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Stefanie Krauth, BSc

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Abstract

Today's rapidly changing and globalized modern world demands constant adaptation and innovation, outstanding performance and perpetual development from organizations. This can put enormous pressure on them. Since employees constitute a large part of organizations, investing in their *job engagement* and the *relational energy* among them is imperative. The current study ($N = 239$) examined one particular positive leadership approach which was assumed to meet these necessities. *PERMA-Lead* (Ebner, 2019) is an integrative positive leadership approach, which is based on Seligman's PERMA-model (2011). It uses the five factors of PERMA (P – Positive Emotions, E – Engagement, R – Relations, M – Meaning, A – Accomplishment) to describe what leadership behavior should look like in order for employees to flourish. A non-experimental cross-sectional anonymous self-reporting online questionnaire was used to investigate whether relational energy can be generated by PERMA-Lead and serves as a mediating variable between PERMA-Lead and job engagement. The current study was able to demonstrate a positive correlation between PERMA-Lead and the generation of relational energy between leader and employee ($N = 239$) as well as among employees ($n = 219$). Furthermore, it showed that relational energy among employees is partially mediating the relationship between PERMA-Lead and job engagement ($n = 223$). Explorative analysis revealed more detailed insights into the correlation between relational energy and the five single factors of PERMA-Lead as well as into the influence of the duration of subordination to one's leader. Furthermore, a principal component analysis (PCA) was conducted to confirm the distinctness of PERMA-Lead and relational energy between leader and employee.

Keywords: Positive leadership, PERMA-Lead, relational energy, job engagement

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The Relation between PERMA-Lead, Relational Energy and Job Engagement

The world is constantly changing and fast-moving. Today's (business) world is often depicted as a VUCA-world, which delineates the world as volatile, uncertain, complex and ambiguous (Rodriguez & Rodriguez, 2015). Globalization, rapidity of technical innovation and perpetual competition are present and pose challenges for organizations (Atwater & Carmeli, 2009; Fu et al., 2019). They are bound to always be on track, must constantly develop innovative ideas and have to be able to offer a wide range of products and services (Atwater & Carmeli, 2009). According to Nel et al. (2015, p. 1), "trying times [like these] are not the exception anymore, but the norm". This results in enormous pressure on organizations.

Organizations cannot exist and be successful without their employees. They make up a large part of organizations and are the driving forces behind whatever is produced or whichever service is provided. To keep organizations sustainably running, it is therefore imperative to invest in employees' well-being and mental health. This study focuses on two concepts that can account for these aspects: *Relational energy* and *job engagement*.

Because "energy is an organizational resource that increases employees' capacity for action and motivation [and enables employees] to do their work and attain their goals" (Quinn et al., 2012, p. 6), organizations should pay more attention to the creation and maintenance of energy. This study centers one specific form of energy called relational energy. It refers to energizing interactions between leaders and employees or among employees, which e.g. can cause flourishing and incorporates various positive effects for employees' well-being and work-related outcomes (Ebner, 2019). Relational energy is, among other things, positively associated with an increased job performance (Baker et al., 2003; Cross & Parker, 2004) and a heightened motivation to work (Amah, 2018; Quinn et al., 2012; Schippers & Hogenes, 2011). The second aspect that will be addressed in the study at hand is job engagement. To name a few, it is positively associated with concentration, commitment and perseverance (Ebner, 2019; Schaufeli et al., 2006).

Positive leadership is one approach that accounts for the necessity to invest in those aspects (Lewis, 2011). There is no universal definition of positive leadership, many different approaches and definitions exist to describe the concept. This study will focus on one specific approach of positive leadership, namely PERMA-Lead (Ebner, 2019). It is a strength-oriented leadership concept based on Seligman's (2011) PERMA-model and will be described in more detail in the following (Ebner, 2019).

The aim of this study is to investigate the relationship between PERMA-Lead and relational energy with inclusion of job engagement.

Theoretical Background

Importance and Impact of Energy

Definition of Energy

According to *Webster's Dictionary*, energy in general is “the capacity of acting or being active” (Merriam-Webster, n.d.). There are three different types of energy in the psychological context, which will be depicted in the following (Cameron, 2013; Schippers & Hogenes, 2011).

Most organizational scholars view energy from an emotion-related perspective (Cole et al., 2012). For example, Quinn and Dutton define energy as “a type of positive affective arousal, which people can experience as emotion – short responses to specific events – or mood – longer-lasting affective states that need to be responses to specific events” (Quinn & Dutton, 2005, p. 36). This definition describes mainly one form of energy, that is, *emotional energy*. Emotional energy refers to being in alignment with one's values and sentiments and entails experiencing a high intensity of emotions (Cameron, 2013; Schippers & Hogenes, 2011). It can be drained and must then be recharged (Cameron, 2013). This can, e.g., be achieved through resting and relaxing. (Cameron, 2013). The two other types of energy have been somewhat sidelined in previous research in organizational psychology. They are, however, gaining increasing attention in recent times and will be very briefly described.

The second form of energy is called *mental energy*. It describes the ability to concentrate thoroughly and to focus cognitively (Schippers & Hogenes, 2011). After high cognitive activity, mental energy runs out and needs to be replenished, as does emotional energy (Cameron, 2013). This can be achieved, for example, by engaging in activities that do not demand a high level of cognition.

Physical energy is the third form of energy and concerns skills such as power or stamina (Schippers & Hogenes, 2011). It refers to the biological processes in the human body that cause people to feel energized. As with the before mentioned forms of energy, physical energy can be depleted. Physical activity reduces physical energy, which must then be restocked through e.g., sleep (Cameron, 2013).

Energy is an essential motivational factor in the work context and is of great importance at the individual as well as at the organization level (Owens et al., 2016). Energetic people reach their goals earlier, report a better well-being and vitality and are valuable in creating a more favorable work atmosphere (Schippers & Hogenes, 2011).

Definition of Relational Energy

Energy plays a particularly important role in relationships. The energy that occurs and exists between people is called relational energy. In contrast to the three just mentioned forms of energy, relational energy does not decrease when used – it increases even more (Cameron, 2013). Relational energy is “energy derived from a relational experience” (Owens et al., 2016, p. 35) and is connected with feelings of vitality and excitement (Cameron, 2013). It is often used synonymously with positive energy. In the work context, it is described as “a heightened level of psychological resourcefulness generated from interpersonal interactions that enhances one’s capacity to do work” (Owens et al., 2016, p. 37). By using the term *psychological resourcefulness*, the scholars refer to concepts like “motivation, vitality, stamina, and vigor that [are] generated as a result of a series of interpersonal exchanges” (Owens et al., 2016, p. 37).

Positive Effects of Relational Energy

Relational energy releases resources and consequently enables people to unleash their strengths (Ebner, 2019). It has various important effects on the output of employees and the organization in general, which will be described in the following.

The most significant characteristic of relational energy in the interest of the current study is the fact that energetic people can energize others: Energetic people do not only improve their personal outcome, but they can also influence the outcome of others (Owens et al., 2016). As such, they can also be called energizers. This is especially interesting in regard to working contexts. Previous research shows that those employees who are having a working relationship with an energizer show measurably better performance (Baker et al., 2003; Cross & Parker, 2004). In addition, relational energy makes a major contribution to increased capacity to do work (Carmeli et al., 2009). Also, relational energy has positive associations with employees’ motivation to work (Amah, 2018; Quinn et al., 2012; Schippers & Hogenes, 2011) and their effectivity (Baker et al., 2003; Cross & Parker, 2004; Quinn et al., 2012). Employees who are positively energized complete their tasks faster and also have more fun doing them (Baker et al., 2003; Cross & Parker, 2004; Quinn et al., 2012).

Research also shows that there are several positive effects of relational energy in matters of leadership. Employees of energizing leaders show significantly higher well-being at work and job performance in comparison to those who are not subordinates to an energizing leader (Baker et al., 2003; Cameron, 2013; Cross & Parker, 2004; Owens et al., 2016). Also, they are more satisfied with their job and show higher well-being in general and in their families (Cameron, 2013; Owens et al., 2016). Furthermore, such employees report

about having more energy when interacting with their leaders in a positive way (Atwater & Carmeli, 2009).

In addition, relational energy influences the cooperation among employees. In working units where employees positively energize each other via relational energy, there is more cohesiveness among them, more creativity and innovation and more willingness to learn new things (Cameron, 2013; Owens et al., 2016).

Relational Energy and Job Engagement

The following section will go into more detail about the effects of relational energy on job engagement of employees.

Erickson (2005) defines job engagement as the readiness of employees to devote a large amount of time and effort to the prosperity of the organization (as cited in Nel et al., 2015). Hence, job engagement assesses the degree to which an employee is receptive to and committed to his*her work (Schaufeli & Bakker, 2004). It describes the extent to which an employee contributes his*her whole self to work (Rich et al., 2010, as cited in Owens et al., 2016).

Kahn (1990) can be viewed as the first scholar who investigated the relationship between job engagement and relational energy. In his study, he investigated relations between job engagement and factors like dignity, respect and appreciation. These factors have a high overlap with relational energy. He found out that these factors have an impact on job engagement. Further research examined the relationship between relational energy and job engagement in more depth and was successful in demonstrating a positive correlation (Owens et al., 2016). Owens et al. (2016, p. 38) assumed that “the enhanced psychological resources entailed in relational energy was one reason for the increased job engagement”. The reason for this may be that sharing resources among employees motivates them and thus leads to committed behavior (Owens et al., 2016).

The described positive effects of both concepts, relational energy and job engagement, suggests the necessity to include their advancement in the working context.

Theories

The following chapters provide the conceptual and theoretical context for the study at hand.

Interaction Ritual Theory

At the core of Collins' interaction ritual theory (1993, 2004) are interactions between persons that “develop a mutual focus of attention and become entrained in each other's bodily microrhythms and emotions” (Collins, 2004, p. 47). This entrainment happens in four stages

(Collins, 2004). First, two or more persons must be in the same place, thereby influencing each other with their physical presence. This can happen consciously as well as unconsciously. The boundaries are clearly defined so that participants know who is included in the interaction and who is not. Individuals focus their attention on a common activity or feature. Lastly, by telling each other about this focus of attention, they reciprocally become aware of each other's focus of attention. This process happens due to emotional energy (Owens et al., 2016). Collins uses the term of emotional energy to describe the energetic activation between the two interactants, which they both reciprocally produce and pass on highly contagious (Owens et al., 2016). This experience influences both the intenseness with which the respective individual experiences his*her emotions and also the way in which this individual deals with his*her interaction partner in the future (Owens et al., 2016). As a result, the interactants ultimately “share a common mood or emotional experience” (Collins, 2004, p. 48). To refer this to job engagement, it can be assumed that the interaction with others will influence job engagement among employees positively (Owens et al., 2016).

