

AUTHENTIC LEADERSHIP AS A PREDICTOR OF RESILIENCE, HUMILITY, AND COMPASSION OF SUBORDINATORS

**Sofia Gomes, University Portucalense & REMIT - Research on Economics
Marlene Sousa, Polytechnic Institute of Leiria & CICS.NOVA -
Interdisciplinary Center for Social Sciences of the Faculty of Social and Human
Sciences (FCSH/NOVA)**

**João M. Lopes, Miguel Torga Institute of Higher Education & NECE –
Research Unit in Business Sciences, University of Beira Interior
Tânia Santos, Polytechnic Institute of Leiria & CICS.NOVA - Interdisciplinary
Center for Social Sciences of the Faculty of Social and Human Sciences
(FCSH/NOVA)**

**Márcio Oliveira, Polytechnic Institute of Leiria & NECE – Research Unit in
Business Sciences, University of Beira Interior**

ABSTRACT

The present research is based on a questionnaire applied to 109 employees of Portuguese companies, who, in the performance of their professional activity, are in a position of direct subordinates of the top management of these companies and analyses the relationship between authentic leadership and its employees' resilience, humility, and compassion. This research empirically validates the theoretical arguments that suggest that authentic leadership is related to resilience, humility, and compassion (the latter, measured based on the dimensions of kindness, common humanity, mindfulness, indifference, disengagement, and separation) and demonstrates that subordinates are crucial resources to help organisations face competitive challenges, taking advantage of their employees' potential and promoting organisational efficiency and competitive advantages over the competition.

Keywords: Authentic Leadership, Humility, Compassion, Resilience

INTRODUCTION

In recent years, Authentic Leadership (AL) and its impact on employees has aroused great interest in both practitioners (George et al., 2007) and academics, who argue that AL promotes positive attitudes and behaviours in subordinates and contributes to better organisational performance (Rego et al., 2012). This article will address AL, resilience, humility, and compassion and show how AL predicts subordinates' resilience, humility, and compassion.

In the organisational setting, resilience is important as studies indicate that it causes increases in individuals' performance, workplace satisfaction, and moral commitments to the organisation (Luthans et al., 2007).

Concerning humility, it is taking on an increasingly prominent role in organisations because it is a strategic virtue for all organisations in any sector because it becomes a competitive advantage: it is a valuable resource that is rare, irreplaceable, and difficult to imitate (Vera & Rodriguez-Lopez, 2004).

Compassion is increasingly important in the organisational environment as it can reset the energy levels of organisational members and make them feel valued (Choi et al., 2016).

Thus, studying the antecedents of employee humility, compassion and resilience are critical if organisations are to survive and thrive by harnessing the potential of their employees so that learning, performance, and competitiveness are sustainable.

Humility, compassion, and resilience at the individual level depending on individual factors and social/contextual factors. As leadership is a very relevant contextual factor, it is important to study how the leader's characteristics and specific behaviour can support, suppress, facilitate or inhibit these characteristics in employees.

This study seeks to enrich research and deepen the literature on this topic by presenting a new and innovative model. Since there is plenty of literature on these constructs in isolation or by establishing relationships with other variables, we intend to understand their relationship with each other.

The article is structured as follows: the next section discusses the arguments that lead to the formulation of hypotheses; the third and fourth sections present the methods and results, respectively; and the final section discusses the main conclusions and considers the limitations of the research and suggestions for future research.

LITERATURE REVIEW

Authentic Leadership

Authentic Leadership (AL) can be considered "a pattern of leader behaviour that builds on and promotes positive psychological skills and a positive ethical climate, to promote greater self-awareness, an internalised moral perspective, balanced information processing and relational transparency on the part of leaders working with followers, promoting positive self-development (Walumbwa et al., 2008, p.94). Avolio, et al., (2004) note that authenticity strongly influences how people live their lives. Authentic leaders know who they are, know what they believe and value, and act on those values and beliefs when interacting transparently with others.

