# **Empirical Article**

## General versus domain-specific grit in the work context

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Researchers have questioned whether grit should be conceptualized and measured as a global (i.e., domain-general) or domain-specific construct. Although evidence is beginning to appear that grit in educational and sport contexts may be measured as domain-specific, it has not yet been explored in the organizational context. The objective of this research was to study the psychometric properties of grit as domain-specific for subsequently analyzing if such domain-specific grit (labor grit) improves the predictive validity of different organizational results. A sample of 326 active workers was used ( $M_{years} = 37.52$ ; SD = 9.85). Their grit levels in the general domain and specific domain were evaluated, as well as their main personality traits and other organizational results such as work engagement and work performance. The grit instrument as domain-specific showed excellent reliability ( $\omega = 0.92$ ), and the unidimensionality of the instrument was confirmed. The results point to the fact that giving an organizational connotation to the grit items does not improve the predictability of the results. However, labor grit adds incremental validity over personality traits and work engagement to predict task and contextual performance ( $\Delta r^2 = 0.13$ ), but not to predict counterproductive behavior.

Key words: Grit, domain-specific, organizational, assessment, work.

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#### INTRODUCTION

Grit is a psychological construct that has been known as passion and perseverance for long-term goals (Duckworth, 2016). Duckworth, Peterson, Matthews, and Kelly (2007) introduce grit as follows: "Grit entails working strenuously toward challenges, maintaining effort and interest over years despite failure, adversity, and plateaus in progress. An individual with grit approaches achievement as a marathon; his or her advantage is stamina" (Duckworth, Peterson, Matthews & Kelly, 2007, p. 1087).

Grit has had great repercussions during the last decade (Datu, 2021; Fernández-Martín, Arco-Tirado & Hervás-Torres, 2020). These repercussions are illustrated by its influence in different fields of psychology, showing positive relationships with several outcomes, such as academic performance (Postigo, Cuesta, Fernández-Alonso, García-Cueto & Muñiz, 2021a; Cuesta, Fernández-Alonso, García-Cueto Postigo. & Muñiz, 2021b; Tang, Wang, Guo & Salmela-Aro, 2019; Tang, Wang, Parada & Salmela-Aro, 2021), mental health (Datu, King, Valdez & Eala, 2019), physical health (Moore, Hussain, Watson et al., 2018), and work (Jordan, Wihler, Hochwarter & Ferris, 2019), among others. Regarding organizational contexts, various studies have shown the relevance of grit (Southwick, Tsay & Duckworth, 2021). Recent research suggests that grittier people are more likely to adopt a strategic mindset toward problemsolving, considering alternative approaches that may be more efficient and effective than their first attempts (Chen, Powers, Katragadda, Cohen & Dweck, 2020). In this way, grit predicts the creation and business success of entrepreneurs (Arco-Tirado, Bojica, Fernández-Martín & Hoyle, 2019; Mooradian, Matzler, Uzelac & Bauer, 2016; Mueller, Wolfe & Syed, 2017; Postigo, Cuesta & García-Cueto, 2021) and job performance in employed

workers (Dugan, Hochstein, Rouziou & Britton, 2019). Furthermore, grit predicts job satisfaction and income, even after controlling for cognitive variables, education levels, and sociodemographic variables such as age and sex (Danner, Lechner & Rammstedt, 2020). It has also been shown to be a good predictor of worker retention in different contexts. It has been able to foretell the permanence of the residents of the general surgery (Salles, Lin, Liebert et al., 2017), who would complete one of the toughest trainings for the United States Army Special Forces (Farina, Thompson, Knapik, Pasiakos, McClung & Lieberman, 2019), as well as which students would persist in the highest-attrition stage at West Point Military Academy (Duckworth, Peterson, Matthews & Kelly, 2007), even controlling for both tenure and prior experience (Eskreis-Winkler, Shulman, Beal & Duckworth, 2014). Managers look for people with grit to reduce the turnover of their company's employees (Rodriguez, Boyer, Fleming & Cohen, 2019). All of this is explained because individuals with grit are more likely to interpret obstacles as problems to solve rather than reasons to give up (Duckworth, 2016; Southwick, Tsay & Duckworth, 2021). Grit is also related to other variables that are important in predicting and explaining job performance. For example, work engagement (Schaufeli, Bakker & Salanova, 2006), which is linked to high levels of job performance (Lesener, Gusy, Jochmann & Wolter, 2020), has shown strong and positive relationships with the grit construct, in both public and private professionals (Ceschi, Sartori, Dickert & Costantini, 2016; Eskreis-Winkler, Shulman & Duckworth, 2014). Suzuki, Tamesue, Asahi, and Ishikawa (2015) analyzed the relationship between grit, various personality constructs, and job performance among 1,134 workers in Japan. Grit was a significant predictor of better job performance, above general personality traits and facets such as

self-control. Along the same lines, burnout, which can be considered the antithesis of engagement (Maslach, Schaufeli & Leiter, 2001), shows negative relationships with grit in different organizational contexts. For example, health personnel, one of the groups most affected by burnout, show inverse relationships between their levels of grit and burnout, in all types of health disciplines (Brateanu, Switzer, Scott et al., 2020; Kim & Lambie, 2018; Shakir, Cappuzzo, Shallwani et al., 2020). In turn, grit serves as a protective factor against exhaustioncounterproductive work behavior (Ceschi, Sartori, Dickert & Costantini, 2016; Ceschi, Tommasi, Costantini, Malavasi, Dickert & Sartori, 2021) and supervisor incivility-perceived workability (Kabat-Farr, Walsh & McGonagle, 2019). Furthermore, as organizational modulating antecedents of grit, leadership, culture, and job design are identified. For instance, employees who are supervised by humble leaders are more likely to be engaged (Owens, Johnson & Mitchell, 2013), while authoritarian leadership tends to encourage passion and perseverance (Owens, Johnson & Mitchell, 2013; Southwick, Tsay & Duckworth, 2021).