Collins differentiates between two kinds of interaction (1993, 2004). In some interactions, energy is produced whereas in others energy is dissipated (Amah, 2018). One main statement of interaction ritual theory is that individuals strive to experience interactions of the first kind, namely interactions in which energy is generated.

Social Contagion Theories

Social contagion theories address the transmission of stimuli from one person to another, which can be referred to as *social contagion* (Hatfield et al., 1994, as cited in Owens et al., 2016). The underlying premise is that people inherit the behaviors and opinions of those with whom they engage in through social interactions (Scherer & Cho, 2003). This can happen both consciously and unconsciously (Scherer & Cho, 2003). There are various positive effects of social contagion on work-related outcomes, which can be attained via the dispersion of positive emotions (Barsade, 2002; Owens et al., 2016). Such positive effects could be improved willingness to cooperate, reduced numbers of conflicts and elevated levels of task performance (Barsade, 2002). Both participants of the interaction benefit from it because resources are divided among them (Owens et al., 2016).

In regard to relational energy, social contagion theories describe that relational energy is shared among interaction partners. Thus, the concept of social contagion “complements the contagious effect insinuated by interaction ritual theory, providing a potential mechanism by which human energy can be transmitted through social interaction” (Owens et al., 2016, p.

37). In addition, it is assumed that the sharing of relational energy between interactants can influence job engagement positively (Owens et al., 2016).

Conservation of Resources Theory

The basic fundament of the theory of conservation of resources (Hobfoll, 1989) is that “people strive to retain, protect, and build resources” they value (Hobfoll, 1989, p. 516; Hobfoll et al., 2018). One way to accomplish this is to establish social circumstances that aid the protection of these resources (Hobfoll et al., 2018). (Relational) energy, for example, can represent such a resource. Energy is often described as a narrow asset that needs to be restocked in case of running out (Hobfoll & Shirom, 2001, as cited in Owens et al., 2016). Based on this, it can be assumed that people seek to nurture and maintain energy. The theory of conservation of resources suggests that individuals do this through others (Owens et al., 2016). Thus, the theory assumes that people utilize interactions with others “to retain, protect and build resources” (Hobfoll, 1989, p. 516; Owens et al., 2016). In addition, the theory of conservation of resources (Hobfoll, 1989) assumes that the possession of resources, in this case relational energy, translates into job engagement (Owens et al., 2016).

It can be concluded that these social interactions are based on relational energy. Thus, the theory contributes an important part to a) explaining why relational energy is important and b) how it is maintained.

Positive Psychology

Development

Positive psychology is a relatively young subfield of psychology and was established by Martin Seligman in 1998 (Seligman & Csikszentmihalyi, 2000). However, the roots of positive psychology go back much further (Linley et al., 2006; Seligman & Csikszentmihalyi, 2000). Scientists like Terman, Watson, and Jung already conducted research on topics like giftedness, marriage satisfaction and the meaning of life in the 1930s (Seligman & Csikszentmihalyi, 2000). Even then, these issues had a great amount of overlap with positive psychology as it is known today. The topics of positive psychology also show intersections with components of humanistic psychology (Linley et al., 2006). Even Maslow discussed psychology’s main focus on the negative critically:

The science of psychology has been far more successful on the negative than on the positive side. It has revealed to us much about man’s shortcomings, his illness, his sins, but little about his potentialities, his virtues, his achievable aspirations, or his full psychological height. It is as if psychology has voluntarily restricted itself to only half its

rightful jurisdiction, and that, the darker, meaner half. (Maslow, 1954, as cited in Linley et al., 2006, p. 5).

Before World War II, psychology had three main branches. The first branch included examining and healing mental illnesses, the second one was concerned with improving people's life and the third one aimed to find and promote giftedness and high potentials (Linley et al., 2006; Seligman & Csikszentmihalyi, 2000). After the war ended, the main focus of psychology shifted considerably to the curing of mental illnesses, whereas the other two branches were mostly ignored (Seligman & Csikszentmihalyi, 2000). A big part of this change was also the onset of the Veterans Administration and the National Institute of Health in the late 1940s (Linley et al., 2006). There is no doubt that the exploration, treatment, and cure of mental disorders is enormously important and has been irreplaceable, especially in the post-World War II era. Nonetheless, the two other branches of psychology also constitute important areas of interest and need, especially in the non-therapeutic contexts like work or education. The sole focus on mental illnesses has also contributed to the deterministic view scientists had on humans back then (Seligman & Csikszentmihalyi, 2000). They viewed them as passive and as determined by the environment (Seligman & Csikszentmihalyi, 2000).

As Seligman was voted president of the American Psychological Association in 1998, he, like Maslow did similarly 50 years before, sharply criticized the developments of the past decades and the mere focus of psychology on pathology of humans (Ebner, 2019; Linley et al., 2006; Seligman & Csikszentmihalyi, 2000).

He called for research in areas concerning the positive aspects of life and thus laid the foundation for the (renewed) emergence of positive psychology (Ebner, 2019; Seligman & Csikszentmihalyi, 2000). Since then, the field of positive psychology has grown and is still growing constantly. Over the years, the followership of positive psychology has become large (Linley et al., 2006). Meanwhile, there are multitudinous books, articles and congresses about positive psychology, like for example the first appurtenant positive psychology journal which is called *The Journal of Positive Psychology* (Linley et al., 2006).

Focus of Content in Positive Psychology

There is no universally valid understanding of what content positive psychology addresses and how exactly it is defined. Different scholars define positive psychology in different ways, certainly showing great overlaps but also some distinctions. On the one hand this can be irritating and misleading. On the other hand, however, it is precisely this diversity that represents the wide range of positive psychology.

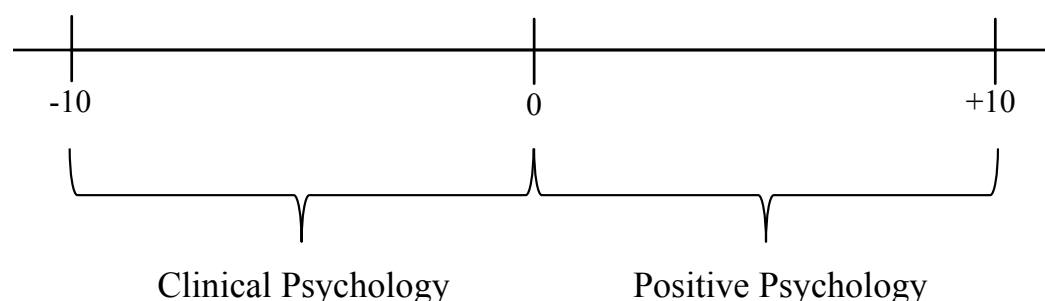
According to Gable and Haidt "positive psychology is the study of the conditions and processes that contribute to the flourishing or optimal functioning of people, groups, and institutions" (Gable & Haidt, 2005, p. 103). Importantly, the definition of *The Journal of Positive Psychology* (2005) incorporates the scientific aspect by defining positive psychology as an area which "is about scientifically informed perspectives on what makes life worth living. It focuses on aspects of the human condition that lead to happiness, fulfilment, and flourishing" (as cited in Linley et al., 2016, p. 5).

Some scholars have attempted to structure the topics of positive psychology. To understand positive psychology more profoundly, the following section will go into more detail about the differentiation Linley et al. made (2006). They distinguish between the *meta-psychological level view* and the *pragmatic level view* and thereby describe the full potential of positive psychology (Linley et al., 2006).

The meta-psychological level view describes the objectives and the "grand vision" (Linley et al., 2006, p. 6) of positive psychology. Accordingly, positive psychology aims to understand "the entire breadth of human experience, from loss, suffering, illness, and distress through connection, fulfilment, health, and well-being" (Linley et al., 2006, p. 6). Thus, it forms a complement to the "classical"/"business-as-usual" psychology (Ebner, 2019; Linley et al., 2006). The underlying idea is that the absence of something negative does not necessarily mean something positive (Ebner, 2019). Rather, positive psychology adds a wider range to the spectrum of humans' well-being. As can be seen in Figure 1, clinical psychology addresses the more negative aspects of life (-10 to 0), while positive psychology addresses the more positive parts of life (0 to +10).

Figure 1

Clinical and Positive Psychology on a Scale



Note. Source: Based on Ebner, 2019, p. 46

A widely spread misconception is that positive psychology exclusively addresses the positive sides of life (Held, 2004; Lazarus & Martin, 2003; Linley et al., 2006). It is imperative to dispel this assumption. Positive psychology aims solely to take the whole

spectrum of humans' well-being into account and hereby outweighs the existing imbalance in research concentration (Linley et al., 2006). By incorporating all the facets of human life, positive psychology is far more credible and inclusive than the traditional focus of psychology, which exclusively focuses on one part of humans' experiences, namely on dysfunction (Linley et al., 2006).

The pragmatic level view is more concerned with the use-oriented and practical side of positive psychology (Linley et al., 2006). It describes "what positive psychologists do in terms of their research and their practice, rather than what their objectives may be" (Linley et al., 2006, p. 7). Four content areas of positive psychology are described: 1) *wellsprings*, 2) *processes*, 3) *mechanisms* and 4) *outcomes*. The wellsprings form the antecedents of the processes and mechanisms. They, e.g., concern developmental experiences which facilitate the expansion of strengths and values. Secondly, the processes a) are elements that contribute to the creation of a positive life and b) describe possible impediments to the creation of a positive life. The mechanisms can be delineated as the existing resources which help leading a positive life. As such, scholars mention „personal and social relationships, working environments, organizations and institutions, communities, and the broader social, cultural, political, and economic systems [...]" (Linley et al., 2006, p. 7). The fourth component, the outcomes, can be described as the elements that make up a good life, e.g. happiness and health. The authors emphasize that the four components should not be understood as rigid, in contrast, they interact with and influence each other.

In addition to the differentiation of Linley et al. (2006), Seligman and Csikszentmihalyi (2000) categorize the contents of positive psychology in a different way. They distinguish subjects depending on which target group positive psychology is directed at. They differentiate between three levels with which positive psychology is concerned: the *subjective level*, the *individual level* and the *group level*. On the subjective level, positive psychology is dealing with topics like joy and satisfaction in the past, flow and well-being in the present and aspiration and optimism for the future. The individual level is more concerned with positive individual characteristics of humans, e.g., the ability to love, social skills and the capability to forgive. The group level refers to institutions and associations that guide individuals toward values such as altruism, tolerance and work ethic. This level is the one that has the closest connection to the topics of this study: working life, organizations and positive leadership.

