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RESEARCH ARTICLE

A New Version of the Evaluation of Motivational Persistence Questionnaire (EPM Questionnaire): Conceptual Grounding and Empirical Support

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Abstract

This study reports on a revised version of the Evaluation of Motivational Persistence questionnaire, expanding the original three-factor model by adding Ambition, Planning, and Self-discipline subscales. Psychometric properties were evaluated in two convenience samples totaling 3,875 participants. The subscales demonstrated generally good internal consistency and composite reliability, although Ambition and Self-discipline were slightly lower, indicating areas for improvement. Confirmatory factor analyses supported a five-factor factorial structure, suggesting that the Recurrence of unattained goals subscale should be eliminated. Measurement invariance across gender was also tested and received support. Convergent validity was assessed using average variance extracted and discriminant validity was examined via the Fornell–Larcker criterion, with most subscales meeting criteria, while a few subscale pairs displayed overlap that warrants further examination. Construct validity was further supported by correlations with established measures. While the instrument demonstrates promise for research and applied settings, additional work is required to strengthen its psychometric properties.

Keywords

motivation, motivational persistence, questionnaire, psychometric proprieties

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1. Introduction

1.1. Motivational Involvement versus Motivational Persistence

Motivation is typically defined in terms of the orientation, intensity, and persistence of behavior, capturing both the goals toward which effort is directed and the sustained engagement required to achieve them (Kleinginna Jr. & Kleinginna, 1981). Most early models of motivation (e.g., Alderfer, 1969; Maslow, 1943; McClelland, 1988; Vroom, 1964) concentrated primarily on the *orientation* component of motivation, seeking to explain what motivates individuals or what can be referred to as "motivational involvement". The other two components—*effort* (the force or energy an individual invests in pursuing their goals) and *persistence* (the perseverance and consistency in maintaining a motivated behavior or act)—have initially received significantly less attention in the literature (Constantin et al., 2008). Evidence supporting the distinction between motivational involvement and motivational persistence comes from previous work suggesting that motivation is best understood as a process involving two interdependent psychological systems: goal choice (i.e., selecting a specific objective) and goal striving (i.e., exerting effort to achieve the objective) (e.g., Gollwitzer & Oettingen, 2012). Goal choice resembles the orientation or direction of motivation, whereas goal striving is more closely associated with persistence in a motivational act - what happens after the decision to pursue a goal has been made.

This distinction underscores the need for an instrument aimed at assessing motivational persistence in the Romanian context. The initial development of such a measure was completed in 2011 (Motivational Persistence Scale; Constantin et al., 2011), resulting in a questionnaire comprising three dimensions: Pursuit of long-term goals/ purposes, Pursuit of current goals/purposes, and Recurrence of unattained goals/ purposes. The present article introduces an updated version of instrument (the Evaluation of Motivational Persistence [EPM] Questionnaire), which includes three additional dimensions, and evaluates the internal consistency and validity of the expanded scale. The subsequent sections provide a conceptual definition of motivational persistence and a detailed description of its dimensions as operationalized in both the original and the revised versions of the EPM questionnaire, before presenting the empirical approach used to evaluate the psychometric properties of the new version.

1.2. Motivational Persistence: Definition and Dimensions

Over time, studies have defined persistence in various ways: as the ability to continue efforts toward success despite fatigue or discouragement (Fernald, 1912); as a circumstantial behavioral response rather than a personality trait (Dorcus, 1935); as the tendency to complete any initiated task (Rethlingshafer, 1942); as reactance to obstacles that hinder goal achievement (Wright & Brehm, 1989); as a habitual tendency to overcome difficulties and seek solutions despite adversity (Neuman et al., 1990); as a temperamental dimension reflecting resistance to frustration and fatigue (Cloninger et al., 1991). Despite these variations, definitions of persistence generally converge on the notion of maintaining consistent effort over time, monitoring one's progress, and continuing toward goals despite obstacles, monotony, or waning interest (Constantin et al., 2011).

In this study, following Constantin et al. (2011), we define motivational persistence as an individual's predisposition to sustain long-term motivation in pursuing personally significant goals. Once a commitment is made, motivational persistence helps the individual to persevere against setbacks, restore motivation, and invest effort in achieving these goals. Therefore, motivational persistence represents the motivational process that bridges the gap between the initial deliberation and the consistent pursuit of long-term goals. The three factors identified in the original Motivational Persistence Scale (Constantin et al., 2011) correspond to stages in a temporal continuum that reflects how persistence unfolds over time and align with

the action phase of the Rubicon model (Gollwitzer, 1990). These factors - pursuit of long-term goals, pursuit of current goals, and recurrence of unattained goals - are described below.

The pursuit of long-term goals refers to the ability to renew and strengthen the motivational value of distant goals and to remain committed to resource-intensive, higher-order objectives despite the (sometimes considerable) costs they entail. Pursuit of long-term goals is closely related to other the concepts described in the literature, such as perseverance (Williams & DeSteno, 2008) and grit (Duckworth et al., 2007). Individuals with high levels on this dimension tend to set personal or professional goals that require careful planning and sustained effort over extended periods - often months or years. When faced with repeated obstacles, they increase rather than reduce their effort. Motivated and energized by their ideals, they consistently draw on available resources to advance toward their objectives

The pursuit of current goals is associated with the volitional aspect of everyday persistence and refers to the ability to maintain focus on ongoing tasks despite distractions, frustration, setbacks, boredom, fatigue, or stress (Constantin et al., 2011). Individuals with high scores on this dimension remain engaged in activities even when they become unpleasant or less interesting. Once they have established a concrete, short-term plan, they are unlikely to abandon it, driven by the motivation to complete what they have started.

The recurrence of unattained goals refers to past or currently inactive goals and represents a post-intentional, automatic process that helps maintain commitment to blocked or suspended pursuits. Recurrence of unattained goals supports the identification of new opportunities to attain valued goals that could not be completed (Constantin et al., 2011). Individuals with high levels on this dimension frequently revisit temporally abandoned personal goals and find it difficult to mentally detach from them. They may generate new ideas related to past projects or problems, or find ways to advance goals that were left incomplete.

1.3 Empirical Evidence on the First Version of the Questionnaire

The first version of the EPM questionnaire (Constantin et al., 2011), has been used in several studies at both the national level in Romania (Bostan et al., 2014; Chirila & Constantin, 2016; Dascălu et al., 2022; Hojbotă et al., 2013; Ionescu et al., 2022; Zegan & Antohe, 2022), and the international level (Akdağ, 2020; Cenberci & Beyhan, 2016; Demir & Yildirim, 2019; Ertem & Arı, 2022; Önalan & Magda, 2020; Öntürk & Yıldız, 2020). By 2022, the questionnaire had already been validated and published in three languages, including the original Romanian version, as well as Turkish (Akdağ, 2020) and Spanish (Quintana et al., 2022).

