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WISE LEADERSHIP: CONSTRUCTION AND VALIDATION OF A SCALE

Given the importance of wisdom in leadership and the crucial role that wise leaders play within organizations, this study aimed at developing a psychometrically valid scale measuring wise leadership. Data were collected from three independent samples from France and Morocco (N=626). Exploratory factor analysis, first- and second-order confirmatory factor analyses, and structural equation modeling established the convergent and discriminant validities of the new wise leadership scale. Review of the extant literature, expert judgment technique and quantitative analyses across four studies yielded a 16-item scale designed to measure wise leadership (Wise Leadership Questionnaire [WLQ]). The driving forces of this pattern of leaders' values, cognitions and behaviors are intellectual shrewdness, spurring action, moral conduct, and virtuous humility. This new wise leadership measure will be valuable for researchers and practitioners in understanding the pattern of wise leaders.

Keywords: Wise leadership, Scale development and validation, Wise Leadership Questionnaire (WLQ).

1. INTRODUCTION

The notion of wisdom has ancient philosophical and theological underpinnings (Baltes, Glück, Kunzmann, 2002), which constitute its prominent intellectual hub (Kekes, 1995). In fact, wisdom's historical developments stretch from the ancient civilizations to the modern era and encompass the Egyptian work, the Instruction of Ptahhotep, the Akkadian work, the Counsels of Wisdom, the Sumerian collections of proverbs, and the Aramaic Words of Ahiqar (Hall, 2010). These historical developments have been pivotal to the current literature on wisdom (Takahashi, Overton, 2005). Particularly, Greek philosophers Socrates, Plato, and Aristotle are considered the classical figures that have widely influenced the development of the concept of wisdom (Holliday, Chandler, 1986).

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Although the emphasis on specific aspects of wisdom varies across cultures and eras, various conceptions of wisdom have more similarities than differences (Meeks, Jeste, 2009) owing to its agreed universal principles (Biloslavo, McKenna, 2013).

Wisdom plays a prominent role in leadership (Elbaz, Haddoud, 2017) and is vital for organizations (Vasconcelos, 2022) given that it oftentimes leads to organizational excellence (Chia, Holt, 2007), and sound judgment and decisions represent the most important components of good leadership (McKenna, Rooney, 2019). Conversely, many companies face corporate fiascos because of imprudently foolish practices and unwise decisions made by their leaders (Jordan, Sternberg, 2007; Rooney, McKenna, 2007) who promote personal gain-seeking behaviors and cultures, rather than what is good, right, and just for all stakeholders (Nonaka, Takeuchi, 2011).

Further, contemporary realities in the world are experiencing what has been termed an era of discontinuity, referring to a time characterized by unpredictable chaos, turbulence, and volatility (Intezari, Pauleen, 2014) that presents leadership opportunities, which consequently prompt new ways of thinking and doing business (Takeuchi, 2013). While leadership represents a complex task within organizations, present-day circumstances exacerbate the challenge and have spurred a need for wise leaders in organizational action (Hassi, Storti, 2019; Kilburg, 2012; McKenna et al., 2009), especially that extant leadership theories cannot entirely explicate the problematic and ineffective conduct of numerous leaders (Rooney et al., 2021). In fact, wise leaders are needed nowadays as the world is marked by uncertainty, new technology, shifting demographics, and rapidly changing consumption trends (Nonaka, Takeuchi, 2011).

Nonetheless, research has not followed these profound transformations by addressing the need pertaining to wisdom in organizations and leadership (Küpers, 2007), even though wisdom is considered a crucial factor for leadership (Yang, 2011). Along the same lines, although practitioners and researchers alike contend that wise leaders are indispensable to organizations (Rooney, McKenna, 2007; Weick, 2007), and some insightful conceptualizations of wise leadership have been proposed, they however do not suggest measurable dimensions and indicators of wise leaders.

To address this gap, the present paper aims at developing a reliable and psychometrically valid measure of wise leadership to assess the wisdom of managers and leaders. Further, this paper intends to expand the scope of leadership conceptualizations by virtue of core aspects of wise leadership, namely judging, action, morality and humility. From a methodological point of view, wisdom will be assessed based on the level of wisdom apparent in the behaviors of leaders and managers as reported by their subordinates, rather than by resorting to fictitious situations or the self-report approach.

The new wise leadership construct will allow working along the lines of establishing complementarity with existing leadership models in order to reach a more comprehensive understanding of leadership-related dynamics in the workplace, especially that bridging wisdom and leadership underscores the key role of judgment in the field of leadership.

The main purpose of this paper is hence to develop a wise leadership scale (Wise Leadership Questionnaire [WLQ]) for leadership research and practice. To this end, we present the concept development of wise leadership; then, we propose a measure of the wise leadership construct; further, we determine the validity of the construct; and lastly, we discuss the findings, implications and limitations of this research, and suggest directions for future research.

2. PHASE 1: CONSTRUCT DEFINITION

2.1. *Phronesis* or Practical Wisdom

The wise leadership concept can be grounded on Aristotle's thesis on *phronesis* or practical wisdom; a notion concerned with applying experiential knowledge in efforts to reach the most fitting judgment while implementing appropriate action to serve the common good (Nicomachean Ethics, 1106a26-b28).

Cultivating practical wisdom is carried out through knowing the ways to achieve the common good in all situations (Mele, 2010) such as through situational appreciation, which is the capacity to recognize the salient facets of a given situation prior to taking decisions and actions (Price, 2000). Hence, judgment is central in wise leadership as it is not merely about knowing how to act in the right way and having the necessary skills and competencies, but, more importantly, it entails possessing the capacity of taking the right action at the right moment or *kairos* (Bartunek, Necochea, 2000), upon considering the specific circumstances. Leaders exercise judgment as required by a given situation in order to reach desired individual and organizational outcomes; this assertion is particularly interesting and promising because leadership scholars oftentimes focus more on investigating the characteristics and behaviors of people at the top of the organization, rather than the context surrounding the circumstances, timing and tools of leaders' actions (Boal, Hooijberg, 2001).

The current research uses Aristotle's thesis on phronesis as a backdrop given that Aristotle is one of the classical figures that have substantially influenced the development of the concept of wisdom (Holliday, Chandler, 1986). Phronesis entails the capacity to respond in an appropriate way in various circumstances to the purpose of a fulfilled life (O'Grady, 2019). As such, Aristotle's virtues are beneficial to humans both individually and as a community (Foot, 2002) as they revolve around acting well in hopes of the fulfillment of a good life or "eudaimonia" (Beadle, Moore, 2006) such a life that fulfills human deprivations and expectations as well as augments human strengths and tackles human weaknesses (Solomon, 2003). In the world of business, phronesis helps individuals to make decision that are both effective and morally sound (Bardon Brown, Pezé, 2017).