The AL construct comprises four dimensions: (1) Self-awareness, understanding of one's strengths and weaknesses and the multifaceted nature of oneself, and being aware of one's impact on others; (2) Relational Transparency, presentation of one's authentic self to others; (3) Internal Moral Perspective, a form of internal and integrated self-regulation that is guided by internal moral standards and values rather than due to organisational or societal pressures, resulting in decision making and behaviour that is consistent with these internal values; (4) Balanced Information Processing, objective analysis of data before making decisions, soliciting viewpoints that question one's deeper positions (Avolio et al., 2004; Avolio & Gardner, 2005; Walumbwa et al., 2008).

The Resilience Construct

Resilience is a highly valued psychological construct thanks to its close relationship to adapt to the environment and adequately overcome adverse situations (Carver, 1998). In psychology, it points to the ability to positively cope with adverse events from health promotion, well-being, and quality of life (Carvalho & Leal, 2012). Resilience can be considered the ability to overcome adversity, failure, or even positive but devastating changes such as increased responsibility (Luthans & Youssef, 2004) or the ability of individuals to successfully cope with challenging change, adversity, and risk (Jensen & Luthans, 2006).

The resilience construct comprises four dimensions: (1) perseverance, which reflects the enthusiastic persistence in finding solutions to problems, overcoming adversities; (2) sense of life, which refers to the awareness that one has something meaningful to live for and involves determination and satisfaction in achieving defined goals; (3) serenity, which refers to a balanced perspective focused on the purposes of one's own life, with the ability to accept the variety of experiences (even adverse ones) serenely and enthusiastically and with the ability to exercise self-esteem; (4) self-sufficiency and self-confidence, which translates into the awareness that each person's life path is unique and that certain stages are faced not in a group but alone, being able to be on their own and depending essentially on themselves (Carvalho & Leal, 2012).

Resilient individuals are goal-driven and can cope with adversity, reflecting tenacity, optimism, and an aggressive approach to solving problems (Sinclair & Wallston, 2004).

The Humility Construct

According to De Bruin (2013), humility can be seen as an "epistemic" virtue that leads a person to be aware of his or her reliability. Solomon (1999) considers humility to be a realistic assessment of one's contribution and recognition of the contribution of others, along with the luck and good fortune that made one's success possible. Humility involves the ability to evaluate success, failure, work, and life without exaggeration. It allows individuals to distinguish the delicate line between good characteristics such as healthy self-confidence, self-esteem, and self-evaluation and less positive ones such as overconfidence, narcissism, and stubbornness (Vera & Rodriguez-Lopez, 2004). The construct of humility can be defined as an interpersonal characteristic that emerges in social contexts and encompasses three dimensions: (1) willingness to know oneself accurately; (2) appreciation of others; (3) willingness (availability) to learn from others (Owens et al., 2013).

In the organisational context, humility is important because it increases the ability of companies to understand and respond to external threats and opportunities, allowing them to achieve outstanding performance and being a source of competitive advantage (Vera & Rodriguez-Lopez, 2004).

The Compassion Construct

Compassion can be defined as the capacity to have an emotional sensitivity towards the suffering of the other, in such a way that it awakens in individuals a balanced awareness about it, such as the motivation/desire to alleviate and ease the suffering of the other, to the detriment of an attitude of detachment and indifference towards the other. This definition encompasses three components: (1) kindness, which translates into the ability to be kind and understanding towards the suffering of the other, rather than being indifferent and neglectful; (2) shared humanity, which means understanding that one's own experiences are part of a shared human experience, as opposed to disengagement; (3) mindfulness, which translates into balanced awareness, acceptance and openness towards the suffering of the other, not denying or avoiding contact with the negative effect of the other (Neff, 2003; Raes et al., 2011). Thus, kindness, common humanity, and mindfulness contribute positively to compassion, whereas indifference, separation, and disengagement contribute negatively (Neff, 2003).

Compassion is a relatively new concept in social and clinical psychology, and studies involving organisations are still scarce (Raes et al., 2011).

