



# The Influence of Power and Self-Esteem on Task Engagement in Work Setting

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# Abstract

## *English*

This research aims to explore the impacts of self-esteem and power on task engagement in work setting. In an experimental study as a function of 2 power conditions (high, low) x 2 self-esteem conditions (high, low), participants were asked to rate dependent variables including: need for closure, mindfulness, self-efficacy, procrastination, and willingness to overcome work challenges such as taking on new projects, collaborating with external partners, thinking extensively and seeking promotions. Individuals with high self-esteem displayed a greater willingness to take on new projects and a higher tendency to think extensively compared to those with lower self-esteem. Power dynamics also played a role, with high power leading to a marginally significant decrease in willingness to collaborate with external partners, compared to low power condition. Furthermore, a marginally significant interaction effect occurred between power and self-esteem on need for closure, suggesting that high self-esteem individuals in high-power situations have a lower need for closure compared to those with low power. These findings contribute to the literature by exploring ways in which self-esteem and power influence decision-making in work environments, which could have implications for project management and team building. Organizations can further use this knowledge to build balanced teams and implement self-esteem building programs to foster a more motivated work environment.

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## *Portuguese*

Esta investigação tem como objetivo explorar os impactos da autoestima e do poder no envolvimento com tarefas em um ambiente de trabalho. Em um estudo experimental em função de 2 Poder (alto, baixo) x 2 Autoestima (alta, baixa), os participantes foram solicitados a avaliar variáveis dependentes, incluindo: necessidade de encerramento, atenção plena, autoeficácia, procrastinação e disposição para superar desafios de trabalho como assumir novos projetos, colaborar com parceiros externos, pensar extensivamente e buscar promoções. Indivíduos com autoestima elevada demonstraram maior disposição para assumir novos projetos e maior tendência a pensar extensivamente em comparação com aqueles com autoestima mais baixa. A dinâmica de poder também desempenhou um papel, com o poder elevado a conduzir a uma diminuição marginalmente significativa na vontade de colaborar com parceiros externos, em comparação com a condição de baixo poder. Além disso, ocorreu um efeito de interação marginalmente significativo entre poder e autoestima na necessidade de encerramento, sugerindo que indivíduos com alta autoestima em situações de alto poder têm menor necessidade de encerramento em comparação com aqueles com baixo poder. Estas descobertas contribuem para a literatura ao explorar formas pelas quais a autoestima e o poder influenciam a tomada de decisões em ambientes de trabalho, o que pode ter implicações na gestão de projetos e na formação de equipas. As organizações podem utilizar ainda mais este conhecimento para construir equipas equilibradas e implementar programas de construção de autoestima para promover um ambiente de trabalho mais motivado.

***Título:*** *A influência do poder e da autoestima no empenhamento na tarefa em contexto de trabalho.*

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***Palavras-chave:*** *poder, autoestima, necessidade de encerramento, atenção plena, autoeficácia, procrastinação, disposição para pedir promoção, disposição para coordenar um novo projeto, disposição para colaborar com parceiro externo, disposição para se envolver em pensamento extensivo*

# Introduction

There is a growing concern in today's workplaces over the crisis of focus. People are more stressed out than ever and as a result, their sense of well-being is crumbling, their productivity is decreasing, and the organizations they work for, are feeling the strain. It is for these reasons that there is a rapidly growing emphasis being placed on creating healthier, more inspiring work environments.

This research aims at understanding human behaviour within organizations, particularly the role played by power and self-esteem. It strives to determine employee attitudes and behaviours, and how managers can find best motivational factors as well conflict resolution strategies. Using Self-determination theory as a psychological theoretical framework, helps to understand what drives individuals' motivation in their workplace, resulting in higher employee engagement, and overall well-being. Self-determination theory emphasizes the significance of autonomy, competence, and relatedness in stimulating human behaviour and identifies power and self-esteem as valid components in meeting these requirements.

This study aims at exploring main and interaction effects of power and self-esteem on a variety of work-related psychological constructs and behaviours. The constructs I will be exploring are the need for closure, which reflects the need to find an unambiguous and clear solution to a given issue. I am also investigating the issues surrounding mindfulness, which is the ability to be fully present and engaged in the present moment. Additionally, this study also examines self-efficacy- the individual's belief in their ability to succeed. Lastly, I will explore the behaviours of procrastination, and the challenges of striving for promotion, collaborating with external partners, taking on new projects, and engaging in extensive thinking.

In conclusion, my research strives to offer valuable insights in the field of organizational psychology by exploring the relationships among power, self-esteem and various psychological constructs and behaviours. This could help organizations derive practical recommendations to create work environments that enhance focus, well-being, and productivity, and ultimately, healthier, more engaging workplaces.

# Literature Review

## Introduction

Within current organizations, employees has been experiencing a decreasing amount of focus, task engagement and motivation in various work settings. According to the State of Workplace Burnout Report from 2023 “at no point in history has work been more omnipresent and complex, and the environment more fast-paced”. In the 2022 study conducted by Infinite Potential, over 38% of participants experienced exhaustion, reduced efficacy, and cynicism, while burnout continued to be on the rise across every demographic group, and individual wellbeing continued to drop significantly. In the State of the Global Workplace 2023 Report created by Gallup, 59% of employees worldwide declared to not be engaged in the work they were performing. Moreover, at least half of the United States workforce was found to be quiet quitting, which by definition means doing the bare minimum that is necessary. One of the main reasons to that is being psychologically detached from work and feeling burned out. Gallup reveals that, demotivated workers in the United States experience 15% lower profitability, 18% lower productivity, and 37% more absenteeism, which not only harms their wellbeing but also an overall performance of the company.

Therefore, nowadays organizations are starting to acknowledge the pressing demand for well-being and better focus in the workplace. Being only profitable is no longer sufficient and organizations in order to be effective must go beyond profitability, by prioritizing the well-being of all stakeholders. Companies that implement both, high-quality performance, and employee thriving, are one step closer to ensuring long-term organizational health, customer satisfaction, loyalty, and financial success (McGregor & Doshi, 2015; Mackey & Sisodia, 2014).

To address those issues, my research focuses on two key research questions:

1. What is the role of perceived power and self-esteem on how people tend to handle a task in terms of the focus they put it?
2. How can power and self-esteem increase mindfulness, self-efficacy and willingness to overcome work challenges, as well as decrease procrastination, and need for closure?

Those questions could be seen through the lenses of self-determination theory, that examines the concept of motivation, as a way to influence performance and well-being of the employees. By exploring various theoretical frameworks, this section aims at providing insights into creating healthier and more productive work environments.

## Self-determination theory

Self-determination theory created by Deci and Ryan in 1985 and developed further in the following years, is a motivational theory that emphasizes how both employees' performance and well-being are influenced by their motivation. According to Deci and Ryan (2008), it “differentiates types of motivation and maintains that different types of motivation have functionally different catalysers, concomitants, and consequences”. Consequently, Self-determination theory makes a distinction between intrinsic and extrinsic motivation, emphasizing the importance of intrinsic motivation for long-term engagement and job satisfaction (Ryan & Deci, 2000). Compared to extrinsic motivation, which depends on external rewards or punishments, intrinsic motivation is driven by individuals' inherent interests and devotion to the tasks. Ultimately, it is associated with improved performance and well-being. (Ryan & Deci, 2000).

Furthermore, Self-determination theory suggests that environmental factors such as job design and managerial styles mostly impact workers' motivations and experiences through the three basic psychological needs of: competence, relatedness, and autonomy. These needs are seen as fundamental to psychological health and effective social functioning. They are also viewed as important for supporting autonomous motivation, high-quality performance, and well-being (Ryan, 1995). Control and autonomy are believed to be closely linked to both intrinsic and extrinsic motivators. People's view that they can create a large impact on the world and have significant control over their actions is influenced by their sense of power and self-worth (Crocker, 2001).

Based on Deci and Ryan's (1985) research on self-determination, inner motivation is formed by individual interest and satisfaction with the task or action. People are prone to be motivated when they feel competent and autonomous to control an action, which potentially boosts their levels of self-esteem. Conversely, outer motivation is more likely to be associated with external factors like rewards or pressures. This could include forms of positive encouragement such as compliments, and financial benefits, but also negative reinforcements such as threats or punishments. If external motivators are overemphasized, it could make people feel pressured as well as less competent and autonomous. This could lead to a decrease in intrinsic motivation, self-determination, and self-esteem (Pierro et al., 2006).

Furthermore, Self-determination theory underlines that psychological factors like autonomy, relatedness, and competence are crucial for promoting well-being. Power and self-esteem are interconnected with those needs and could be further strengthened by reinforcing a sense of competence and effectiveness. Similarly, autonomy, or the sense of being in control of one's

actions and decisions, is crucial for maintaining a healthy level of self-esteem (Ryan & Deci, 2000).

## Power

Power – a crucial component of various work environments, can be defined differently depending on the context or the situation. Oksitycz (2006) argues that “main schools of thought on the subject of power in an organisational setting consider power to be either a resource held by individuals and departments, or an inherent feature of organisational structure and society”. Organizational design is by far the most visible source of power within companies, and it is often manifested through formal authority structures and hierarchies, influencing individuals' behaviors and interactions within organizations (Schminke et al., 2000). The office or position held in an organizational hierarchy is frequently the source of formal authority, which is associated with the exercise of power through the application of formal rules and procedures (Buchanan & Huczynski 2019). Power is therefore distributed in accordance with a hierarchy of authority by application of organizational structures, rules, and laws. Furthermore, power in general is the ability to accomplish something on an individual or collective level. Therefore, sociologists see power as a structural aspect of society or as a personal quality that is expressed in the way that it affects other people (Dahl, 1957).

## *Need for closure*

By definition, need for closure is a psychological term that refers to an individual's need for clear, unambiguous information and a sense of finality (Webster & Kruglanski, 1994). Individuals who have a strong need for closure might find it difficult to deal with ambiguity and uncertainty, which might result in decreased task engagement. Frequently, they possess a strong compulsion to discover exact, practical solutions, and act quickly in order to solve the issue (Webster & Kruglanski, 1994).

In the literature, power and need for closure have been studied in various contexts, and could lead to a situation in which high power strengthens an already existing need for closure (Fiske, 1993). High power individuals are often motivated by a desire to have control over their surroundings (Fiske, 1993). This idea is related to the construct of closure, which is the desire to reach a clear and final solution as well as a sense of finality in different contexts (Webster & Kruglanski, 1994). Moreover, the research conducted by Bodenhausen & Wyer (1985) suggests that powerful individuals are more likely to use stereotypes and heuristics when making

decisions because of the number of decisions their roles contain (Fiske, 1993). This tendency could be useful in situations where quick decision making is needed. Yet at the same time, this inclination can also result in unfair and biased opinions, as well as failure to dive deeper into a task and be open to different viewpoints (Baron, 2004). Additionally, the research of Lauren from 1972 shows that desire for closure can affect the way people use their authority. Individuals who are high in need for closure tend to use more aggressive measures such as threats and ultimatums, which limits the opportunity of cooperation and transparency (Lauren, 1972). Therefore, Kruglanski et al. (2006) came to the conclusion that having high power has the potential to increase the number of rigid beliefs while decreasing the openness to other people's opinions, which could impact work satisfaction and task performance.

### *Mindfulness*

One way to overcome the tendency to disregard a task as well as increase focus and attention, is through mindfulness. It is explained as “a human ability of being present in the moment and paying full attention to the ongoing activities without getting diverted” (Chandna et al., 2022). Mindfulness is considered to be one of the crucial variables in this study as it leads to higher levels of efficacy and has great impact on the mental well-being of individuals (Keng et al., 2011). While power may promote feelings of control and attentiveness for some individuals, it does not necessarily facilitate a more mindful state of mind.