Positive Leadership

Positive leadership originated from positive psychology. It adapts models and theories of positive psychology and aims to applicate them to leadership context (Ebner, 2019). There is not one single or consistent concept of positive leadership, various definitions and models have been developed over the course of time. The different models have been established in a variety of ways: Some are based on scientific results, some have been founded more intuitively, some are focusing primarily on the behavior of the leaders whereas others focus on the positive outcomes the leaders have on employees. These different models of positive leadership have not always been derived directly from the contents of positive psychology. Thus, while these models indeed have boundary points with positive psychology, they do not represent a direct application and derivative of its subject matter to the leadership context. This makes it difficult to correctly classify the models in terms of their scientific value and meaningfulness. Furthermore, the disparity of definitions can lead to irritations, especially among leaders. For them, it could be helpful (and is often desired by them) to have explicit guidelines on how a positive leader should behave in order to ideally promote the strengths of his*her employees.

First, two leadership models in the course of positive leadership will be described in the following. They have achieved the greatest degree of recognition to date and are scientifically based (Ebner, 2019). After that, a third positive leadership model will be discussed: PERMA-Lead. This model, as already mentioned, forms the core of this work.

Psychological Capital (PsyCap)

Psychological capital (Youssef-Morgan & Luthans, 2013) – shortly PsyCap – is defined as “one’s positive appraisal of circumstances and probability for success based on motivated effort and perseverance” (Luthans et al., 2007, p. 550). The concept can be positioned at the micro level, because it is concerned with issues that have a direct impact on the individual (Ebner, 2019). Psychological capital “represents an individual’s positive psychological state of development that is characterized by four psychological resources” (Walumbwa et al., 2010, p. 939): *Hope*, *Efficacy*, *Resilience* and *Optimism* (Walumbwa et al., 2010; Youssef-Morgan & Luthans, 2013). Hope refers to the inner confidence someone has for his*her future, Efficacy describes a person's belief that he*she can achieve his*her goals and successfully complete their tasks based on their own competence, Resilience is a person's hardiness to keep going even in difficult times and to get through those times and Optimism is a generally positive attitude towards life that includes positive expectations for the future (Ebner, 2019; Walumbwa et al., 2010; Youssef-Morgan & Luthans, 2013).

Depending on the amount of psychological capital an employee has, it affects various job-related outcomes. For example, it shows positive relations with accomplishment, contentment with the job, commitment and wellbeing (Youssef-Morgan & Luthans, 2013). Additionally, it is negatively related to factors like stress, fear and fluctuation plans. Furthermore, research was able to show that it even has effects on non-job-related factors like health and social life.

When taking Hope, Efficacy, Resilience and Optimism together, they weigh more than any of them alone. A combination of the four factors can forecast desirable outcomes better than every single one of them alone (Youssef-Morgan & Luthans, 2013). Thus, they constitute a so called “higher order multidimensional resource” (Youssef-Morgan & Luthans, 2013, p. 200). The components of psychological capital are conceptualized as state-like constructs, i.e. they are alterable and not as rigid as trait-like characteristics (Ebner, 2019; Walumbwa et al., 2010; Youssef-Morgan & Luthans, 2013). Amongst others, Luthans et al. found empirical evidence for this in 2007, when they were able to show that the components of psychological capital are clearly distinguishable from personality trait constructs such as the Big Five.

What ultimately makes psychological capital a leadership construct is the fact that psychological capital is contagious: a leader’s psychological capital can positively influence the employees’ psychological capital and hence increase their positive behaviors and performance (Walumbwa et al., 2010).

Positive Organizational Scholarship (POS)

Positive organizational scholarship (POS) is a concept established by Kim Cameron (Cameron et al., 2003; Ebner, 2019). Originally, he did not introduce POS as a distinct approach to positive leadership. Rather, he introduced it together with his colleagues Dutton and Quinn, describing POS as a framework model that “is [primarily] concerned [...] with the study of especially positive outcomes, processes, and attributes of organizations and their members” (Cameron et al., 2003, p. 4). They did not present POS as a specific concept, but rather as a space for different models and theories to fit in (Cameron et al., 2003; Ebner, 2019).

A more thorough review of the term positive organizational scholarship reveals the perspective behind it (Dutton et al., 2006). It is concerned with the *positive*, that is, with uplifting and flourishing conditions and dynamics (Cameron et al., 2003; Dutton et al., 2006), with the *organizational*, because it describes how those are manifested and sustained in organization (Dutton et al., 2006) and with *scholarship* because it focuses on “empirical

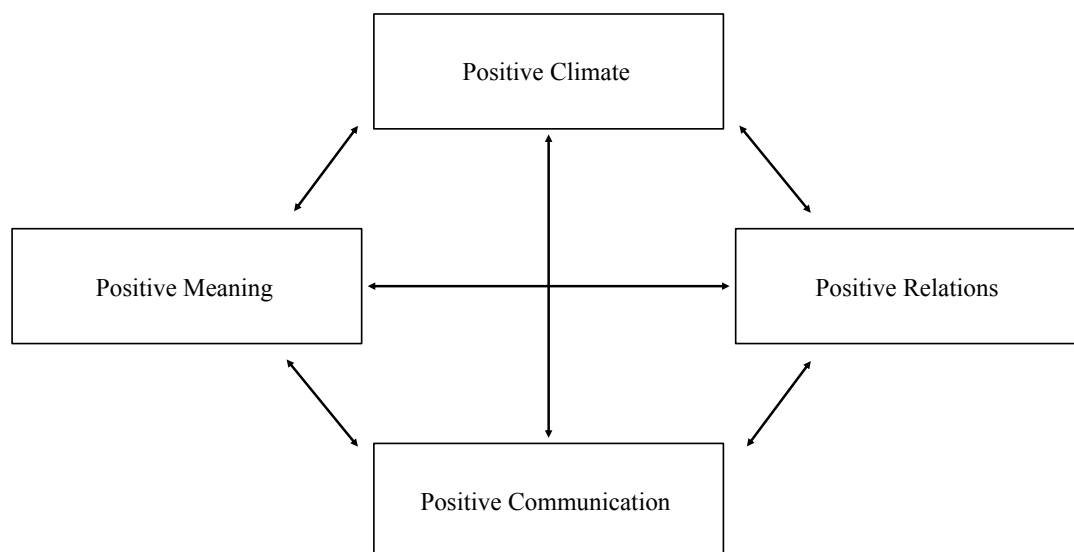
credibility and theoretical explanations” (Cameron et al., 2003, p. 6) and wants “to develop rigorous, systematic, and theory-based foundations for positive phenomena” (Cameron et al., 2003, p.6).

In 2008, Cameron explicitly positioned POS as a positive leadership approach (Ebner, 2019). According to him, an organization’s performance can be depicted in a scale. Average performance of the organization is shown in the center, while below-average and above-average performance are shown on the left and right. Thus, for an organization to show outstanding performance it needs a development to the right. This is described as a positive deviation. Here, it is clearly recognizable that positive organizational scholarship has emerged in parallel with and in part from positive psychology, because the underlying fundamental idea of a continuum is common to both.

To achieve the positive deviation just mentioned, Cameron describes four leadership strategies (Cameron, 2012). These are related to the four concepts shown in Figure 2.

Figure 2

Four Positive Leadership Strategies According to Cameron (2012)



Note. Source: Based on Cameron, 2012, p. 22

First, Cameron emphasizes the importance of a *Positive Climate*. Accordingly, leaders should invest in fostering a positive atmosphere within the organization by promoting positive values (Ebner, 2019). Furthermore, he underlines the significance of *Positive Meaning*. For that reason, leaders should act in a sense-making and sense-giving way in order to convey the bigger picture to their employees. The third strategy refers to *Positive Communication*. Following this, a leader should provide his*her employees with constructive feedback, equally get it in return and interact in a supportive manner. The last strategy relates to *Positive*

Relationships. Consequently, leaders should nurture relationships with their employees and develop them further.

Inferentially, positive organizational scholarship can be positioned at the macro level. It can be seen as an organizational theory from which concrete action implications for leaders can be derived (Ebner, 2019). Cameron has done this, for example, by identifying the above mentioned four leadership strategies (Ebner, 2019).

PERMA-Lead

PERMA-Lead (Ebner, 2016) is an integrative positive leadership model based on the PERMA-model (Seligman, 2011). The PERMA-model (Seligman, 2011) defines five measurable foundations for a person to flourish: P for *Positive Emotions*, E for *Engagement*, R for *Relations*, M for *Meaning* and A for *Accomplishment* (Ebner, 2016). *PERMA-Lead* (Ebner, 2016) applies the model to leadership context and uses the five factors to describe how a leader should act so that his*her employees can flourish. In addition to the five PERMA factors, the model includes an additional factor called "lead". This factor represents the strengths orientation of the leader. It follows, a positive leader is someone who positively influences the PERMA of his*her employees through his*her leadership behavior (Ebner, 2019). Consequently, leadership behavior is one influencing factor for the employees' PERMA.

There is already some scientific evidence that PERMA-Lead is related to several psychological constructs. For example, it positively influences stress and burnout, i.e. it decreases the perceived level of both (Ebner, 2019). The study at hand aims to expand the knowledge about PERMA-Lead by providing scientific findings regarding the emergence of relational energy.

In the following, an overview about the individual factors of the model and their positive effects will be given.

Positive Emotions

Humans experience Positive Emotions as feelings that are comfortable and that provide them with strength (Ebner, 2019). Positive Emotions are positively related to multiple work-related outcomes on the personal as well as on the social and performance level (Diener et al., 2020).

On the personal level, e.g., experiencing Positive Emotions can lead to a stronger belief in oneself (Diener et al., 2020; Frederickson & Fowler, 2001) and to an increase in creativity (Davis, 2009). Furthermore, Diener et al. (2020) report in their meta-analysis that Positive Emotions entail improved coping schemes. There is also evidence that Positive

Emotions are associated with improved health and longer life expectancy (Diener & Chan, 2011).

In regard to social outcomes, research shows that Positive Emotions can lead to elevated levels of cooperation and teamwork (Diener et al., 2020). For instance, there is a positive relation between the encouragement of gratefulness and prosocial behavior (Bartlett & DeSteno, 2006). Furthermore, Positive Emotions are positively associated with the quality of relationships (Diener et al., 2020). E.g., people experiencing more Positive Emotions are more social and consequently have qualitatively more valuable interpersonal relationships (Diener & Seligman, 2002). Also, customers of employees who show Positive Emotions are more satisfied and hence rate service quality higher (Pugh, 2001).

On the performance level, Oswald and his colleagues were able to show that experiencing Positive Emotions at work can lead to increased productivity (Oswald et al., 2015). Likewise, they could show that experiencing negative emotions can lead to lower productivity (Oswald et al., 2015).