AL as a Predictor of Resilience, Humility, and Compassion

Some authors (Anwar et al., 2020; Avolio & Gardner, 2005; Malik & Dhar, 2017; Mubarak & Noor, 2018) consider that AL plays a very significant role in employees' behaviour as it contributes to increasing their creative performance, to fostering hope for the future and to helping them find meaning and commitment to work by fostering a structure and environment that supports both leaders and their followers. Avolio, et al., (2004) consider that LA is the basis for building trust, helping people to develop their strengths and be more positive, open their thinking, add value and meaning about what is right in decisions, and improve the overall performance of the organisation over time.

On the other hand, Avolio & Gardner (2005) consider that the authentic leader can impact subordinates' behaviour through positive modeling, emotional contagion, and positive social communication exchanges.

Thus, some authors (Anwar et al., 2020; Gaddy et al., 2017; Zehir & Narcikara, 2016) argue that LA can increase subordinates' resilience levels. LA has points in common with humility and some authors argue that authentic leaders are humble and less likely to feel the need to demand someone's attention (May et al., 2003). Some authors (Owens & Hekman, 2016; Rego et al., 2017) argue that leaders' humility is contagious, so we can infer that authentic leaders, by being humble, also foster humility in their employees.

Dutton, et al., (2014) argue that the leader's behaviour affects the compassion of their employees since they help people frame the meaning of suffering and model and anchor appropriate acts of compassion. Thus, through emotional contagion, authentic leaders foster compassion in their employees, producing beneficial feelings, reducing anxiety, stress, intention to leave the organisation, and burnout (Engen & Singer, 2015). These leaders will provoke feelings of kindness, common humanity, and mindfulness in their employees and inhibit feelings of indifference, disengagement, and separation in them (Dutton et al., 2014).

HYPOTHESES

- H1: *Higher levels of authentic leadership correspond to higher levels of resilience.*
- H2: *Greater levels of authentic leadership correspond to greater levels of humility.*
- H3: *Higher levels of authentic leadership are matched by higher levels of kindness.*
- H4: *Higher levels of authentic leadership correspond to higher levels of mindfulness.*
- H5: *Greater levels of authentic leadership correspond to greater levels of common humanity.*
- H6: *Higher levels of authentic leadership correspond to lower levels of indifference.*
- H7: *Higher levels of authentic leadership correspond to lower levels of disengagement.*
- H8: *Higher levels of authentic leadership correspond to lower levels of separation.*

DATA AND METHODOLOGY

Sample

The sample consists of 109 observations collected through an online questionnaire applied to employees of small and medium-sized companies in the central region of Portugal, registered as members of NERLEI (Business Association of the Leiria Region). They play a role of direct subordination to the top management of these companies. Data were collected between October and December 2020 through the Google Forms application. The questionnaire contains five group of questions: (G1) resilience measured with 20 questions; (G2) authentic leadership measured with 16 questions; (G3) humility measured with nine questions, (G4) compassion measured with 24 questions, equally distributed by its six dimensions - kindness, common humanity, mindfulness,

indifference, disengagement, and separation, (G5) socio-demographic characteristics with six questions namely gender, age, academic qualifications, seniority in the company, time (in years) of collaboration with the current leader, and a weekly number of working hours.

Regarding socio-demographic characteristics (table 1), 57.8% of the workers surveyed are women; 38.5% are under 30 years old, and 34.9% are between 41 and 50 years old.

31.3% have completed the 9th year of schooling in terms of academic qualifications, 16.5% the 12th year, and 45.9% have a degree. 60.6% have been with the company for less than ten years, 27.5% between 11 and 20 years, and 11.9% for more than 20 years. Concerning the number of years with the leader, 29.4% have been with him for less than one year, 54.1% between 2 and 5 years, and 16.5% for more than five years. 82.6% work at least 40 hours per week.