However, like any new construct in psychology, grit has shown different controversies and debates when it comes to gaining a niche in the field of personality. The first great debate has to do with the difficulty of finding a substantive framework that differentiates it from other more classical psychological constructs, such as self-efficacy or conscientiousness. Selfefficacy, or a person's belief in their ability to use behaviors that influence events that affect their lives (Bandura, 1977), is closely related to grit (Oriol, Miranda, Oyanedel & Torres, 2017; Usher, Li, Butz & Rojas, 2019), finding correlations (r) around 0.70 (e.g., Postigo, Cuesta, García-Cueto, Menéndez-Aller, González-Nuevo & Muñiz, 2020). However, core self-evaluations, such as self-efficacy, do not contemplate passion or a long-term framework (Southwick, Tsay & Duckworth, 2021). Also, grit has been strongly related to different types of passions, such as harmonious and obsessive passion or attainment passion (Jachimowicz, Wihler, Bailey & Galinsky, 2018). In relation to the first two, a study by Von Culin, Tsukayama, and Duckworth (2014) showed that grit correlates positively with harmonious passion, rather than obsessive. Furthermore, individuals with grit tend to seek happiness in life through meaningful prosocial purposes (such as attention-absorbing activities/tasks; consistency) rather than small pleasurable moments (intensity). Referring to passion attainment, this is seen as complementary to grit, because higher passion attainment increases the influence of grit on different achievement goals (Jachimowicz, Wihler, Bailey & Galinsky, 2018). For its part, conscientiousness is defined as the tendency to be self-controlled, responsible to others, hardworking, orderly, and rule-abiding (Roberts, Jackson, Fayard, Edmonds & Meints, 2009). Credé, Tynan, and Harms (2017) showed in their meta-analysis that the global construct of grit has a very high correlation (r = 0.84) with conscientiousness. However, it is beginning to be established that both constructs have different levels of conceptual hierarchy (Schmidt, Nagy, Fleckenstein, Möller & Retelsdorf, 2018), so that grit, due to its more proactive nature, would be considered a facet of conscientiousness (Wolff, Schmidt, Borzikowsky, Möller & Wagner, 2020). However, grit differs from other facets of conscientiousness such as productiveness, responsibility, organization, and self-control. These facets do not specify the passion component, and in addition, grit differs in its emphasis on long-term stamina rather than short-term intensity (Duckworth, Peterson, Matthews & Kelly, 2007). Specifically, it has shown very high relationships with the productiveness facet (Schmidt, Nagy, Fleckenstein, Möller & Retelsdorf, 2018), to such an extent that some authors have already called the relationship between both constructs a jangle fallacy or new wine in an old bottle (Ponnock, Muenks, Morell, Yang, Gladstone & Wigfield, 2020; Schmidt, Lechner & Danner, 2020). However, other authors state that, although very close relationships are found between both constructs, grit is not reduced to productiveness (Duckworth, Peterson, Matthews & Kelly, 2007; Duckworth, Taxer, Eskreiswinkler, Galla & Gross, 2019; Postigo, Cuesta, García-Cueto, Menéndez-Aller, González-Nuevo & Muñiz, 2020; Werner, Milyavskaya, Klimo & Levine, 2019). Postigo et al. (2023) examined extrinsic convergent validity evidence of a grit scale (EGO), analyzing whether it demonstrated similar relationships with other variables as the Grit-S scale (not jingle fallacy) and different relationships with facets of conscientiousness (not jangle fallacy). The scale exhibits similar correlations regarding facets of conscientiousness, but it demonstrated higher correlations with motivational variables (self-efficacy and achievement motivation), while the Grit-S scale showed higher correlations with selfcontrol. Additionally, Southwick, Tsay, and Duckworth (2021) conclude that, even though both constructs share perseverance and a dispositional personality, grit would include passion (consistency of interests) and a long-term framework, of which productiveness would not be characterized, understood as work ethic and persistence while pursuing goals (Soto & John, 2017). For their part, Meriac, Slifka, and LaBat (2015) analyzed the extent to which redundancy existed in work ethic (productiveness) and grit in a sample of 322 university students who were in an active state of employment. Work ethic and grit were highly correlated, but productiveness explained a part of the variance of job satisfaction and turnover intentions that grit did not explain, leading to the conclusion that they are different constructs. In other words, productiveness may be more strongly associated with the intrinsic rewards a person derives from their work and their finding it more meaningful. However, even though both grit and productiveness were negatively related to stress, grit explained incremental variance in stress beyond productiveness. As Meriac, Slifka, and LaBat (2015) explained, individuals with more grit might have different coping strategies when encountering stressful situations in their professional lives. Thus, when these individuals encounter adversity, they may be more likely to adapt and approach situations in ways that are less likely to induce stress. Finally, grit in an organizational context is not reduced to work engagement. As mentioned previously, personal resources such as perseverance and consistency of interest enhance work engagement (Suzuki, Tamesue, Asahi & Ishikawa, 2015). In turn, employees are more likely to persevere if they perceive their work as meaningful (specially, absorption, dedication, and engagement), and they will perceive their work as meaningful if they are given more freedom to decide how they want to work (Singh & Chopra, 2018).

Another important debate has to do with considering grit as dispositional (vs. activity-specific). From a domain-general

perspective, grit is usually viewed as a stable personality trait, whereas from a domain-specific perspective, it is typically regarded as a trait-like characteristic, which is more malleable compared with domain-general grit. Given the designation of grit as a personality trait (Duckworth, Peterson, Matthews & Kelly, 2007; Duckworth & Quinn, 2009), individuals with grit are expected to demonstrate grit enduringly and consistently across time and context. In fact, in the initial study by Duckworth, Peterson, Matthews, and Kelly (2007), the same measurement instrument (Grit Scale) is used to evaluate the grit construct in different disciplines (educational context, Military Academy, and National Spelling Bee in the United States). Along these lines, both the Grit Scale (Duckworth, Peterson, Matthews & Kelly, 2007) and its short version (Grit-S; Duckworth & Quinn, 2009) have been used without distinction in a multitude of contexts (e.g., Eskreis-Winkler, Shulman, Beal & Duckworth, 2014) and cultures. However, Duckworth and Quinn (2009) invite us to explore the specific aspects versus the general aspects of the grit domain. Since then, various authors have opted to measure grit as domain-specific (Clark & Malecki, 2019; Cormier, Dunn & Dunn, 2019; Morell, Yang, Gladstone, Faust, Ponnock & Wigfield, 2021; Postigo, Cuesta, Fernández-Alonso, García-Cueto & Muñiz, 2021a; Schmidt, Fleckenstein, Retelsdorf, Eskreis-winkler & Möller, 2019; Sudina, Vernon, Foster et al., 2021). In the educational context, Clark and Malecki (2019) showed that after controlling grit, academic grit accounted for an additional 9.60% of the variance in academic achievements. For their part, Cormier, Dunn, and Dunn (2019) were limited to the fact that the items on the Grit Scale were preceded by the phrase "As an athlete in sport ..." or "In my academic pursuits ...," thus giving them a sports and academic connotation, respectively. These authors revealed that grit scores varied depending on the sports, academic, or life context in general, finding that grit as domain-specific increases the predictive capacity of academic performance in university students by 20% and in high school students by 9%. Regarding the variation of grit as a function of time, there has also been evidence of its low stability, since longitudinal studies have begun to show variations in grit levels over time, in both adolescents (Peña & Duckworth, 2018; Tang, Wang, Parada & Salmela-Aro, 2021) and young adults (Wolff, Schmidt, Borzikowsky, Möller & Wagner, 2020).