Studies using the questionnaire provide evidence for the positive outcomes of motivational persistence. Specifically, both the dimensions of pursuing long-term goals and pursuing current goals have been shown to exert a strong positive influence on job performance (Țuțu & Constantin, 2012) and to be associated with higher entrepreneurial intentions in Turkish women (Önalan & Magda, 2020). Beyond the context of work, studies have shown that volunteers exhibit higher motivational persistence compared to non-volunteers (Macovei & Constantin, 2011). Motivational persistence was also found to be significantly and positively related to self-efficacy, and moderately associated with perceived control and emotional involvement (Bostan et al., 2022). In the study of Bostan and her colleagues, motivational persistence directly and positively predicted perceived control over goal achievement, while also significantly mediating the relationship between goal type and perceived control over a 12-month period. In addition, motivational persistence is negatively correlated with procrastination tendencies (Ertem & Arı, 2022). Morever, it has been identified as a significant predictor of well-being (Ionescu et al., 2022).

Encouraged by these promising findings, we sought to revise the scale to capture additional dimensions of motivational persistence. Specifically, the new version of

the questionnaire now includes three new scales: Ambition, Planning, and Self-discipline. By incorporating these subdimensions, the scale provides a more nuanced and comprehensive assessment of motivational persistence, potentially improving its predictive validity across diverse contexts. A detailed description of the new subdimensions is provided in the following subsection.

1.4. The Newly Added Scales: Ambition, Planning, and Self-Discipline

Ambition reflects a relatively stable predisposition toward attaining success and accomplishing valued goals (Judge & Kammeyer-Mueller, 2012) and is often considered a component of broader constructs such as goal setting, self-enhancement values, conscientiousness, and achievement striving (Hirschi & Spurk, 2021b). It is typically measured as a combination of several elements, including high career aspirations, an ambitious disposition, a desire for advancement, strong self-confidence, competitiveness, and motivation to assume leadership roles (Hirschi & Spurk, 2021a). Empirical studies indicate that ambition is associated with performance at work (Bui et al., 2021; Hirschi & Spurk, 2021b; Huang et al., 2014), as well as income, educational attainment, and occupational prestige (Judge & Kammeyer-Mueller, 2012).

In this paper, we argue that ambition is a fundamental aspect of motivational persistence. Motivational persistence cannot be demonstrated by pursuing small or easily attainable goals, but by striving toward challenging objectives that require sustained effort and dedication. From this perspective, ambitious individuals are those who consistently seek self-improvement, envision meaningful future achievements, and commit to accomplishing significant long-term goals.

Planning, defined as the process of organizing and coordinating tasks, goals, and responsibilities, involves setting priorities and allocating time and resources efficiently. Conceptually, planning is described in the literature from several perspectives, including implementation intentions (Gollwitzer, 1999; Gollwitzer & Sheeran, 2006; Townsend & Liu, 2012), action planning (Prinz, 1997), goal setting (Locke & Latham, 2012). Empirical evidence suggests that planning has a range of positive behaviors spanning from adherence to diet and physical exercise programs (e.g., de Ridder et al., 2009; Scholz et al., 2007; Sniehotta et al., 2005) to increased work performance (Parke et al., 2018). Although some studies have begun to highlight certain limitations of planning (e.g., Townsend & Liu, 2012)—it remains a crucial process that allows individuals to articulate their positive behavioral intentions, thereby increasing the likelihood of goal attainment. Even simple planning strategies can have a meaningful impact on achieving goals. Research on implementation intentions demonstrates that they not only help individuals initiate their goals, but also support continued progress by reducing susceptibility to distractions. In addition, implementation intentions help individuals to disengage from unproductive courses of action and to avoid overexertion, thereby preserving cognitive and physical resources and facilitating more effective pursuit of subsequent goals (Gollwitzer & Sheeran, 2006).

In the EPM questionnaire, *planning* is evaluated by items that reflect an individual's tendency to maintain a clear course of action and an organized approach in their activities, as demonstrated through behaviors such as scheduling tasks in advance, recording daily or weekly activities, and utilizing agendas and checklists. Adding this factor to the EPM questionnaire calls for a precise differentiation between planning and the pursuit of current goals. While planning refers to the manner in which activities are organized and approached, the pursuit of current goals pertains to the implementation of these plans. The latter emphasizes executing what has been planned, achieving efficiency in daily tasks, maintaining focus, and ignoring potential distractions.

Self-discipline plays a central role in guiding behavior toward meaningful personal goals. It is closely related to a range of constructs, including self-control, self-regulation, willpower, grit, response inhibition, impulse control, effortful control,

and ego strength (Duckworth & Kern, 2011; Hagger et al., 2021). Costa Jr. et al. (1991) view self-discipline as a facet of conscientiousness, defining it as persistence in tasks that are not immediately engaging - that is, the ability to continue despite boredom or distractions. Duckworth and Seligman (2006) use self-discipline and self-control interchangeably, describing both as the capacity to suppress dominant impulses in service of higher-order goals. However, Hagger et al. (2021) provide empirical evidence that that self-discipline and self-control, while related, are distinct constructs. Similarly, Costa Jr et al. (1991) argue that self-discipline and self-control are not synonymous. They suggest that self-discipline is one aspect of the broader self-control construct, which additionally includes elements of neuroticism.

Beyond conceptual diversity and terminological inconsistencies, both self-discipline and self-control have been shown to predict positive outcomes, such as academic performance and workplace success (Duckworth & Seligman, 2006; Hagger & Hamilton, 2019). A high level of self-discipline/ self-control has been found to improve mood, leading to greater happiness and well-being (Hofmann et al., 2013). Furthermore, self-discipline is associated better social functioning, and more cohesive relationships (Duckworth & Kern, 2011; Hagger et al., 2021), as well as physical health and wealth (Moffitt et al., 2011).

In the EPM questionnaire, we view self-discipline as the tendency to remain steadfast in honoring personal commitments and to follow obligations and promises despite temptations or competing desires. In the context of this study, it is important to distinguish self-discipline from both pursuit of long-term goals and planning, which are other dimensions of the EPM questionnaire. Regarding its relationship to pursuit of long-term goals, we draw on Hagger and Hamilton (2019), who argue that self-discipline and grit represent related but distinct constructs. Self-discipline involves regulating behavior at the level of subordinate goals—for example, resisting the temptation to eat hyper caloric foods when on a diet. Grit, on the other hand, which is akin to the pursuit of long-term goals measured by the EPM questionnaire, involves sustained focus and effort toward higher-order, long-term goals, guiding actions and resources across multiple subordinate goal conflicts over time. Thus, an individual may exhibit high self-discipline in managing immediate impulses yet fail to consistently pursue long-term goals, illustrating that self-discipline can operate independently of long-term goal pursuit.