	Frequency	Valid Percent	Cumulative Percentage
Sex			
Men	46	42,2	42,2
Women	63	57,8	100
Age			
Under 30 years old	42	38,5	38,5
Between 31 and 40 years old	21	19,3	57,8
Between 41 and 50 years old	38	34,9	92,7
Over 50 years old	8	7,3	100
Academic Qualifications			
9th grade	34	31,3	31,3
12th year	18	16,5	47,8
Degree	50	45,9	93,7
Other	7	6,3	100
Length of service in the company			
Less than 10 years	66	60,6	60,6
11 to 20 years old	30	27,5	88,1
More than 20 years	13	11,9	100
Number of years the employee has been with the leader			
Less than 1 year	32	29,4	29,4
From 2 to 5 years	59	54,1	83,5
More than 5 years	18	16,5	100
Number of weekly working hours			
Less than 40 hours	45	41,3	41,3
40 hours	45	41,3	82,6
More than 40 hours	19	17,4	100

Sample Scales

Resilience (G1) is measured by the scale of (Carvalho & Leal, 2012); authentic leadership (G2) is measured by the scale of (Rego et al., 2012); humility (G3) is measured by the scale of (Owens et al., 2013); and compassion (G4) is measured by the scale of (Raes et al., 2011).

Regarding the metrics of the questions, in G1 regarding resilience and G3 a 5-point Likert scale was used, with 1 - the statement does not strictly apply at all to me to 5 - the statement completely applies to me; in G2 of authentic leadership, a 5-point Likert scale was used, with 1 -

never to 5 - often, if not always; in G4 of compassion questions, a 5-point Likert scale was also used, with 1 - rarely, if not never to 5 - almost always, if not always.

Methodology

Given the objective and the way to test the formulated hypotheses, this study uses a quantitative methodology. This type of methodology, which is widely used in social sciences, as is the case of this study, allows, even in small samples, to establish significant relationships between variables, generalise conclusions and replicate the same methods and techniques to other samples (Nikam et al., 2019; Almeida et al., 2017).

The method used is Partial Least Squares (PLS) using Smart PLS 3.0 software (Ringle et al., 2015). This variance-based method assumes a non-distribution of data and combines factor analysis with regression estimation. As the data in our study were collected through questionnaires, the sample data do not have a normal distribution. In addition, many indicators were collected, which were later aggregated into latent variables, as stated in the structural model. On the other hand, the sample is small, and this method optimizes the relationships between the latent variables and, between these and the indicators, allowing not only to identify the significant relationships between them but also to test the formulated hypotheses (Ringle et al., 2020; Hair et al., 2019). Thus, the PLS algorithm was applied to the defined theoretical structural model.

Model Validation

The model obtained by applying the PLS algorithm should be validated in terms of reflective measures and predictive precision. The composite reliability and Cronbach's Alpha were used to assess the internal consistency of the reflective measures. The values obtained in this model are higher than the reference value of 0.70 (Hair et al., 2019) and, as such, the internal convergence is "satisfactory to good". The outer loadings of the model (the connection between the latent variables and the indicators as shown in Figure 2) are greater than 0.50 (reference value). As such, the latent variable explains at least 50% of the variance of each associated indicator. Finally, the Average Variance Extracted (AVE) obtained is also higher than the 0.50 reference value (Hair et al., 2019). Thus, the model meets the conditions imposed by the reflective measures, according to Table 2.

	Authentic Leadership	Common Humanity	Humility	Indifference	Kindness	Mindfulness	Disengagement	Separation	Resilience
Cronbach's Alpha	0.915	0.889	0.905	0.906	0.857	0.767	0.916	0.923	0.936
Composite Reliability	0.926	0.923	0.922	0.896	0.901	0.850	0.925	0.877	0.943
Average Variance Extracted (AVE)	0.540	0.749	0.570	0.688	0.696	0.586	0.757	0.647	0.523

The Fornell-Larcker criterion was also used to assess the discriminant validity of each of the nine latent variables, whereby, each AVE of the latent variables (elements on the main diagonal that are in bold) should be greater than all the square correlations of the latent variables (elements outside the diagonal), as found in this model.