2.2. Conceptual Development

There is a general agreement among scholars that wisdom is a multidimensional and multifaceted construct (Ardelt, 2003) whose dimensions and aspects strengthen one another (Baltes, Staudinger, 2000) and are necessary for the manifestation of wisdom (Glück, 2018).

Researchers concur on the importance of wisdom to the understanding of leadership (e.g., Bennis, 2007) and several authors have linked the concepts of wisdom and leadership. However, the construct of wisdom within organizations has yet to receive the necessary attention from management and leadership scholars (McKenna et al., 2009), especially that existing scales and measures of wisdom have not turned their attention to leadership styles embodied by wise leaders.

The construction of the wise leadership scale will be accomplished by relying on Aristotle's thesis on phronesis or practical wisdom as well as wise leadership constructs identified by wise leadership researchers. Additionally, to enhance the comprehensiveness of the wise leadership scale, the expert judgment method will be used to assess the validity of the measure. In so doing, we ensure that the newly developed wise leadership scale encompass the spectrum of behaviors that are required for effective wise leaders.

An investigation of the extant literature pertaining to wisdom and leadership yielded studies that addressed ways wisdom is displayed through leadership (Yang, 2011), defining principles of wise leadership (McKenna et al., 2009), core abilities of wise leaders (Nonaka, Takeuchi, 2011) and fallacies of unwise leaders (Sternberg, 2005).

Manifestations of Wisdom through Leadership. Yang (2011) conducted an extensive literature review about the relations of leadership and wisdom and concluded that wise leader behaviors, practices and actions are displayed through the following:

(1) personality attributes: Wisdom, viewed as a personal quality, is considered as a crucial element of eminent leadership that appears when leading subordinates;

(2) knowledge, skills and expertise: Wisdom is expected to be reached through learning from accumulated experiences and leaders become wise as they successfully lead and guide generations of subordinates;

(3) interpersonal dynamics as leaders develop, nurture, and exhibit their wisdom as they act in a wise manner in face of the challenges and opportunities they encounter; and

(4) positive actions. Leaders who succeed in achieving desired outcomes for their organizations and society, are likely to attain wisdom. The latter is manifested through the positive effects related to aspiring and maintaining the common good for the self (leaders) and others (organization and society).

Defining Principles of Wise Leadership. McKenna et al. (2009) elaborated a framework of five defining principles of wise leadership in the organizational context. These include:

(1) *Wise leaders use reason and careful observations* to establish facts and provide deductive explanations. To make decisions, leaders exhibit wisdom by resorting to rules of reason, as well as *soft data* such as the interactions between the intellectual, affective, motivational and intuitive spheres of human functioning;

(2) *Wise leaders allow for non-rational and subjective elements when making decisions.* They contend that leading institutions require the promotion and protection of values with the latter constituting the core of all organizations and work, particularly across different cultures and value systems;

(3) *Wise leaders value humane and virtuous outcomes.* Wisdom is defined in terms of values, ethics and virtue; it encompasses an important constituent element that forms ethical judgment. Wise leaders promote socially valued behaviors and actions that are noble and worthwhile;

(4) *Wise leaders and their actions are practical and oriented towards everyday life, including work.* Wisdom is fundamentally practical as it involves taking action in day-to-day activities. Wise leaders are cognizant of absolute principles, but they know how and when to put them into practice in complex and uncertain contexts; and

(5) *Wise leaders are articulate, understand the aesthetic dimension of their work, and seek the intrinsic personal and social rewards of contributing to the good life.* This implies that wisdom is vital in decision making given that wise leaders are able to practically articulate wise judgments to others. Formulating wise judgment also requires an aesthetic capacity.

Core Abilities of Wise Leaders. Based on Aristotle's thesis on *phronesis* or practical wisdom about applying experiential knowledge in order to make the most appropriate judgment and implementing the timeliest action to serve the common good, Nonaka and Takeuchi (2011) identified six core abilities of wise leaders.

(1) *Wise leaders can judge goodness*. They are able to distinguish what is good for their organization and society based on their values and ethics. Their goals are morally set while they intend to achieve desired organizational and shareholders outcomes;

(2) *Wise leaders can grasp the essence*. They intuitively sense what lies behind any situation, quickly envisage its implications, craftily formulate a vision of the future, and promptly make an adequate decision about the appropriate action required to achieve optimal desired outcomes. Wisdom permits grasping the essence by means of comprehending people, things and events;

(3) *Wise leaders can create shared context or "ba"* as they create formal and informal opportunities for all organizational members, including executives and subor-dinates, to learn from each other. To do so, knowledge sharing, relationship building, and favoring interactions are carried out and promoted, which, in turn, contribute to the creation of a sense of purpose that consequently yields adequate alternative solutions to problems faced by organizations and their members;

(4) *Wise leaders can communicate the essence*. They are able to translate the nucleus of their expertise into tacit knowledge and effectively communicate it to others in a way that everyone is able to understand. They effectively encode their message to the point that receivers, even though from various contexts and with diverse backgrounds, can smoothly grasp the quintessence of the communication;

(5) *Wise leaders can exercise political power*. They can bring together individuals with varying interests and conflicting goals and entice them to act. They do so by mobilizing them to adhere to the same vision and pursue common goals. They are able to grasp the perspectives and emotions of other people and connect with them in the timeliest manner by resorting to dialectical reasoning. This ability goes one step further beyond effective communication as it presupposes a thorough understanding of the good and bad of the human condition, and it entails operating in a creative and successful way while dealing with opposing viewpoints; and

(6) *Wise leaders can foster practical wisdom in others*. They are able and willing to share their knowledge and expertise within their organizations by using their honed mentoring and coaching skills as well as nurture and create learning opportunities. This practice allows subordinates to acquire some of the leader's wisdom.

Fallacies of Unwise Leaders. Sternberg (2005) describes six common leadership flaws or fallacies through which unwise leaders demonstrate poor reasoning and which are the opposite of wise leadership. These flaws are:

(1) 'unrealistic-optimism fallacy', which occurs when leaders believe that they are so effective that they can act as they please and they are so intelligent that they can overcome any obstacle.

(2) 'egocentrism fallacy' where leaders resort to self-importance and believe that they only matter, rather than prioritizing people that they lead or taking their responsibility towards them.