Despite apparent overlap, self-discipline and planning also represent distinct constructs. In self-discipline, the focus lies on the individual's ability to uphold commitments and maintain consistency despite temptations, distractions, or short-term costs. Planning, by contrast, emphasizes organization, attention to detail, and a structured approach to tasks. A highly organized person may fail to follow through on plans if self-discipline is lacking, whereas a self-disciplined individual can honor commitments even without a strong tendency toward detailed planning or rigid organization. In other words, self-discipline ensures that obligations are met and actions are sustained, while planning provides a roadmap for achieving goals efficiently; one can be self-disciplined without being highly organized, and conversely, one can plan meticulously without consistently executing those plans.

1.5 Overview of the Present Study

The present study aimed to evaluate the psychometric properties of the extended EPM questionnaire. Specifically, we assessed the internal consistency of the newly added scales and examined the factorial structure of the revised instrument. In addition, we assessed measurement invariance across gender, as well as the convergent and discriminant validity of the questionnaire. To achieve these objectives, we analyzed large datasets collected via the PsihoProfile platform (https://www.psihoprofile.ro/) by Romanian practicing psychologists.

2. Method

2.1 Participants

Two samples of Romanian participants were included in the present study. The first sample consisted of 3,500 participants, of whom 64.1% completed the questionnaire online, with the remaining participants completing a paper-and-pencil version. The sample was balanced in terms of gender distribution (46% men, 54% women). Participants ranged in age from 16 to 73 years (M = 32.83, SD = 11.88). Regarding educational attainment, 6.48% had lower secondary or primary education, 31.41% reported high-school or post–high-school education, 30.50% held a bachelor's degree, while 9.24% had completed postgraduate studies (master's or doctoral degrees). The rest of the sample (22.37%) did not report their educational level. This sample was used to conduct internal consistency analyses, confirmatory factor analyses (CFA), and gender-based measurement invariance testing.

Sample 2 consisted of 1,375 participants, distinct from those in the first sample, 58.2% of whom were women. Participants' ages ranged from 16 to 72 years (M = 28.66, SD = 12.02). Educational attainment varied: 0.1% had completed only primary school, 24.9% had completed lower secondary school, 18.6% had completed high school, 1.9% had post-secondary vocational training, and 8.2% had vocational or professional school training. Additionally, 18.6% held a bachelor's degree, 11.3% had completed postgraduate studies (the remaining 16.3% did not report their education level). This sample was used to test the revised version of the questionnaire resulting from adjustments based on the first CFA.

Additional subsamples from the first sample completed the EPM questionnaire together with other measures used for convergent and divergent validity. A total of 237 participants completed the EPM and the VIA Inventory of Strengths-Revised (VIA-IS-R; McGrath, 2019). Participants (43.9% men) were aged from 18 to 60 years (M = 35.95, SD = 11.63; median = 35). Another subsample, totaling 1,033 participants, completed the EPM together with the Primal Beliefs Inventory (Clifton et al., 2019). The majority of the participants were women (62.1% women), with ages ranging from 16 to 75 years (M = 32.02, SD = 11.02). Finally, 1,405 participants completed the EPM along with the Styles of Work questionnaire (Constantin et al., 2010). Participants, of whom 62.6% were women, were aged between 16 and 71 years (M = 28.96, SD = 12.33).

2.2 Instruments

The Evaluation of Motivational Persistence Scale. The initial version of the questionnaire (Constantin et al., 2011) consisted of 13 items assessing Pursuit of long-term goals, Pursuit of current goals (4 items each), and Recurrence of unattained goals (5 items).

When the questionnaire was added to the Psihoprofile platform, one additional item was included for both the Pursuit of long-term goals and Pursuit of current goals scales, for reasons of symmetry, as well as to avoid potential issues with internal consistency. Subsequent data collection and analyses indicated the need for several revisions to the items in the originally published version. Beyond these minor adjustments, more substantial changes were introduced, specifically the addition of three new scales assessing Ambition, Planning, and Self-discipline, each composed of five items. Thus, the version of the questionnaire administered in the present study initially contained 30 items. Participants are asked to read the list of statements and select the option that best reflects their usual way of thinking and acting, using a 5-point Likert scale ranging from 1 (*to a very small extent*) to 5 (*to a very large extent*). Several items were reverse scored. For the full list of items, see Table 1. Preliminary internal consistency and exploratory factor analyses were conducted on a smaller sample, providing initial support for the structure and reliability of the new version. However, the present article focuses on confirmatory factor analyses based on the larger datasets collected via the Psihoprofile platform, and the results of these preliminary analyses are not reported here.

VIA Inventory of Strengths-Revised (VIA-IS-R; McGrath, 2019). The VIA-IS-R

consists of 192 items assessing 24 character strengths and six virtues, with eight items per strength. The inventory includes scales measuring perseverance (e.g., "I never get sidetracked when I work") and self-control/self-regulation (e.g., "It is easy for me to stay disciplined"), which were expected to be strongly related to motivational persistence. Participants completed the entire instrument to assess not only the convergent validity of the EPM questionnaire but also its discriminant validity. Items are rated on a 5-point scale ranging from 1 (*very much unlike me*) to 5 (*very much like me*). Internal consistency in the present sample was acceptable, ranging from α = .66 for judgement to α = .90 for love.

Primal Beliefs Inventory (PI; Clifton et al., 2019). The original version of the PI comprises 99 items assessing 26 primals - defined as general beliefs about the world that influence how individuals think, feel, and act - including 22 tertiary primals (five of which are neutral, not subordinate to any secondary factor), three secondary primals (Safe, Enticing, and Alive), and the primary primal (Good). In this study, the Romanian version of the questionnaire included 140 items, incorporating additional items recommended by Clifton et al. (2023) when translating and adapting the instrument to other languages. Participants were instructed that the statements describe the world as it is, not as we wish it to be, and were asked to indicate their level of agreement on a scale, from 1 (*strongly disagree*) to 6 (*strongly agree*). Our focus was on tertiary primals and their relationship with motivational persistence as measured by the EPM. Therefore, total scores for secondary and primary factors were not computed. Internal consistencies in the present sample ranged from .55 (Changing) to .89 (In Progress).

The Styles of Work Questionnaire (Constantin et al., 2010). The questionnaire includes 70 items and assesses 10 dimensions that describe an individual's work style (i.e., how a person relates to work or the organizational context and approaches professional tasks). The dimensions are: Adaptive – innovative, Planned – spontaneous, Dependent – independent, Individualistic – collectivistic, Dedicated – detached, Relaxed – tense, Impulsive – controlled, Analytical – intuitive, Demotivated – motivated, and Energetic – exhausted. Items are statements with two forced-choice response options, along with an intermediate option ("?") for participants who are undecided or do not identify with either extreme (e.g., "I typically: a) adjust my activities spontaneously based on the problems that arise; b) ?; c) prefer to plan my time in advance and follow my schedule."). Internal consistencies ranged from .56 (Dedicated – detached) and .58 (Relaxed – tense), the scales with lower reliability, to .85 (Energetic exhausted). For the purpose of examining the validity of the EPM questionnaire, we were primarily interested in correlations with the Planned– spontaneous and Demotivated – motivated scales.