In short, it has been shown that this construct helps to explain certain organizational outcomes. Grit is usually characterized by passion, perseverance, an extended time frame, and disposition (vs. activity-specific). However, this last characteristic must be studied in the organizational context. In general, studies in the organizational context measure grit as domain-general, making it necessary to study grit as domain-specific. For the main objective, we will study the descriptive statistics and the discrimination index of the new scale items, if these items exhibit differential item functioning (DIF) based on sex, evidence of validity in terms of their internal structure, or in relation to other variables, as well as the reliability of the scale scores. Additionally, analyzing whether grit is domain-specific (labor grit) improves the predictive validity of different organizational results, or instead, the starting hypothesis about grit invariance across contexts should be maintained (Duckworth, Peterson, Matthews & Kelly, 2007).

Finally, we will study whether labor grit predicts job performance beyond the five major personality traits (the facets of conscientiousness [organization, productiveness, and responsibility] included; Soto & John, 2017) and work engagement. For the main objective, a new scale of labor grit will be developed. We follow the criteria laid down by the European Federation of Psychological Associations (EFPA) for test evaluation and the Standards for Educational and Psychological Evaluation (AERA, APA, NCME, 2014), along with the recommendations from current psychometric literature (Lane et al., 2016; Muñiz & Fonseca-Pedrero, 2019). This new scale, derived from the EGO scale, is expected to show adequate psychometric properties. Specifically, it is expected to show a good fit to a unidimensional model (like the EGO scale), good reliability of its scores, and adequate evidence of validity in relation to other variables of its nomological network, such as the variables that compose the Big Five and, especially, conscientiousness (Schmidt, Lechner & Danner, 2020; Schmidt, Nagy, Fleckenstein, Möller & Retelsdorf, 2018). Also, it should show good discriminative capacity as a function of the level of command and supervision at work (Kabat-Farr, Walsh & McGonagle, 2019). Additionally, it is expected that grit, measured as domain-specific (labor grit), will improve the predictive validity of different organizational outcomes, as it occurs in other contexts such as schools and sports (Clark & Malecki, 2019; Cormier, Dunn & Dunn, 2019). Finally, labor grit, measured through the new scale, is expected to provide incremental validity of different indicators of job performance (task performance, contextual performance, and counterproductive behavior). Following previous studies (Ceschi, Sartori, Dickert & Costantini, 2016; Danner, Lechner & Rammstedt, 2020; Meriac, Slifka & LaBat, 2015; Singh & Chopra, 2018; Suzuki, Tamesue, Asahi & Ishikawa, 2015), labor grit should provide differentiating aspects to predict job performance, above the Big Five, conscientiousness facets, and work engagement (vigor, dedication, and absorption).

## METHOD

#### Participants

The sample was initially made up of 356 workers from the general Spanish population. The sampling type was incidental. The final sample comprised 326 participants after removing 8.5% for responding incorrectly to two or more items in the attentional control scale or for responding "completely agree or disagree" in all of the sincerity questions. Both are described in the Instruments section. The members of the sample were between 20 and 71 years old, with a mean age of 37.52 and a standard deviation of 9.85 years, and 56.1% were women. Almost two-thirds (64.1%) work in the private sector, one-third (30.1%) supervise at their jobs, and almost three-quarters (72.7%) have engaged in university studies. Almost three-quarters (74%) work in the service sector.

#### Instruments

Oviedo Grit Scale (EGO) and Oviedo Grit Scale at Work (WEGO). The EGO (Postigo, Cuesta, García-Cueto, Menéndez-Aller, González-Nuevo & Muñiz, 2020) is a unidimensional 10-item questionnaire that assesses grit. The EGO assesses grit as a combination of perseverance and long-term passion toward proposed goals. The items are formulated on a Likert scale that ranges from 1 (totally disagree) to 5 (totally agree). The instrument has excellent reliability ( $\alpha = 0.94$ ), as well as good validity evidence (Postigo, Cuesta, García-Cueto, Menéndez-Aller, González-Nuevo & Muñiz, 2020). Reliability ( $\alpha$ ) in the present study was 0.91.

Additionally, to refer to the organizational context, two experts in psychometry and an expert in organizational psychology modified, in a consensual way, the 10 items that make up the EGO, developing the EGO at work (WEGO; Table 1). The idea was to give an organizational connotation to each of the items to study the domain-specific character of grit in a work context. In this sense, the WEGO assesses grit as a combination of perseverance and long-term passion toward proposed work-related goals, considering the work context across all scale indicators. As seen in the EGO (Postigo, Cuesta, García-Cueto, Menéndez-Aller, González-Nuevo & Muñiz, 2020), the items are on a Likert scale that ranges from 1 (*totally disagree*) to 5 (*totally agree*).

The Utrecht Work Engagement Scale (UWES-9). The UWES-9 (Schaufeli, Bakker & Salanova, 2006) is a nine-item self-report scale that assesses work engagement grouped into three subscales with three items each: vigor, dedication, and absorption. All items are scored on a seven-point frequency rating scale ranging from 0 (*never*) to 6 (*always*). The reliability ( $\alpha$ ) in the present study was as follows: Vigor: 0.76; Dedication: 0.87; Absorption: 0.78.

Individual Work Performance Questionnaire (IWPQ). The IWPQ (Koopmans, 2015) assesses the most relevant outcome in organizational psychology and individual performance, which can be defined as "behaviors or actions that are relevant to the goals of the organization" (Campbell, 1990, p. 704). It comprehends a multidimensional construct with three dimensions: task performance (the proficiency with which individuals perform the core tasks for their job), contextual performance (behaviors that support the organizational and psychological environment in which the technical core must function: for example, demonstrating effort, cooperating, and communicating), and counterproductive behavior (the behavior that harms the well-being of the organization). All items have a recall period of 3 months and a five-point rating scale (0 = seldomto 4 = always for the task and contextual performance, and 0 = never to 4 = often for counterproductive work behavior). In the current research, a Spanish version was used (Ramos-Villagrasa, Barrada, Fernández del Río & Koopmans, 2019). The ceiling effect in the task performance scale of the IWPQ is usual (DeNisi & Murphy, 2017). In our data, only 13% of participants obtained the maximum score, which seems like a relatively small effect. The reliability  $(\alpha)$  in the present study was as follows: Task performance: 0.77; Contextual performance: 0.83; Counterproductive behavior: 0.69