Table 3
RESULTS OF THE APPLICATION OF THE FORNELL-LARCKER CRITERION

	Authentic Leadership	Common Humanity	Humility	Indifference	Kindness	Mindfulness	Disengagement	Separation	Resilience
Authentic Leadership	0.663								
Common Humanity	0.454	0.866							
Humility	0.582	0.622	0.785						
Indifference	-0.102	-0.176	-0.436	0.829					
Kindness	0.433	0.635	0.637	-0.322	0.834				
Mindfulness	0.480	0.719	0.679	-0.305	0.680	0.766			
Not Involved	-0.109	-0.371	-0.426	0.756	-0.488	-0.415	0.870		
Off	-0.138	-0.239	-0.356	0.794	-0.339	-0.297	0.764	0.804	
Resilience	0.538	0.714	0.674	-0.232	0.541	0.686	-0.266	-0.255	0.650

Finally, the predictive precision of the model was validated through the R Square (R^2) values of the endogenous (dependent) latent variables. In social sciences, considering Cohen's (1988) criterion that an R^2 of 0.02 represents a "small" effect, an R^2 of 0.15 represents a "medium" effect and an R^2 of 0.35 represents a "high" effect, in this model the latent variables uninvolved, indifference and disengagement, have a small effect and the remaining variables have a medium effect.

RESULTS

After applying the PLS algorithm, a bootstrap analysis was performed in Smart PLS. This analysis consists of a non-parametric procedure that tests the statistical significance of several PLS results (Ringle et al., 2015) with 95% confidence. The results obtained are shown in Table 4. We can conclude that all latent variables are significant for $p=0.000$, except three dimensions of compassion - indifference, non-involvement, and disengagement, which were not statistically significant.

Table 4
SIGNIFICANCE TESTING RESULTS OF THE STRUCTURAL MODEL PATH COEFFICIENTS

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ((O/STDEV))	P Values
H1: Authentic Leadership -> Resilience	0.538	0.571	0.069	7.782	0.000*
H2: Authentic Leadership -> Humility	0.582	0.605	0.056	10.332	0.000*
H3: Authentic Leadership -> Kindness	0.433	0.454	0.072	5.982	0.000*
H4: Authentic Leadership -> Mindfulness	0.480	0.507	0.061	7.872	0.000*
H5: Authentic Leadership -> Common Humanity	0.454	0.473	0.081	5.579	0.000*
H6: Authentic Leadership -> Indifference	-0.102	-0.036	0.175	0.584	0.560
H7: Authentic Leadership -> Disengagement	-0.109	-0.048	0.185	0.592	0.554
H8: Authentic Leadership -> Separation	-0.138	-0.037	0.182	0.756	0.450

Note: * $p=0.000$. Source: authors' calculations.

When analysing the data obtained by the measurement instruments, we found that LA correlates positively with resilience ($\beta=0.538$), confirming Hypothesis 1. Thus, as Avolio, et al., (2004); Vera & Rodriguez-Lopez (2004) state, authentic leaders, by promoting the humility of employees, provide them with healthy self-confidence and self-esteem, promoting positive self-

development (Walumbwa et al., 2008), as opposed to narcissistic behaviours associated with overconfidence and stubbornness. As argued by (Sinclair & Wallston, 2004), the results show that AL provides greater focus on goals and employees' ability to solve problems, making them more resilient employees, confirming the contributions of (Anwar et al., 2020; Gaddy et al., 2017; Zehir & Narcikara, 2016).

The results further reveal the positive correlation between AL and humility ($\beta=0.582$), therefore reinforcing the contributions of Owens & Hekman (2016); Rego, et al., (2017), which go in the direction that the humility of authentic leaders is contagious to employees, confirming hypothesis 2.

The results also show that authentic leadership has a positive impact on kindness ($\beta=0.433$), mindfulness ($\beta=0.488$) and common humanity ($\beta=0.454$), confirming hypothesis 3, hypothesis 4 and hypothesis 5. As argued (Dutton et al., 2014), authentic leadership has a negative impact on indifference ($\beta=-0.102$), disengagement ($\beta=-0.109$) and separation levels ($\beta=-0.138$). However, these three dimensions of compassion are not statistically significant in explaining authentic leadership. Thus, Hypotheses 6, 7, and 8 are rejected.

CONCLUSIONS, LIMITATIONS OF THE RESEARCH AND AVENUES FOR FUTURE RESEARCH

The world has gone through major societal changes in economic, social, political, cultural, and ethical relations, imposing new conditions on organisations, rebuilding the world of work and business, and impacting the organisational field. In this way, the importance of authentic leadership and its influence on the behaviour of employees and organisations as a whole has been highlighted.