Table 1. *Items of the EPM Questionnaire*

	Original item and English translation	**Scale**	**Retained in the final version of the EPM questionnaire?**
1.	Îmi place să îmi stabilesc obiective simple, ușor de atins. *I like to set up simple and easy-to-reach objectives for myself.*	Ambition (–)	No
2.	Prefer realizările imediate în locul proiectelor sau scopurilor pe termen lung. *I prefer immediate achievements instead of long-term goals or projects.*	Pursuit of long-term goals (–)	No

3.	Îmi place să-mi notez din timp activitățile zilnice sau săptămânale. *I like to write down my daily/weekly to-do list in advance.*	Planning	Yes
4.	Rareori reușesc să finalizez tot ceea ce mi-am propus să fac într-o anumită zi. *I rarely fully go through with my planned daily activities.*	Pursuit of current goals (–)	Yes
5.	Mă mai gândesc încă la diferite moduri în care aș putea folosi oportunități la care am renunțat. *I still think about different ways I could use opportunities that I gave up.*	Recurrence	No
6.	Sunt o persoană disciplinată în tot ceea ce fac. *I am a disciplined individual in anything I do.*	Self-discipline	Yes
7.	Îmi place să mă gândesc la reușite sau realizări personale ambițioase. *I like to think about achievements or ambitious personal accomplishments.*	Ambition	Yes
8.	Obiectivele pe termen lung mă motivează să depășesc greutățile de zi cu zi. *Long-term goals motivate me to overcome day-to-day hardships.*	Pursuit of long-term goals	Yes
9.	În fiecare dimineaţă verific ce am planificat, înainte de a trece la treabă. *I check my planned activities every morning, before I get to work.*	Planning	Yes
10.	De regulă, nu respect cele stabilite pentru o anumită zi sau săptămână. *I usually do not stick to what is set for a certain day or week.*	Pursuit of current goals (–)	Yes
11.	Chiar dacă nu mai contează, continui să mă gândesc la obiective personale la care am fost nevoit să renunț. *I still think about the goals I gave up on, even though they don't matter anymore.*	Recurrence	No
12.	Îmi respect angajamentele luate, chiar și atunci când am de pierdut sau sunt în dezavantaj. *I honor my commitments, even when I lose or am at a disadvantage.*	Self-discipline	Yes
13.	Simt nevoia să îi depășesc pe ceilalți sau să realizez lucruri deosebite în viață *I feel the need to prove myself or to achieve great things.*	Ambition	No
14.	Continui să investesc timp și efort în idei și proiecte care cer ani de răbdare și de muncă. *I continue to invest time and effort in projects that require years of patience and hard work.*	Pursuit of long-term goals	Yes
15.	Folosesc agendă și liste pentru a planifica ce am de făcut de la o zi la alta. *I use an agenda and make lists to plan what I have to do every day.*	Planning	Yes

16.	Când îmi planific să fac ceva într-o zi, nu mă las până nu fac ceea ce mi-am propus. *When I plan to do something on a certain day, I don't stop until I do what I set out to do.*	Pursuit of current goals	Yes
17.	Mă surprind că revin cu gândul la inițiative mai vechi, abandonate. *I often find myself thinking about older, abandoned initiatives again.*	Recurrence	No
18.	Chiar dacă nu este necesar, îmi pun mereu lucrurile în ordine, la locul lor. *I still keep things well organized, even when it's not necessary.*	Self-discipline	Yes
19.	Sunt o persoană ambițioasă. *I am an ambitious person.*	Ambition	Yes
20.	Îmi mențin motivația chiar și în activitățile care se întind pe luni de zile. *I keep my motivation even in activities that stretch over months.*	Pursuit of long-term goals	Yes
21.	Planific în detaliu ceea ce am de făcut pentru a doua zi. *I plan in detail what I have to do for the next day.*	Planning	Yes
22.	La sfârșitul fiecărei zile, de regulă, constat că nu am făcut ceea ce mi-am planificat. *By the end of the day, I often find that I didn't accomplish what I had planned.*	Pursuit of current goals (–)	Yes
23.	Îmi este ușor să uit un proiect important pentru mine, dar la care am renunțat în favoarea altor priorități. *It's easy for me to forget an important project that I gave up on to focus on other priorities.*	Recurrence (–)	No
24.	Când îmi stabilesc o limită (de timp, la cumpărături/ mâncare), de multe ori o încalc. *I usually break self-imposed limits (for example, with shopping, food, time, etc.).*	Self-discipline (–)	No
25.	Vreau mereu mai mult de la mine și de la viitorul meu. *I always expect more from myself and from my future.*	Ambition	Yes
26.	Nu îmi place să urmăresc scopuri sau obiective care cer luni sau ani de efort. *I don't like to pursue goals that require months or years of effort.*	Pursuit of long-term goals (–)	No
27.	Reactualizez periodic lista cu obiective pe care le voi atinge la un moment dat. *I regularly update my list of personal goals that I will achieve in the future.*	Planning	Yes
28.	Sunt eficient în atingerea obiectivelor zilnice. *I am efficient in achieving my day-to-day objectives.*	Pursuit of current goals	Yes
29.	Mă întorc mereu cu gândul la proiecte sau dorințe personale încă nerealizate. *I always think back to personal projects or desires that I haven't yet accomplished.*	Recurrence	No

30. Prin disciplină și perseverență mi-am atins cele mai importante obiective în viață. *Through discipline and perseverance, I have achieved my most important goals in life.*	Self-discipline	Yes

2.3 Overview of the Analyses

We evaluated the psychometric properties of the EPM questionnaire through several steps. Internal consistency was assessed using Cronbach's alpha and composite reliability, and descriptive statistics were computed for all scales. Confirmatory factor analyses (CFA) were conducted on two independent samples using the diagonally weighted least squares (DWLS) estimator, appropriate for ordinal data, with the Satorra-Bentler correction applied for global model fit evaluation. Model fit was evaluated using the Comparative Fit Index

(CFI), the Tucker-Lewis Index (TLI), the Standardized Root Mean Square (SRMR), and the Root Mean Square Error of Approximation (RMSEA). CFI and TLI values ≥ 0.95, SRMR values < .08 and RMSEA < .06 were considered to be indicative of well-fitting models (Hu & Bentler, 1999). Convergent validity was examined through the computation of average variance extracted (AVE). Discriminant validity was assessed using the Fornell–Larcker criterion. According to this approach, discriminant validity is demonstrated when a construct explains more variance in its indicators than it shares with other constructs. Measurement invariance across gender was tested to ensure the questionnaire operates equivalently for male and female participants. Additionally, correlations between the EPM questionnaire and external measures (VI-IS-R, PI, and SWQ) were examined to provide further evidence of construct validity. All analyses were conducted in R using the *psych* (Revelle & Revelle, 2015), *lavaan (*Rosseel, 2012), and *semTools* (Jorgensen et al., 2016) packages.