Observation, description, acting with awareness, non-judgment of inner experience, and non-reactivity to inner experience are five major facets of mindfulness identified by the Five Facet Mindfulness Questionnaire. In the present research, we will focus on the individual effects of power on four major facets of mindfulness that were identified as most valuable for the research questions (i.e., acting with awareness, non-judging, non-reactivity, and describing experiences). Current studies suggest that being in a high state of power could lead to decreased levels of mindfulness. Some researchers, like Fiske (2001) found that higher power is hurtful to the objective observation of situations. Those in power are more likely to interpret information in a way that favors their hierarchical position. This goes hand in hand with nonjudgment, since high-power individuals are less likely to be critical about their own thoughts and actions (Galinsky et al., 2006). Keltner et al. (2003) suggest that having power may enhance impulsive behaviors, making individuals more receptive to automatically react to situations instead of responding thoughtfully. There has been limited research conducted on the describing facet of mindfulness and its relation to power. However, the above-mentioned tendency of high-power individuals to hold biased opinions may also influence description of their own internal states.

It's important to mention that other factors such as personal traits and experiences might impact the way power is perceived by different individuals. Therefore, further research is necessary to fully understand the connection between power and all five facets mindfulness.

### *Self-efficacy*

Self-efficacy is known as the belief in one's skills, capabilities, and present resources to successfully accomplish a task or a situation (Bandura, 1986). When individuals realize that they have the required skills and knowledge to handle a task at work, they are more likely to set ambitious goals, leading to higher productivity, engagement and performance at organizational context (Cherniss, 2017).

Attribution Theory could be used to examine the relationship between power and self-efficacy (Heider, 1958). The main idea of this theory is that people frequently assign internal or external forces as the causes of events. High-status individuals may be more prone than those with low status to attribute their accomplishments to personal factors—like their talent and dedication—than to external factors that are beyond their reach (Lammers & Burgmer, 2019). Such an emphasis on internal attributions helps boost self-efficacy through the strengthened belief in one's competence. For instance, a person in a managerial position who succeeds in a difficult negotiation would associate their own ability to plan strategically and communicate well as a source of their success. This internal attribution increases self-efficacy and further strengthens one's belief in their skills as a leader. Furthermore, Galinsky et al. (2003) offers another perspective on the topic. They propose that the presence of hierarchies in organizations might influence people's assessments of their own abilities. People in positions of power often attribute the effectiveness of their actions because they have substantial control over crucial resources, decisions, and information flow. Viewing themselves as in control creates a feeling of being more capable and successful, thus increasing the levels of self-efficacy (Schwarzer, 1992). Moreover, high-power positions provide a wide range of opportunities for people to make important decisions, take initiative, solve problems, and influence outcomes. When results of those self-ruled actions are positive, it can further strengthen the internal factors derived from the attribution theory (Heider, 1958).

### *Procrastination*

According to Piers Steel (2007), "procrastination is the voluntary delay of an intended course of action despite expecting to be worse off for the delay" which may result in missed opportunities, decreased productivity and engagement as well as increased stress (Steel, 2007).

The relationship between power and procrastination is complex with some research suggesting that high power might lead to lower procrastination levels. Locke's Goal Setting Theory seems to offer a potential explanation. It suggests that specific, challenging, and achievable goals enhance motivation and task engagement (Locke & Latham, 1990). People in high power positions are often expected to achieve definite outcomes, which in turn may compel them to set ambitious and clear objectives for themselves and their employees. In addition, the autonomy associated with high power can further help with the pursuit of these goals. For instance, a project manager who controls project resources can assign personnel to complete a task and set a clear deadline. This goal setting ability can influence the execution, in turn, decreasing the tendency to procrastinate.

#### *Willingness to overcome work challenges*

Another important element for the purposes of this study is knowing how power affects the ability to overcome work challenges. Therefore, four behavioral measurements have been identified in order to gain a deeper understanding of their relationship with power: willingness to ask for promotion, willingness to collaborate with external partners, willingness to coordinate a new project, and willingness to engage in extensive thinking.

According to Social Cognitive Theory, having a lot of power could lead to a higher chance to ask for a promotion (Scheepers et al., 2013). It's possible for those in positions of authority to feel more competent and that they deserve a reward in form of an advancement. Furthermore, they have more working experience, which could make them more likely to speak up and negotiate for themselves.

According to Social Identity Theory by Tajfel and Turner (1979), on one hand, power holders are less inclined to engage with members outside of their group when they perceive the outgroup as a threat to the ingroup's status. On the other hand, power also provides the resources and confidence to take the lead and successfully cooperate with others (Kähkönen et al., 2014). When it comes to project coordination, the same logic could be applied. High-power people may be more inclined to take on new tasks, but their strong sense of self-worth and need for control might make it difficult for them to delegate tasks to others.

As Cacioppo and Petty (1987) propose, need for cognition might be a potential factor affecting the relationship between power and extended thinking. Need for closure refers to the individuals' personal attraction to difficult and efforts-worthy thinking. On one hand, some researchers argue that high power individuals are inclined to be less likely to accept novel information due to their strong tendency to rely on experiential information (Weick & Guinote, 2008). On the

other hand, research also found that power may increase curiosity and motivation to understand complex situations (Room, 2015). Therefore, depending on the setting, power may have different effects on extensive thinking. Future research that includes more objective behavioral measures can provide a better understanding of the relationship between power and willingness to overcome work challenges.

## Self- Esteem

In a modern society, the idea of self-esteem is widely present within different fields. At work and in the classroom, at sports competitions and music performances, people typically believe that having a strong sense of self-worth is essential to succeed. In fact, Orth and Robins (2014) argue that raising people's levels of self-esteem through extensive interventions is necessary to achieve the crucial societal goals.

The term "self-esteem" describes a person's subjective assessment of their own value as a human being (Donnellan, Trzesniewski, & Robins, 2011; MacDonald & Leary, 2012). Furthermore, while feeling that one is "good enough" is a popular definition of self-esteem, it's important to remember that people who have high self-esteem would not necessarily feel superior to others (Neff, 2011). Instead, self-esteem is associated with feelings of acceptance and respect for oneself, as opposed to the excessive self-regard that would define a narcissistic individual (Brummelman et al., 2016). Importantly, self-esteem is related to whether people feel accepted and valued. Therefore, high self-esteem levels are associated with increased psychological well-being, resilience, and optimism, which could potentially improve job satisfaction and performance (Ahmad & Siddiqui, 2021).

Power and self-esteem are interconnected yet different from one another. They both play significant roles in shaping individuals' perceptions, motivations, and behaviors. Power refers to the ability to influence or control others, resources, or organizations. It often stems from the roles, that an individual holds in hierarchical contexts or from one's position in social structure (French & Raven, 1959). Self-esteem, however, refers to an individual's overall evaluation of self and one's abilities, including feelings of self-worth and self-confidence (Pelham & Swann, 1989). While power is seen as external factor that relates to one's ability to influence others, self-esteem reflects internal evaluation of self-worth and capabilities. However, both concepts, power and self-esteem significantly influence employee behavior, motivation, autonomy, and job-satisfaction in the organizational setting. In this section, we will further explore self-esteem at the individual level and focus on the effects of high versus low self-esteem on core dependent

variables: need for closure; mindfulness; self-efficacy; procrastination; and willingness to overcome challenges at work.

### *Need for closure*

In the past, researchers have already been examining the link between self-esteem and the need for closure. The findings indicate that individuals who have high self-esteem are likely to have a lower need for closure. Self-Consistency Theory proposed by Lecky (1945), provides a potential explanation for this connection. People are driven to keep a stable self-concept and high self-esteem individuals usually have a deep sense of self-consistency as well as internal coherency, which makes them less vulnerable in uncertain situations (Lecky, 1945). They might already have a clear and positive self-view that is not easily changed due to external factors. As a result, having a high sense of self-worth may protect them from the discomfort that comes with ambiguity, reducing the demand for an immediate closure. Conversely, those who are low on self-esteem may feel, that they need closure more than others in order to feel in control of their surroundings and less uncertain (Kernis et al., 1993).

### *Mindfulness*

Further research indicates that mindfulness practices can foster self-esteem and potentially create a positive feedback loop by encouraging self-acceptance (Carver & Scheier, 1981). Self-compassion which is the main component of mindfulness, incorporates treating oneself with kindness and generosity, therefore creating a more positive self-regard (Neff, 2003). Additionally, practicing mindfulness, enhances self-awareness, making individuals more appreciative of their strengths and positive qualities (Vago & Silbersweig, 2012). It appears that individuals with high self-esteem may be more receptive to mindfulness practices as they already established a sense of self-worth and willingness to self-observe (Barnard and Curry, 2011). Similarly, as in the power section, we'll focus only on identifying the relationship between self-esteem and four facets of mindfulness.

According to the studies, high self-esteem could lead to higher levels of acting with awareness. If individuals hold themselves in high regard, they might be more curious and interested in observing their internal and external experiences (Carver & Scheier, 1981). Furthermore, a positive self-view should be associated with increased non-judgment as individuals with high self-esteem could be less inclined to pass judgements of themselves or events occurring in their lives (Pepping et al., 2013). Having said that, the association between self-esteem and non-reactivity is not as clear. Increased resilience will very likely be experienced by individuals with

high self-esteem. Nevertheless, it is also probable that individuals with low self-esteem might be highly motivated to practice non-reactivity as a method for managing negative emotions. Finally, increased self-esteem would most likely positively impact the ability to describe experiences. Individuals with a favourable self-view could be more inclined to label their thoughts and feelings clearly and precisely (Pepping et al., 2013).

### *Self-efficacy*

The relationship between self-efficacy and self-esteem is another area that has been examined repeatedly in the past. According to Bandura's (1986) Self-Efficacy Theory, positive self-beliefs play a crucial role in task accomplishments. People who have high self-esteem usually describe themselves in more favorable terms and have higher confidence in their own capabilities. They are also more likely to see their past experiences positively and concentrate on their successes instead of failures, which in turn provides them with a higher sense of self-efficacy (Brown et al., 1988). Positive Psychology perspective further emphasizes the connection between self-efficacy and self-esteem. This theory focuses on virtues, strengths and elements that support optimal functioning and well-being (Seligman & Csikszentmihalyi, 2000). High self-esteem is viewed as a positive quality that is linked to an increased resilience and goal achievement. As a result, people who have a high sense of their own worth are more likely to approach tasks with confidence and persistence (Sommer & Baumeister, 2002). They might also be better equipped to overcome problems and maintain motivation when experiencing difficulties.

### *Procrastination*

Research from the past indicates that procrastination and self-esteem are related, with higher levels of self-esteem being linked to decreased procrastination (Hajloo, 2014). According to the Cognitive-Behavioral Therapy, detrimental beliefs and thought patterns are the primary causes of procrastination, but individuals with strong self-esteem, tend to have more adaptive self-beliefs (Beck, 1976). This includes putting off tasks less, because of a positive self-concept and less negative self-talk (Ford, 2015). Moreover, perfectionism is another element linked to procrastination that may be mitigated thanks to strong self-esteem (Steel, 2007). High self-worth individuals might be less likely to hold themselves to unreasonably high standards, which would reduce the fear of failing, that frequently causes them to procrastinate in the first place. Another theory that supports this argument is Self-Regulation Theory, which concentrates on individuals' ability to monitor, control, and adjust their behavior to achieve goals (Bandura, 1986). People who have high self-esteem might be confident in their ability to manage time and

resist temptations to procrastinate (Hajloo, 2014). They likely have higher self-motivation and persistence, making them more focused to complete their goals.