According to PERMA-Lead, a positive leader should ensure that his*her employees experience Positive Emotions at work, so that the above mentioned positive effects can be effectively achieved (Ebner, 2019). Furthermore, a leader is more likely to elicit Positive Emotions from his*her employees if he*she experiences them himself*herself (Ebner, 2016).

Engagement

In relation to leadership context, Engagement refers to the nurturing of employees' Engagement. It can be seen as the opponent to burnout (Schaufeli et al., 2006). Employees scoring high in Engagement "have a sense of energetic and effective connection with their work activities, and they see themselves as able to deal well with the demands of their jobs" (Schaufeli et al., 2006, p. 702).

Highly engaged employees show more vigor in the work context, are more absorbed in a task and show more commitment (Schaufeli et al., 2006). In addition, Engagement gives strength to continue a task and not to quit (Ebner, 2019). Furthermore, Engagement has a positive relation to higher job satisfaction and commitment towards the organization (Kern et al., 2014).

Relations

The factor Relations refers to the creation of sustainable relationships (Ebner, 2016). Positive Relations at the workplace are positively connected to psychological safety (Carmeli & Gittell, 2009). Furthermore, Relations are strongly correlated with the commitment towards one's organization and job satisfaction (Kern et al., 2014). Nurturing and maintaining positive

relationships within the organization can also help reduce the frequency of colleagues leaving the organization (Dutton & Ragins, 2007, as cited in Madden et al., 2015). In addition, positive Relations in the working context are mediating the relation between the perceived aid from the organization and the intention to fluctuate (Madden et al., 2015). Here, Madden et al. (2015) address leaders directly to support positive relationships between employees in order to reduce turnover.

Meaning

There is no universal understanding of Meaning. The term was mainly influenced by Viktor Frankl, who stated that every human being carries an intrinsic will to find and experience Meaning in life (Schnell, 2009). He also claimed that the absence of Meaning can generate serious psychological problems (Frankl, 1996, as cited in Schnell, 2009). Consequently, the experience of Meaning is an irreplaceable part of human life.

Since work takes up a major part of a person's life, many people aim to experience Meaning in their work and not just see it as something functional (Šverko & Vizek-Vidović, 1995, as cited in Steger et al., 2012). There are a lot of different understandings of Meaning, especially in the working context. According to Ebner, Meaning is “experienced meaningfulness: doing something that is bigger than ourselves and has significance” (2019, p. 67). This definition will be used in the following.

Meaning has positive relations with various work-related constructs. For example, there is a positive association between Meaning and well-being (Arnold et al., 2007), psychological adaptation (Steger et al., 2012), job engagement (Jung & Yoon, 2016), commitment towards and identification with the organization (Jung & Yoon, 2016; Pratt et al., 2006).

Meaning can be created by oneself as well as through the contribution of others. Thus, conveying it is an important component of leadership. To relate the above mentioned to PERMA-Lead: In order to support the flourishing of his*her employees, a positive leader strives to ensure that his*her employees find their work meaningful (Ebner, 2019). To do this, he*she lets them know that their work is important and of high value (Ebner, 2019).

Accomplishment

Accomplishment refers to the conscious perception and celebration of the achievement of a goal (Ebner, 2019). A positive leader provides his*her employees with the assurance that they are capable of achieving goals. Also, he*she shares with his*her employees when they have achieved a goal, gives feedback and lauds them for it.

Accomplishment is positively associated with life satisfaction and health. Also, it is negatively associated with the probability for depression or anxiety disorder and stress (Butler & Kern, 2015, as cited in Ebner, 2019). Gander et al. (2016) found similar results: They emphasize the importance of Accomplishment (as well as the other PERMA factors) in enhancing one's well-being and improving symptoms of depression.

Comparison (of the Three Positive Leadership Styles)

The main commonality of the three described concepts is that they all are positive leadership concepts. They all address positive aspects and outcomes and thus present concepts that can enable positive leadership.

PsyCap (Youssef-Morgan & Luthans, 2013) and PERMA-Lead (Ebner, 2016) can be located at the micro level, because they are directly concerned with the individual. POS (Cameron et al., 2003), however, is positioned at the macro level. It was initially seen more as an overarching context into which several different theories could be integrated (Cameron et al., 2003; Ebner, 2019). Only later, Cameron derived a concrete leadership concept from it (Ebner, 2019). This concrete leadership concept, in turn, could be located at the micro level as well (see Figure 2).

What all three concepts have in common is that they are concerned with constructs that should, when present, result in positive leadership. They address positive aspects: PsyCap (Hope, Efficacy, Resilience and Optimism), POS (Positive Climate, Positive Communication, Positive Meaning, Positive Relations) and PERMA-Lead (Positive Emotions, Engagement, Relations, Meaning and Accomplishment) (Cameron et al., 2003; Ebner, 2019; Youssef-Morgan & Luthans, 2013). POS and PERMA-Lead overlap in some aspects, namely Positive Meaning and Positive Relations. Furthermore, all constructs addressed are described as state-like constructs, which can be altered and are not inflexible.

According to Youssef-Morgan and Luthans (2013), an existing and fulfilled psychological capital of the leader causes the emergence and transmission of positive leadership. Thus, the basis of positive leadership in this theory lies within the contagion of employees with the PsyCap of the leader. PERMA-Lead represents an intermediate stage between PsyCap and POS in terms of the emergence and transmission of positive leadership. In PERMA-Lead, the primary goal is to strengthen the PERMA of employees and not to pay attention to the expression of the constructs in the leader himself*herself (Ebner, 2019). Nevertheless, it is the case, that a leader is more likely to trigger positive emotions in his*her employees if he*she experiences them himself*herself (Ebner, 2016). POS, on the other hand, only aims to ensure that the leader positively satisfies the constructs in his*her employees

(Cameron et al., 2003). There is no mention of the extent to which they are or should also be fulfilled by the leader.

When taking the four constructs of Psychological capital – Hope, Efficacy, Resilience and Optimism – together, they are an even stronger predictor of various positive work-related outcomes (Youssef-Morgan & Luthans, 2013). Even though it is not explicitly mentioned for the other two concepts, one can assume that this assumption can also be made for POS and PERMA-Lead.

Current Study

The current study examines the relationship between PERMA-Lead, relational energy and job engagement.

Hypothesis 1

Hypothesis 1 investigates the relationship between PERMA-Lead and relational energy a) between leader and employee and b) among employees. To date, there has been no research on this relationship yet. Consequently, the current study aims to fill this scientific gap. To have a theoretical basis for the generation of relational energy, reference to the above discussed theories is being made: Interaction ritual theory (Collins, 1993, 2004), social contagion theories and conservation of resources theory (Hobfoll, 1989). These theories offer a theoretical explanation for the emergence and transmission of relational energy.

Since several other positive leadership approaches have already been linked to the generation of relational energy (e.g., Amah, 2018), I assume the following for PERMA-Lead:

Hypothesis 1: PERMA-Lead (from the employees' perspective) is positively related to generation of relational energy...

- a) ... between leader and employee
- b) ... among employees.

Hypothesis 2

The second hypothesis represents an extension of hypothesis 1. It is assumed that relational energy serves as a mediator in the relationship between PERMA-Lead and job engagement.

Furthermore, research to date shows that various positive leadership styles are positively associated with relational energy (Amah, 2018). Therefore, as already described in hypothesis 1, a positive relationship between PERMA-Lead and relational energy is expected as well.

Previous research shows that relational energy ensures that employees can use their resources and allow their strengths to blossom which in turn impacts engaged behaviors of

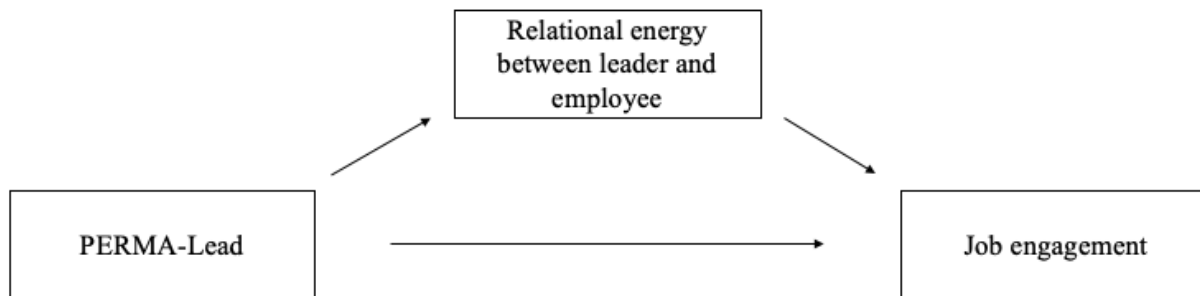
them (Owens et al., 2016). Moreover, interaction ritual theory (Collins, 1993, 2004) and social contagion theories describe that interactions with other individuals will presumably affect job engagement positively (Owens et al., 2016). In addition, conservation of resources theory (Hobfoll, 1989) assumes that the possession of resources, in this case relational energy, translates into job engagement (Saks, 2006, as cited in Owens et al., 2016).

There is no investigation on the effects of PERMA-Lead on job engagement yet, which is why this study aims to fill this scientific gap. Based on the evidence just presented the following is assumed:

Hypothesis 2a: Relational energy between leader and employee is a mediating variable between PERMA-Lead and job engagement (see Figure 3).

Figure 3

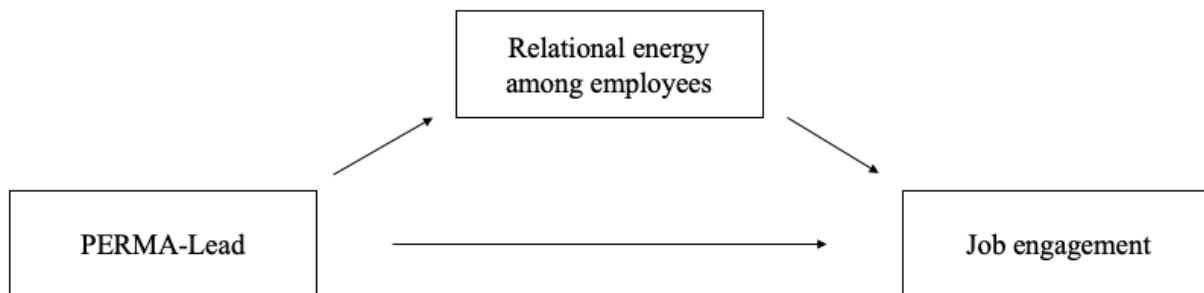
Mediation Model of Hypothesis 2a



Hypothesis 2b: Relational energy among employees is a mediating variable between PERMA-Lead and job engagement (see Figure 4).

Figure 4

Mediation Model of Hypothesis 2b



Method

A non-experimental study cross-sectional design was used to investigate the present research question. Participants were surveyed using an anonymous self-reporting online questionnaire, which was designed via SoSci-Survey (Leiner, 2019). The questionnaire was

available in both German and English and participants could choose which version they wanted to complete.

