות | 5 – אף פעם |
| 1. לפני מתן משוב לאדם אחר, אני אשתדל לראות את הדברים מנקודת המבט שלו / שלה |  |  |  |  |  |
| 1. אני אחלק פרויקט גדול למשימות קטנות וקלות לניהול |  |  |  |  |  |
| 1. בעבודה לקראת מטרה מסוימת, אני אקח את הזמן הנחוץ להעריך את האסטרטגיות הנחוצות ואת התהליך הצפוי |  |  |  |  |  |
| 1. אם אני בעמדת מנהיגות, אני אציין את המטרות אליהן שואפים האחרים באופן ברור |  |  |  |  |  |
| 1. כשמועסקים עובדים קשה במיוחד, לדעתי ההנהלה צריכה לספק תגמול נוסף |  |  |  |  |  |
|  | 1 – מסכים/ה לגמרי | 2 – מסכים/ה | 3 – נייטרלי/ת | 4 – לא מסכים/ה | 5 – מאוד לא מסכים/ה |
| 1. התנהלות המנהל תשתפר אם יבקש חוות דעת של אנשים נוספים |  |  |  |  |  |
| 1. אי אפשר לסמוך על רוב המועסקים בארגון |  |  |  |  |  |
| 1. החטבת קצת הארגון שלי תלויה בי |  |  |  |  |  |
| 1. אני נוטה להתעצבן מדברים שאחרים יחשיבו שוליים |  |  |  |  |  |
| 1. אם לא אעבוד קשה, אחרים יחשבו שהם לא צריכים |  |  |  |  |  |
|  | 1 – נכון מאוד | 2 – נכון | 3 – נכון ולא נכון באותה מידה | 4 – לא נכון | 5 – מאוד לא נכון |
| 1. קל לי לגרום לאנשים לפעול כמוני |  |  |  |  |  |
| 1. קל לי לשכנע את הקולגות והמנהלים שלי בדעותיי |  |  |  |  |  |
| 1. אני טוב/ה בסיעור מוחין |  |  |  |  |  |
| 1. התנודות הרגשיות שלי קיצוניות. כשאני עצוב/ה אני אומלל/ה, וכשאני שמח/ה אני מאושר/ת |  |  |  |  |  |
| 1. קל להניא אותי מדעתי |  |  |  |  |  |
| 1. אני נוטה לחשוב ״מחוץ לקופסה״ |  |  |  |  |  |