### *Willingness to overcome work challenges*

According to research, it is suggested that having high self-esteem could lead to one's greater likelihood to self-advocate. This aligns with Social Cognitive Theory (Bandura, 1986), which states that self-esteem influences work behavior, choices, and strategies.

With high self-esteem, comes a greater amount of self-efficacy, leading to a stronger believe that one is capable and deserving a promotion within a career or a field (Lane et al., 2004).

Some studies support the idea that higher self-esteem individuals might be more assertive and confident in leading projects (Zaman et al., 2021).

Moreover, the motivation to collaborate with businesses outside of the company may also be affected by self-image. People with high self-esteem may be more open-minded and they could perceive the collaboration more as an opportunity than a threat (Turner & Tajfel 1979).

Interestingly, there are some contradictory findings regarding the impact of self-esteem on the openness to new information. Bar-Tal et al. (2019) conclude that people with high self-esteem might indulge in confirmation bias, while Kernis (2002) shows that people with high self-esteem have a more multifaced mindset. Some researchers mentioned that power has considerable connection with self, and it can amplify the interest to understand complicated situations (Carlos et al., 2023). On one hand, high self-esteem is said to be related to the high confidence and could potentially make an individual more prone to understanding complex ideas. However, an excessive degree of self-esteem can also result in confirmation bias and a feeling of entitlement, which impairs one's capacity for critical thinking (Uçar, 2017).

## Hypothesis

This study aims to examine how power and self-esteem may interact to affect individual judgements on work-related constructs. It is crucial to recognize that while power and self-esteem have separate effects on psychological outcomes related to the workplace (such as the need for closure, mindfulness, self-efficacy, procrastination, and willingness to overcome work challenges), self-esteem may also mitigate the effect of power on judgements related to work challenges. In this research the following hypothesis are tested:

1. H1: High power leads to higher need for closure, lower mindfulness, higher self-efficacy, lower procrastination, higher willingness to ask for promotion, lower willingness to collaborate with external company, higher willingness to coordinate a new project, higher willingness to think extensively, than low power.
2. H2: High self-esteem leads to lower need for closure, higher mindfulness, higher self-efficacy, lower procrastination, higher willingness to ask for promotion, higher willingness to collaborate with external company, higher willingness to coordinate a new project, lower willingness to think extensively than low self-esteem.
3. H3: High power leads to higher need for closure, higher mindfulness, higher self-efficacy, lower procrastination higher willingness to ask for promotion, higher willingness to collaborate with external company, higher willingness to coordinate a new project, higher willingness to think extensively, than low power when self-esteem is high; but it leads to lower need for closure, lower mindfulness, lower self-efficacy, higher procrastination, higher willingness to ask for promotion, lower willingness to collaborate with external company, lower willingness to coordinate a new project, lower willingness to think extensively, when self-esteem is low.

# Methodology

To examine, the relationship between power and self-esteem as independent variables and their effects on dependent variables, quantitative research method in form of an experiment was chosen. The goal was to test how the interaction between power and self-esteem can impact dependent variables such as need for closure, mindfulness, self-efficacy, procrastination, and willingness to overcome work challenges. This framework led to the creation and identification of three hypothesis: H1 for main effect of power, H2 for main effect of self-esteem and H3 for interaction effect between power and self-esteem.

## Design

The experiment had a between-subject design, with two independent variables, specifically 2 power conditions (high vs. low) x 2 self-esteem conditions (high vs. low). Each of the participants was randomly assigned to one out of four conditions:

1. High Power and High Self Esteem
2. High Power and Low Self Esteem
3. Low Power and High Self Esteem
4. Low Power and Low Self Esteem

The data was collected to identify how manipulation of power and self-esteem impacts need for closure, mindfulness, self-efficacy, procrastination, and willingness to overcome work challenges.

## Participants

Sample size was specified according to the Theorem of Central Limit, which determined that the minimum sample size of 30 participants per group is required to achieve a distribution equivalent to the normal distribution. Applying this principle to the between-subjects design, a minimum sample of 120 participants was required for the study.

Overall, a total of 291 individuals participated in the survey. After cleaning the data, which involved deleting the incomplete answers, sample size was reduced to 130 participants, including 76 women, 51 men, 1 person identifying as non-binary and 2 people stating “other” or “prefer not to say”. 31 participants were exposed to the “High Power and High Self Esteem” condition, 40 participants received the “High Power and Low Self Esteem” scenario, 30 were

manipulated with “Low Power and High Self Esteem” whereas 29 participants were assigned to “Low Power and Low Self Esteem” scenario.

## Materials

### Independent variables

#### *Power*

Power was manipulated in two conditions, high and low power, by exposing participants to an immersive work scenario. In the high-power condition, participants had to imagine they were a CEO of the big international company and were given a high sense of expertise and authority (See Image 1). In the low power condition, participants had to imagine they were an intern that felt insignificant in the big corporate world (See image 2). Participants were allowed to move further within the survey, only after 30 seconds to ensure that the scenarios will be read carefully. For each power condition, to reinforce the manipulation of the scenario, participants were asked to name three characteristics of a powerful or powerless person, corresponding to the experimental condition. This question’s purpose was only to reinforce the manipulation of power as independent variable, and the final answer was not valuable for the analysis.

#### *Self-Esteem*

Consequently, participants were also manipulated with a sense of self-esteem. In the high-self-esteem condition, participants had to imagine that after work, they went to an animal shelter and donated money, which gave them a deep sense of fulfilment (See Image 1). In the low self-esteem condition, participants had to imagine that instead of going to the animal shelter they chose to spend money on the cinema, which gave them a sense of self-doubt (See Image 2). For each self-esteem condition, to reinforce the manipulation of the scenario, participants were asked to name three characteristics of a person living (or not living) in accordance to their values, corresponding to the experimental condition. Similarly, as with the power variable, this question’s purpose was only to reinforce the manipulation of self-esteem as independent variable, and the final answer was not valuable for the analysis.

Imagine **you are the CEO of a big international company**. You walk into the bustling office with **big windows**, and you feel a surge of **confidence** knowing the company is in good hands. While approaching your employees' desks, you say that the final sales report must be completed by the end of the day. The **team listens closely**, eager to **follow your instructions**, because they know **you're an expert** in closing deals that will make the company grasp even bigger share of the market. You can't help but feel the **sense of power**, knowing that **your expertise and authority** is leading the company towards the right direction.

After a successful day at work, **you stop by the local animal shelter** to take Rex for a walk. You hand over **a weekly check**, knowing that it will help **cover the costs** for food and care for Rex and his fellow mates. Even though it's just a small contribution, this **simple act of generosity** fills you with **deep sense of self-esteem and fulfillment**. In this moment, you realize that **success isn't just about personal gain** – it's about using your resources to **uplift others and make the world a better place**.

*Image 1: High Power and High Self Esteem Scenario*

Imagine **you are an intern at the big international company**. You walk into the bustling office with big windows, and **you suddenly feel small and overwhelmed** by the **big corporate world**. When you finally find your sit, the boss approaches you, saying that the final sales report must be completed by the end of the day. **You nod instantly** in an agreement and **with a fearful tone**, you **promise to submit it as soon as possible**. As the boss walks away, **a sense of vulnerability washes over you**. You can't help but **feel powerless and insignificant** in the grand scheme of the **workplace hierarchy**.

After a long day at work, **you think about stopping by the local animal shelter** to take Rex for a walk. Realising it will take a long time to get there, **you decide to go to the cinema instead**. As you watch the movie, you can't shake the **feeling of disappointment and doubt**, thinking that **you let Rex and his fellow mates down**. In this moment, **a sense of low self-esteem lingers** as you **struggle to believe that you're doing enough** to make this world a better place.

*Image 2: Low Power and Low Self Esteem Scenario*

## Dependent variables

### *Need for closure*

Need for closure was measured based on the Need for Closure Scale created by Webster and Kruglanski in 1994. After analysing the scale, 5 statements, that best fit the purpose of this study, were selected. Participants were asked to rate those statements on a Likert-type scale from 1 (never true) to 7 (always true). Claims included items such as, *“I feel hurried to reach a decision, even when there is no reason to do so”* and *“I would quickly become impatient and irritated if I would not find a solution to a problem immediately”*.

### *Mindfulness*

To measure mindfulness, Five Facet Mindfulness Questionnaire created by Baer et al. in 2006, was used. After analysing the scale, 4 statements, that best fit the purpose of this study, were selected. Participants were asked to rate those statements on a Likert-type scale from 1 (never true) to 7 (always true). Claims included items such as, *“I do jobs or tasks automatically without*

*being aware of what I'm doing” and “I can easily put my beliefs, opinions, and expectations into words.”*

### *Self-efficacy*

To measure self-efficacy, General Self-Efficacy Scale, created by Schwarzer and Jerusalem in 1995 was used. After analysing the scale, 3 statements, that best fit the purpose of this study, were selected. Participants were asked to rate those statements on a Likert-type scale from 1 (never true) to 7 (always true). Claims included items such as, *“I am confident that I could deal efficiently with unexpected events.”* and *“It is easy for me to stick to my aims and accomplish my goals”*.

### *Procrastination*

Procrastination was measured based on the Procrastination Scale created by Lay in 1986. After analysing the scale, 3 statements, that best fit the purpose of this study, were selected. Participants were asked to rate those statements on a Likert-type scale from 1 (never true) to 7 (always true). Claims included items such as, *“I often find myself performing tasks that I had intended to do days before.”* and *“I generally delay before starting on work I have to do”*.

### *Willingness to overcome work challenges*

To measure willingness to overcome work challenges, participants were asked to rate 4 statements on a scale from 1 (not willing at all) to 7 (definitely willing). Four main variables were chosen with an aim to understand specific behaviours within the organisational context: willingness to ask for promotion, willingness to collaborate with external company, willingness to coordinate a new project and willingness to think extensively. The scale included questions such as *“To what extend would you be willing to ask your boss for promotion?”* and *“To what extend would you be willing to collaborate with a co-worker from an external company?”*.

### **Control variables**

To ensure that manipulation was perceived as intended, two validation questions were asked. First question was designed for the power variable and aimed at checking if participants understood who the person in the scenario was. Second question was related to the self-esteem manipulation and aimed at examining if participants understood where the person in the scenario decided to go to. Additionally, one attention check question was asked to verify if participants read and answered questions carefully. Lastly, five demographical questions were presented to identify basic information such as gender, age, country of origin, highest level of education and professional status of the participants.

## Recruitment strategy

The overall length of the questionnaire was estimated to take around 5 to 10 minutes, depending on the individual speed of each participant and it was designed, using a digital application tool called “Qualtrics”. The survey was analysed and proofread by four individuals from diverse age groups and backgrounds. Based on their comments and feedback several improvements were made, including creation of completion scale, attention check questions, as well as small adjustments to the survey flow. The survey link was shared on various social media platforms, such as Facebook, WhatsApp, and Instagram to reach a target audience of students and young professionals across different European countries.

## Procedure

In the first part of the survey, participants were provided with a consent page and were told they would be participating in a study about closure and mindfulness. Then, they were randomly assigned to one of four experimental conditions. Participants were asked to read a scenario and answer two open-ended questions about power and self-esteem to further deepen the manipulation. In the second part of the survey, participants were asked to rate dependent variable statements, on a scale from 1 to 7. Subsequently, participants were asked one manipulation check question for power variable, one manipulation check question for the self-esteem variable and one attention check question. Ultimately, the survey was concluded with final demographic questions and a small debrief about the study.