The Next Big Five Inventory (BFI-2). Big Five personality traits facets were assessed with the BFI-2 (Soto & John, 2017). The BFI-2

facets were constructed to strike a balance between bandwidth and fidelity. The aim was to represent the empirically most prominent, and distinguishable, facets of each domain in a parsimonious fashion. Along these lines, the BFI-2 assesses three facets (four items per facet) for each of the five major personality traits (conscientiousness, extraversion, open-mindedness, negative emotionality, and agreeableness). The Spanish version of the BFI-2 was used (Gallardo-Pujol, Rouco, Cortijos-Bernabeu, Oceja, Soto & John, 2021). For the present study, conscientiousness and negative emotionality, and their corresponding facets, were used. The reliability ( $\alpha$ ) for each of the variables was as follows: Conscientiousness: 0.88; Organization: 0.85; Productivity: 0.71; Responsibility: 0.65; Negative emotionality: 0.88; Agreeableness: 0.78; Extraversion: 0.82; and Open-mindedness: 0.81.

Attentional Control Scale. This is a 10-item scale with five-point Likert-type responses. This scale aims to detect participants who answer the questions carelessly. The items were constructed in the following way: "In this question, please select option four." These items were interspersed between the items in the different scales. People were eliminated from the study if they answered two or more of the 10 attentional control questions incorrectly. In other words, participants were allowed to fail a maximum of one attentional question. If people failed more than one question, it was considered that they were not answering the study questions rigorously and could distort the results.

Sincerity Scale. This is a four-item scale that measures sincerity (Vigil-Colet, Morales-Vives, Camps, Tous & Lorenzo-Seva, 2013) on a Likert scale from 1 (completely disagree) to 5 (completely agree). The items deal with obvious questions, from which marking the option "completely agree" or "completely disagree" (depending on the item direction) it is inferred that the person may be exaggerating his/her answers. Obtaining a total of 20 points (marking four questions with the options "completely agree" or "completely disagree") was the reason for exclusion from the study. An example of an item is "I have occasionally said something bad about someone." As can be seen, these are obvious or exaggerated statements that should not lead to the extreme score of agreeing or disagreeing with the four questions. It is understandable that a person may completely agree (or disagree) with any of the questions. However, it is also understood that, if people answer the extreme alternative in all four questions, they are trying to present a socially desirable image, which may lead to a distortion of their results.

#### Procedure

We began by contacting potential participants who met our inclusion criteria. These were to be over 18 years old and actively employed/ working, regardless of age, salary, or employment sector, including whether private, public, or non-profit. Potential participants were contacted

Table	1.	Descriptive	statistics of	of the	items	in the	Oviedo	Grit	Scale	at Wor	k (WEGO	)
				**								

Item	Mean	SD	Sk	K	D.I	F.L
1. When I set myself an objective at work, I continue until I achieve it.	4.49	0.65	-1.31	2.73	0.601	0.705
2. In my job, I do what I set out to do.	4.09	0.73	-0.77	1.54	0.482	0.578
3. I am consistent in my professional interests.	4.18	0.80	-0.74	0.19	0.688	0.784
4. I am clear about my professional objectives.	4.05	0.95	-0.83	0.22	0.490	0.574
5. Even though my professional results seem so far away, I give the best version of myself at work to get	4.36	0.75	-1.34	2.76	0.645	0.777
closer to them.						
6. During my workday, I work hard every day to get closer to my professional goals.	4.27	0.82	-1.05	1.18	0.657	0.777
7. When I have a work project in mind, I do everything possible to get it done.	4.17	0.82	-0.73	0.07	0.611	0.739
8. I spend as much time and energy as I can on reaching my professional goals.	3.83	0.92	-0.54	-0.03	0.635	0.728
9. If I set myself something to do at work, I will work on it until I achieve it.	4.36	0.72	-1.20	2.44	0.684	0.826
10. At work, I finish what I start.	4.48	0.65	-1.27	2.56	0.582	0.701
Total Grit score	42.28	5.41	-0.90	2.71	-	-

Note: SD = standard deviation; Sk = skewness; K = kurtosis; D.I = discrimination index; F.L = factor loading.

through social and professional networks (LinkedIn and business organizations). We asked the potential participants to complete the online questionnaire, to provide contact details for other potential participants, and to publicize the online questionnaire to other potential participants (who met the inclusion criteria). We repeated the same request with these new participants. This procedure lasted 3 months (December 2020–March 2021). The mean time taken for respondents to complete the questionnaire was 30 min. The items from each scale were randomly applied, along with the items from the attentional control scale, with the condition that items measuring the same trait could not follow each other. The participants received no remuneration for their participation. Participation was anonymous, and confidentiality was maintained following data protection and privacy laws (Organic Law 3/2018, 5 December, on Protection of Personal Data and Assurance of Digital Rights).

#### Data analysis

Psychometric properties of the WEGO scale. Firstly, an exploratory factor analysis (EFA) was performed to examine the dimensionality of the WEGO instrument. We used KMO and the Bartlett statistic to assess the suitability of the data for factorial analysis. The EFA was performed on the polychoric correlation matrix, using unweighted least squares (ULS) as the estimation method (Ferrando & Lorenzo-Seva, 2017). The dimensionality of the instrument was determined by the optimal implementation of parallel analysis (Timmerman & Lorenzo-Seva, 2011) with 1,000 random correlation matrices. In addition, we used unidimensional congruence (UniCo), explained common variance (ECV), and mean of item residual absolute loadings (MIREAL) to examine how well the data fit a single dimension. The following values support treating the data as essentially unidimensional: UniCo > 0.95; ECV > 0.85; MIREAL < 0.30 (Calderón-Garrido et al., 2019). We used the comparative fit index (CFI) and the root mean square error of approximation (RMSEA) as indices of fit, establishing a good fit when CFI > 0.95 and RMSEA < 0.08 (Hu & Bentler, 1999).

Secondly, the descriptive statistics (mean, standard deviation, skewness, and kurtosis) of the 10 items in the new instrument WEGO were examined. The item-test correlations (discrimination index) were analyzed for each item. All items were considered suitable when reaching 0.20 or above (Muñiz & Fonseca-Pedrero, 2019). We assessed whether items had an impact based on sex. For those items that did, we examined DIF using logistic regression (Gómez-Benito et al., 2013). Also, we carried out a reliability analysis via the alpha coefficient for ordinal data (Elosua & Zumbo, 2008) and McDonald's Omega coefficient (McDonald, 1999).