Sample

The present sample was recruited primarily through social media (Facebook, WhatsApp and Instagram). In addition, acquaintances were asked to forward the link. Preliminary testing via G*Power 3.1 (Faul et al., 2009) revealed that the sample must include at least 73 participants in order to gain a power of .90, a medium effect size of $f^2 = 0.15$ and an alpha level of .05. The self-imposed goal in terms of the sample size was at least $N = 100$, in case some questionnaires were not filled in completely. I only investigated full-aged, currently working participants who are subordinates to a leader. Thus, self-employed people and people working in non-hierarchical surroundings were excluded.

The initial sample included $N = 253$. Three participants were excluded because they gave nonsensical answers. For example, one participant stated that he had been subordinated to his leader for 19 years, even though he was only 24 years old. Another nine participants were excluded because they had an unusually short completion time for some items. Analysis of missing values showed 21 participants with missing values. After a detailed review of these values, I excluded two of them completely from the analysis. For the others, I chose pairwise deletion for the different analyses. Therefore, the final sample size was $N = 239$.

Of the participants, 65% ($n = 156$) were female, 34 % ($n = 82$) were male and less than one percent ($n = 1$) was diverse. All were between 18 and 66 years old, with a mean age of 32.97 years ($SD = 13.31$). Of the participants, 75% ($n = 180$) were currently living in Germany, 19% ($n = 45$) were living in Austria, and 6% ($n = 14$) were living in other countries ($n = 1$ from the Cayman Islands, $n = 1$ from Hungary, $n = 1$ from Italy, $n = 4$ from the Netherlands, $n = 2$ from Spain, $n = 2$ from Switzerland, and $n = 3$ from the United States of America).

Table 1 shows the highest educational qualification of the participants and the industries they were working in. More than a third of the participants held a bachelor's degree. Otherwise, the sample is heterogeneous with regard to this variable. The participants were working in a wide range of industries. The most frequently represented industries were “office, marketing, finance, law and security” and “social, health and beauty”.

Table 1

Highest Educational Qualification and Industries of the Participants

	<i>n</i>	<i>%</i>
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Highest educational qualification		
Secondary school diploma	3	1%
Junior high school diploma	21	9%
High school diploma	35	15%
Vocational education	23	10%
College diploma	16	7%
University diploma (bachelor)	91	38%
University diploma (master)	39	16%
University diploma (doctorate)	8	3%
Other diploma	3	1%
Industry		
Construction, wood and building services engineering	7	3%
Office, marketing, finance, law and security	40	17%
Chemistry, biotechnology, food and plastics	6	3%
Electrical engineering, electronics, telecommunications and IT	12	5%
Trade, logistics and transport	18	8%
Agriculture, horticulture and forestry	3	1%
Mechanical engineering, automotive and metal	21	9%
Media, graphics, design, printing, arts and crafts	12	5%
Cleaning, housekeeping, semi-skilled and auxiliary occupations	0	0%
Social, health and beauty	53	22%
Textile, clothing and fashion industry	3	1%
Tourism, hospitality and leisure	7	3%
Environment	0	0%
Science, education, research and development	28	12%
Other service/ industry	29	12%

Note. $N = 239$.

Due to pairwise deletion, the sample size for some analyses was slightly smaller. The exact sample sizes are reported in the respective analysis.

Procedure

The participants received a link to participate in the survey. After clicking on the link, they immediately entered the survey. The first page included a short introduction, provided the participants with information about the protection of their data privacy, the duration of the study and referred to contact details.

Once the participants agreed to the terms of the study, demographic data was collected. Furthermore, participants were asked whether they were currently working (to earn income), whether they were currently employed (by a company/ firm/ the government/ any organization) and whether they were currently subordinate to (at least) one leader. Those who met the criteria were transferred to the next page.

On the following pages work-related variables were surveyed (see Demographic Variables for more detailed descriptions of the variables).

The subsequent part of the questionnaire included the items of the Relational Energy Scale (Owens et al., 2016). At first, the participants answered those items in regard to their directly superior leader. Afterwards they answered the same items in regard to the team they were working in. Those who did not work in a team skipped the latter part.

The next page involved the PERMA-Lead-Profiler[®] (Ebner, 2019). Participants rated 15 items in relation to their directly superior leader.

Subsequently, participants were asked to fill out the UWES-9 Work Engagement Scale (Schaufeli et al., 2006).

After completing the questionnaire, the participants were transferred to the final page of the questionnaire. I thanked them for their participation and asked them to forward the link of the survey.

Material

Demographic Variables

I collected data about the following demographic variables: gender, age, place of residence, highest educational qualification, industries the participants were working in, how long participants have already been subordinate to a leader, size and duration of cooperation of the team participants were working in and the working hours per week. Furthermore, I gathered data about the extent of home office of the participants on a scale from 0% to 100% in steps of ten.

Relational Energy Scale

To test for the presence of relational energy between leader and employee (hypothesis 1a), the Relational Energy Scale was used (Owens et al., 2016). It consists of five 7-point-scale items from 1 = *strongly disagree* to 7 = *strongly agree* and includes items like: “I feel invigorated when I interact with this person” and “After interacting with this person I feel more energy to do my work”. The inner consistency ($\alpha = .94$) was excellent.

To test for the emergence of relational energy among employees (hypothesis 1b), the Relational Energy Scale (Owens et al., 2016) was used in a slightly modified form. First,

participants were asked with how many other colleagues they worked closely or in a team. Then participants answered the items of the Relational Energy Scale (Owens et al., 2016) in relation to those colleagues. If someone indicated that they did not work with anyone closely or as part of a team, the person was asked not to answer the items. The inner consistency ($\alpha = .95$) was excellent.

PERMA-Lead Profiler®

To test the leader's PERMA-Lead, the PERMA-Lead Profiler® was used (Ebner, 2019). It measures the five factors of PERMA-Lead (Ebner, 2016) with a total of 15 items. The questionnaire is collected from the employees' point of view. The scale measures whether and to what extent a leader contributes to the employees' PERMA. Each of the five PERMA factors is tested with three items and each item is assessed on a scale from 0% to 100% in steps of 10 %. Participants must indicate the degree to which they agree with the statements. Example items for the respective subscales are "My manager contributes to me feeling comfortable at work" (Positive Emotions), "My manager deliberately gives me tasks that correspond with my individual strengths" (Engagement), "My manager makes sure that we support each other in our team" (Relations), "My manager contributes to me experiencing meaning in my work" (Meaning) and "My manager is happy with me when I have reached a (partial) goal and tells me so" (Accomplishment).

The inner consistency was excellent, for the scale in total ($\alpha = .97$) as well as for the particular subscales Positive Emotions ($\alpha = .95$), Engagement ($\alpha = .93$), Relations ($\alpha = .90$), Meaning ($\alpha = .91$) and Accomplishment ($\alpha = .96$).

UWES-9 Work Engagement Scale

To examine employees' job engagement, the UWES-9 Work Engagement Scale by Schaufeli et al. (2006) was used. It includes nine items constructed on a 7-point-Likert-scale from 0 = *never* to 6 = *always/every day*, which participants have to rate. Example items are "I am immersed in my work" and "When I get up in the morning, I feel like going to work". The inner consistency ($\alpha = .93$) of the scale was excellent.

The scale of Blanz (2015) was used for the judgement of Cronbach's α values.

Results

Descriptive Statistics

Descriptive statistics of the variables concerning the duration someone is already subordinate to a leader, the size and duration of cooperation of the team someone is working in, the working hours per week and the extent of the home office are shown in Table 2.

Table 2

Means, Standard Deviations and Extreme Values for Variables Describing Work Circumstances

	<i>n</i>	<i>M</i>	<i>SD</i>	<i>Min.</i>	<i>Max.</i>
Duration of subordination to leader	229	3.33	4.88	0	42
Team size	238	5.59	6.05	0	40
Duration of cooperation in the team (in years)	212	2.29	1.42	1	6
Working hours per week	239	30.79	13.48	0	70
Home office	239	5.08	4.28	0	10

Means, standard deviations and intercorrelations of the variables relational energy between leader and employee, relational energy among employees, PERMA-Lead and job engagement are depicted in Table 3. On average, there was a higher amount of relational energy among employees ($M = 4.99$) than between leader and employee ($M = 4.22$). The intercorrelations of the four variables are all highly statistically significant. Relational energy between leader and employee and PERMA-Lead are correlating the highest ($r = .75^{**}$).

Table 3

Means, Standard Deviations and Intercorrelation Matrix for Relational Energy Measures, PERMA-Lead and Job Engagement

	<i>n</i>	<i>M (SD)</i>	1.	2.	3.	4.
1. Relational energy between leader and employee	239	4.22 (1.65)				
2. Relational energy among employees	223	4.99 (1.42)	.36**			
3. PERMA-Lead	239	7.41 (2.55)	.75**	.30**		
4. Job engagement	239	4.90 (0.97)	.36**	.29**	.43**	

** $p < .01$.

Empirical Examination

Hypothesis 1a

A simple linear regression was conducted to assess the effect of PERMA-Lead on relational energy between leader and employee. According to the conducted requirement tests

the residuals were not perfectly normally distributed. However, as per the Central Limit Theorem, a normal distribution can be assumed from a sample size of $N = 30$ (Field, 2009). Since the sample size was $N = 239$, this did not pose a problem for the calculation. The other requirements were met.

The analysis (see Table 4) showed highly statistically significant results, indicating that PERMA-Lead contributes statistically significantly to explain the variance of relational energy between leader and employee. Results showed a positive correlation between PERMA-Lead and relational energy between leader and employee, $F(1, 237) = 296.12$, $p < .001$, $R^2 = 0.56$.

Table 4

Simple Linear Regression Analysis Hypothesis 1a

Predictor variable	<i>B</i>	<i>SE</i>	β	<i>t</i>	Sig. (<i>p</i>)
PERMA-Lead	.48	.03	.75	17.21	<.001

A multiple linear regression was calculated to further specify hypothesis 1a. I examined the relation between PERMA-Lead and relational energy between leader and employee while controlling for sex and age. All requirements were met. The sample size was $N = 239$. Backward elimination method was used because it is well suited for exploratory analyses (Field, 2018).

The predictor variable sex was removed from the model as it had no statistically significant effect on relational energy between leader and employee. The resulting model, consisting of PERMA-Lead and age showed statistically significant results $F(2, 236) = 154.60$, $p < .001$. The R^2 for the overall model was .57 (adjusted $R^2 = .56$), indicative for a high goodness-of-fit according to Cohen (2013).