# Results

## Participants

Overall, a total of 291 individuals participated in the survey. After cleaning the data, which involved deleting the incomplete answers, sample size was reduced to 130 participants, including 76 women, 51 men, 1 person identifying as non-binary and 2 people stating “other” or “prefer not to say”. Most of the participants grew up in one of the European countries ( $N = 97$ ), with 37 stating Poland as country of origin, 19 Germany, 7 Portugal and 33 other nationalities.

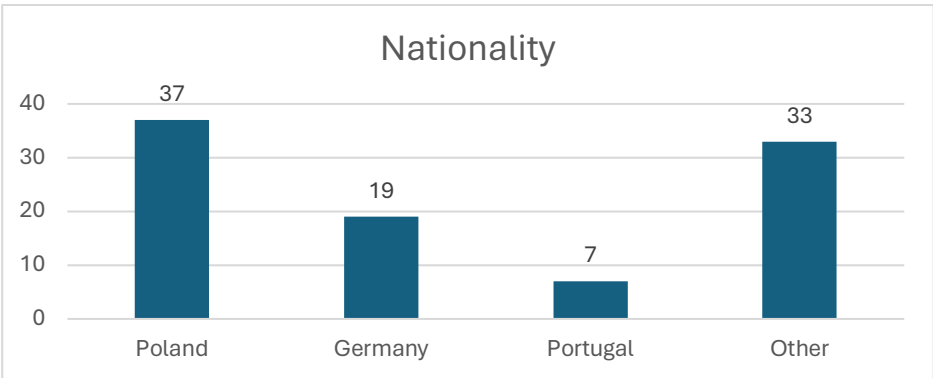


Table 1: Recorded nationalities of participants

The overall average age of the sample was 24,91 years old (*Minimum age*= 18; *Maximum age*= 62). Moreover, the majority of participants completed a bachelor’s degree ( $N = 70$ ), 29 finished a master’s degree, 30 have a high school diploma and only one participant declared to have a PhD or a higher degree. The majority of the sample declared to be a student ( $N = 73$ ) or student and employee ( $N = 30$ ). 21 participants said to be an employee, whereas 2 were unemployed and 4 preferred not to answer the question.

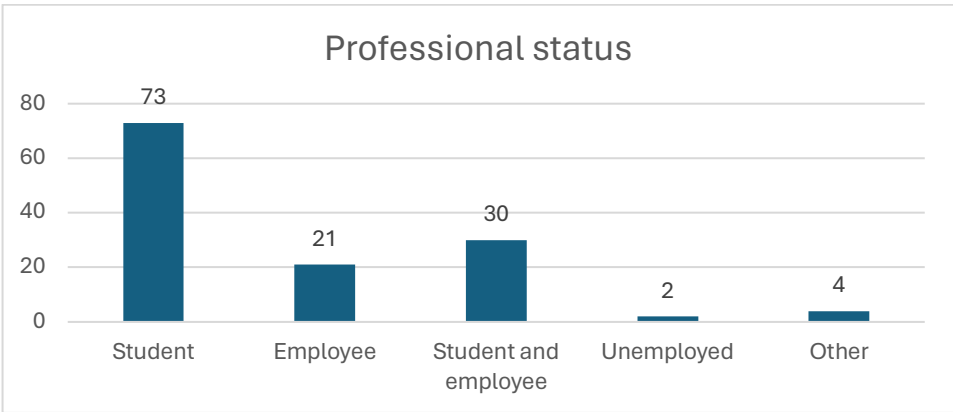


Table 2: Recorded professional statuses of participants

## Dependent variables

### *Need for closure*

Firstly, we conducted reliability tests to better understand the dynamics between the specific measurements of need for closure variable. The scale consisted of 5 items (*Cronbach's alpha* = 0.58) and the first statement “*When I have made a decision, I feel relieved.*” was found to be unreliable (*Cronbach's alpha if item deleted* = 0.65). However, after deleting item number 1 and conducting ANOVA analysis again, p-value for the interaction effect increased ( $F_{(1, 126)} = 2.972, p = 0.087$ ), p-value for the main effect of power slightly decreased ( $F_{(1,126)} = 0.135, p = 0.714$ ) and p-value for the main effect of self-esteem also decreased only slightly ( $F_{(1,126)} = 0.104, p = 0.748$ ). Since, deleting the items with high Cronbach's alpha didn't affect the results in a significant way, we decided to keep all the measurements in the analyses.

Further ANOVA 2 Power (high, low) x 2 Self Esteem (high, low) did not reveal a significant main effect of power ( $F_{(1,126)} = 0.023, p = 0.881$ ) indicating that, on average, participants in the high-power condition ( $M_{High Power} = 4.43, SD_{High Power} = 0.91$ ) did not report significantly higher need for closure compared to those in the low power condition ( $M_{Low Power} = 4.39, SD_{Low Power} = 1.03$ ). We also did not find a significant main effect of self-esteem ( $F_{(1, 126)} = 0.131, p = 0.718$ ), indicating that high self-esteem participants ( $M_{High Self Esteem} = 4.36, SD_{High Self Esteem} = 1.03$ ) did not show significantly lower levels of self-efficacy compared to low self-esteem participants ( $M_{Low Self Esteem} = 4.46, SD_{Low Self Esteem} = 0.90$ ). Yet, we found a marginally significant interaction effect between power and self-esteem ( $F_{(1, 126)} = 3.554, p = 0.062$ ). Concluding that, high self-esteem shows a tendency to lead to lower need for closure than low self-esteem, when power is high, but it shows a tendency to lead to higher need for closure than low self-esteem, when power is low.

Power	Self Esteem					
	High		Low		TOTAL	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
High	4.22	0.89	4.60	0.90	4.43	0.91
Low	4.51	1.16	4.26	0.89	4.39	1.03
TOTAL	4.36	1.03	4.46	0.90		

*Note: M and SD represent mean and standard deviation respectively*

Table 3: Means and standard deviations for Need for Closure as a function of 2 (Power) x 2 (Self Esteem)

Looking closure into the profile plots, we can see that, high-power condition shows a steeper increase in the need for closure compared to the low-power condition as self-esteem goes up. Specifically, participants with higher self-esteem in the high-power condition tended to report

a lower need for closure compared to those with lower self-esteem, while the opposite pattern was observed in the low-power condition. This would indicate that high power amplifies the effect of self-esteem on need for closure.

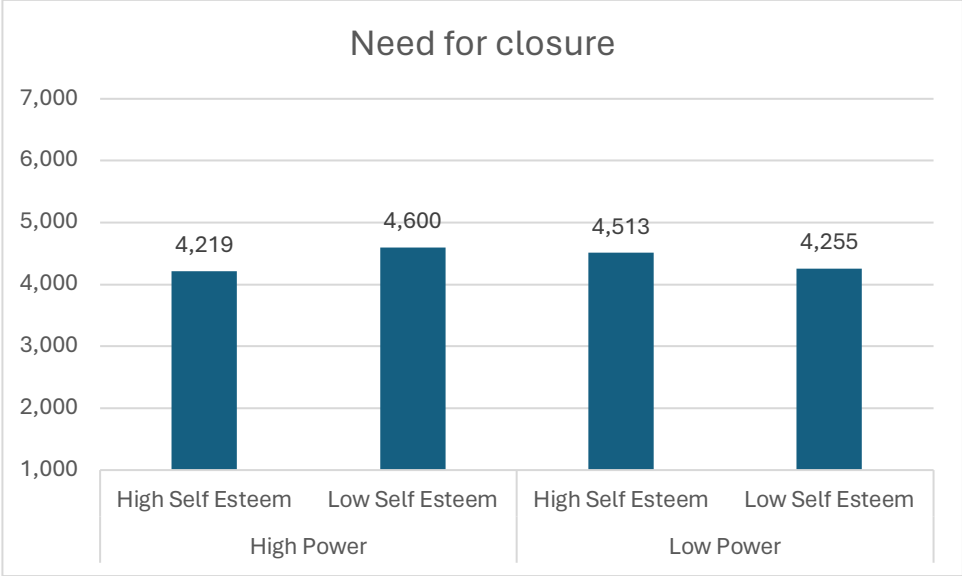


Table 4: Estimated Marginal Means for Need for closure Variable

We further conducted, t-tests analysis to better understand the interaction effect between power and self-esteem. While grouping data for high power variable and running Independent Samples T-test we found that individuals with high self-esteem ( $M = 4.22, SD = 0.89$ ) reported significantly lower levels of need for closure compared to individuals with low self-esteem ( $M = 4.60, SD = 0.90$ ),  $t(1) = -1.784, p = 0.04$ ). Concluding that, high self-esteem leads to lower need for closure than low self-esteem, when power is high.

When grouping data for low power variable the results were not significant but could still show a clear tendency. Individuals with high self-esteem ( $M = 4.51, SD = 1.16$ ) reported higher levels of need for closure compared to individuals with low self-esteem ( $M = 4.26, SD = 0.89$ ),  $t(1) = 0.965, p = 0.169$ ). Concluding that, high self-esteem shows a tendency to lead to higher need for closure than low self-esteem, when power is low. Those results are particularly interesting because they show a tendency for a full interaction effect.

*Mindfulness*

Firstly, we conducted reliability tests to better understand the dynamics between the specific measurements of mindfulness variable. The scale consisted of 4 items (*Cronbach's alpha* =

0.23) and none of the items were found to significantly improve the overall reliability of the scale if deleted.

Further ANOVA 2 Power (high, low) x 2 Self Esteem (high, low) did not reveal a significant main effect of power ( $F_{(1, 126)} = 0.038, p = 0.846$ ) indicating that, on average, participants in the high-power condition ( $M_{High Power} = 4.17, SD_{High Power} = 0.75$ ) did not report significantly lower mindfulness compared to those in the low power condition ( $M_{Low Power} = 4.21, SD_{Low Power} = 0.95$ ). We also did not find a significant main effect of self-esteem ( $F_{(1, 126)} = 0.263, p = 0.609$ ), indicating that high self-esteem participants ( $M_{High Self Esteem} = 4.24, SD_{High Self Esteem} = 0.86$ ) did not report significantly higher levels of mindfulness compared to low self-esteem participants ( $M_{Low Self Esteem} = 4.15, SD_{Low Self Esteem} = 0.84$ ). Additionally, there was no significant interaction effect between power and self-esteem ( $F_{(1, 126)} = 1.144, p = 0.287$ ).

Interestingly looking closure at the profile plots we can see that high-power condition shows a steeper decrease in mindfulness compared to the low-power condition as self-esteem goes up. Specifically, participants with higher self-esteem in the high-power condition tended to report lower mindfulness compared to those with lower self-esteem, while the opposite pattern was observed in the low-power condition. This would indicate that there is a tendency for high self-esteem to amplify the effect of power on mindfulness.