Thirdly, as evidence of validity, a Pearson correlation was calculated between the WEGO and EGO scales and the following: (a) facets of conscientiousness (organization, productiveness, and responsibility) and (b) three dimensions of work engagement (vigor, dedication, and absorption). As evidence of divergent validity, the Pearson correlation was calculated between WEGO and EGO and the facets of negative emotionality (AERA, APA, NCME, 2014).

Fourthly, the discriminative capacity of the WEGO instrument was studied between those who had supervisory tasks at work and those who did not. For this purpose, a *t*-test of mean differences for independent samples was performed. In turn, a one-factor ANOVA was analyzed to study the possible differences between the types of management in the company or labor level (employee, middle management, and management). The Bonferroni post hoc test was used to study the differences between groups. Cohen's *d* was used as an effect size estimator, with between 0.20 and 0.40 being considered a small effect size, between 0.50 and 0.80 a medium effect size, and greater than 0.80 a large effect size (Cohen, 1988).

*EGO versus WEGO*. To assess the differences between the EGO and WEGO in the relationships with other variables, a Pearson correlations matrix was performed between the EGO, the WEGO, and the Big Five (extraversion, negative emotionality, open-mindedness, agreeableness, and conscientiousness facets), work engagement (vigor, absorption, and dedication), and job performance (task and contextual performance, and

counterproductive behavior). Fisher's z transformation was used to test the differences between the EGO and WEGO correlations.

*Grit predictive capacity.* To analyze the predictive capacity of grit on work performance, a hierarchical multiple linear regression was carried out, entering a set of variables in each of the steps (using the forced-entry method): (a) Big Five, except the conscientiousness that was observed in it, counts its three facets: organization, productivity, and responsibility; (b) the three dimensions of work engagement: absorption, vigor, and dedication; and (c) labor grit. The objective was to study the predictive capacity that each set of variables was adding. In each of the regressions, this procedure was carried out, considering the task performance, the contextual performance, and the counterproductive behavior as the dependent variable in each of the cases. The coefficient of determination  $(R^2)$  was used to analyze the percentage of explained variance.

The descriptive statistics, the DIF, the Pearson correlations, the differences between groups, and the multiple regressions were calculated using the SPSS 24 statistics package. The EFAs and the reliability coefficients were produced using FACTOR 10.5.03 (Ferrando & Lorenzo-Seva, 2017).

#### RESULTS

#### Psychometric properties of the WEGO scale

Firstly, in the EFA, both the KMO (0.904) and Bartlett's statistic (p < 0.001) demonstrated that the data were suitable for factorial analysis. A single factor explained 56.8% of the total variance, the optimal implementation of parallel analysis suggested a single dimension, and we found the following indicators for a unidimensional structure: UniCo = 0.978, ECV = 0.895, MIREAL = 0.204. In addition, the fit indices were adequate, CFI = 0.988, and RMSEA = 0.067. With the results obtained, it seemed wise to maintain the hypothesis that a single factor was sufficient to demonstrate the psychological processes that could explain grit (Calderón-Garrido, Navarro-González, Lorenzo-Seva & Ferrando, 2019).

Secondly, the descriptive statistics for the items (Table 1) were assessed. The values for each item in skewness and kurtosis were appropriate. The discriminatory power for each of the items was very high (D.I: [0.629–0.764]). In addition to this, the item correlations are shown in Table 2. The correlations between the items are moderate to high. None of the items exhibited impact or DIF based on sex, whose results are shown in Table 3.

We continued by examining the instrument's reliability. Both Cronbach's alpha and McDonald's omega demonstrated excellent reliability ( $\alpha = 0.91$ ;  $\omega = 0.92$ ).

Regarding validity evidence between the WEGO and other variables, Table 2 shows the Pearson correlations. The correlation between the WEGO and conscientiousness was high, particularly with the productiveness dimension. In addition, the WEGO demonstrated relationships with different dimensions of work engagement. This is all evidence of convergent validity. As evidence of discriminant validity, the WEGO instrument exhibited weak correlations with negative emotionality and open-mindedness.

Regarding the discriminative capacity of the new WEGO scale, people who supervised at work (M = 43.42; SD = 4.70) showed statistically significant differences (t = 2.51; p = 0.012) from those who did not have supervisory tasks (M = 41.79; SD = 5.63), with a small effect size (d = 0.33). Similarly,

Table 2.	Correlations	between	the	items	of the	WEGO	scale
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	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9	Item 10
Item 1	0.376	0.407	0.271	0.424	0.455	0.462	0.381	0.539	0.531
Item 2		0.425	0.325	0.305	0.322	0.247	0.301	0.316	0.513
Item 3			0.511	0.533	0.517	0.448	0.490	0.496	0.421
Item 4				0.367	0.293	0.314	0.411	0.336	0.280
Item 5					0.569	0.409	0.484	0.540	0.399
Item 6						0.487	0.518	0.525	0.435
Item 7							0.534	0.577	0.359
Item 8								0.481	0.339
Item 9									0.472

Table 3. Differential item functioning of the WEGO scale items

	Chi-square	р
1. When I set myself an objective at work, I continue until I achieve it.	1.228	0.541
2. In my job, I do what I set out to do.	0.160	0.923
3. I am consistent in my professional interests.	0.674	0.714
4. I am clear about my professional objectives.	2.883	0.237
5. Even though my professional results seem so far away, I give the best version of myself at work to get closer to them.	1.047	0.592
6. During my workday, I work hard every day to get closer to my professional goals.	2.001	0.368
7. When I have a work project in mind, I do everything possible to get it done.	0.162	0.922
8. I spend as much time and energy as I can on reaching my professional goals.	4.334	0.115
9. If I set myself something to do at work, I will work on it until I achieve it.	5.438	0.066
10. At work, I finish what I start.	2.034	0.362

according to the ANOVA, individuals differed in levels of labor grit in function of the type of management they had in their company (F = 5.50; p = 0.004). People who were employees in their company (M = 41.66; SD = 5.61) showed statistically significant differences in labor grit (p = 0.049; d = 0.42) compared with people in managerial positions (M = 43.97; SD = 4.45) and also with those in middle management (M = 43.74; SD = 4.63), with a small effect size (p = 0.027; d = 0.38). However, between managers and middle managers there was no statistically significant difference in labor grit (p = 0.999).