(3) 'omniscience fallacy', when leaders think that they know everything and, as a consequence, lose sight of the limitations of what they know.

(4) 'omnipotence fallacy', when leaders believe they are all-powerful and do things as they wish.

(5) 'invulnerability fallacy', when leaders contend that they can get away with any mistake they make because of their perceived intelligence and position of authority.

(6) 'moral disengagement' fallacy, where leaders consider themselves above moral concerns as they believe that morality is important for others but not for themselves.

This body of work contains a plethora of behaviors reflecting wise leadership which are grounded on the following core aspects: 1) judging: a central theme in Aristotle's thesis on *phronesis* or practical wisdom and one of the McKenna's et al. (2009) main principles of wise leadership; 2) positive action: is at the heart of the Nonaka and Takeuchi's (2011) core abilities of wise leaders; 3) morality: is an integral part of the Sternberg's (2005) fallacies of unwise leaders as well as Nonaka and Takeuchi's (2011) core abilities of wise leaders; and 4) humility: is at the core of the Sternberg's (2005) fallacies of unwise leaders. Therefore, four categories were identified as appropriate for being the pillars of the wise leadership scale which are: 1) intellectual shrewdness, 2) spurring action, 3) moral conduct, and 4) virtuous humility.

These categories contribute to a thorough understanding of wise leadership processes and outcomes. Hence, these four manifestations of wise leadership will be taken into account in the process of generating items for the wise leadership scale in the present study. This perspective is designed to integrate all views and streams of the concept of wisdom by including the cognitive, emotional, behavioral, and virtuous aspects of leaders in order to reflect a balance between a leader's character, intellect, and actions. All these aspects are vital to our understanding of wise leadership.

In light of the above, we define wise leaders as *individuals who operate in a normatively positive way by exhibiting intellectual shrewdness, moral conduct, virtuous humility and spurring action.* We retain on these four components, namely exhibiting intellectual shrewdness, moral conduct, virtuous humility and spurring action as dimensions of wise leadership. We will elaborate on them further and describe the item development and validation process adopted to evaluate the derived structure.

We posit that expecting and requiring leaders to be wise may only be effective if adequate scales to measure the characteristics of wise leadership are provided. Thus, empirical investigations are much needed in order to allow organizations to identify and develop wise leaders (McKenna, Rooney, 2019). To overcome this shortage, the current paper aims to develop a measure for wise leadership.

In the following sections, we present the studies that yielded the development and validation of the new wise leadership construct.

3. PHASE 2: VALIDATION STUDIES

The aim of this section is to create a parsimonious scale of wise leadership and assess its constituting dimensions which appropriately characterize this specific style of leadership. Overall, the process that was followed to construct and validate the wise leadership scale is aligned with the recommended procedures by scholars in the area of scale development (e.g., DeVellis, 2012; Hinkin, 1995; Johnson, et al., 2012; Netemeyer et al., 2003). With the use of this research strategy as a backdrop, four studies were carried out to construct and validate the wise leadership scale.

3.1. Study 1: Construct Definition, Dimension Specification and Item Generation

Several scholars posit that the concept of wisdom is integrative in nature as it encompasses cognitive, affective, and reflective dimensions (Ardelt, 2003; Clayton, Birren,

1980). We corroborate this paradigmatic stance and assess the multidimensionality and the higher order nature of the wise leadership construct.

The domain specification and item generation process began through a deductive approach given that advances in theory and research of the key concepts under study (i.e., wisdom and leadership) constitute a promising base in which to search relevant construct dimensions (see Netemeyer et al., 2003).

A review of relevant and related literature was conducted by searching management, business and social sciences databases, namely Science Direct, JSTOR, Business Source Complete, Ebsco, and SSRN in order to identify the body of knowledge in which the construct of wise leadership was situated. No time limit was imposed as the notion of wisdom has ancient philosophical and theological underpinnings that constitute its prominent intellectual hub (Kekes, 1995). Various wise leadership-related expressions such as wise leadership, wise leaders, wisdom in leadership, were entered as subject themes to search the databases (Knapp, 2000).

Overall, 136 references were shortlisted. They were mostly conceptual and case-based, including essays and professional magazines articles. None of these references included any measurement instrument of wise leaders. Most of these references did not encompass any relevant components, categories, elements or items of wise leadership. Hence, only 15 studies were useful for item generation as items could be sourced from definitions, abstract conceptualizations, quotes of respondents, or pertinent explanations and qualitative insights of experts.

This review of the leadership literature reveals that wise leadership outcomes are generally sourced from literature on leadership (McKenna et al., 2009; Yang, 2011), strategic management (Boal, Hooijberg, 2001), business (Garick, 2013; Nonaka, Takeuchi, 2011), tourism (e.g., Elbaz, Haddoud, 2017), psychology (Sternberg, 2007), education (Sternberg, 2008), military context (e.g., Zacher, McKenna, Rooney, Gold, 2015), and philosophy, religion and spirituality (Kriger, 2013). This search process yielded studies that addressed defining principles of wise leadership in the organizational context (McKenna et al., 2009), the ways wisdom is displayed through leadership (Yang, 2011), the core abilities of wise leaders (Nonaka, Takeuchi, 2011) and the traits of wise leaders (Kaipa, Radjou, 2013).

The deductive approach allowed identifying an initial pool of 44 items as indicators to measure the following four dimensions of wise leadership.

Intellectual shrewdness refers to knowing, understanding and judging in the face of regular as well as ambiguous or uncertain circumstances. It is about sensing situations beyond insights and facts in a timely manner, and anticipating challenges and consequences (Longman, 2002). They know what needs to be done and are fully aware that their actions and judgments have consequences (Tichy, Bennis, 2010). Wise leaders' resort to reason and cautious observations to establish facts and provide deductive explanations (McKenna et al., 2009) without jumping to conclusions (Peterson, Seligman, 2004). They are cognizant of absolute principles and know how and when to put them into practice in complex and uncertain contexts (McKenna et al., 2009) as they are able to perceive variation in the environment and deal with its complexity (Malan, Kriger, 1998). Their conduct is practical in nature and fundamentally directed to everyday life and work (McKenna et al., 2009). In this regard, wise organizational figures are expected to master their subject area, understand all the issues related to their work, provide answers to all questions posed to them, and anticipate counterparts' questions (Hassi et al., 2011). Further, wise leaders have the

practical intellectual skills to execute the intended vision (Sternberg, 2008) by deciding on the right action at the right moment as required by a given situation (Bartunek, Necochea, 2000).