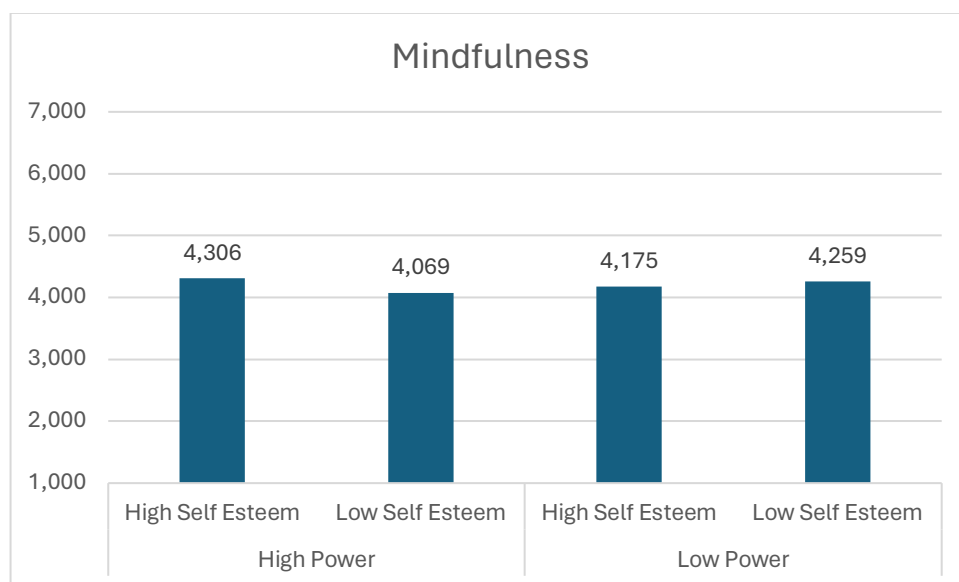


Table 5: Estimated Marginal Means for Mindfulness Variable

### Self-Efficacy

Firstly, we conducted reliability tests to better understand the dynamics between the specific measurements of self-efficacy variable. The scale consisted of 3 items (*Cronbach's alpha* =

0.67) and none of the items were found to significantly improve the overall reliability of the scale if deleted.

Further ANOVA 2 Power (high, low) x 2 Self Esteem (high, low) did not reveal a significant main effect of power ( $F_{(1, 126)} = 0.000, p = 0.985$ ) indicating that, on average, participants in the high-power condition ( $M_{High Power} = 5.20, SD_{High Power} = 0.93$ ) did not report significantly higher self-efficacy compared to those in the low power condition ( $M_{Low Power} = 5.20, SD_{Low Power} = 1.00$ ). We also did not find a significant main effect of self-esteem ( $F_{(1, 126)} = 0.108, p = 0.743$ ), indicating that high self-esteem participants ( $M_{High Self Esteem} = 5.17, SD_{High Self Esteem} = 0.89$ ) did not show significantly lower levels of self-efficacy compared to low self-esteem participants ( $M_{Low Self Esteem} = 4.22, SD_{Low Self Esteem} = 1.01$ ). Additionally, there was no significant interaction effect between power and self-esteem ( $F_{(1, 126)} = 0.059, p = 0.809$ ).

### *Procrastination*

Firstly, we conducted reliability tests to better understand the dynamics between the specific measurements of procrastination variable. The scale consisted of 3 items (Cronbach's  $\alpha = 0.78$ ) and the second statement: "*I generally delay before starting on work I have to do.*" was found to be unreliable (Cronbach's  $\alpha$  if item deleted = 0.73). However, after deleting item number 2 and conducting ANOVA analysis again, p-value for the interaction effect slightly decreased ( $F_{(1, 126)} = 0.194, p = 0.660$ ), p-value for the main effect of power significantly increased ( $F_{(1,126)} = 0.018, p = 0.893$ ) and p-value for the main effect of self-esteem increased slightly ( $F_{(1,126)} = 0.011, p = 0.916$ ). Since, deleting the items with high Cronbach's  $\alpha$  didn't affect the results in a significant way, we decided to keep all the measurements in the analyses. Further ANOVA 2 Power (high, low) x 2 Self Esteem (high, low) did not reveal a significant main effect of power ( $F_{(1, 126)} = 0.466, p = 0.496$ ) indicating that, on average, participants in the high-power condition ( $M_{High Power} = 4.58, SD_{High Power} = 1.38$ ) did not report significantly higher procrastination compared to those in the low power condition ( $M_{Low Power} = 4.73, SD_{Low Power} = 1.34$ ). We also did not find a significant main effect of self-esteem ( $F_{(1, 126)} = 0.046, p = 0.831$ ), indicating that high self-esteem participants ( $M_{High Self Esteem} = 4.62, SD_{High Self Esteem} = 1.40$ ) did not show significantly lower levels of self-efficacy compared to low self-esteem participants ( $M_{Low Self Esteem} = 4.67, SD_{Low Self Esteem} = 1.34$ ). Additionally, there was no significant interaction effect between power and self-esteem ( $F_{(1, 126)} = 0.153, p = 0.697$ ).

### *Willingness to ask for promotion*

An ANOVA 2 Power (high, low) x 2 Self Esteem (high, low) did not reveal a significant main effect of power ( $F_{(1, 126)} = 0.802, p = 0.372$ ) indicating that, on average, participants in the high-power condition ( $M_{High Power} = 5.07, SD_{High Power} = 1.40$ ) did not report significantly higher willingness to ask for promotion compared to those in the low power condition ( $M_{Low Power} = 4.81, SD_{Low Power} = 1.79$ ). We also did not find a significant main effect of self-esteem ( $F_{(1, 126)} = 0.002, p = 0.961$ ), indicating that high self-esteem participants ( $M_{High Self Esteem} = 4.93, SD_{High Self Esteem} = 1.57$ ) did not show significantly lower willingness to ask for promotion compared to low self-esteem participants ( $M_{Low Self Esteem} = 4.97, SD_{Low Self Esteem} = 1.61$ ). Additionally, there was no significant interaction effect between power and self-esteem ( $F_{(1, 126)} = 0.037, p = 0.849$ ).

### *Willingness to collaborate with external partner*

An ANOVA 2 Power (high, low) x 2 Self Esteem (high, low) revealed a marginally significant main effect of power ( $F_{(1, 126)} = 1.920, p = 0.168$ ) showing a tendency for participants in the high-power condition ( $M_{High Power} = 4.65, SD_{High Power} = 1.56$ ) to report lower willingness to collaborate with external partner compared to those in the low power condition ( $M_{Low Power} = 5.05, SD_{Low Power} = 1.75$ ). Concluding that high power individuals tended to have a lower willingness to collaborate with external partner, than low self-esteem individuals. Furthermore, we did not find a significant main effect of self-esteem ( $F_{(1, 126)} = 0.283, p = 0.596$ ), indicating that high self-esteem participants ( $M_{High Self Esteem} = 4.77, SD_{High Self Esteem} = 1.66$ ) did not show significantly lower willingness to collaborate with external partner compared to low self-esteem participants ( $M_{Low Self Esteem} = 4.88, SD_{Low Self Esteem} = 1.66$ ). Additionally, there was no significant interaction effect between power and self-esteem ( $F_{(1, 126)} = 0.266, p = 0.607$ ).

Power	Self Esteem					
	High		Low		TOTAL	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
High	4.65	1.45	4.65	1.66	4.65	1.56
Low	4.90	1.86	5.21	1.63	5.05	1.75
TOTAL	4.77	1.66	4.88	1.66		

*Note: M and SD represent mean and standard deviation respectively*

*Table 6: Means and standard deviations for Willingness to collaborate with external partner as a function of 2 (Power) x 2 (Self Esteem)*

### *Willingness to coordinate a new project*

An ANOVA 2 Power (high, low) x 2 Self Esteem (high, low) did not reveal a significant main effect of power ( $F_{(1, 126)} = 0.136, p = 0.713$ ) indicating that, on average, participants in the high-power condition ( $M_{High Power} = 5.45, SD_{High Power} = 1.33$ ) did not report significantly higher willingness to coordinate new project compared to those in the low power condition ( $M_{Low Power} = 5.41, SD_{Low Power} = 1.46$ ). Yet we found a significant main effect of self-esteem ( $F_{(1, 126)} = 3.781, p = 0.054$ ), indicating that high self-esteem participants ( $M_{High Self Esteem} = 5.69, SD_{High Self Esteem} = 1.10$ ) reported significantly higher willingness to coordinate new project compared to low self-esteem participants ( $M_{Low Self Esteem} = 5.20, SD_{Low Self Esteem} = 1.57$ ). Concluding that high self-esteem individuals have a greater willingness to coordinate a new project than low self-esteem individuals. Additionally, there was no significant interaction effect between power and self-esteem ( $F_{(1, 126)} = 0.785, p = 0.377$ ).

Power	Self Esteem					
	High		Low		TOTAL	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
High	5.84	0.86	5.15	1.55	5.45	1.33
Low	5.53	1.31	5.28	1.62	4.41	1.46
TOTAL	5.69	1.10	5.20	1.57		

*Note: M and SD represent mean and standard deviation respectively*

*Table 7: Means and standard deviations for Willingness to coordinate a new project as a function of 2 (Power) x 2 (Self Esteem)*

Looking closure into the profile plots, we can see that high-power condition shows a steeper decrease in the willingness to coordinate a new project compared to the low-power condition as self-esteem goes up. Specifically, participants with higher self-esteem in the high-power condition tended to report a lower willingness to coordinate a new project compared to those with lower self-esteem, while the same pattern was observed in the low-power condition. This would indicate that self-esteem amplifies the effect of power on willingness to coordinate a new project.

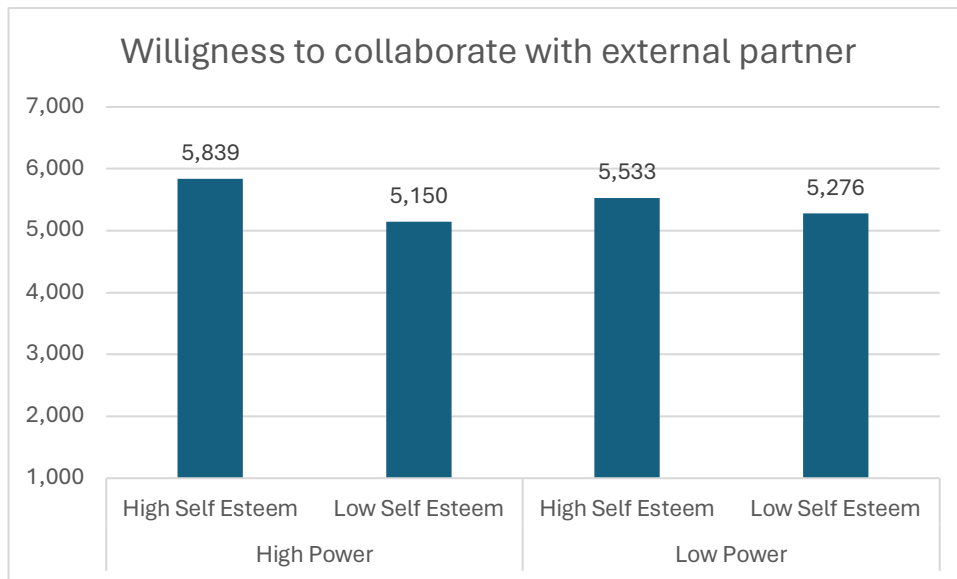


Table 8: Estimated Marginal Means for Willingness to coordinate a new project Variable

Further, we conducted Independent Samples T-test to better understand the dynamics between the groups. After grouping data for high power variable and running the analysis we found that individuals with high self-esteem ( $M = 5.84$ ,  $SD = 0.86$ ) reported significantly higher willingness to coordinate a new project compared to individuals with low self-esteem ( $M = 5.15$ ,  $SD = 1.55$ ),  $t(1) = 2.227$ ,  $p = 0.015$ ). Concluding that, high self-esteem leads to higher willingness to coordinate a new project than low self-esteem when power is high.