#### EGO versus WEGO

Table 4 shows the Pearson correlations between the WEGO, the EGO, and other variables. The correlation between both grit

instrument versions was very high (r = 0.930). The highest correlations were found with contextual performance (WEGO, r = 0.689; EGO, r = 0.659) and task performance (WEGO, r = 0.654; EGO, r = 0.661) and productiveness (WEGO, r = 0.609; EGO, r = 0.602). In general, most of the variables showed the highest relationship with the WEGO in comparison with the EGO, but none of the differences were significant (Fisher's z transformation in Table 4). Therefore, the EGO and WEGO have the same predictability ( $r^2$ ).

## >Grit predictive capacity

The results of the hierarchical linear regressions are shown in Table 5, with those variables that entered the model of each set (step), as well as the increase in the coefficient of determination  $(r^2)$  on the different dependent variables (task performance,

Table 4. Pearson correlations between the WEGO, EGO, BFI-2, UWES-9, and IWPQ instruments

	WEGO	EGO	z (p)		WEGO	EGO	z (p)
EGO	0.930	_		BFI-2			
UWES-9				Conscientiousness	0.514	0.513	0.02 (0.492)
Vigor	0.469	0.445	0.40 (0.345)	Organization	0.308	0.308	_
Absorption	0.438	0.399	0.63 (0.264)	Productiveness	0.609	0.602	0.15 (0.440)
Dedication	0.427	0.395	0.51 (0.305)	Responsibility	0.455	0.458	-0.05 (0.480
IWPQ				Negative emotionality	-0.147	-0.150	-0.04 (0.484
Task performance	0.654	0.661	-0.16 (0.436)	Extraversion	0.387	0.394	-0.10 (0.460
Contextual performance	0.689	0.659	0.73 (0.233)	Open-mindedness	0.185	0.171	-0.18 (0.428
Counterproductive behavior	-0.258	-0.232	0.37 (0.356)	Agreeableness	0.362	0.328	0.49 (0.312)

Note: UWES-9 = Utrecht Work Engagement Scale; EGO = Oviedo Grit Scale; WEGO = Oviedo Grit Scale at Work; IWPQ = Individual Work Performance Questionnaire.

## Table 5. Hierarchical multiple linear regression to predict work performance

Dependent variable		New set of variables that is introduced into the model	Variables that enter the model	Beta	<i>p</i> -value	$R^{2}\left(p ight)$
Task performance	Model 1	Big five	Organization	0.042	0.479	0.393 (<0.001)
			Productiveness	0.414	< 0.001	
			Responsibility	0.082	0.231	
			Negative emotionality	-0.149	0.003	
			Extraversion	0.094	0.079	
			Open-mindedness	-0.025	0.593	
			Agreeableness	0.042	0.427	
	Model 2	Work engagement	Organization	0.054	0.375	0.407 (0.054)
			Productiveness	0.375	< 0.001	
			Responsibility	0.094	0.174	
			Negative emotionality	-0.127	0.015	
			Extraversion	0.055	0.322	
			Open-mindedness	-0.028	0.554	
			Agreeableness	0.026	0.618	
			Dedication	0.083	0.255	
			Vigor	0.077	0.333	
		·	Absorption	-0.010	0.8/1	
	Model 3	Labor grit	Organization	0.065	0.232	0.536 (<0.001)
			Productiveness	0.169	0.009	
			Responsibility	0.051	0.405	
			Negative emotionality	-0.181	< 0.001	
			Extraversion	0.022	0.653	
			Open-mindedness	-0.026	0.530	
			Agreeableness	-0.050	0.291	
			Dedication	0.038	0.556	
			Vigor	0.060	0.398	
			Absorption	-0.118	0.042	
Contented and content	M- 4-1 1		Labor grit	0.504	< 0.001	0.204 (<0.001)
Contextual performance	Model 1	Big five	Organization	-0.153	0.017	0.304 (<0.001)
			Productiveness	0.484	< 0.001	
			Responsibility	0.014	0.851	
			Regative emotionality	0.041	0.437	
			Extraversion	0.128	0.025	
			A groephleness	0.102	0.043	
	Model 2	Wark angegement	Agreeableness	0.060	0.287	0 420 (<0.001)
	Widdel 2	work engagement	Productiveness	-0.005	<0.001	0.429 (<0.001)
			Pageongibility	0.330	<0.001	
			Negative emotionality	0.004	0.932	
			Extraversion	0.042	0.303	
			Open-mindedness	0.050	0.063	
			Agreeableness	0.000	0.400	
			Dedication	0.122	0.091	
			Vigor	0.063	0.419	
			Absorption	0.251	<0.001	
	Model 3	Labor grit	Organization	-0.055	0.303	0.554 (<0.001)
			Productiveness	0.153	0.016	
			Responsibility	-0.038	0.527	
			Negative emotionality	-0.011	.809	
			Extraversion	0.024	0.623	
			Open-mindedness	0.088	0.032	
			Agreeableness	-0.032	0.496	
			Dedication	0.077	0.226	
			Vigor	0.046	0.506	
			Absorption	0.144	0.012	
			Labor grit	0.496	< 0.001	
Counterproductive behavior	Model 1	Big Five	Organization	-0.056	0.400	0.263 (<0.001)
•		-	Productiveness	-0.054	0.460	· · /
			Responsibility	0.017	0.825	
			Negative emotionality	0.351	< 0.001	
			Extraversion	-0.098	0.096	
			Open-mindedness	0.008	0.881	

(continued)

Table 5. (continued)

Dependent variable		New set of variables that is introduced into the model	Variables that enter the model	Beta	<i>p</i> -value	$R^2(p)$
			Agreeableness	-0.164	0.005	
	Model 2	Work engagement	Organization	-0.068	0.288	0.360 (0.054)
			Productiveness	-0.003	0.964	
			Responsibility	0.002	0.980	
			Negative emotionality	0.307	< 0.001	
			Extraversion	-0.021	0.709	
			Open-mindedness	0.005	0.913	
			Agreeableness	-0.134	0.016	
			Dedication	-0.405	< 0.001	
			Vigor	-0.001	0.989	
			Absorption	0.112	0.093	
	Model 3	Labor grit	Organization	-0.068	0.286	0.360 (0.744)
			Productiveness	.005	0.945	
			Responsibility	0.004	0.961	
			Negative emotionality	0.310	< 0.001	
			Extraversion	-0.020	0.727	
			Open-mindedness	0.005	0.914	
			Agreeableness	-0.130	0.021	
			Dedication	-0.403	< 0.001	
			Vigor	0.000	0.996	
			Absorption	0.117	0.087	
			Labor grit	-0.021	0.744	

contextual performance, and counterproductive behavior). In the case of the Big Five model's task performance, only the negative emotionality and the productiveness facets are statistically significant in the model, explaining 39.3% of the variance. In the second step, in which work engagement is included, it shows that none of the three dimensions of work engagement are statistically significant in the model without the change in  $r^2$  being significant. In the last step, labor grit is included in the model, explaining 53.6% of the variance, with a high predictive power above the personality and work engagement variables.