Spurring action refers to leadership behavior that inspires and rallies subordinates around a desired vision by sharing knowledge, guiding subordinates towards the action needed to achieve desired outcomes and motivating them to act in the right direction. By exhibiting these behaviors and qualities, leaders behave in a way that subordinates regard and consider as wise (Nonaka, Takeuchi, 2011). Spurring action arises from providing a shared sense of purpose to subordinates and sharing knowledge with them, which allows aligning individual and organizational desired outcomes. Thus, adhering to and achieving a positive vision of the future appear to subordinates as an inviting way of expanding one's knowledge while behaving in a specific goal-directed manner. To do so, wise leaders have the ability to convince followers of the value of their vision (Sternberg, 2008) by, inter alia, matching their behaviors with their words (Tichy, Bennis, 2010), building relationships, and creating knowledge sharing opportunities for all organizational members (Nonaka, Takeuchi, 2011). Lastly, wise leaders raise followers to higher levels and expand their capacities (Steed, 2017). All these qualities are facilitated by the wise leaders' ability to comprehend the diverse social actors and their various relationships (Boal, Hooijberg, 2001) as well as offering wise counsel to others and adopting viewpoints that make sense not only to the self but also to others (Peterson, Seligman, 2004).

Moral conduct describes the guiding role of morals, values and principles in the way wise leaders behave and lead in everyday activities with all stakeholders in a consistent, sincere, and moral manner. Wise leaders behave this way because they strongly believe that all their actions should have a moral purpose (Nonaka, Takeuchi, 2011); they hence uphold ethics (Steed, 2017) and value virtuous outcomes (McKenna et al., 2009). Concretely, wise leaders advance common goods not just their own good, balance their own interests with others' interests, consider the moral side of everything they do, and live up to their principles and standards (Sternberg, 2008; Tichy, Bennis, 2010). To do so, wise leaders resort to a moral compass that sets clear parameters for their actions, honor their commitments and match their doings with their sayings (Tichy, Bennis, 2010). By rooting themselves in such a noble purpose, including bringing benefit to the greatest number of people (Kaipa, Radjou, 2013), and by shying away from excess and greed, their organization lives in harmony with society (Garick, 2013). Conversely, unwise leaders tend to espouse the moral disengagement mode, which is about neglecting the moral aspect of what they do and reasoning only in terms of what is expedient (Sternberg, 2007), that is convenient, but possibly immoral action.

Virtuous humility, as conceptualized in Aristotle's virtues, involves a stable sense of self-worth, and represents a mid-point between two extremes, namely the vices of deficiency and excess (Irwin, 1999). Virtuous humility implies a great deal of humility on the part of leaders who appreciate their knowledge, skills, and abilities, while regularly questioning them (Weick, 2007). Wise leaders commit themselves to continuous learning by demonstrating an interest in all experience and enjoying all topics (Peterson, Seligman, 2004). They admit that they do not know everything and willingly learn from others (Sternberg, 2008), including their own subordinates. In doing so, they avoid confining themselves into inaction and ignorance (Pfeffer, Sutton, 2006). True wisdom does not arise from the sheer accumulation of knowledge, but from a genuine respect for and sincere inquisitiveness about the still unconquered aspects of knowledge (Pfeffer, Sutton, 2006).

Further, the humility of wise leaders is reflected in acknowledging errors they make and learning from their mistakes (Tichy, Bennis, 2010).

We identified initial content specifications by means of a thorough review of the literature related to wisdom and leadership. In the subsequent sections, we will test the wise leadership construct as a higher order, multidimensional and latent model. It will be defined based on the commonality among its various dimensions, which are expected to correlate in order to support the summation of constituting elements into one single representation of these components. While each of these components contribute uniquely and individually to the overall construct, discriminant validity for these components should be supported. In sum, wise leadership is comprised of related, but distinct components that are required for a leader to considered as wise.

3.2. Study 2: Content Validity Assessment

The deductive approach was complemented with the expert judgment method and two expert judgment sessions were organized with the objective of assessing and improving the content validity (Netemeyer et al., 2003) of the four-dimensional 44 items generated in Study 1.

The first session was comprised of four practitioners and four academics from eight different countries, who specialize in management and leadership. The purpose of this assessment was to improve the accuracy, clarity and comprehensiveness of the 44 items (Netemeyer et al., 2003) about wise leadership. To achieve this objective, the participants were requested to identify: (a) items that should be kept without modification; (b) items that should be changed; (c) items that should be removed; and (d) new items that could be added to the initial pool.

First, a short description of the four categories of wise leadership was provided to the participants. Then, from a list where the items were randomly ordered, the participants assigned each item into one dimension. Only items that mostly matched the a priori dimension were selected for subsequent analyses. The review by experts in Pretest 1 yielded removing 15 items and changing 9 items. The total number of items was thus reduced from 44 to 29 items.

Pretest 2 included a different group of experts consisting of three academics and three professionals, from six different countries, with the objective to evaluate the content validity of the 29 items that were retained from Pretest 1. This procedure allowed refining the pool of 29 to 20 items which matched their appropriate dimensions. Nine items were not appropriately assigned to any of the four a priori dimensions and were henceforth removed from the pool, yielding a final list of 20 items. Based on experts' feedback, two of the items were rephrased in order to eliminate redundancy and unclear wording (DeVellis, 2012).

The 20 items retained adequately grasped the suggested contents and were deemed the least equivocal. Each of the four categories (i.e., intellectual shrewdness, spurring action, moral conduct, and virtuous humility) encompassed five items. In the subsequent phases, we will quantitatively establish the evidence for validity of the wise leadership construct as it constitutes a crucial step in the scale development process (Hinkin, 1995).

As the original version of the questionnaire was developed in English, the survey was translated into French as the latter is the mean of communication widely used in the Moroccan workplace (Benzakour, 2007). The back-translation method was used (Brislin, 1986). The questionnaire was pre-tested to make sure that the questions were adequately interpreted by the respondents. The pre-tests did not yield any major changes to the items.

3.3. Study 3: Item Reduction and Refinement

Method

The factor structure of the 20 items generated through the deductive and inductive approaches was assessed using an exploratory factor analysis (EFA; Aldhaheri, 2020) with Promax rotation, which is the recommended technique in scale development (Netemeyer et al., 2003).