When grouping data for low power variable individuals with high self-esteem ( $M = 5.53$ ,  $SD = 1.13$ ) did not report significantly higher willingness to coordinate a new project compared to individuals with low self-esteem ( $M = 5.28$ ,  $SD = 1.62$ ),  $t(1) = 0.670$ ,  $p = 0.253$ ). Concluding that, high self-esteem doesn't show a significant tendency to lead to higher willingness to coordinate a new project than low self-esteem when power is low.

#### *Willingness to engage in extensive thinking*

An ANOVA 2 Power (high, low) x 2 Self Esteem (high, low) did not reveal a significant main effect of power ( $F(1, 126) = 0.197$ ,  $p = 0.658$ ) indicating that, on average, participants in the high-power condition ( $M_{High Power} = 5.46$ ,  $SD_{High Power} = 1.31$ ) did not report significantly higher willingness to engage in extensive thinking new project compared to those in the low power condition ( $M_{Low Power} = 5.39$ ,  $SD_{Low Power} = 1.53$ ). Yet we found a marginally significant main effect of self-esteem ( $F(1, 126) = 1.989$ ,  $p = 0.161$ ), indicating that, on average, there was a tendency for high self-esteem participants ( $M_{High Self Esteem} = 5.62$ ,  $SD_{High Self Esteem} = 1.25$ ) to report higher willingness to engage in extensive thinking compared to low self-esteem

participants ( $M_{Low\ Self\ Esteem} = 5.26$ ,  $SD_{Low\ Self\ Esteem} = 1.53$ ). Concluding that high self-esteem individuals tend to have a greater willingness to engage in extensive thinking than low self-esteem individuals. Additionally, there was no significant interaction effect between power and self-esteem ( $F_{(1, 126)} = 0.617$ ,  $p = 0.434$ ).

Power	Self Esteem					
	High		Low		TOTAL	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
High	5.77	1.06	5.23	1.46	5.46	1.32
Low	5.47	1.43	5.31	1.65	3.39	1.53
TOTAL	5.62	1.25	5.26	1.53		

*Note: M and SD represent mean and standard deviation respectively*

Table 9: Means and standard deviations for Willingness to engage in extensive thinking as a function of 2 (Power) x 2 (Self Esteem)

Looking closure into the profile plots, we can see that high-power condition shows a steeper decrease in the willingness to engage in extensive thinking compared to the low-power condition as self-esteem goes up. Specifically, participants with higher self-esteem in the high-power condition tended to report a lower willingness to engage in extensive thinking compared to those with lower self-esteem, while the same pattern was observed in the low-power condition. This would indicate that self-esteem amplifies the effect of power on willingness to engage in extensive thinking.

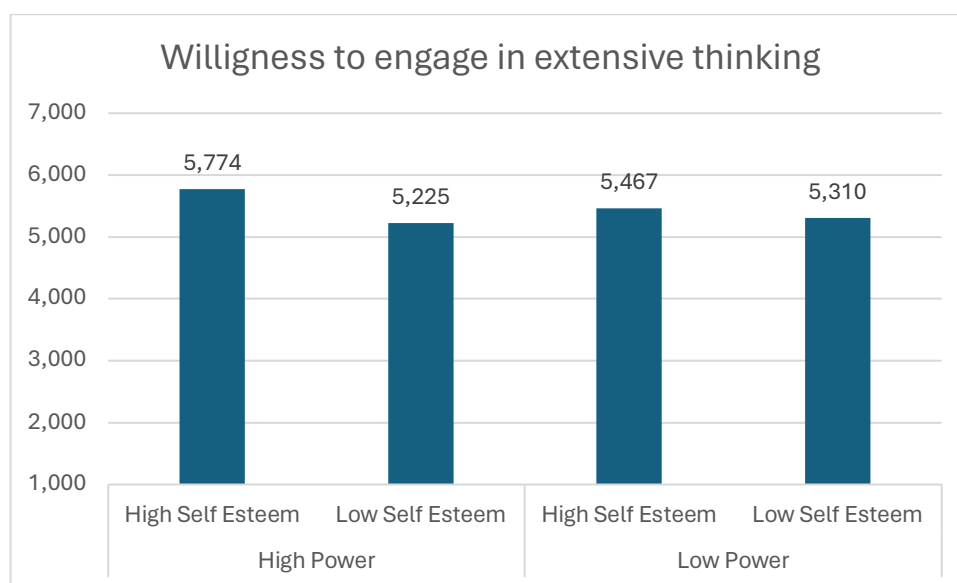


Table 10: Estimated Marginal Means for Willingness to engage in extensive thinking Variable

Further, we conducted Independent Samples T-test to better understand the dynamics between the groups. After grouping data for high power variable and running the analysis we found that individuals with high self-esteem ( $M = 5.77$ ,  $SD = 1.06$ ) reported significantly higher willingness to engage in extensive thinking compared to individuals with low self-esteem ( $M = 5.23$ ,  $SD = 1.46$ ),  $t(1) = 1.840$ ,  $p = 0.035$ ). Concluding that, high self-esteem leads to higher willingness to engage in extensive thinking than low self-esteem when power is high.

When grouping data for low power variable individuals with high self-esteem ( $M = 5.47$ ,  $SD = 1.43$ ) did not report significantly higher willingness to engage in extensive thinking compared to individuals with low self-esteem ( $M = 5.31$ ,  $SD = 1.65$ ),  $t(1) = 0.388$ ,  $p = 0.350$ ). Concluding that, high self-esteem doesn't show a significant tendency to lead to higher willingness to engage in extensive thinking than low self-esteem, when power is low.

## Control variables

First manipulation check question was designed for the power variable and aimed at checking if participants understood who the person in the scenario was ( $M = 1.90$ ,  $SD = 0.98$ ). 68 participants answered that a person in the scenario was a CEO, 53 participants said a person was an intern, whereas 8 participants claimed it to be an external partner and 1 person said it was a client. Second manipulation check question was related to the self-esteem variable and aimed at examining if participants understood where the person in the scenario decided to go to ( $M = 2.10$ ,  $SD = 0.99$ ). 65 participants declared that the person in the scenario went to the animal shelter, 56 participants said it was a cinema, while 7 people chose a supermarket and 2 people declared it was a pharmacy. Overall, 93% of the participants answered manipulation checks questions correctly. Additionally, one attention check question was asked to verify if participants read and answered questions carefully ( $M = 2.00$ ,  $SD = 0.00$ ) with all the participants answering the attention check question correctly.

# Discussion

## Summary of Results

The present research addressed the impact of power and self-esteem on need for closure, mindfulness, self-efficacy, procrastination and willingness to overcome work challenges. The findings paint a multifaceted picture of how self-esteem and power influence focus and project engagement in organizational settings. While the data for most of dependent variables didn't show a pattern that would be in accordance with the initial hypotheses, a more intricate story emerged when exploring need for closure and willingness to coordinate a new project. We observed a significant main effect of self-esteem on willingness to coordinate a new project, confirming the initial hypothesis that individuals with high self-esteem displayed a greater tendency to take on new projects compared to those with lower self-esteem. Interestingly, this research also shows a marginal interaction effect between power and self-esteem for need for closure variable. We initially expected that high power would lead to a greater need for closure, particularly for individuals in the high self-esteem condition. However, the observed trend was the opposite: high power leads to higher need for closure than low power when self-esteem is high; but it leads to lower need for closure when self-esteem is low. Furthermore, we could see a tendency for main effect of power on willingness to collaborate with external partner, which confirmed our initial hypothesis, indicating that high power leads to lower willingness to collaborate with external partner, than low power. There was also a marginal trend for the main effect of self-esteem over the willingness to engage in extensive thinking, which was in opposite to the initial hypothesis. Concluding that, high self-esteem leads to higher willingness to think extensively, than low self-esteem. Interestingly, the analysis yielded a couple of unexpected findings. The expected positive effect of power on willingness to ask for a promotion was not supported by the data. Furthermore, the observed effect of self-esteem on willingness to engage in extensive thinking ran counter to our prediction, with high self-esteem linked to a marginally lower tendency for deep thinking.

Further analysis through t-tests provided stronger evidence, for the interaction effect between power and self-esteem. When grouping data for high power variable, we found that individuals with high self-esteem reported significantly lower need for closure, marginally higher mindfulness, significantly higher willingness to coordinate a new project and significantly higher willingness to engage in extensive thinking, compared to individuals in low self-esteem condition. When we only look at ANOVAs, the results don't suggest a robust interaction effect

between power and self-esteem, however exploring the data further we can see that self-esteem plays a role when power is high but seems to have no effect when power is low. (For more detailed overview of hypothesis testing, please refer to appendix 3).

## Theoretical implications of the results

Our findings regarding the interaction between self-esteem, power, and need for closure contribute significantly to the existing theoretical landscape. Firstly, the interaction effect between power and self-esteem on need for closure aligns with Construal Level Theory (Trope & Liberman, 2010). Studies suggest individuals with high self-esteem adopt a broader, more abstract construal level, processing information comprehensively. This openness might translate to a desire for clarity and a drive to complete tasks (Webster & Kruglanski, 1994), potentially leading them to engage in deeper information gathering before embarking on new projects. However, our research introduces a novel perspective by suggesting that power might moderate the influence of self-esteem on need for closure. Building on Power Threat Theory, we propose that when power is high, individuals in high self-esteem condition experience a lower need for closure compared to those with high self-esteem. This supports the theory's claim that high power mitigates threat from ambiguity (Johnstone et al., 2018). While this is likely the case, the effect could get far more complicated in cases of low power. According to Social Identity Theory (Tajfel, 2004), individuals with low power rely more heavily on external validation to maintain self-worth. This suggests that the combination of low power and low self-esteem may intensify the need for closure in order to counter uncertainty and potentially gain approval from others. Moreover, Attachment Theory (Bowlby et al., 1992) claims that high self-esteem is connected to secure attachment styles which reflect greater comfort with ambivalence. This implies that high self-esteem in combination with high power may lessen the need for closure by cultivating a more secure sense of self.

More study is needed to examine the relations between self-esteem, power, and need for closure. For instance, research could examine how people with high self-esteem might feel more responsible and more in control in high-power situations, increasing need for clarity before making decisions. The investigation of these mechanisms would enhance our understanding of how self-esteem shapes decision making under different power dynamics, in turn leading to more effective leadership and project management strategies.

Furthermore, the positive correlation between high self-esteem and the willingness to manage new projects is in line with our initial hypothesis. People with high self-esteem tend to be more convinced of their own capabilities, which makes them more prone to confront challenges and start new initiatives. Ultimately, our results supply valuable inputs into the interplay between self-esteem, power, need for closure and willingness to coordinate a new project, inviting future researchers to further examine these processes.

## Practical implications of the results

These findings have beneficial implications for project management and team building. Understanding the connections between self-esteem, power, and need for closure can inform the organizations about project allocation and team composition. For example, knowing that high power individuals have a lower need for closure than low power individuals when their self-esteem is high, and higher need for closure when self-esteem is low, could be used by the companies for the task allocations. Tasks requiring structured action and precise analysis might be well-suited for individuals with high self-esteem and strong need for closure, particularly if positioned in low-power roles. Leaders can leverage this knowledge to create a balanced team dynamic where individuals with diverse self-esteem and need for closure profiles can work together effectively.

When we look more closely at the main effect of self-esteem on willingness to coordinate a new project, we see that this finding could also have implications in several work settings. For example, organizations could establish self-esteem building programs such as skills development workshops or mentoring programs for employees. Furthermore, recognition initiatives that reward not only completed projects but also initiative and leadership qualities can be a major motivator. Publicly praising employees reinforces the value of these behaviors and encourages others to lead by example. By implementing these strategies, workplaces create a culture that encourages confidence and enables employees to take ownership and assume responsibility for new projects, leading to a more motivated workspace.