In the case of contextual performance, in the first step, more personality variables are statistically significant in the model than task performance (extraversion, open-mindedness, and the organization and productiveness facets), explaining 30.4% of the contextual performance. When work engagement is introduced into the model (step 2), all personality variables are no longer significant except for productiveness, which together with the absorption variable of work engagement explain 42.9% of the variance. Finally, the introduction of labor grit in the model (step 3) is significant, explaining 55.4% together with open-mindedness, productiveness, and absorption.

In the case of counterproductive behavior, the results are somewhat different. Regarding the general personality variables (step 1), agreeableness (negative) and negative emotionality are the variables that enter the model, explaining 26.3% of the variance. In step 2, the work engagement variable dedication is statistically significant in the model, explaining 36% of the variance together with agreeableness and negative emotionality. Finally, labor grit (step 3) is not significant and therefore does not show predictive power on the personality and work engagement variables to explain the counterproductive behavior.

## DISCUSSION AND CONCLUSIONS

Grit predicts several work outcomes (Danner, Lechner & 2020; Eskreis-Winkler, Rammstedt, Shulman, Beal & Duckworth, 2014; Postigo, Cuesta & García-Cueto, 2021; Rodriguez, Boyer, Fleming & Cohen, 2019) beginning to be important in the organizational context (Southwick, Tsay & Duckworth, 2021). Furthermore, grit has been proposed as a domain-general construct, evaluating it in multiple contexts without distinction (Duckworth, Peterson, Matthews & Kelly, 2007). However, various studies have shown that grit predicts better results when measured as a domain-specific construct (Clark & Malecki, 2019; Cormier, Dunn & Dunn, 2019). In this line, this study sought to determine whether grit is best conceptualized and measured as a global (i.e., domaingeneral) construct or as a domain-specific construct in the organizational context. This general objective was broken down into three specific objectives: (1) to develop a new labor grit scale (as organizationally domain-specific); (2) to analyze whether grit as organizationally domain-specific (labor grit) improves the predictive validity of different organizational results; and (3) to study whether labor grit predicts job performance beyond the five major personality traits and work engagement.

Firstly, the EGO scale (Postigo, Cuesta, García-Cueto, Menéndez-Aller, González-Nuevo & Muñiz, 2020) was used to evaluate grit. The EGO is a one-dimensional 10-item instrument that has shown that even considering both facets of grit (perseverance of effort and consistency of interests), a single factor is sufficient to explain the behaviors underlying grit. In the present study, each of the items was reformulated, giving them an organizational connotation to study grit as domain-specific. For example, the EGO scale item "I work hard every day to get closer

to my goals" was reformulated as "During my workday, I work hard every day to get closer to my professional goals" (see Table 1). The new organizationally domain-specific grit scale (WEGO) showed adequate psychometric properties, in terms of both reliability ( $\omega = 0.92$ ) and the analysis of the items (D.I = 0.482 - 0.688). In addition, it showed an essentially unidimensional structure, like its original version (EGO; Postigo, Cuesta, García-Cueto, Menéndez-Aller, González-Nuevo & Muñiz, 2020), then other studies with the Grit-S scale (Areepattamannil & Khine, 2018; Gonzalez, Canning, Smyth & Mackinnon, 2020), and then other grit domain-specific measurement instruments (Clark & Malecki, 2019; Morell, Yang, Gladstone, Faust, Ponnock & Wigfield, 2021). Additionally, both WEGO scales exhibited strong relationships with variables identified in their nomological network, such as the facets of conscientiousness (organization, productivity, and responsibility). These high relationships highlight the controversy of grit with respect to the jangle fallacy with other constructs in its nomological network, such as the facets of conscientiousness. However, even though the relationship between productiveness and grit was high (r = 0.609), grit should not be reduced to productiveness (Schmidt, Lechner & Danner, 2020; Schmidt, Nagy, Fleckenstein, Möller & Retelsdorf, 2018). Also, the WEGO showed moderate correlations with the rest of the Big Five variables, especially with extraversion (r = 0.387) and agreeableness (r = 0.362). The WEGO scale reflected an adequate discriminative capacity, showing higher levels of labor grit in people who supervised in their work versus those who did not (Kabat-Farr, Walsh & McGonagle, 2019). In addition, people in higher positions in the company hierarchy showed higher labor grit scores compared with people with a lower level in the hierarchy. People with greater responsibilities in their company tend to have more grit because they must persevere more in the face of adversity given the responsibility they have in decision-making (Southwick et al., 2020). In addition to this, people with high levels of passion tend to reach higher positions given their consistency in the same objectives (Jachimowicz, Wihler, Bailey & Galinsky, 2018; Von Culin, Tsukayama & Duckworth, 2014).

Secondly, once the psychometric properties of the WEGO scale were studied, it was analyzed if grit, measured as domain-specific (WEGO), added more incremental validity to organizational outcomes than grit measured as general domain (EGO). Grit as domain-specific hardly improves the different organizational outcomes. Thus, the correlation between both domains is very high (r = 0.93), with no significant differences in the correlations between both domains and the rest of the variables, so these findings contradict previous studies that have demonstrated the incremental validity of grit as domain-specific, both in the educational context (Clark & Malecki, 2019) and in sport or life in general (Cormier, Dunn & Dunn, 2019).

Thirdly, the predictive capacity of the WEGO in organizational outcomes was studied. On the one hand, labor grit adds incremental validity to the Big Five personality traits, including the productiveness facet, which has shown high relationships with grit (Ponnock, Muenks, Morell, Yang, Gladstone & Wigfield, 2020; Schmidt, Lechner & Danner, 2020). On the other hand, labor grit has added incremental validity to the three variables that make up work engagement. Considering both personality and work engagement variables, the WEGO can

increase the predictive capacity of task performance from 40.7% to 50.3%, as well as that of contextual performance from 42.9% to 55.4%. With all this in mind, the present results are in line with previous research that shows that grit helps predict organizational outcomes (Danner, Lechner & Rammstedt, 2020; Dugan, Hochstein, Rouziou & Britton, 2019; Mooradian, Matzler, Uzelac & Bauer, 2016; Mueller, Wolfe & Syed, 2017; Postigo, Cuesta & García-Cueto, 2021), and also variables related to these outcomes, such as work engagement (Ceschi, Sartori, Dickert & Costantini, 2016), above variables such as productiveness (Meriac, Slifka & LaBat, 2015), general personality variables (Suzuki, Tamesue, Asahi & Ishikawa, 2015), and burnout (Brateanu, Switzer, Scott et al., 2020). Referring to counterproductive behavior, grit does not add incremental validity to the general variables of personality and work engagement. Therefore, although grit correlates moderately with counterproductive behavior (Ceschi, Tommasi, Costantini, Malavasi, Dickert & Sartori, 2021), it does not add predictive validity, with agreeableness, negative emotionality, and dedication (work engagement facet) being the most important variables in the regression model, which explain 36% of counterproductive behavior.