3. Results

3.1 Internal Consistency

The reliability analyses for the EPM questionnaire scales are presented in Tables 2 and 3. All scales, except for Ambition, exhibited acceptable internal consistency, with Cronbach's α above the .70 threshold. The initial Ambition scale (5 items) was problematic due to item I1, which was removed. The revised 4-item Ambition scale (I7, I13, I19, I25) showed improved internal consistency but remained below the threshold (α = .62). Consequently, item I1 was also excluded from the CFA. Composite reliabilities for the final EPM scales, after removing items with weak loadings in the CFA (see section 3.2), are presented in Table 3.The composite reliability values for the final EPM questionnaire scales are slightly below ideal but still acceptable. Planning demonstrates the strongest reliability, while Ambition, Implementation, and Self-discipline show lower internal consistency, indicating that these scales might be improved in future revisions.

Table 2. *Descriptive Statistics and Cronbach's Alphas for the EPM Questionnaire Scales*

Scale	*M*	*SD*	*Min*	*Max*	*Skew*	*Kurtosis*	*Cronbach's α*
Ambition (initial scale, 5 items)	3.69	.60	1	5	-.36	.46	.50
Ambition (final scale, 3 items)	4.10	.73	1	5	-.92	1.22	.68
Pursuit of long-term goals (initial scale, 5 items)	3.58	.76	1	5	-.43	.12	.73
Pursuit of long term goals (final scale, 3 items)	3.68	.89	1	5	-.57	.00	.76
Planning	3.07	.99	1	5	-.13	-.75	.85
Pursuit of current goals	3.74	.78	1	5	-.63	.33	.77
Self-discipline (initial scale, 5 items)	3.78	.71	1	5	-.52	.16	.68
Self-discipline (final scale, 4 items)	3.84	.76	1	5	-.62	.40	.71
Reccurence of unattained goals (eliminated)	2.61	.85	1	5	.22	-.30	.82
Motivational persistence (final, 20 items)	3.64	.64	1	5	-.43	.19	.89*

Note. *Omega Total = .91, Omega hierarchical = .75. Figure 1 displays the items that make up the final scales. No items were removed from the initial version of Planning and Pursuit of Current Goals.

Table 3. *Composite Reliabilities for the EPM Questionnaire (Final Scales)*

Scale	Composite Reliability
Ambition	.65
Pursuit of long-term goals	.68
Planning	.82
Implementation	.68
Self-discipline	.64

3.2 Results of the Confirmatory Factor Analyses

A hierarchical CFA was conducted to examine the structure of the EPM questionnaire. The model included six first-order latent factors, i.e., Ambition (I7, I13, I19, I25), Pursuit of long-term goals (I2, I8, I14, I20, I26), Planning (I3, I9, I15, I21, I27), Pursuit of current goals (I4, I10, I16, I22, I28), Self-discipline (I6, I12, I18, I24, I30), and Recurrence of unattained goals (I5, I11, I17, I23, I29). A higher-order factor, Motivational persitence, was specified to capture the shared variance among these first-order factors, representing the overarching construct. This model demonstrated unacceptable fit, with a scaled chi-square = 21136.26 (*df* = 371), *CFI* = 0.910, *TLI* = 0.90, robust *RMSEA* = 0.089 (90% CI [0.088, 0.091]), and SRMR = 0.10. Inspection of the results revealed that the dimensions Ambition, Pursuit of long term goals, Planning, Implementation, and Self-discipline loaded positively and significantly on the higher-order factor of motivational persistence (standardized loadings ranging from β = 0.61 to β = 0.99). However, Recurrence of unattained goals dimension exhibited a small but significant negative loading on the higher-order factor ($\beta = -0.16$, $p < .001$), indicating that higher levels of motivational persistence were associated with lower levels of recurrence. This pattern was inconsistent with theoretical expectations; therefore, this dimension was removed and the CFA was rerun.

Table 4. *Standardized and Unstandardized Factor Loadings for the EPM Questionnaire*

Latent Variable	Indicator	Unstandardized estimate	*SE*	*z*-value	*p*	Standardized estimate
Ambition	I7	.422	.012	35.654	<.001	.737
	I13	.104	.010	10.632	<.001	.182
	I19	.507	.015	33.859	<.001	.885
	I25	.294	.010	29.895	<.001	.514
Pursuit of long-term goals	I2	.126	.007	17.420	<.001	.298
	I8	.310	.011	28.002	<.001	.734
	I14	.295	.010	29.675	<.001	.698
	I20	.380	.014	27.504	<.001	.899
	I26	.202	.008	24.795	<.001	.478
Planning	I3	.610	.009	69.865	<.001	.787
	I9	.658	.009	72.101	<.001	.848
	I15	.585	.009	68.400	<.001	.754
	I21	.648	.009	71.576	<.001	.835
	I27	.472	.011	43.550	<.001	.609
Pursuit of current Goals	I4	.288	.008	35.956	<.001	.529
	I10	.319	.008	38.969	<.001	.586
	I16	.453	.010	43.635	<.001	.831
	I22	.305	.008	39.028	<.001	.559
	I28	.464	.011	43.873	<.001	.851
Self-discipline	I6	.106	.029	3.669	<.001	.741
	I12	.076	.021	3.668	<.001	.528
	I18	.085	.023	3.664	<.001	.594
	I24	.064	.018	3.617	<.001	.446
	I30	.112	.031	3.654	<.001	.783
Motivational persistence	Ambition	1.432	.050	28.460	<.001	.820
	Pursuit of long-term goals	2.145	.088	24.509	<.001	.906
	Planning	.813	.024	34.109	<.001	.631
	Pursuit of current Goals	1.539	.044	35.358	<.001	.839
	Self-discipline	6.900	1.909	3.615	<.001	.990

The revised five-dimensional model demonstrated improved fit, with a chi-square = 9652.59 (*df* = 247), *CFI* = .95, *TLI* = .94, robust *RMSEA* = .096 (90% CI [.095, .098]), and *SRMR* = .082. Unstandardized and standardized factor loadings for this model are presented in Table 4. Examination of the factor loadings indicated that several items showed lower standardized loadings (< .50) on their respective latent dimensions—specifically I13 (Ambition), I2 and I26 (Pursuit of long-term goals), and I24 (Self-discipline). Although factor loadings above .40 are sometimes considered acceptable in the literature (Cheung et al., 2024), we adopted a more conservative approach and removed items with loadings < .50. These items also exhibited relatively high residual variances, further indicating that they were weak indicators of their respective latent constructs and justifying their exclusion from the final model. These items were subsequently removed, which resulted in further improved model fit, with a chi-square = 4880.01 (*df* = 165), *CFI* = .975, *TLI* = .971, robust *RMSEA* = .094 (90% CI [.092, .097]), *SRMR* = .068.