## Limitations and Future Directions

Although digital data collection offers several benefits, such as cost-effectiveness, scalability, and wider reachability of participants (Wright, 2005), there are also limitations to its use. One of the biggest drawbacks is a sample bias that appears when recruitment fails to achieve diverse populations. Additionally, limited control over the environment of data collection can introduce external distractions and technical issues to the participant, hindering their attention (Malhotra et al. 2020). Furthermore, a low sample size ( $N = 130$ ) may have limited the statistical power to detect main and interaction effects for dependent variables. Additionally, the study relied on self-reported measures, which can be susceptible to bias. Open-ended questions were intended to reinforce the manipulation of priming scenarios; however, they could also compromise its effects. By forcing participants to answer open-ended questions, we could have potentially decreased their rational and analytical reasoning (Evans & Stanovich, 2013).

Future research could address these limitations by employing larger sample sizes and incorporating objective measures. Moreover, it could be valuable to show scenarios in a different setting, using another storyline to examine how it affects the sense of power and self-esteem. For instance, showing power in a form of a motivational leadership, when high-power individuals inspire others through coaching and training to invest in an employee's development. Additionally, using only one form of manipulation (either a scenario or an open-ended question) could potentially change the outcome of the results. Furthermore, future studies should investigate if other forms of power, for instance the sense of power gained through task delegation or control over the surroundings would have a comparable impact on dependent variables. In this regard, it would be crucial to explore power-related emotions like control and confidence and separate the various meanings of "power" (e.g. societal vs personal) to study their effect on work-related constructs. Additionally, exchanging statements with low Cronbach's alpha, for less generic questions from the scales could improve the overall significance of the results. This includes statements such as *"When I have made a decision, I feel relieved"*, *"It is easy for me to stick to my aims and accomplish my goals"*, *"I can solve most problems if I invest the necessary effort"* and *"I often find myself performing tasks that I had intended to do days before"*. Ultimately, exploring the specific thought processes underlying the interaction between self-esteem, power, and dependent variables could provide valuable insights for project management practices and result in a more precise interplay of main and interaction effects between these variables.

## Conclusion

In conclusion, this study revealed a significant influence of self-esteem on several aspects of project engagement in work settings. Individuals with high self-esteem displayed a greater willingness to take on new projects and higher tendency to think extensively compared to those with lower self-esteem. Power dynamics also played a role, with high power individuals reporting marginally significant lower willingness to collaborate with external partners, compared to low power individuals. Interestingly, data also uncovered an interaction effect between power and self-esteem for need for closure variable, indicating a tendency for high power individuals to report higher need for closure than low power individuals, when self-esteem is high and lower need for closure, when self-esteem is low. Furthermore, we can see that self-esteem plays a role when power is high but seems to have no effect when power is low, indicating that high power amplifies the effects of self-esteem. Through understanding these relationships, project managers can build effective teams by leveraging the strengths of individuals with different self-esteem and need for closure profiles, ultimately leading to more successful project outcomes.

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# Appendices

## Appendix 1: Survey

**Thank you** so much for taking the time to participate in my **dissertation** research on the topic of **mindfulness and closure!** 😊

It will take around **5-10 min** to complete the survey but your input might bring us one step closer to understanding the complexity of our minds 🧠

All the data will be treated **anonymously** and **confidentially**. It will be used for research purposes only and I won't collect any data that would allow to identify the participants, so **please be as honest as possible**.

In this study you will be asked to visualize a work scenario and answer several questions. Please note that this study is aimed at understanding different opinions and perceptions so **there are no right or wrong answers**.

By proceeding you are accepting these terms and confirming you are at least 18 years old.

If you have any questions regarding this survey, please do not hesitate to contact me at: s-msora@ucp.pt.

I hope you'll enjoy it!

Let's begin ✅

Accept and Proceed

First, you will see a short scenario in a work setting. I would like you to **carefully read** it and **relate to it** as much as possible. You will be required to stay on the page for **at least 30 seconds** and then you will be asked to answer 2 open-ended questions.

It is important to **take as much time as you need** to **visualize the situation** and please keep in mind that there are **no right or wrong answers**.

Imagine **you are the CEO of a big international company**. You walk into the bustling office with **big windows**, and you feel a surge of **confidence** knowing the company is in good hands. While approaching your employees' desks, you say that the final sales report must be completed by the end of the day. The **team listens closely**, eager to **follow your instructions**, because they know **you're an expert** in closing deals that will make the company grasp even bigger share of the market. You can't help but feel the **sense of power**, knowing that **your expertise and authority** is leading the company towards the right direction.

After a successful day at work, **you stop by the local animal shelter** to take Rex for a walk. You hand over **a weekly check**, knowing that it will help **cover the costs** for food and care for Rex and his fellow mates. Even though it's just a small contribution, this **simple act of generosity** fills you with **deep sense of self-esteem and fulfillment**. In this moment, you realize that **success isn't just about personal gain** – it's about using your resources to **uplift others** and **make the world a better place**.

Please think of a moment when you saw someone feeling powerful towards others. In your opinion, what are the **3 most common characteristics of a powerful person?**

Now, please think of the moment when you saw someone living in accordance to their values. In your opinion, what are the **3 most common characteristics of a person who sticks to their values?**

Imagine **you are the CEO of a big international company**. You walk into the bustling office with **big windows**, and you feel a surge of **confidence** knowing the company is in good hands. While approaching your employees' desks, you say that the final sales report must be completed by the end of the day. The **team listens closely**, eager to **follow your instructions**, because they know **you're an expert** in closing deals that will make the company grasp even bigger share of the market. You can't help but feel the **sense of power**, knowing that **your expertise and authority** is leading the company towards the right direction.

After a successful day at work, **you think about stopping by the local animal shelter** to take Rex for a walk. Realising it will take a long time to get there, **you decide to go to the cinema instead**. As you watch the movie, you can't shake the **feeling of disappointment and doubt**, thinking that **you let Rex and his fellow mates down**. In this moment, **a sense of low self-esteem lingers** as you **struggle to believe that you're doing enough** to make this world a better place.

Please think of a moment when you saw someone feeling powerful towards others. In your opinion, what are the **3 most common characteristics of a powerful person?**

Now, please think of the moment when you saw someone not living in accordance to their values. In your opinion, what are the **3 most common characteristics of a person who doesn't stick to their values?**

Imagine **you are an intern at the big international company**. You walk into the bustling office with big windows, and **you suddenly feel small and overwhelmed** by the **big corporate world**. When you finally find your sit, the boss approaches you, saying that the final sales report must be completed by the end of the day. **You nod instantly** in an agreement and **with a fearful tone**, you **promise to submit it as soon as possible**. As the boss walks away, **a sense of vulnerability washes over you**. You can't help but **feel powerless and insignificant** in the grand scheme of the **workplace hierarchy**.

After a long day at work, **you stop by the local animal shelter** to take Rex for a walk. You hand over a **weekly check**, knowing that it will help **cover the costs** for food and care for Rex and his fellow mates. Even though it's just a small contribution, this **simple act of generosity** fills you with **deep sense of self-esteem and fulfillment**. In this moment, you realize that **success isn't just about personal gain** – it's about using your resources to **uplift others** and **make the world a better place**.

Please think of a moment when you saw someone feeling powerless towards others. In your opinion, what are the **3 most common characteristics of a powerless person?**

Now, please think of the moment when you saw someone living in accordance to their values. In your opinion, what are the **3 most common characteristics of a person who sticks to their values?**

Imagine **you are an intern at the big international company**. You walk into the bustling office with big windows, and **you suddenly feel small and overwhelmed** by the **big corporate world**. When you finally find your sit, the boss approaches you, saying that the final sales report must be completed by the end of the day. **You nod instantly** in an agreement and **with a fearful tone**, you **promise to submit it as soon as possible**. As the boss walks away, **a sense of vulnerability washes over you**. You can't help but **feel powerless and insignificant** in the grand scheme of the **workplace hierarchy**.

After a long day at work, **you think about stopping by the local animal shelter** to take Rex for a walk. Realising it will take a long time to get there, **you decide to go to the cinema instead**. As you watch the movie, you can't shake the **feeling of disappointment and doubt**, thinking that **you let Rex and his fellow mates down**. In this moment, **a sense of low self-esteem lingers** as you **struggle to believe that you're doing enough** to make this world a better place.

Please think of a moment when you saw someone feeling powerless towards others. In your opinion, what are the **3 most common characteristics of a powerless person?**

Now, please think of the moment when you saw someone not living in accordance to their values. In your opinion, what are the **3 most common characteristics of a person who doesn't stick to their values?**

The remaining part of the survey will only focus on **closed-ended questions**. You will be asked to answer several statements on the scale from 1 to 7.

Please **rate** each of the following statements with the number that best describes **your own opinion** of what is **generally true** for you on a **scale** from: 1 (never true) to 7 (always true).

	1 (never true)	2	3	4	5	6	7 (always true)
When I have made a decision, I feel relieved.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would rather make a decision quickly than sleep over it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel hurried to reach a decision, even when there is no reason to do so.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I am confronted with a problem, I'm dying to reach a solution very quickly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would quickly become impatient and irritated if I would not find a solution to a problem immediately.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please **rate** each of the following statements with the number that best describes **your own opinion** of what is **generally true** for you on a **scale** from: 1 (never true) to 7 (always true).

	1 (never true)	2	3	4	5	6	7 (always true)
I disapprove of myself when I have illogical ideas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I do jobs or tasks automatically without being aware of what I'm doing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can easily put my beliefs, opinions, and expectations into words.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In difficult situations, I can pause without immediately reacting.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please **rate** each of the following statements with the number that best describes **your own opinion** of what is **generally true** for you on a **scale** from: 1 (never true) to 7 (always true).

	1 (never true)	2	3	4	5	6	7 (always true)
It is easy for me to stick to my aims and accomplish my goals.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am confident that I could deal efficiently with unexpected events.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can solve most problems if I invest the necessary effort.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please **rate** each of the following statements with the number that best describes **your own opinion** of what is **generally true** for you on a **scale** from: 1 (never true) to 7 (always true).

	1 (never true)	2	3	4	5	6	7 (always true)
I often find myself performing tasks that I had intended to do days before.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I generally delay before starting on work I have to do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In preparing for some deadline, I often waste time by doing other things.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please **rate** each of the following statements with the number that best describes **your willingness to accept following circumstances** on a **scale** from: 1 (not willing at all) to 7 (definitely willing).

	1 (not willing at all)	2	3	4	5	6	7 (definitely willing)
To what extent would you be willing to coordinate a new monthly project and manage your team?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To what extent would you be willing to ask your boss for promotion?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To what extent would you be willing to collaborate with a co-worker from an external company?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To what extent would you be willing to handle a project that requires extensive thinking and coming up with new solutions?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Now, please indicate:

The person in the scenario was:

- a CEO
- an external partner
- an intern
- a client

The person in the scenario decided to go to:

- the cinema
- the supermarket
- the animal shelter
- the pharmacy

This question is aimed at understanding if you're paying attention. Please select B:

- A
- B
- C
- D

We're **almost finished!** Thanks for holding on 😊 Before you submit the survey, I would like you to provide your final **demographic information**.

Which **gender** do you identify most with?

- Male
- Female
- Non-binary
- Transgender
- Other
- Prefer not to say

**Age**

How **old** are you?

**Country**

In which **country** did you grow up?

**Education**

What is the **highest level of education** you have completed?