The findings of the present study carry certain practical implications that deserve to be highlighted. Grit helps to explain work engagement, which has demonstrated its relevance in various outcomes of the organizational context (Lesener, Gusy, Jochmann & Wolter, 2020). People with high levels of grit show a passion for those long-term goals that they have set for themselves, as well as perseverance in the face of obstacles that are in the way of reaching those goals (Duckworth, 2016). Therefore, in the organizational context, it is not surprising that knowing how much grit a person has helps to predict the work engagement that they will show in the workplace (Ceschi, Sartori, Dickert & Costantini, 2016). The relationship between both constructs is one of the reasons why grit is important in the organizational context (Southwick, Tsay & Duckworth, 2021), since if grit predicts work engagement and it predicts job performance, it will be influencing in an indirect way the performance of the worker. However, it must be considered that an especially gritty individual with an elaborated goal hierarchy might be less engaged in their long-term interests and values if they are not in alignment with their organization or work role (Barría-González, Postigo, Pérez-luco, Cuesta & García-Cueto, 2021; Southwick, Tsay & Duckworth, 2021; Wiegand, Drasgow & Rounds, 2021). Another reason that highlights the importance of grit in the organizational context has to do with the fact that the gritty person is more likely to remain in their job (Duckworth, Peterson, Matthews & Kelly, 2007; Eskreis-Winkler, Shulman, Beal & Duckworth, 2014; Farina, Thompson, Knapik, Pasiakos, McClung & Lieberman, 2019; Salles, Lin, Liebert et al., 2017). This will provide them with a greater amount of knowledge and skills, in short, experience, which will help them perform better at work. In addition, the results of the present study support that grit leads to better work performance in a direct way (Table 2), where passion and perseverance for different work objectives help people perform more efficiently and effectively (Chen, Powers, Katragadda, Cohen & Dweck, 2020). Finally, the most notable practical implication of the present study

is that measuring grit as domain-specific does not significantly increase the predictive validity of organizational variables. In fact, the correlation (r) between both forms of the EGO test is 0.93. One of the most used tests in organizational psychology is the Maslach Burnout Inventory (Maslach, Jackson & Leiter, 1996). This instrument adapts its items depending on the context, but burnout instruments are not developed for each type of population or context. The findings of the present study point toward this line of grit: giving an organizational connotation to the items helps the person to better understand the context but does not warn them about the need to measure grit as a specific organizational domain. This contradicts the results found by other studies in favor of measuring grit as domain-specific, such as in the educational context (Clark & Malecki, 2019; Cormier, Dunn & Dunn, 2019). This can be due to different reasons: the first of them has to do with the fact that grit in the educational context must be measured as domain-specific, and students, due to their adolescent nature, must be evaluated with items that are according to academics, which would not occur in the organizational context. A second feasible explanation has to do with the measurement of the domain-general and the domain-specific with two instruments with different psychometric properties. For example, in the case of Clark and Malecki (2019), the incremental validity of the domain-specific can be the result of comparing a general grit scale (Child Adapted Grit-S; Duckworth & Quinn, 2009) with debatable psychometric properties (e.g., Credé, 2018; Tynan, 2021) versus a domain-specific scale of grit with adequate psychometric properties (Academic Grit Scale; Clark & Malecki, 2019). Additionally, in the case of Cormier, Dunn, and Dunn (2019), these authors find correlations between the domain-general and the domain-specific between 0.53 and 0.72, which may raise doubts about the convergent validity of the Grit Scale. Finally, even though the number of items was considerable and they were randomly distributed, a limitation was that participants responded to both instruments (domain-specific or general) at the same time. Future studies should employ a longitudinal design applying both scales separately.

The results of the present study must be interpreted with some limitations. First, there are variables of relevance in the organizational context that have not been considered, such as organizational background, work culture, and design, since a low-trait grit individual may exhibit more passion and perseverance in a salutary organization than a high-trait grit individual in a toxic work environment (Ho, Garg & Rogelberg, 2021; Southwick, Tsay & Duckworth, 2021). Second, the study has an absence of moderators that may be affecting this prediction, such as goal commitment and organizational mindsets (Canning, Murphy, Emerson, Chatman, Dweck & Kray, 2020; Murphy & Reeves, 2021). Following the "more-is-notalways-better" perspective, grit may trigger negative manifestations at work under specific conditions. For example, depending on the organizational mindset and goal commitment of each worker, having very high grit can make ambition lead to permanently changing jobs, using organizations as springboards toward that long-term goal (which would tend to be in another organization different from the current one). Third, another limitation is that a snowball sampling approach was followed. This procedure involves participants seeking out other potential participants, which can lead to homogeneous groups. The present study, while attempting to control for sociodemographic characteristics of age and sex as participants were recruited, demonstrates this limitation. Finally, it is known that job performance is arguably organizational behavior's most critical dependent variable (Campbell & Wiernik, 2015) and interrater reliability is the most appropriate reliability coefficient in the case of the supervisory rating of job performance (Salgado & Moscoso, 2019). However, we were not able to obtain an interrater coefficient, and it was measured using a self-report scale. This limitation may also be understood as an invitation to other researchers (and ourselves). Once we have acknowledged that grit predicts task and contextual performance when measured using a self-report scale, we cannot help but wonder if we can replicate these results using supervisory ratings of job performance.

## AUTHOR CONTRIBUTIONS

All authors whose names appear on the submission (1) made substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data; or the creation of new software used in the work; (2) drafted the work or revised it critically for important intellectual content; (3) approved the version to be published; and (4) agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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## CONFLICT OF INTEREST

Authors do not have any financial or non-financial interests that are directly or indirectly related to the work submitted for publication.

#### ETHICS APPROVAL STATEMENT

The study was approved by the Faculty of Psychology at the University of Oviedo (Spain).

## INFORMED CONSENT

All participants agreed to participate in the study on a voluntary and anonymized basis.

## DATA AVAILABILITY STATEMENT

Database and analyses are available on request from the authors.

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