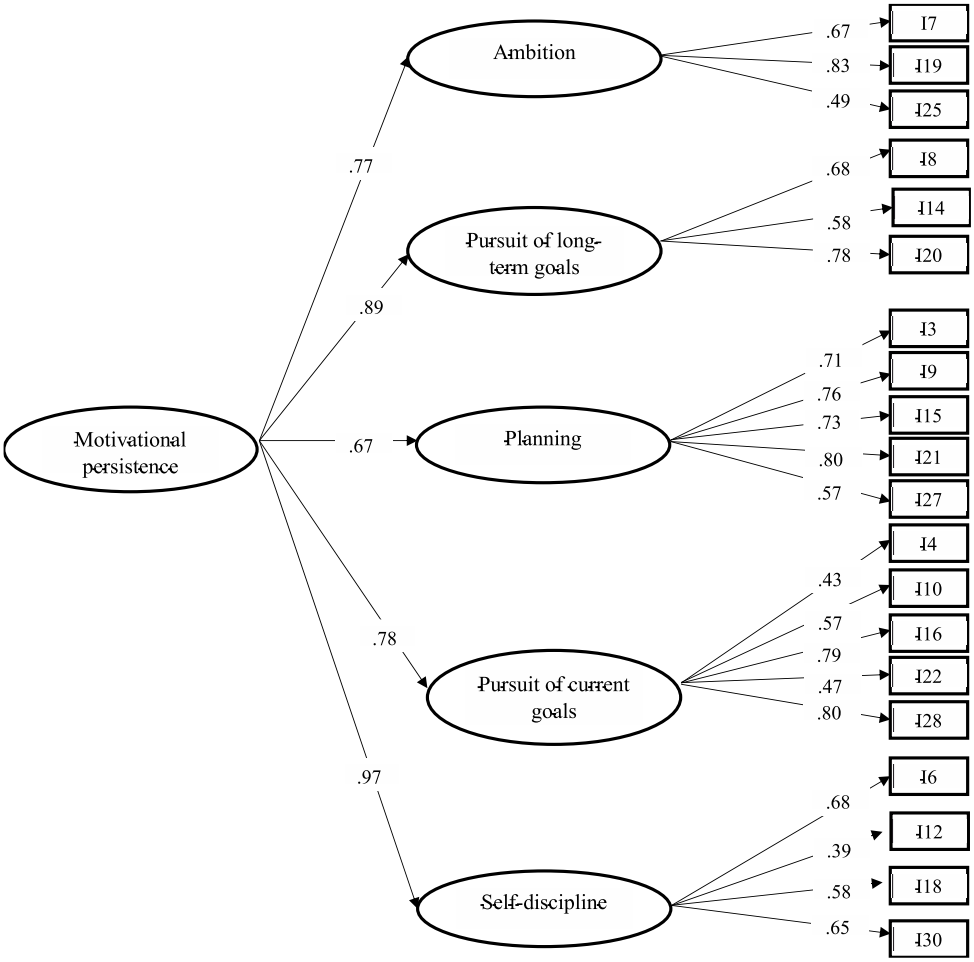

Figure 1. Standardized Factor Loadings Obtained in the Second Sample

This revised version of the questionnaire, resulting from the adjustments based on the results of the first CFA, was subsequently tested on sample 2.The model demonstrated good fit, with a scaled chi-square = 1682.32 (*df* = 165), *CFI* = 0.962, *TLI* = .956, robust *RMSEA* = 0081 (90% CI [.078, .085]), and *SRMR* = .065. Standardized factor loadings are presented in Figure 1. Except for one item with factor loading slightly below the .40 threshold (I12 = .398), all factor loadings were satisfactory, suggesting that the selected items were good indicators of the latent variables.

3.3 Convergent Validity (AVE) and Discriminant Validity (Fornell–Larcker Criterion) Analyses

Table 5 presents the AVE values for each EPM scale, as well as the squared correlations between scales. Three of the five EPM questionnaire scales have adequate AVE values (≥ 0.50), but *Pursuit of current goals* and *Self-discipline* fall slightly below the recommended threshold, suggesting that these scales may not capture their constructs as strongly as the others. Further, results indicate that several scale pairs met the Fornell–Larcker criterion, suggesting adequate discriminant validity for those relationships. However, four scale pairs did not satisfy the criterion. For these scales, the squared latent correlations exceeded the AVE values, indicating potential overlap among the constructs. This suggests that some constructs share substantial variance and may not be fully distinct, with the lower AVE values for Pursuit of current goals and Self-discipline contributing to reduced discriminant validity.

Table 5. *Fornell–Larcker Discriminant Validity Results*

Scale 1	Scale 2	Criterion Met	Squared Correlation	AVE (Scale 1)	AVE (Scale 2)
Ambition	Pursuit of long-term goals	No	.837	.508	.585
Ambition	Planning	Yes	.256	.508	.595
Ambition	Pursuit of current goals	Yes	.389	.508	.466
Ambition	Self-discipline	No	.659	.508	.466
Pursuit of long-term goals	Planning	Yes	.377	.585	.595
Pursuit of long-term goals	Pursuit of current goals	Yes	.533	.585	.466
Pursuit of long-term goals	Self-discipline	No	.752	.585	.466
Planning	Pursuit of current goals	Yes	.286	.595	.466
Planning	Self-discipline	Yes	.416	.595	.466
Pursuit of current goals	Self-discipline	No	.700	.466	.466

Note. AVE = Average Variance Extracted.

3.4 Gender-Based Measurement Invariance Testing

Measurement invariance of the EPM questionnaire was examined across gender using the first sample (3,500 participants). Configural invariance tests whether the factor structure is the same across genders, metric invariance examines whether factor loadings are equivalent, and scalar invariance assesses equality of item intercepts. The model demonstrated acceptable fit at the configural, and scalar levels, with minimal changes in fit indices (see Table 6 for results). Because ΔCFI was less than 0.01, the invariance hypothesis is supported. This indicates that the EPM questionnaire measures constructs equivalently across gender, allowing for meaningful comparison of latent means.