- No degree
- High School
- Bachelor's Degree
- Master's Degree
- PhD or higher
- Prefer not to say

Professional status

What is your current professional status?

- Student
- Employee
- Student and employee
- Unemployed
- Retired
- Other
- Prefer not to say

Thank you for your time and input, your answers are very important! 😊

If you have any **questions or comments** regarding this survey, do not hesitate to write them below or contact me at: [s-msora@ucp.pt](mailto:s-msora@ucp.pt)

## Appendix 2: Results

### Need for closure

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	When I have made a decision, I feel relieved.	1.00	7.00	5.34	1.27	1.61	130
2	I would rather make a decision quickly than sleep over it.	1.00	7.00	3.59	1.57	2.46	130
3	I feel hurried to reach a decision, even when there is no reason to do so.	1.00	7.00	4.11	1.76	3.08	130
4	When I am confronted with a problem, I'm dying to reach a solution very quickly.	1.00	7.00	4.75	1.57	2.48	130
5	I would quickly become impatient and irritated if I would not find a solution to a problem immediately.	1.00	7.00	4.27	1.63	2.64	130

#	Field	1 (never true)	2	3	4	5	6	7 (always true)	Total
1	When I have made a decision, I feel relieved.	1.54% 2	0.00% 0	5.38% 7	14.62% 19	36.15% 47	19.23% 25	23.08% 30	130
2	I would rather make a decision quickly than sleep over it.	8.46% 11	19.23% 25	23.08% 30	18.46% 24	20.00% 26	6.15% 8	4.62% 6	130
3	I feel hurried to reach a decision, even when there is no reason to do so.	8.46% 11	13.08% 17	15.38% 20	20.77% 27	15.38% 20	18.46% 24	8.46% 11	130
4	When I am confronted with a problem, I'm dying to reach a solution very quickly.	0.77% 1	10.77% 14	13.85% 18	13.08% 17	22.31% 29	26.92% 35	12.31% 16	130
5	I would quickly become impatient and irritated if I would not find a solution to a problem immediately.	3.08% 4	14.62% 19	15.38% 20	22.31% 29	16.92% 22	19.23% 25	8.46% 11	130

### Mindfulness

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	I disapprove of myself when I have illogical ideas.	1.00	7.00	4.02	1.78	3.16	130
2	I do jobs or tasks automatically without being aware of what I'm doing.	1.00	7.00	3.25	1.48	2.20	130
3	I can easily put my beliefs, opinions, and expectations into words.	2.00	7.00	4.85	1.33	1.78	130
4	In difficult situations, I can pause without immediately reacting.	1.00	7.00	4.65	1.50	2.26	130

#	Field	1 (never true)	2	3	4	5	6	7 (always true)	Total
1	I disapprove of myself when I have illogical ideas.	7.69% 10	16.92% 22	17.69% 23	13.85% 18	20.00% 26	14.62% 19	9.23% 12	130
2	I do jobs or tasks automatically without being aware of what I'm doing.	13.08% 17	20.00% 26	26.15% 34	19.23% 25	13.85% 18	6.15% 8	1.54% 2	130
3	I can easily put my beliefs, opinions, and expectations into words.	0.00% 0	5.38% 7	11.54% 15	20.77% 27	27.69% 36	24.62% 32	10.00% 13	130
4	In difficult situations, I can pause without immediately reacting.	0.77% 1	9.23% 12	14.62% 19	20.00% 26	20.77% 27	24.62% 32	10.00% 13	130

### Self-Efficacy

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	It is easy for me to stick to my aims and accomplish my goals.	1.00	7.00	4.73	1.31	1.70	130
2	I am confident that I could deal efficiently with unexpected events.	2.00	7.00	5.06	1.31	1.70	130
3	I can solve most problems if I invest the necessary effort.	1.00	7.00	5.82	1.18	1.38	130

#	Field	1 (never true)	2	3	4	5	6	7 (always true)	Total
1	It is easy for me to stick to my aims and accomplish my goals.	1.54% 2	5.38% 7	9.23% 12	20.00% 26	36.92% 48	20.00% 26	6.92% 9	130
2	I am confident that I could deal efficiently with unexpected events.	0.00% 0	4.62% 6	9.23% 12	13.85% 18	33.08% 43	26.15% 34	13.08% 17	130
3	I can solve most problems if I invest the necessary effort.	0.77% 1	2.31% 3	0.77% 1	5.38% 7	24.62% 32	33.85% 44	32.31% 42	130

### Procrastination

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	I often find myself performing tasks that I had intended to do days before.	1.00	7.00	4.71	1.42	2.02	130
2	I generally delay before starting on work I have to do.	1.00	7.00	4.59	1.68	2.81	130
3	In preparing for some deadline, I often waste time by doing other things.	1.00	7.00	4.65	1.81	3.26	130

#	Field	1 (never true)	2	3	4	5	6	7 (always true)	Total
1	I often find myself performing tasks that I had intended to do days before.	0.77% 1	7.69% 10	13.85% 18	16.92% 22	26.92% 35	26.15% 34	7.69% 10	130
2	I generally delay before starting on work I have to do.	1.54% 2	12.31% 16	17.69% 23	13.08% 17	18.46% 24	23.08% 30	13.85% 18	130
3	In preparing for some deadline, I often waste time by doing other things.	3.85% 5	13.08% 17	12.31% 16	14.62% 19	16.15% 21	21.54% 28	18.46% 24	130

### *Willingness to overcome work challenges*

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	To what extend would you be willing to coordinate a new monthly project and manage your team?	1.00	7.00	4.95	1.58	2.49	130
2	To what extend would you be willing to ask your boss for promotion?	1.00	7.00	4.83	1.65	2.71	130
3	To what extend would you be willing to collaborate with a co-worker from an external company?	1.00	7.00	5.43	1.38	1.91	130
4	To what extend would you be willing to handle a project that requires extensive thinking and coming up with new solutions?	1.00	7.00	5.43	1.41	1.98	130

#	Field	1 (not willing at all)	2	3	4	5	6	7 (definitely willing)	Total
1	To what extend would you be willing to coordinate a new monthly project and manage your team?	2.31% 3	6.15% 8	13.08% 17	10.00% 13	26.92% 35	23.85% 31	17.69% 23	130
2	To what extend would you be willing to ask your boss for promotion?	4.62% 6	3.85% 5	14.62% 19	13.08% 17	27.69% 36	16.92% 22	19.23% 25	130
3	To what extend would you be willing to collaborate with a co-worker from an external company?	1.54% 2	3.08% 4	4.62% 6	10.77% 14	26.15% 34	29.23% 38	24.62% 32	130
4	To what extend would you be willing to handle a project that requires extensive thinking and coming up with new solutions?	0.77% 1	2.31% 3	9.23% 12	9.23% 12	26.15% 34	23.85% 31	28.46% 37	130

## Appendix 3: Hypothesis Testing

### *Need for closure*

1. Main effect of power: High power leads to higher need for closure, than low power. (We anticipated the trend well, but ANOVA results were not significant)
2. Main effect of self-esteem: High self-esteem leads to lower need for closure than low self-esteem. (We anticipated the trend well, but ANOVA results were not significant)
3. Interaction effect between the two independent variables: High power leads to ~~higher~~ lower need for closure than low power when self-esteem is high; but it leads to ~~lower~~ higher need for closure when self-esteem is low. (ANOVA results were marginally significant and further confirmed by t-tests but the trend was opposite to what was anticipated)

### *Mindfulness*

1. Main effect of power: High power leads to lower mindfulness than low power. (We anticipated the trend well, but ANOVA results were not significant)
2. Main effect of self-esteem: High self-esteem leads to higher mindfulness than low self-esteem. (We anticipated the trend well, but ANOVA results were not significant)
3. Interaction effect between the two independent variables: High power leads to higher mindfulness than low power when self-esteem is high; but it leads to ~~lower~~ higher mindfulness when self-esteem is low. (We partially anticipated the trend well, and t-test partially confirmed the results, but ANOVA results were not significant)

### *Self-efficacy*

1. Main effect of power: High power leads to ~~higher~~ lower self-efficacy, than low power. (The trend was opposite to what was anticipated, and ANOVA results were not significant)
2. Main effect of self-esteem: High self-esteem leads to ~~higher~~ lower self-efficacy than low self-esteem. (The trend was opposite to what was anticipated, and ANOVA results were not significant)
3. Interaction effect between the two independent variables: High power leads to higher self-efficacy than low power when self-esteem is high; but it leads to lower self-efficacy when self-esteem is low. (We anticipated the trend well, but ANOVA results were not significant)

### *Procrastination*

1. Main effect of power: High power leads to lower procrastination, than low power. (We anticipated the trend well, but ANOVA results were not significant)

2. Main effect of self-esteem: High self-esteem leads to lower procrastination than low self-esteem. (We anticipated the trend well, but ANOVA results were not significant)
3. Interaction effect between the two independent variables: High power leads to ~~lower~~ higher procrastination than low power when self-esteem is high; but it leads to ~~higher~~ lower procrastination when self-esteem is low. (The trend was opposite to what was anticipated, and ANOVA results were not significant)

*Willingness to ask for promotion*

1. Main effect of power: High power leads to higher willingness to ask for promotion, than low power. (We anticipated the trend well, but ANOVA results were not significant)
2. Main effect of self-esteem: High self-esteem leads to ~~higher~~ lower willingness to ask for promotion, than low self-esteem. (The trend was opposite to what was anticipated, and ANOVA results were not significant)
3. Interaction effect between the two independent variables: High power leads to higher willingness to ask for promotion, than low power when self-esteem is high; but it leads to higher willingness to ask for promotion when self-esteem is low. (We anticipated the trend well but, ANOVA results were not significant)

*Willingness to collaborate with external partner*

1. Main effect of power: High power leads to lower willingness to collaborate with external company, than low power. (We anticipated the trend well, and ANOVA results were marginally significant)
2. Main effect of self-esteem: High self-esteem leads to ~~higher~~ lower willingness to collaborate with external company, than low self-esteem. (The trend was opposite to what was anticipated, and ANOVA results were not significant)
3. Interaction effect between the two independent variables: High power leads to ~~higher~~ lower willingness to collaborate with external company than low power when self-esteem is high; but it leads to lower willingness to collaborate with external company, when self-esteem is low. (We partially anticipated the trend well, but ANOVA results were not significant)

*Willingness to coordinate new project*

1. Main effect of power: High power leads to higher willingness to coordinate a new project, than low power. (We anticipated the trend well, but ANOVA results were not significant)

2. Main effect of self-esteem: High self-esteem leads to higher willingness to coordinate a new project, than low self-esteem. (We anticipated the trend well, and ANOVA results were significant)
3. Interaction effect between the two independent variables: High power leads to higher willingness to coordinate a new project, than low power when self-esteem is high; but it leads to lower willingness to coordinate a new project, when self-esteem is low. (We anticipated the trend well, and t-test partially confirmed the results, but ANOVA results were not significant)

*Willingness to engage in extensive thinking*

1. Main effect of power: High power leads to higher willingness to think extensively than low power. (We anticipated the trend well, but ANOVA results were not significant)
2. Main effect of self-esteem: High self-esteem leads to ~~lower~~ higher willingness to think extensively, than low self-esteem. (The trend was opposite to what was anticipated, but ANOVA results were marginally significant)
3. Interaction effect between the two independent variables: High power leads to higher willingness to think extensively than low power when self-esteem is high; but it leads to lower willingness to think extensively when self-esteem is low. (We anticipated the trend well, and t-test partially confirmed the results, but ANOVA results were not significant)