Resilience, humility, and compassion are becoming more and more important in our society due to the constant changes caused by globalisation and the growing competition between organisations, making it essential that their leaders provide conditions for developing these characteristics among employees.

Generally speaking, we can state that our research has shown that authentic leaders arouse more resilience and more humility in their subordinates. On the other hand, this type of leadership seems to have an important influence on compassion, measured by the kindness and common humanity of employees.

This study is interesting in scientific terms. In the literature review conducted, we found no other studies that address the direct influence of authentic leadership on the variables resilience, humility, and *compassion*. On the other hand, this research provides interesting results that may be applied in organisational contexts, at the time of decision-making, concerning the development of employees' capabilities for exceptional individual and collaborative performance.

As for the research limitations, the first limitation relates to the fact that the dependent and independent variables were collected simultaneously and from the same source. We suggest using longitudinal studies in the future, with data concerning the dependent and independent variables being collected at different moments in time.

On the other hand, our study does not predict the influence of different individual characteristics of employees on the levels of resilience, humility, and compassion. We consider that leaders can influence these characteristics of their employees. Still, we do not measure the influence that the individual characteristics of each employee have on there in those variables.

FUNDING

This work is supported by national funds, through the FCT—Portuguese Foundation for

Science and Technology under the project UIDB/04630/2020.

REFERENCES

- Almeida, F., Faria, D., & Queirós. (2017). Strengths and limitations of qualitative and quantitative research methods. *European Journal of Education Studies*, 3(9).
- Anwar, A., Abid, G., & Waqas, A. (2020). Authentic leadership and creativity: Moderated meditation model of resilience and hope in the health sector. *European Journal of Investigation in Health, Psychology and Education*, 10(1), 18-29.
- Avolio, B.J., & Gardner, W.L. (2005). Authentic leadership development: Getting to the root of positive forms of leadership. *The Leadership Quarterly*, 16(3), 315-338.
<https://doi.org/https://doi.org/10.1016/j.leaqua.2005.03.001>
- Avolio, B.J., Gardner, W.L., Walumbwa, F.O., Luthans, F., & May, D.R. (2004). Unlocking the mask: A look at the process by which authentic leaders impact follower attitudes and behaviors. *The Leadership Quarterly*, 15(6), 801-823. <https://doi.org/https://doi.org/10.1016/j.leaqua.2004.09.003>
- Carvalho, C.A.F., & Leal, I.P. (2012). Adaptation of "The Resilience Scale" for the Portuguese adult population. *Psicologia USP*, 23(2), 417-433.
- Carver, C.S. (1998). Resilience and thriving: Issues, models, and linkages. *Journal of Social Issues*, 54(2), 245-266.
- Choi, H.J., Lee, S., No, S.R., & Kim, E.II. (2016). Effects of compassion on employees' self-regulation. *Social Behavior and Personality: An International Journal*, 44(7), 1173-1190.
- De Bruin, B. (2013). Epistemic virtues in business. *Journal of Business Ethics*, 113(4), 583-595.
- Dutton, J.E., Workman, K.M., & Hardin, A.E. (2014). *Compassion at work*.
- Engen, H.G., & Singer, T. (2015). Compassion-based emotion regulation up-regulates experienced positive affect and associated neural networks. *Social Cognitive and Affective Neuroscience*, 10(9), 1291-1301.
- Gaddy, J.W., Gonzalez, S.P., Lathan, C.A., & Graham, P.K. (2017). The perception of authentic leadership on subordinate resilience. *Military Behavioral Health*, 5(1), 64-72.
- George, B., Sims, P., McLean, A.N., & Mayer, D. (2007). Discovering your authentic leadership. *Harvard Business Review*, 85(2), 129.
- Hair, H.J., Hult, G.T.M., Ringle, C., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling, (2nd edition)*. ISBN 978-1-4833-7744-5.
- Hair, J.F., Risher, J.J., Sarstedt, M., & Ringle, C.M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2-24. <https://doi.org/10.1108/EBR-11-2018-0203>.
- Jensen, S.M., & Luthans, F. (2006). Relationship between entrepreneurs' psychological capital and their authentic leadership. *Journal of Managerial Issues*, 254-273.
- Luthans, F., & Youssef, C.M. (2004). *Human, social, and now positive psychological capital management: Investing in people for competitive advantage*.
- Luthans, F., Youssef, C.M., & Avolio, B.J. (2007). Psychological capital: Investing and developing positive organizational behavior. *Positive Organizational Behavior*, 1(2), 9-24.
- Malik, N., & Dhar, R.L. (2017). Authentic leadership and its impact on extra role behaviour of nurses. *Personnel Review*, 46(2), 277-296. <https://doi.org/10.1108/PR-05-2015-0140>
- May, D.R., Chan, A.Y.L., Hodges, T.D., & Avolio, B.J. (2003). Developing the moral component of authentic leadership. *Organizational Dynamics*.
- Mubarak, F., & Noor, A. (2018). Effect of authentic leadership on employee creativity in project-based organizations with the mediating roles of work engagement and psychological empowerment. *Cogent Business & Management*, 5(1), 1. <https://doi.org/10.1080/23311975.2018.1429348>
- Neff, K.D. (2003). The development and validation of a scale to measure self-compassion. *Self and Identity*, 2(3), 223-250. <https://doi.org/10.1080/15298860309027>
- Nikam, V., Abimanyu, J., & Suresh, P. (2019). *Quantitative methods for social sciences*, NIAP, New Delhi. ISBN: 978-81-940080-2-6
- Owens, B.P., & Hekman, D.R. (2016). How does leader humility influence team performance? Exploring the mechanisms of contagion and collective promotion focus. *Academy of Management Journal*, 59(3), 1088-1111.
- Owens, B.P., Johnson, M.D., & Mitchell, T.R. (2013). Expressed humility in organizations: Implications for performance, teams, and leadership. *Organization Science*, 24(5), 1517-1538.
- Raes, F., Pommier, E., Neff, K.D., & Van Gucht, D. (2011). Construction and factorial validation of a short form of the self-compassion scale. *Clinical Psychology & Psychotherapy*, 18(3), 250-255.