Thus, additionally to PERMA-Lead, age is significantly explaining variance of relational energy between leader and employee. The effect of age on relational energy between leader and employee is relatively small (see Table 5), whereas the effect of PERMA-Lead is still (see hypothesis 1a) strong (see Table 5).

Table 5

Multiple Linear Regression Analysis Hypothesis 1a While Controlling for Sex and Age

Predictor variable	<i>B</i>	<i>SE</i>	β	<i>t</i>	Sig. (<i>p</i>)
Age	-.01	.01	-.11	-2.52	.012
PERMA-Lead	.49	.03	.75	17.46	<.001

Hypothesis 1b

To assess the effect of PERMA-Lead on relational energy among employees, another simple linear regression was conducted. Because not all participants were working closely/ in a team with colleagues the sample size included $n = 223$. Analysis showed four outliers (see Appendix 1), which were excluded from the analysis, because linear regression is not robust against outliers (Field, 2009). The resulting sample size included $n = 219$. Again, requirement tests indicated that the residuals were not fully normally distributed. In that case, the Central Limit Theorem applies again, according to which residuals are normally distributed from a sample size of $N = 30$ (Field, 2009). Thus, there is no violation of this requirement. All other requirements were met.

The results of the analysis (see Table 6) are statistically significant. Thus, PERMA-Lead is statistically significant involved in predicting the variance of relational energy among employees. There is a positive correlation between PERMA-Lead and relational energy among employees, $F(1,217) = 14.20, p < .001, R^2 = .06$.

Table 6

Simple Linear Regression Analysis Hypothesis 1b

Predictor variable	<i>B</i>	<i>SE</i>	β	<i>t</i>	Sig. (<i>p</i>)
PERMA-Lead	.13	.04	.25	3.77	<.001

Multiple linear regression was calculated to examine the relation between PERMA-Lead and relational energy among employees while controlling for sex and age. Hereby, the aim was to further specify hypothesis 1b. The requirements were met. The sample size was $n = 219$. Backward elimination method was used because it is well suited for exploratory analyses (Field, 2018).

Both sex and age were removed from the model as they had no significant effect on relational energy between leader and employee. Thus, PERMA-Lead was the only predictor that showed statistically significant results, $F(1, 217) = 14.20, p < .001$.

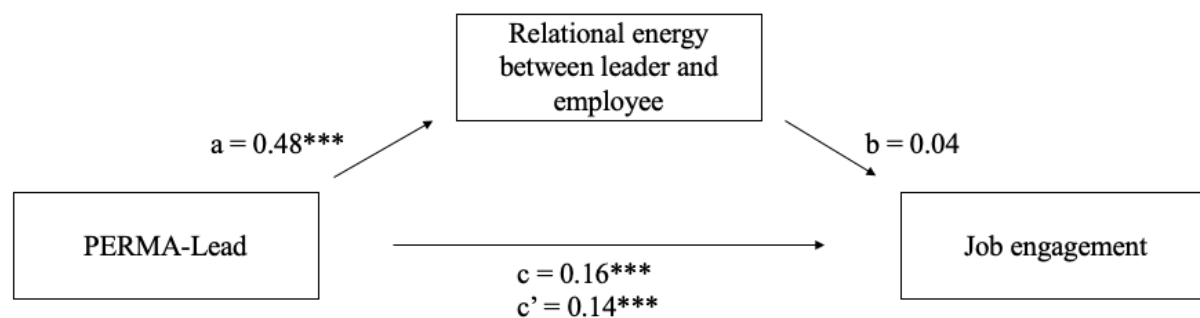
Hypothesis 2a

To test whether PERMA-Lead predicts job engagement and whether the direct path is mediated by relational energy between leader and employee a simple mediation analysis using the PROCESS macro by Hayes (2017) was performed (see Figure 5). The sample size was $N = 239$. I did not exclude any outliers, because the PROCESS macro by Hayes (2017) is using

bootstrapping and is therefore a robust procedure. An effect of PERMA-Lead on job engagement was observed, $B = 0.16$, $t = 6.18$, 95% CI [0.11, 0.22], $p < .001$. After relational energy between leader and employees was entered into the model, PERMA-Lead was statistically significantly associated with relational energy between leader and employee, $B = 0.48$, $t = 15.96$, 95% CI [0.42, 0.54], $p < .001$. Relational energy between leader and employee in turn was not statistically significantly associated with job engagement, $B = 0.04$, $t = 0.78$, 95% CI [-0.07, 0.15], $p = 0.44$. Thus, I found that the relationship between PERMA-Lead and job engagement is not mediated by relational energy between leader and employee.

Figure 5

Mediation Analysis Hypothesis 2a



Note. $N = 239$.

*** $p < .001$.

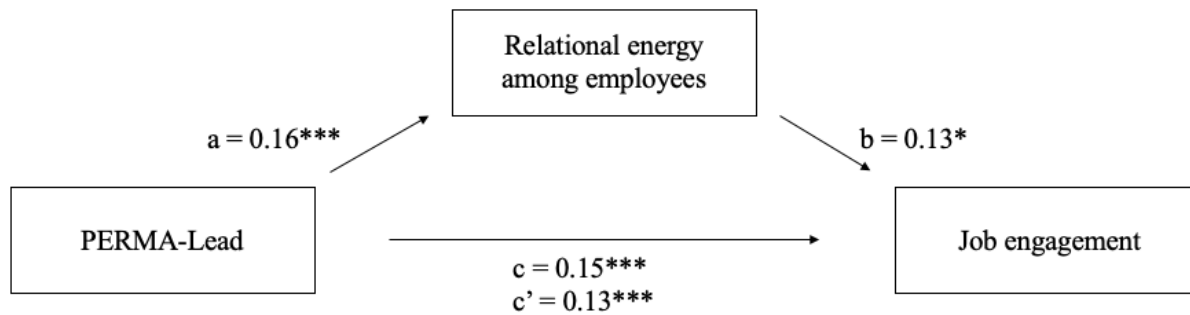
Hypothesis 2b

Another simple mediation analysis using the PROCESS macro by Hayes (2017) was conducted to test whether the relational energy among employees mediates the relationship between PERMA-Lead and job engagement (see Figure 6). The sample size was $n = 223$. I did not exclude any outliers, because the PROCESS macro by Hayes (2017) is using bootstrapping and is therefore a robust procedure.

There is an effect of PERMA-Lead on job engagement, $B = 0.15$, $t = 5.56$, 95% CI [0.10, 0.21], $p < .001$. After inserting relational energy among employees into the model, PERMA-Lead was statistically significantly associated with relational energy among employees, $B = 0.16$, $t = 3.76$, 95% CI [0.08, 0.25], $p < .001$. Also, relational energy among employees was statistically significantly associated with job engagement, $B = 0.13$, $t = 2.59$, 95% CI [0.03, 0.22], $p = .01$. The analysis shows that the relationship between PERMA-Lead and job engagement is partially mediated by relational energy among employees.

Figure 6

Mediation Analysis Hypothesis 2b



Note. $n = 223$.

*** $p < .001$; * $p < 0.05$.

Explorative Analysis

The Relation Between Single Factors of PERMA-Lead and Relational Energy

Exploratively, I investigated correlations between the single factors of PERMA-Lead and relational energy (see Table 7). All variables were highly statistically significant and positively related with each other. Among the PERMA factors, relational energy between leader and employee correlated highest with Positive Emotions ($r = .74^{**}$). Relational energy among employees correlated highest with Meaning ($r = .30^{**}$).

Relational energy between leader and employee correlated least with Relations compared to the other PERMA factors ($r = .59^{**}$), even though it is still a highly statistically significant correlation. In terms of relational energy among employees, Relations does not exhibit the weakest correlation compared to the other PERMA factors, but still the second weakest ($r = .24^{**}$). However, it must also be underlined that this is still a statistically significant correlation.

Correlations between the PERMA factors and relational energy among employees are weaker than correlations between the PERMA factors and relational energy between leader and employee. This goes in line with analyses concerning hypothesis 1a and 1b.

Table 7

Intercorrelation Matrix Between Single Factors of PERMA-Lead and Relational Energy Measures

	<i>n</i>	<i>M</i> (<i>SD</i>)	1.	2.	3.	4.	5.	6.	7.
1. Positive Emotions	239	7.17 (2.86)							
2. Engagement	239	6.95 (3.08)	.74**						

3. Relations	239	7.75 (2.69)	.74**	.66**				
4. Meaning	239	7.42 (2.80)	.81**	.81**	.77**			
5. Accomplishment	239	7.76 (2.92)	.76**	.66**	.66**	.77**		
6. Relational energy between leader and employee	239	4.22 (1.65)	.74**	.67**	.59**	.68**	.64**	
7. Relational energy among employees	223	4.99 (1.42)	.27**	.27**	.24**	.30**	.23**	.36**

** $p < .01$.

The Effect of the Duration of Subordination to the Leader on the Relation Between PERMA-Lead and Relational Energy Between Leader and Employee

A multiple linear regression was calculated to find out whether, in addition to PERMA-Lead (see Hypothesis 1a), the duration of subordination to the leader is predicting relational energy between leader and employee (see Table 8). Two outliers were identified via case-wise diagnosis and eliminated, because linear regression is not robust against outliers (Field, 2009). The resulting sample size was $n = 226$. A statistically significant regression equation was found, $F(2, 224) = 189.97, p < .001, R^2 = .63$. Thus, PERMA-Lead as well as the duration of subordination to the leader is statistically significantly explaining variance of relational energy between leader and employee. The duration of subordination to the leader is statistically significantly negatively related with the relational energy between leader and employee (see Table 8).

Table 8

Multiple Linear Regression to Examine the Effect of the Duration of Subordination to the Leader on The Relation Between PERMA-Lead and Relational Energy Between Leader and Employee

Predictor variable	<i>B</i>	<i>SE</i>	β	<i>t</i>	Sig. (<i>p</i>)
PERMA-Lead	.51	.03	.80	19.47	<.001
Duration of subordination to the leader	-.04	.01	-.12	-2.86	.005

Differences in Relational Energy Between Leader and Employee and Relational Energy Among Employees

In order to investigate whether relational energy between leader and employee differs statistically significantly from relational energy among employees a t-test for dependent samples was calculated. The requirement of normal distribution was not met. However, due to the Central Limit Theorem a t-test for dependent samples is robust against this violation (Stone, 2010) and therefore the analysis could still be calculated. All other conditions were met. Due to pairwise deletion the initial sample size was $n = 223$. Four outliers were identified and eliminated (see Appendix 1). Logically, these are the same outliers as in the analysis of hypothesis 1b. Consequently, the resulting sample size was $n = 219$. Relational energy between leader and employee was statistically significantly lower than relational energy among employees, $t(218) = -6.86, p < .001$. There was an effect of about medium size ($d = 0.46$).