To gather data, we resorted to a database of a Moroccan Government directory of the construction and civil engineering industry. Potential respondents from 170 businesses were contacted to discuss the purpose of the study, their willingness to participate in the research, and the way to proceed. Explicit instructions about the research and the questionnaire were provided to the participants on-site. Respondents were guaranteed confidentiality and anonymity for the analysis of the data. The sample consisted of 207 full-time employees representing 65 different businesses operating in Morocco (38.23% response rate).

Respondents assessed the wise leadership of their supervisors along a 5-point scale, where 1 = strongly disagree and 5 = strongly agree. Respondents were between the ages of 18 and 63, with an average of 30.29 years (SD = 9.20) and an average work experience of 7.93 years (SD = 8.014). About half of the respondents (49.8%) were men. All respondents had a degree: 35.7% had a high school degree, 42% a college degree, and 21.3% a university degree.

Results and discussion

Exploratory factor analysis (EFA). Items were factor analyzed using the Promax rotation. To be retained for further analyses, items had to have a minimum loading weight of .50 on a single factor and a maximum of .32 on another factor as well as factors with eigenvalues greater than 1.0 (Tabachnick, Fidell, 2013).

Dimensionality and reliability assessment of the wise leadership model. In the 4-factor solution, the 20 items were projected to load on four distinct factors, with a maximum cross-loadings of .32. However, one item of each of the other four dimensions did not properly load on their appropriate a priori factors and were thus deleted.

A second EFA was conducted and produced a four-factor structure comprising the four expected dimensions, namely intellectual shrewdness, spurring action, moral conduct and virtuous humility. The most interpretable solution was a 4-factor structure (Table 1). All items loaded on their appropriate dimensions and the highest cross-loading was .29; it explained 62.52% of the total variance.

We hence retained 16 of the strongest items, 4 items for each dimension. These 16 items met all the requirements of loading weights.

The reliability tests indicated coefficient Cronbach's alphas for all the dimensions greater than the .70 cutoff point (Nunnally and Bernstein, 1994): intellectual shrewdness (Cronbach's α = .76), spurring action (α = .77), moral conduct (α = .80), and virtuous humility (α = .84).

These EFA results show that the four dimensions of the wise leadership construct can be conceptualized under one higher order construct to assess wise leadership.

Study 4 will investigate various types of validity of the wise leadership scale and relationships between its four factors and other theoretically relevant variables.

Table 1. Exploratory factor analysis (EFA): 4-factor solution (Study 3)

Factors and items	F1	F2	F3	F4
F1: Intellectual shrewdness				
Anticipates what will happen	**.86**	.26	.24	.19
Takes the appropriate action in the right moment	**.80**	.24	.20	.15
Quickly senses what lies behind a situation	**.73**	.12	.21	.17
Exhibits sound judgment	**.64**	.26	.24	.27
F2: Spurring action				
Guides towards the action needed to achieve a desired outcome	.26	**.84**	.23	.20
Motivates subordinates to act	.19	**.81**	.17	.12
Voluntarily shares knowledge with others	.27	**.76**	.25	.22
Rallies others around his/her vision	.15	**.67**	.23	.16
F3: Moral conduct				
Constantly considers the morality of what he/she does	.23	.27	**.89**	.23
Balances his/her own interests and other people's interests	.28	.23	**.85**	.29
Puts the greater good of the organization first	.26	.22	**.79**	.17
Consistently links saying and doing	.14	.17	**.62**	.01
F4: Cultivating humility				
Regularly questions what he/she knows	.19	.16	.21	**.84**
Recognizes that he/she does not know everything	.16	.21	.17	**.84**
Admits errors and mistakes that he/she makes	.27	.17	.23	**.82**
Willingly learns from everyone	.19	.17	.10	**.77**
Eigenvalues	4.42	2.1	1.76	1.67
Total variance explained by each factor	27.62	13.37	11.00	10.54

Note: N = 207. All the factor loadings are significant at p < .001. Items sorted by their loadings on each factor.

Source: Table compiled by the authors.

3.4. Study 4: Scale Validation

In this study, the aim is to provide further empirical evidence for the convergent and discriminant validities of the second-order wise leadership model, which constitute a *condition sine qua non* for the process of validating theoretical constructs (Hinkin, 1995). We included the concepts of transformational leadership and authentic leadership in this study as they constitute related measures of the wise leadership construct; despite some conceptual overlap between these three leadership styles, the wise leadership construct upholds a unique distinctiveness (see Table 2). Furthermore, hypotheses will be developed pertaining to the relationships between transformational, authentic, and wise leadership.

Table 2. Comparisons of wise leadership, transformational leadership and authentic leadership

Theoretical Components	Wise Leadership	Transformational Leadership	Authentic Leadership
Wise Leadership			
Intellectual shrewdness	✓		*
Spurring action	✓	*	
Moral conduct	✓		*
Cultivating humility	✓		
Transformational Leadership			
Inspiring motivation	*	✓	
Intellectual stimulation		✓	
Idealized influence		✓	
Individualized consideration		✓	
Authentic Leadership			
Balanced processing	*		✓
Internalized moral perspective	*		✓
Relational transparency			✓
Leader self-awareness			✓

✓ = focal component; * = minor or implicit component.

Source: Table compiled by the authors.

3.4.1. Convergent validity

Examined through the lens of its effects, transformational leadership aims as transforming followers' priorities and inspiring them to accomplish targets beyond their potentials and expectations (Bass & Bass, 2008). The model of transformational leadership primarily includes four fundamental components. Inspirational motivation refers to leaders who articulate a compelling vision for the future to their subordinates, express confidence that desired outcomes will be achieved, build team spirit, and create enthusiasm (Bass and Bass, 2008). Intellectual stimulation is concerned with leaders encouraging their followers to think on their own, reframe problems, and resort to novel perspectives as they deal with regular everyday workplace challenges (Bass and Riggio, 2006). Idealized influence is about leaders' qualities of envisioning, exerting confidence, and their ability to setting high standards for emulation (Bass and Bass, 2008). Individualized consideration entails organizational leaders playing the role of a coach or mentor for their followers with the objective to help them nurture and achieve their full potential (Bass and Riggio, 2006). Based on the above description, there seems to be a small overlap between wise leadership and transformational leadership pertaining to inspiring and rallying subordinates around a desired vision as encompassed by the inspirational motivation dimension of transformational leadership and the spurring action dimension of wise leadership.

Authentic leadership originates from studies postulating authenticity as a key to self-esteem and encompasses several aspects of leadership, ethics, and productive behavior at work (Walumbwa et al., 2008). Walumbwa et al. (2008) operationalized authentic leadership as an organizational leader's set of behaviors that cultivate positive psychological capabilities and an ethical climate, to nurture the following four mechanisms.