- Rego, A., Owens, B., Leal, S., Melo, A.I., Cunha, M.P., Gonçalves, L., & Ribeiro, P. (2017). How leader humility helps teams to be humbler, psychologically stronger, and more effective: A moderated mediation model. *The Leadership Quarterly*, 28(5), 639-658.
- Rego, A., Sousa, F., Marques, C., & e Cunha, M.P. (2012). Authentic leadership promoting employees' psychological capital and creativity. *Journal of Business Research*, 65(3), 429-437.
- Ringle, C.M., Wende, S., & Becker, J.M. (2015). "SmartPLS 3." Boenningstedt: SmartPLS GmbH. <http://www.smartpls.com>.
- Ritchey, F. (2008). *The statistical imagination: Elementary statistics for the social sciences*, (2nd edition).
- Sinclair, V.G., & Wallston, K.A. (2004). The development and psychometric evaluation of the brief resilient coping scale. *Assessment*, 11(1), 94-101. <https://doi.org/10.1177/1073191103258144>.
- Solomon, R.C. (1999). *A better way to think about business: How values become virtues*.
- Vera, D., & Rodriguez-Lopez, A. (2004). Strategic virtues: Humility as a source of competitive advantage. *Organizational Dynamics*, 33(4), 393-408.
- Vieira, C., Castilho, P., & Duarte, J. (2013). *Study of the validation and measurement of the portuguese version of the compassion scale*. Coimbra University.
- Walumbwa, F.O., Avolio, B.J., Gardner, W.L., Wernsing, T.S., & Peterson, S.J. (2008). Authentic leadership: Development and validation of a theory-based measure. *Journal of Management*, 34(1), 89-126.
- Zehir, C., & Narcikara, E. (2016). Effects of resilience on productivity under authentic leadership. *Procedia-Social and Behavioral Sciences*, 235, 250-258.