Distinctness of PERMA-Lead and Relational Energy Between Leader and Employee

Given the high intercorrelations between PERMA-Lead and relational energy between leader and employee ($r = .75^{**}$, see p. 29), a principal component analysis (PCA) was used to examine whether the two constructs were distinct from each other. There is a lack of consensus in literature regarding the minimum sample size for conducting a PCA. The sample size of the analysis was $n = 239$, thus hereby meeting requirements according to, e.g., Guilford (1954, as cited in MacCallum et al., 1999) but not meeting requirements according to Field (2009). Despite the existing disagreement I decided to calculate a PCA. However, it should be considered that the sample size might be a limitation. All other requirements were met.

I only incorporated factors with eigenvalues ≥ 1 , according to the Kaiser-Guttman-Criterion (Kaiser, 1960, as cited in Field, 2009). Two components with eigenvalues exceeding 1 were retained. They explained 73.07% of the total variance. The loadings of the components are displayed in Table 9 and it can be seen there that the components are distinct from each other. A graphical illustration is displayed in Appendix 2.

Table 9

Principal Components Analysis of PERMA-Lead and Relational Energy Between Leader and Employee

Item	Component loading	
	1	2

Factor 1: PERMA-Lead ^a		
P1: My manager contributes to me feeling comfortable at work.	.74	.19
P2:	.71	.22
P3:	.68	.24
E1: My manager deliberately gives me tasks that correspond with my individual strengths.	.58	.21
E2:	.72	.18
E3:	.67	.21
R1: My manager makes sure that we support each other in our team.	.81	-.06
R2:	.92	-.19
R3:	.94	-.15
M1: My manager contributes to me experiencing meaning in my work.	.78	.11
M2:	.90	-.02
M3:	.86	-.01
A1: My manager is happy with me when I have reached a (partial) goal and tells me so.	.81	.01
A2:	.80	.05
A3:	.84	.02
Factor 2: Relational energy between leader and employee ^b		
1. I feel invigorated when I interact with this person.	.10	.83
2. After interacting with this person I feel more energy to do my work.	.03	.91
3. I feel increased vitality when I interact with this person.	.01	.92
4. I would go to this person when I need to be “pepped up”.	.08	.77
5. After an exchange with this person I feel more stamina to do my work.	.01	.92

Note. The extraction method was principal components with an oblimin rotation. Factor loadings above .50 are in bold. Since not all items of the PERMA-Lead-Profiler[®] (Ebner, 2019) are allowed to be published, only sample items can be found in the table.

^a PERMA-Lead-Profiler[®] (Ebner, 2019), ^b Relational Energy Scale (Owens et al., 2016)

Discussion

The primary goal of this study was to investigate whether the positive leadership approach PERMA-Lead contributes to the generation of relational energy. The data at hand, obtained via an online self-reporting questionnaire, revealed that PERMA-Lead indeed contributes to the emergence of relational energy both a) between leader and employee and b) among employees.

Furthermore, the study investigated whether relational energy is a mediating variable between PERMA-Lead and job engagement. The data at hand shows that this is partially the case for relational energy among employees and not the case for relational energy between leader and employee.

The following section discusses these findings in more detail, elaborates on the exploratory research, and addresses issues arising from this study that can be explored in the future.

Interpretation

Hypothesis 1

First of all, it must be emphasized that the results of the current study confirm findings from previous research and even broaden them. Amah (2018) found out that different positive leadership styles are significantly positively correlated with relational energy. The study at hand has extended this knowledge by adding new findings on another form of positive leadership, namely PERMA-Lead.

The current study was able to show that PERMA-Lead had a demonstrable effect on relational energy a) between leader and employee as well as b) among employees. Thus, hypothesis 1a and hypothesis 1b could be confirmed.

By being positively related to the emergence of relational energy, it can be assumed that PERMA-Lead contributes strongly to the emergence of positive social relationships in the workplace. Relational energy can be transmitted to colleagues via processes described in interaction ritual theory (Collins, 1993, 2004) and social contagion theories. The social interactions in which these contagious processes take place create social relationships between a) leader and employee and b) among employees. The emergence of relational energy and, consequently, social relationships is of great importance as positive effects result

from it. For example, “the quality of [the] relationships at work matters not only for [one’s] ability to flourish personally, but is also likely to enhance [one’s] sense of achievement”(Roffey, 2017, p. 171).

The results of testing hypothesis 1a indicate that PERMA-Lead is a leadership concept that has a direct impact on the relationship between leader and employee. Thus, PERMA-Lead is not an abstract leadership concept. To the contrary, it directly impacts the relationship between people. Based on this it can be assumed that PERMA-Lead has some other positive effects on the relationship between leader and employee. These should be investigated in future research. Furthermore, results show that sex had no significant effect on the relationship between PERMA-Lead and relational energy between leader and employee. From an equality perspective, this is a positive result, as neither gender draws any advantage in terms of the relationship between PERMA-Lead and relational energy. Age, on the other hand, showed a small effect on the relationship ($B = -.01$): Relational energy between leader and employee decreases by .01 with each year of life of the participant, i.e. employee. This means, the older the participant, i.e. the employee, the less the relational energy between leader and employee, i.e. the participant. However, it is important to note that this is indeed a small effect. One possible explanation, for example, would be that older people may place less value on social relationships and that relational energy therefore decreases. Another explanation could be that the older employees are, the more experienced they are. It could follow that with more experience there is less dependence of the employees on the leader and consequently a decrease in the relational energy between leader and employee.

The current study shows that PERMA-Lead has an impact beyond the direct relationship between leader and employee. The leadership concept even has a positive effect on relational energy among employees. Thus, PERMA-Lead is a concept that can have a far-reaching influence on a broader environment. This makes it, among other things, especially suitable for organizations that have many employees or organize their employees on several levels.

I also investigated whether age and sex have an influence on the relationship between PERMA-Lead and relational energy among employees. There was no statistically significant effect.

Previous research states that it lies primarily in the scope of the leader to shape the culture of an organization (Roffey, 2017). This is mainly based on relations. Results from the study at hand show that PERMA-Lead has a stronger effect on relational energy between leader and employee than it does on relational energy among employees. In this respect, there

is an existing need for action and support on the part of the leaders. They should aim to promote the relationships with and between their employees more systematically and more regularly, for example by organizing joint activities, teamwork or similar.

Hypothesis 2

The second hypothesis was an extension of hypothesis 1. It was assumed that relational energy would be a mediating variable in the relation between PERMA-Lead and job engagement. This hypothesis could only be verified partially. Relational energy between leader and employee was not mediating this relation, whereas relational energy among employees was partially mediating it. This suggests that relational energy between leader and employees does not drive engaged work behavior, whereas relational energy among employees indeed does.

Since job engagement is a highly valuable resource in the working context, because it is, among other things, positively related to vigor, commitment (Kern et al., 2014; Schaufeli et al., 2006), perseverance (Ebner, 2019) and job satisfaction (Kern et al., 2014), it is imperative to invest in it.

The results of the present study provide indications of two important issues that should be addressed and followed up further.

First, it should be evaluated why relational energy between leader and employee does not mediate the relationship between PERMA-Lead and job engagement. One possible reason could be that the relational energy between them does not extend and motivate enough to result in committed behavior. Consideration should be given to what would be needed to change this. On the other hand, the absence of mediation could be due to another reason. Employees who are more independent from their leader and hence work more autonomously could consequently have a lower relational energy with their leader. Thus, relational energy between leader and employee would not mediate the relationship between PERMA lead and job engagement, but that would not be necessary anyway.

Second, relational energy among employees should be encouraged even more. One suggestion would be interventions that specifically target the relationship among employees, like, e.g. joint leisure activities but also work-related activities, such as collaborative brainstorming sessions addressing projects, continuous exchange of ideas and feedback rounds between employees. If this could be implemented and achieved, not only relational energy among employees, but also job engagement of employees could subsequently be increased as well. In addition, it can be assumed that through the committed behavior of

leaders to organize such events, relational energy between leader and employee would also grow.

Explorative Analysis

Explorative analysis revealed that all factors of PERMA-Lead have a highly statistically significant relationship to both forms of relational energy. This demonstrates how crucial all facets of PERMA-Lead are to the emergence of relational energy and how essential this positive leadership approach is to facilitate relational energy.

Relational energy between leader and employee correlated highest with Positive Emotions of all factors of PERMA-Lead. This implies that the factor Positive Emotions targets relational energy between leader and employee the most among the PERMA factors. Since no causal conclusions can be drawn yet, it should be further investigated whether it can be further confirmed that, of all factors of PERMA-Lead, the factor Positive Emotions contributes the most to the generation of relational energy between leader and employee. The result at hand is an important finding to possibly prioritize the focus on this PERMA factor in the future, as it can be assumed that the emergence of relational energy between leader and employee can be enhanced in this way. However, other factors should not be neglected as they are also highly correlated with relational energy between leader and employee. Therefore, effort should also be made to ensure this strong correlation between the other factors and relational energy between leader and employee is maintained and possibly even increased in the future.

Relational energy among employees correlated highest with Meaning of all factors of PERMA-Lead. As such, Meaning seems to be an important facilitator in the emergence of relational energy among employees and this should be considered when leaders work with PERMA-Lead, e.g. by providing clear communication around the purpose and overall mission of a department or by highlighting how the department or individual's work contributes to overall mission of the larger organization or society. The other PERMA factors were also significantly correlating with relational energy among employees, hereby implicating that they are also crucial for the emergence of relational energy among employees.

Relational energy among employees was constantly lower correlated with PERMA-Lead than relational energy between leader and employee. This goes in line with the confirmatory results I developed through examination of hypothesis 1 (see p. 37ff for further discussion on this).

Still, this is a very encouraging result, because it reveals that PERMA-Lead and relational energy are strongly related. Thus, PERMA-Lead represents an effective positive leadership concept to generate relational energy.

However, these high correlations, especially the one between PERMA-Lead and relational energy between leader and employee, might also suggest that PERMA-Lead and relational energy represent a common construct. Therefore, a factor analysis was conducted in this study, which could show that they are indeed two constructs that are distinct from each other (see Table 9 and Appendix 2).

Furthermore, the duration (in terms of years) of subordination to the leader is statistically significantly negatively correlated with relational energy between leader and employee. This means, the longer someone is subordinated to a leader, the worse the relational energy between this person and his*her leader. There are various possible explanations for this result. One possible explanation could be that there is less and less investment in relational energy when leader and employee have been working together for a long time, i.e. it might turn into a kind of commodity. Another explanation could be that people may place less value on relationships as they get older. Since people who have been subordinate to a leader for a long time tend to be older, this could be one reason why relational energy is declining. At this point, the explanation already given above can be applied again, namely that employees who are older may work more independently and this explains the lower relational energy. Another explanation could be that the result of the investigation only applies to those participants who rated the relational energy between themselves and their leader as negative or rather negative. Thus, it could be that the result does not apply at all to those who reported a positive relational energy. These possible explanations should definitely be further investigated. Either way, conscious attention should be paid to continuing to actively invest in relational energy even after many years of working together.