Balanced processing is concerned with objectively analyzing pertinent data upon making decisions. The internalized moral perspective is about the internal moral standards that direct and auto-regulate individual behaviors. Relational transparency involves displaying authenticity by sharing adequate information and feelings as well as avoiding ill-suited emotions. Self-awareness is tantamount to comprehending one's strengths and weaknesses, and the way a person constructs a meaning of the world (Walumbwa et al., 2008).

It is clearly evident that the concepts of wise leadership and authentic leadership have a partial theoretical overlap. First, both constructs emphasize the role of morals and principles in guiding leaders' behaviors while conducting business. Second, displaying authenticity by sharing adequate information and feelings is aligned with connecting the saying and the doing as part of wise leadership. Third, the balanced processing dimension of authentic leadership consisting of objectively analyzing pertinent data before making decisions converges with the aspect of wise leadership of exhibiting sound judgment. Empirically, leaders' wisdom has been found to be positively associated with the individualized consideration dimension of transformational leadership (Zacher et al., 2014).

As wise leadership shares some conceptual aspects with both transformational and authentic leadership styles, we expect the second-order wise leadership construct to relate positively to transformational leadership and authentic leadership.

3.4.2. Discriminant validity

Although there is an overlap between wise leadership and transformational leadership, it is worth noting that the suggested dimensions of wise leadership are not subsumed in transformational leadership. In this respect, a principal difference lies in the fact that wise leaders exhibit intellectual shrewdness which consists of knowing, understanding and judging in the face of regular as well as ambiguous and uncertain circumstances. As such, wise leadership is far from fully operationalizing the dimensions of transformational leadership as the overlap is only partial.

Similarly, as the wise leadership construct is operationalized in this paper, several of its aspects are not reflected in the authentic leadership concept. The intellectual shrewdness of wise leadership goes a few steps further compared to the balanced information processing dimension of the authentic leadership (i.e., objectively analyzing pertinent data) owing to the situational appreciation mechanism; the latter involves sensing situations beyond facts and anticipating challenges and implications (Longman, 2002; Nonaka, Takeuchi, 2011), identifying the key aspects of a given situation (Price, 2000), and taking the right action at the right moment (Bartunek, Necochea, 2000). Further, wise leaders resort to spurring action in order to rally subordinates around a desired vision by sharing knowledge, guiding followers towards the action needed to achieve desired outcomes and motivating them to act in the right direction. Wise leaders cultivate virtuous humility by regularly questioning their knowledge, skills and abilities. They admit that they do not know everything (Tichy, Bennis, 2010) and voluntarily learn from others (Sternberg, 2008), including their own followers. In doing so, they avoid limiting themselves into inactivity and ignorance (Pfeffer, Sutton, 2006).

Based on this reasoning, although wise leadership shares some conceptual aspects with both transformational and authentic leadership styles, it nonetheless remains different in scope. Wise leadership encompasses distinct and additional dimensions as compared to what has been included and measured by transformational leadership and authentic leadership.

3.4.3. Method

Participants and procedures. We gathered data from two independent samples from France and Morocco. The two different samples allowed the focal measures to be completed by distinct sets of raters, a process that enhances the response rate and reliability of the study (Hinkin, 1995). We surveyed working individuals who were attending executive education seminars in two different universities in both countries. It is worth noting that France and Morocco served just as the fieldwork for the present research to collect data about observable behaviors and practices at work. The construct definition, the dimension specification and item generation were made based on the world literature – though mostly Western. The assessment of the content validation resorted to experts from 14 different countries.

The France sample included 205 full-time employees among a total of 300 potential respondents that were initially approached; this constitutes a 68.33% response rate. Respondents evaluated their supervisors' wise leadership pattern. The mean age of these participants was 30 years (SD = 5.39), with 5.54 mean years (SD = 3.37) of organizational tenure; 57% of the participants were female. All respondents had a degree: 1.5% a high school degree, 59.5% an undergraduate degree, and 39% a master's degree.

The Morocco sample was comprised of 214 employees with a 71.33% response rate given that 300 employees were asked to participate in the current research. Their average age was 36 years (SD = 7.23), with an average of 7.86 years (SD = 5.5) of organizational tenure; 53% of the respondents were female. Among the sample, 0.5% of the respondents had a high school degree, 57.9% a bachelor's degree, and 41.6% a master's degree. In both samples, we controlled for the participants' age, gender and education.

To reduce the common method bias, data were gathered in two occasions separated by a four-day lag in both samples. In day 1, participants provided data pertaining to their supervisor's wise leadership style. In day 5, respondents answered questions related to transformational and authentic leadership styles. Statistically, we tested for potential common method bias using the Harman's single-factor test (Podsakoff et al., 2003). The largest factor explained 36.71% in the France sample and 29.73% of the variance in the Morocco sample, which is less than the 50% threshold in both samples. Thus, there is no threat of common method bias in the dataset.

Measures

As Tables 3 and 4 show, all the measures used in this study achieved very good reliability as their reliability coefficients are greater than the recommended cut-off level of .70 (Nunnally and Bernstein, 1994). Responses to items consisted of a Likert scale with response options ranging from 1, "strongly disagree" to 5, "strongly agree". The following measures were used.

Leadership variables. To measure wise leadership, the 16-item WLQ was utilized. To measure transformational leadership, 16 items from the MLQ (Bass and Avolio, 2004) were used. We included the 16-item scale of the authentic leadership measure (Walumbwa et al., 2008).

3.4.4. Results and discussion

Descriptive analysis. Tables 3 and 4 show the descriptive statistics for all Study 4 scales and for both the France and Morocco samples. All of Cronbach's alphas are above the recommended cut-off level of .70 (Nunnally & Bernstein, 1994).