Table 6. *Gender-Based Measurement Invariance of the EPM Questionnaire*

Tested Model	χ^2 *(df)*	*Robust RMSEA [90% CI]*	*CFI*	Model Comparison	*ΔRMSEA*	*ΔCFI*
M1: Configural invariance	5035.65 (330)	.090 [.088, .093]	.975	–	–	–
M2: Metric invariance	5289.71 (349)	.090 [.088, .092]	.974	M1 vs M2	.000	.001
M3: Scalar invariance	5392.34 (403)	.084 [.082, .086]	.973	M2 vs M3	.006	.001

3.5 Correlations Between the Motivational Persistence Measured with the EPM Questionnaire, Character Strenghts, Primal World Beliefs, and Styles of Work

Correlations between motivational persistence measured with the EPM questionnaire and character strengths assessed with the VIA-IS-R are presented in Table 7. With the exception of humility, which showed a non-significant association, all correlations were positive and statistically significant. As expected, motivational persistence showed strong positive correlations with perseverance (r = .628, p < .001) and self-regulation (r = .595, p < .001). Motivational persistence was also moderately to strongly associated with hope (r = .509, p < .001), zest (r = .492, p < .001), curiosity (r = .488, p < .001), and love of learning (r = .461, p < .001). These smaller associations indicate that motivational persistence is connected to, but not redundant with, other positive character traits. Thus, the pattern of results is consistent with expectations and further supports the divergent validity of the questionnaire. The remaining character strengths also showed positive correlations of mostly moderate size (*r*s around .20–.45), including creativity, judgment, perspective, honesty, social intelligence, gratitude, and spirituality. Overall, this pattern of broadly positive but generally lower correlations is to be expected and indicates that motivational persistence is related to a wide range of adaptive character traits while retaining clear distinctiveness, supporting the scale's construct validity.

Table 8 presents the correlations between motivational persistence and primal world beliefs. The results suggest that people who are high in motivational persistence also tend to believe that the world needs their contribution *(r* = .421, p < .001), is meaningful (r = .380, p < .001), just (r = .383, p < .001), and pleasurable (r = .358, p < .001). Participants with high levels of motivational persistence also endorsed other positive views of the world (e.g., they saw the world as improvable, interesting, understandable, regenerative etc.). The pattern of correlations supports the divergent validity of the EPM questionnaire.

Table 7. *Correlations between Motivational Persistence (EPM Total Score) and VIA-IS-R Character Strenghts*

Variable	***r***	***p***
Creativity	.405	<.001
Curiosity	.488	<.001
Judgement	.346	<.001
Love of learning	.461	<.001
Perspective	.465	<.001
Bravery	.354	<.001
Perseverance	.628	<.001
Honesty	.443	<.001
Zest	.492	<.001
Love	.325	<.001
Kindness	.233	<.001
Social intelligence	.391	<.001
Teamwork	.327	<.001
Justice	.358	<.001
Leadership	.364	<.001
Forgiveness	.150	.021
Humility	.035	.595
Prudence	.439	<.001
Self-regulation	.595	<.001
Appreciation of beauty and excellence	.122	.060
Gratitude	.389	<.001
Hope	.509	<.001
Humor	.317	<.001
Spirituality	.368	<.001

Table 8. *Correlations between Motivational Persistence (EPM Total Score) and Primal World Beliefs*

Variable	***r***	***p***
Harmless	.204	< .001
Cooperative	.209	< .001
Just	.383	< .001
Pleasurable	.358	< .001
Progressing	.263	< .001
Regenerative	.308	< .001
Stable	.253	< .001
Abundant	.290	< .001
Beautiful	.278	< .001
Funny	.097	.002

Variable	***r***	***p***
Improvable	.325	< .001
Interesting	.311	< .001
Meaningful	.380	< .001
Worth exploring	.171	< .001
Intentional	.242	< .001
Interactive	–.036	.252
Needs me	.421	< .001
Acceptable	–.136	< .001
Changing	–.031	.314
Hierarchical	.115	< .001
Interconnected	.122	< .001
Understandable	.330	< .001

Correlations between motivational persistence and work styles are presented in Table 9. The results align with theoretical expectations, the strongest associations being observed for planned versus spontaneous work ($r = –.449$, $p < .001$), energetic versus exhausted ($r = –.455$, $p < .001$), and motivated versus demotivated ($r = .402$, $p < .001$). These findings suggest that participants high in motivational persistence tend to approach tasks in a more structured and planned manner and have higher levels of energy and motivation. Other correlations were smaller but still in the expected direction (e.g., motivational persistence is associated with lower levels of impulsivity), further supporting the validity of the EPM questionnaire.

Table 9. *Correlations between Motivational Persistence (EPM Total Score) and Styles of Work*

Variable	***r***	***p***
Adaptative – innovative	.003	.913
Planned – spontaneous	-.449	<.001
Dependent – independent	.062	.021
Individualist – collectivist	.092	.001
Dedicated – detached	-.126	<.001
Relaxed – tense	.163	<.001
Impulsive – controlled	.245	<.001
Analytic – intuitive	-.315	<.001
Demotivated – motivated	.402	<.001
Energetic – exhausted	-.455	<.001

Note. For the SWQ scales, higher scores indicate stronger endorsement of the right-hand pole of each bipolar variable (e.g., higher exhaustion on the Energetic-exhausted scale).

4. Discussion

This study aimed to evaluate the updated version of the EPM questionnaire. The original instrument (Constantin et al., 2011) included three subscales (i.e., Pursuit of long-term goals, Pursuit of current goals, and Recurrence of unattained goals). The revised version expanded the questionnaire by adding three new subscales: Ambition, Planning, and Self-Discipline, with the goal of capturing additional aspects of motivational persistence. To test the adequacy of the updated measure, the study examined the internal consistency of each scale, the factorial structure of the questionnaire, and its convergent and discriminant validity, as well as measurement invariance across gender

In general, the scales demonstrated good internal consistency. Cronbach's alpha exceeded .70 for all scales except for Ambition. The problematic item in the Ambition scale was Item 1 ("I like to set simple and easy-to-reach objectives for myself"), which was intended to be reverse-scored. However, this item may not adequately capture the construct of Ambition. Preferring simple, easy-to-achieve goals does not automatically mean that a person avoids or dislikes challenging, ambitious goals. These two tendencies are not perfect opposites, and the item therefore fails to capture the intended reversed meaning of ambition. For this reason, it was removed from the current version of the scale. Following the CFA analyses, one additional item from the Ambition scale was removed, leaving the scale with only three items. This is not ideal and may contribute to lower internal consistency. Therefore, future versions of the EPM questionnaire could consider adding new items that better assess ambition, either directly or in reverse form. For example, Item 1 could be reformulated as: "I do not like to set difficult, ambitious goals for myself," in order to preserve the reversed structure. Additionally, future versions of the questionnaire might also include an extra item for the Self-discipline scale, as this scale showed the lowest composite reliability.