Table 3. Means, reliabilities, standard deviations and correlations among the variables – France sample (Study 4)

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
1. Intellectual shrewdness (WL)	3.50	.93	(.86)										
2. Spurring action (WL)	3.48	.91	.61**	(.86)									
3. Moral conduct (WL)	3.53	.96	.26**	.34**	(.85)								
4. Cultivating humility (WL)	3.35	1.09	.54**	.44**	.29**	(.88)							
5. Inspirational motivation (TFL)	3.47	.86	.13	.16*	.27**	. 16*	(.73)						
6. Intellectual stimulation (TFL)	3.77	.89	.23**	.28**	.22**	.21**	.43**	(.79)					
7. Idealized influence (TFL)	3.73	.81	17*	.16*	.14*	.20**	.55**	.64**	(.78)				
8. Individualized consideration (TFL)	3.49	.88	.21**	.14*	.17*	.28**	.57**	.57**	.72**	(.79)			
9. Organizational citizenship behavior	3.96	.73	.33**	.30**	.29**	.29**	.32**	.22**	.25**	.26**	(.84)		
10. Affective commitment	3.87	.88	.41**	.36**	32**	.34**	.23**	.16*	.19**	.12	.47**	(.90)	
11. Supervisor-related identification	3.42	.88	.38**	.30**	.21**	.29**	.20**	.05	.11	.18*	.35**	.46**	(.80)

Note: N=205; Cronbach αS are reported on the diagonal in parentheses; **p < 0.01; *p < 0.05.

Source: Table compiled by the authors.

Table 4. Means, reliabilities, standard deviations and correlations among the variables – Morocco sample (Study 4)

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
1. Intellectual shrewdness (WL)	3.61	.90	(.82)										
2. Spurring action (WL)	3.51	.91	.49**	(.85)									
3. Moral conduct (WL)	3.57	.92	.28**	.25**	(.82)								
4. Cultivating humility (WL)	3.45	.73	.33**	.26**	.48**	(.83)							
5. Self-aware-ness (AL)	3.5	.71	.15*	.14*	.18*	.18**	(.70)						
6. Relational transparency (AL)	3.35	.76	.09	.15*	.07	.21**	.27**	(.71)					

Table 4 (cont.). Means, reliabilities, standard deviations and correlations among the variables – Morocco sample (Study 4)

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
7. Internalized moral perspective (AL)	3.7	.71	.15*	.09	.32**	23**	.48**	.46**	(.71)				
8. Balanced processing (AL)	3.44	.77	.19**	.16*	.30**	.26**	.55**	.58**	.59**	(.72)			
9. Organizational citizenship behavior	3.95	.68	.40**	.25**	.27**	.26**	.27**	-.04	.27**	.30**	(.85)		
10. Affective commitment	3.90	.84	.32**	24**	.24**	.32**	.18**	.06	.18**	.17*	.34**	(.89)	
11. Supervisor-related identification	3.42	.68	.20**	.30**	.35**	.39**	.13	.09	.22**	.22**	.35**	.29**	(.72)

Note: N=214; Cronbach αS are reported on the diagonal in parentheses; **p < 0.01; *p < 0.05.

Source: Table compiled by the authors.

Measurement model. Prior to testing the hypothesized model, a CFA was carried out to gauge the associations between latent constructs and their manifest indicators for both samples. The findings confirm that the model fits the data – with both the predictor and outcomes measures – as seen in the following indices. France sample: $\chi2$ =710.50; $\chi2$/df=1.59; CFI = .93; TLI = .92; RMSEA = .05. Morocco sample: $\chi2$ =664.29; $\chi2$/df=1.49; CFI = .93; TLI = .93; RMSEA = .05.

We hypothesized that the second-order wise leadership measure relates positively to authentic and transformational leadership constructs. As displayed in Tables 3 and 4, overall, the dimensions of the wise leadership are positively associated with the dimensions of both authentic and transformational leadership.

Convergent validity. To evaluate the convergent validity of the wise leadership construct, the following criteria were observed: (1) high factor loadings of indicators on their respective construct exceeding the 0.40 cut-off point as measured using CFA (DeVellis, 2012); (2) a minimum requirement for composite reliability (CR) of 0.7. (Hair et al., 2014); (3) an average variance extracted (AVE) of more than 0.50 as a threshold; and (4) the value of CR has to be greater than the AVE (Fornell & Larcker, 1981).

As Table 5 displays, all the statistics meet the indicated requirements in both samples. The item loadings to their respective factors are higher than the 0.40 threshold and range between .59 and .94; all the CRs are greater than the recommended value of 0.7 and range between .82 and .88; all the AVEs are higher than the 0.5 cut-off point; and every CR is greater than the AVE of the same factor. Convergent validity is then established indicating that the second-order wise leadership construct relates positively to authentic leadership and transformational leadership.

Table 5. Factor loadings, average variance extracted and composite reliability for both samples (Study 4)

Factors	Items	Factor Loading		Average Variance Extracted (AVE)		Composite Reliability (CR)	
		France Sample	Morocco Sample	France Sample	Morocco Sample	France Sample	Morocco Sample
Intellectual shrewdness	IS4	0.85	0.82	0.61	0.54	0.86	0.82
	IS3	0.76	0.70				
	IS2	0.70	0.67				
	IS1	0.81	0.74				
Spurring action	IG4	0.94	0.67	0.62	0.55	0.86	0.83
	IG3	0.93	0.74				
	IG2	0.60	0.82				
	IG1	0.59	0.73				
Moral conduct	MC4	0.82	0.69	0.57	0.55	0.84	0.83
	MC3	0.82	0.72				
	MC2	0.63	0.71				
	MC1	0.74	0.83				
Cultivating humility	VH4	0.81	0.72	0.64	0.56	0.88	0.84
	VH3	0.79	0.72				
	VH2	0.79	0.71				
	VH1	0.82	0.84				

Source: Table compiled by the authors.

Discriminant validity. A series of CFAs were carried out in order to examine the correlations of the second-order wise leadership construct with related constructs, namely authentic leadership and transformational leadership in the two distinct samples as shown in Table 6. This approach consists of comparing the chi-square values of two structural equation modelling (SEM) models: in the first one, the higher-order construct was distinct from another construct, whereas in the second, both constructs merged in a unitary one-factor model (Bagozzi et al., 1991).

Nested models were created where the four dimensions of wise leadership along with their items loaded onto the second-order wise leadership construct and the indicators for transformational and authentic leadership loaded on a distinct factor in, respectively, the France and Morocco samples. This procedure of discriminant two-factor models was compared to a unitary one-factor model procedure where all the indicators loaded on the higher order wise leadership.

As Table 6 shows, the discriminant two-factor models yielded a more acceptable fit with the data compared to the unitary procedure. The chi-square differences were statistically significant: $\Delta\chi2$ (2) = 292.85, p < .01, for the comparison of wise leadership with transformational leadership in the France sample and $\Delta\chi2$ (2) = 193.88, p < .01 in the Morocco sample. All the ΔCFI values exceeded the .01 cut-off point.

Table 6. Test of convergent and discriminant validity for the higher-order wise leadership construct in France and Morocco samples (Study 4)

Models	χ2 (df)	χ2/df	Δχ2 (df)	CFI	TLI	RMSEA
France sample (N=205)						
Discriminant two-factor model: Higher order wise leadership construct and transformational leadership	1584.10 (1050)	1.51	-	.91	.90	.05
Unitary one-factor model: Merging Higher order wise leadership construct and transformational leadership	1876.95 (1062)	1.77	292.85**	.86	.85	.06
Morocco sample (N=214)						
Discriminant two-factor model: Higher order wise leadership construct and authentic leadership	1551.12 (1049)	1.48	-	.90	.89	.05
Unitary one-factor model: Merging Higher order wise leadership construct and authentic leadership	1745 (1063)	1.64	193.88**	.86	.85	.06

Note: CFI = comparative fit index; TLI = Tucker-Lewis index; RMSEA = root mean square error of approximation. **$p < .01$ (two-tailed).

Source: Table compiled by the authors.

Discriminant validity was also established using the AVE value approach which holds that discriminant validity exists if the AVE of a given construct is higher than the square of the correlation of that construct and another construct (Fornell, Larcker, 1981). In Study 4, the AVE of the wise leadership factor exceeds the squared correlation of the latter and other leadership styles included in the study: AVE = 0.61 (France sample) and 0.55 (Morocco sample); squared correlation of wise leadership with both transformational leadership and then with authentic leadership is 0.10.

These results support the discriminant validity of the higher-order wise leadership measure stating that the second-order wise leadership construct is partially related to but distinct from authentic leadership and transformational leadership.

The higher-order wise leadership construct is in general positively and significantly associated with authentic leadership and transformational leadership but remains empirically distinct. Study 4 therefore supports evidence of the convergent and discriminant validities of the higher-order wise leadership construct. It has also provided supplementary evidence of validity for the construct and the content of the wise leadership construct. Further, Tables 4 and 4 show that while the dimensions of wise leadership generally correlate positively with the dimensions of authentic and transformational leadership, the correlations coefficients are low to moderate; these levels of correlation are not strong enough to signal construct redundancy.

4. DISCUSSION AND CONCLUSION

The current research yielded the development of a measure of wise leadership and hence made several contributions to the management literature. First, the newly developed WLQ is a theory-driven, reliable and psychometrically valid measure to assess the wise leadership

style. The results of the current research show that the four dimensions of intellectual shrewdness, spurring action, moral conduct and virtuous humility can be reasonably conceptualized under one superordinate construct and form a higher order construct to assess wise leadership; particularly that the dimensions were moderately to highly correlated (r = .26 to .61 across the research samples) and generally shared similar relationships with the outcomes (Johnson et al., 2012).

Second, the new wise leadership approach has the potential to contribute to advancing leadership research; it is different than existing leadership approaches such as authentic and ethical leadership, in that it expands the scopes of these leadership conceptualizations by virtue of its core aspects, namely judging, action, morality and humility. Wise leadership will provide insightful accounts of leadership aspects that have yet to be covered by existing theories such as anticipating what will happen, the willingness to learn from everyone, acknowledging mistakes, balancing one's own interests with other people's interests and acting in the right way, at the right moment and while considering the particularities of the circumstances. Chiefly, situational appreciation and judgment, considered as key mechanisms of wise leadership, enable leaders to adjust to the organizational and environmental setting, rather than imposing the required style of leadership.

Third, from a methodological standpoint, self-report measures of wisdom suffer from multiple limitations because: (1) they may engender self-deception and impression management biases (Maercker, Zoellner, 2004); and (2) wise leaders are likely to describe themselves as less wise than others as they are more critical of themselves than others (Aldwin, 2009). To overcome these methodological shortcomings, subordinate ratings of wise leadership were used as recommended by Redzanowski, Glück (2013). Further, real, factual, and work-related questions were asked, rather than fictitious situations and problems in order to construct an ecologically valid measure of wise leadership (Glück, 2018). As such, wise leadership was assessed based on the level of wisdom apparent in the behaviors of leaders as reported by their subordinates.

Fourth, the suggested 16-item measure has sound psychometric properties, as evidenced across three independent samples from France and Morocco (N=626), pertaining to content, convergent, and discriminant validities. Study 4 indicates that the higher-order wise leadership construct has positive associations with three outcome variables, namely OCB, affective commitment, and supervisor-related identification; it also supports the discriminant validity of the higher-order wise leadership construct and confirms that the second-order wise leadership construct is related to, yet distinct from, authentic and transformational leadership.

By building a wise leadership scale, the current research has practical implications for both organizations and leaders. First, the suggested wise leadership model bridges a glaring gap in management and leadership practice at an opportune time. The model is a reliable and sound measure that allows assessing the level of wise leadership displayed by organizational members. It also has the potential to serve as a practical tool for organizations and managers to develop wise leaders through training and development activities.

Second, several organizations were subject to failures because of recklessly rash practices and unwise actions made by their own leaders (Jordan, Sternberg, 2007) in a business environment marked by scandals, inefficiencies and imbalances (Rooney, McKenna, 2007). Nonetheless, research has yet to follow these profound transformations by addressing the need pertaining to wisdom in organization and leadership (Küpers, 2007). Given this context, the wise leadership model may be useful in identifying unwise leaders

who would not exhibit wise behaviors be it during the hiring process of potential leaders/managers or as part of need analyses prior to planning leadership development activities with the objective of designing adequate interventions aimed at adjusting leaders' unwise patterns.

Lastly, it is promising that the second-order wise leadership construct was positively associated with various subordinate outcomes, namely OCB, affective commitment, and supervisor-related identification because these associations indicate that developing wise leaders can potentially yield positive results pertaining to training and development interventions.

The various studies of the current research have been instrumental in the development of the wise leadership scale and provide preliminary evidence of its construct validity. However, this is only a first step in the validation process of the scale as building up and demonstrating the psychometric properties of new measures is a demanding and complex procedure (Hinkin, 1995). Future research is a required next step to continue assessing the discriminant, convergent, incremental, and predictive validities of the wise leadership scale using a broader array of samples and settings. On another note, although Study 4 data were gathered in two measurement waves separated by a four-day lag in both the France and Morocco samples in order to reduce or avoid the same-source problem (Podsakoff et al., 2012), dataset may have been affected with the same-source bias as the respondents' completed measures of the independent, dependent and control variables. Future studies ought to examine different criterion variables rated using objective measures carried out by multiple respondents such as supervisors, subordinates, and peers to limit or control the effects of potential biases associated with common method variance.

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