Further, CFA showed that Recurrence of unattained goals loaded only weakly and negatively onto the motivational persistence factor. This result suggests that Recurrence of unattained goals is not actually a dimension of the higher-order construct of motivational persistence. There may be several explanations for this. One possibility is that individuals with high motivational persistence tend to accomplish most of their goals; therefore, they are less likely to have important objectives left unfinished or abandoned in the past, and thus have fewer goals to return to later. Moreover, the Recurrence of unattained goals subscale may capture a construct that is conceptually distinct from motivational persistence. Instead of reflecting sustained effort toward long-term objectives, returning to unfinished goals may indicate tendencies such as rumination and difficulty letting go of previous commitments that ultimately proved unfeasible. In this view, revisiting unattained goals may indicate an inefficient style of goal management rather than motivational persistence, which would explain its weak association with motivational persistence. Therefore, we decided to exclude Recurrence of unattained goals from the final version of the EPM scale. Nevertheless, future research should further investigate the relationship between motivational persistence and the recurrence of unattained goals.

The results of the CFA also led to the removal of several items with lower factor loadings, specifically, I13, I2, I26, and I24. Notably, three of these were reverse-scored items. It is possible that, in a large sample of 3,500 participants, some individuals may have overlooked the reversed wording, which could explain these findings. The removal of these items resulted in improved CFA fit indices. A major strength of our study is that the revised model, resulting from the elimination of these items and the Recurrence of unattained goals subscale, was subsequently tested on an additional sample. The analyses confirmed that the model demonstrated good fit, supporting the robustness of the updated structure.

Despite satisfactory results in the CFA, convergent validity analyses indicated relatively low AVE values for the Pursuit of current goals and Self-discipline subscales. Therefore, future revisions of the instrument could focus on refining items to better capture these constructs and enhance their convergent

validity. Regarding discriminant validity, several subscale pairs met the Fornell–Larcker criterion, indicating adequate discriminant validity for those relationships. However, some subscale pairs did not satisfy this criterion. Specifically, the pairs Ambition – Pursuit of long-term goals, Ambition – Self-discipline, Pursuit of long-Term goals – Self-discipline, and Pursuit of current goals – Self-discipline did not meet the Fornell–Larcker criterion. Although these results suggest potential issues, we retained these subscales provisionally, with the aim of improving them in future iterations. This decision was based on both theoretical and practical considerations. First, Ambition and Pursuit of long-term goals are conceptually distinct. Setting ambitious goals does not necessarily imply the capacity for sustained effort and persistence required to achieve them. One can be highly ambitious yet lack the long-term persistence needed for goal completion. Conversely, dedicated pursuit of long-term goals does not always involve ambitious objectives. Individuals may choose modest long-term goals that provide psychological comfort ("I am doing something for myself and my future") without requiring exceptional effort or mobilization of motivation. Identifying discrepancies between ambition and pursuit of long-term goals, even if rare, can be important in psychological assessment, as they help explain individual behavior or performance patterns.

Similarly, Ambition should also differ from Self-discipline. A person can be ambitious but lack the self-discipline necessary to accomplish their goals. Moreover, as discussed in the Introduction, an individual may demonstrate high self-discipline in managing immediate impulses yet fail to consistently pursue long-term goals, highlighting that the subscales Self-discipline and Long-term goal pursuit should capture different constructs.

Finally, if Pursuit of current goals focuses on executing plans at the daily or short-term level, Self-Discipline an enduring capacity for behavioral regulation. Whereas pursuing current goals measures whether someone completes specific tasks or follows a schedule (i.e., puts the plans they have formulated into action), self-discipline represents supports adherence to personal standards/ commitments, even in the absence of immediate plans. We anticipate that refining the items of these scales to better capture these conceptual nuances will improve their discriminant validity in future revisions of the instrument.

The results provide evidence that the instrument demonstrates measurement invariance across gender, indicating that the EPM questionnaire functions equivalently for both genders. Therefore, the EPM questionnaire can be reliably used to compare motivational persistence between men and women. This allows researchers and practitioners to interpret group differences with confidence, knowing that observed differences are due to true variations in motivational traits rather than measurement artifacts.

Convergent validity was further supported through significant correlations between the EPM questionnaire and both the VIA-IS-R (McGrath, 2019) and the Work Styles Questionnaire (Constantin et al., 2010). As expected, motivational persistence showed strong positive correlations with perseverance and self-regulation measured by the VIA-IS-R. In addition, the robust correlations between EPM dimensions and planned, energetic, and motivated workstyles further underscore the instrument's relevance for assessing motivational traits in both professional and academic contexts. These findings indicate that individuals with higher levels of persistence tend to adopt structured, proactive approaches to work, demonstrate greater energy and motivation, and show enhanced resilience in overcoming obstacles and distractions. Discriminant validity of the EPM questionnaire was also supported through its relationships with the PI (Clifton et al., 2019), which assess fundamental beliefs about the world. The observed weak to moderate correlations suggest that motivational persistence is conceptually distinct from broader worldview constructs, reinforcing its specificity as a trait that influences behavior independently of general cognitive schemas or personality dimensions.

Several limitations of the present study should be acknowledged. First, although the

study included a very large and relatively diverse sample, it relied on a convenience sample, primarily composed of employees and university students. This may limit the generalizability of the findings to other populations, such as unemployed individuals, people from different cultural or socio-economic backgrounds, or those with lower levels of education. Future studies should aim to recruit more diverse, probability-based, or cross-cultural samples to further examine the robustness and generalizability of the EPM questionnaire. Second, some of the measures administered alongside the EPM displayed relatively low internal consistency. Therefore, any associations involving these measures should be interpreted cautiously, as limited reliability may have weakened the observed relationships. Third, test-retest reliability was not examined. Assessing temporal stability is important to confirm that the instrument reliably measures motivational persistence over time, especially since motivational persistence is theoretically assumed be a relatively stable trait. Additionally, the criterion-related validity of the EPM questionnaire was not assessed in the present study. Future research could address this by examining how scores on the EPM predict relevant real-world outcomes, such as academic and job performance, which should ideally not be self-reported. Longitudinal designs would be particularly valuable to assess the predictive validity of the instrument over time. Additionally, once the scales of the EPM questionnare are refined in future iterations of the questionnaire, it will be important to conduct cross-cultural validation studies. Although the previous version of the EPM questionnaire has already been validated in other cultural contexts (e.g., Quintana et al., 2022), the revised version may function differently across populations. Testing the updated EPM across diverse cultural contexts will help determine whether it measures the same constructs equivalently and may reveal culturally specific patterns in motivational traits.

To conclude, the results of the present study suggest that the inclusion of new subscales in the EPM questionnaire shows promise. Overall, the subscales demonstrated good internal consistency, and the factorial structure of the questionnaire exhibited a good fit in confirmatory factor analyses. Nevertheless, further refinement of the instrument is needed to enhance both convergent and discriminant validity. Future research should also evaluate whether all five subscales should be retained or whether a more parsimonious version of the questionnaire—with fewer subscales—would be better supported empirically.

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