Limitations and Future Directions

The current study has some limitations that must be mentioned. The generalizability is disputable because the sample at hand may not represent the population accurately. Approximately two thirds of the sample were women, whereas only one third of the sample were men. Only one diverse person participated. Most participants were living in Germany, followed by Austria. Thus, the results cannot be generalized to other countries, especially not to those which culturally differ a lot from Germany and Austria. More than half of the sample

holds a university degree, which probably does not represent the basic population. Future research should endeavor to examine a sample that more accurately represents the population.

The current study had a cross-sectional design. For future research it would be interesting to investigate PERMA-Lead in the context of a longitudinal study. As such, it could be investigated how relational energy among employees would change before and after they were subordinates to a positive (PERMA-) leader. In addition, it would be interesting to directly compare relational energy between leader and employee and among employees on the one hand with a positive (PERMA-) leader and on the other hand with other types of leaders.

The questionnaire used collected PERMA-Lead from the employees' point of view. To create a more holistic picture, it would be interesting for future studies to work with a combination of the employees' and the leaders' perspective.

The intercorrelation matrix between the PERMA-factors and the two forms of relational energy already gives an indication of which factors are particularly strongly related to relational energy. Future research could investigate here inferentially which factors best predict relational energy and contribute most to its emergence.

Conclusion

The present study was able to produce empirical evidence for the emergence and transmission of relational energy in the working context. It provides a link between this empirical evidence and theories like interaction ritual theory (Collins, 1993, 2004), social contagion theories and conservation of resources theory (Hobfoll, 1989). A deeper understanding between whom relational energy arises and with which factors this is connected could be shown. The current study emphasizes how crucial social interactions are in the working context and provides guidance on how to promote them. Also, it could show that there are still issues in which investments will have to be made in the working context in the future. This mainly concerns the practical context. The study at hand can be seen as a point of reference for organizations and leaders on what optimal leadership behavior can look like in order to ensure that relational energy is generated and organizational members are engaged.

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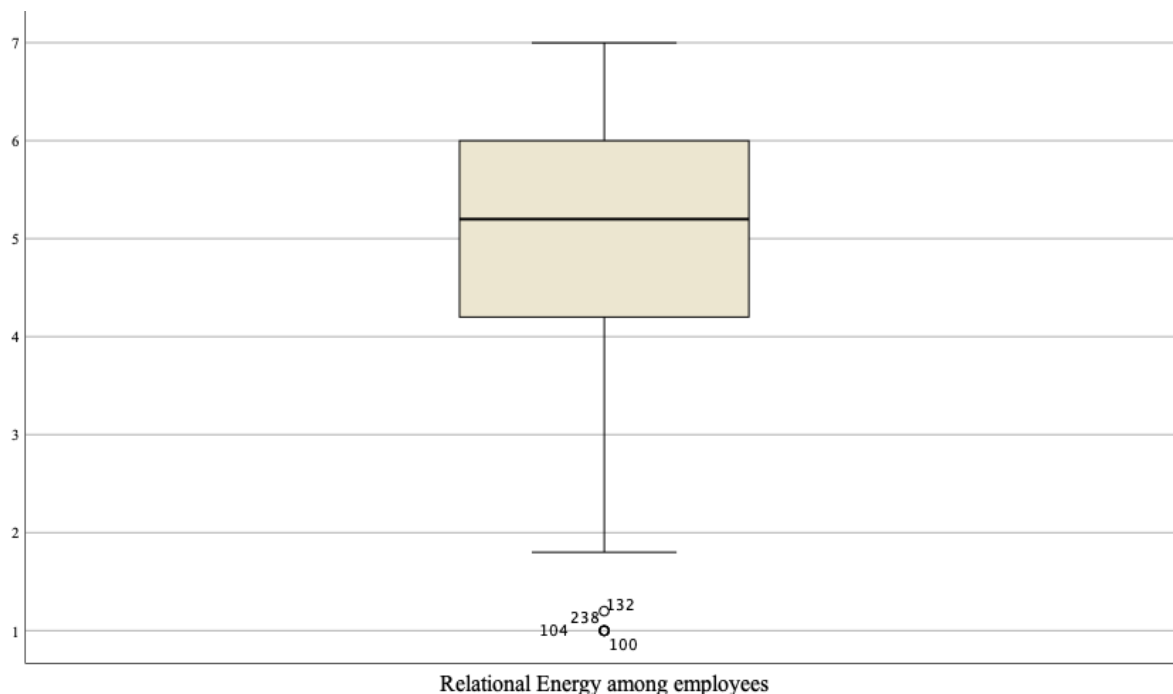
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Appendix

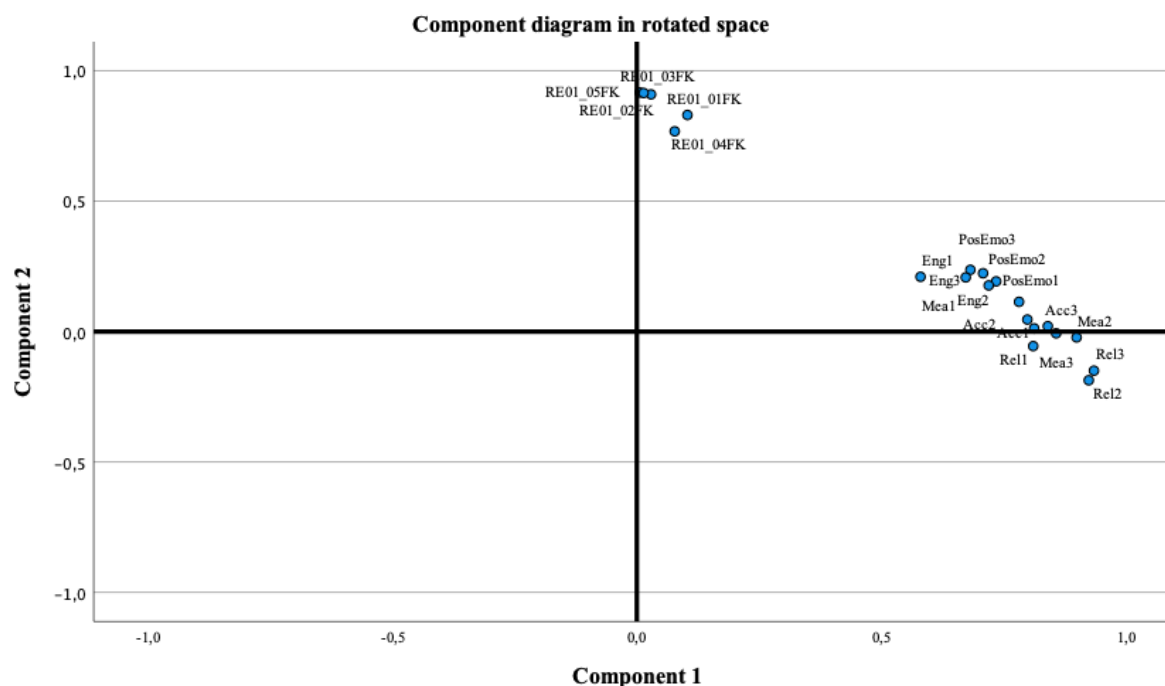
Appendix 1

Outliers (Hypothesis 1b and Explorative Analysis of Differences in Relational Energy Between Leader and Employee and Relational Energy Among Employees)



Appendix 2

Component Diagram of Conducted Principal Component Analysis



Note. Relational Energy Scale (between leader and employee) (Owens et al., 2016) consists of the following items: RE01_01FK, RE01_02FK, RE01_03FK, RE01_04FK, RE01_05FK. PERMA-Lead-Profiler[®] (Ebner, 2019) consists of the following items: PosEmo1, PosEmo2, PosEmo3, Eng1, Eng2, Eng3, Rel1, Rel2, Rel3, Mea1, Mea2, Mea3, Acc1, Acc2, Acc3

Appendix 3

Abstract in German

Die moderne Welt ist gekennzeichnet von schneller Veränderung und Globalisierung. Diese verlangt von Unternehmen ständige Anpassung und Innovation, herausragende Leistungen und kontinuierliche Entwicklung. Dies kann enormen Druck auf Unternehmen ausüben. Da Mitarbeiter*innen einen großen Teil von Organisationen ausmachen, ist es unerlässlich, in ihr *Job Engagement* und die *Relational Energy* zwischen ihnen zu investieren. In der vorliegenden Studie ($N = 239$) wurde ein Positive Leadership-Ansatz untersucht, von dem angenommen wurde, dass er diese Anforderungen erfüllt. *PERMA-Lead* (Ebner, 2019) ist ein integrativer positiver Führungsansatz, der auf dem PERMA-Modell von Seligman (2011) basiert. Das PERMA-Modell besteht aus fünf Faktoren: P – Positive Emotionen, E – Engagement, R – Relations (positive Beziehungen), M – Meaning (Bedeutung, Sinn), A – Accomplishment (Leistung, Zielerreichung). PERMA-Lead nutzt diese Faktoren, um zu beschreiben, wie Führungsverhalten aussehen sollte, damit Mitarbeiter*innen aufblühen können. Um herauszufinden, ob Relational Energy durch PERMA-Lead entstehen und als Mediatorvariable zwischen PERMA-Lead und Job Engagement wirken kann, hat die vorliegende nicht-experimentelle Studie einen anonymen Online-Fragebogen verwendet. Es konnte eine positive Korrelation zwischen PERMA-Lead und der Entstehung von Relational Energy zwischen Führungskraft und Mitarbeiter*in ($N = 239$) sowie zwischen den Mitarbeiter*innen ($n = 219$) nachgewiesen werden. Darüber hinaus zeigte sich, dass die Relational Energy unter den Mitarbeiter*innen teilweise die Beziehung zwischen PERMA-Lead und dem Job Engagement am Arbeitsplatz mediiert ($n = 223$). Explorative Analysen ergaben detailliertere Einblicke in die Korrelationen zwischen Relational Energy und den fünf Einzelfaktoren von PERMA-Lead sowie in den Einfluss der Dauer der Unterordnung unter der Führungskraft. Darüber hinaus wurde eine Hauptkomponentenanalyse (PCA) durchgeführt, um die Unterscheidbarkeit von PERMA-Lead und Relational Energy zwischen Führungskraft und Mitarbeiter*in zu bestätigen.

Schlagwörter: Positive Leadership, PERMA-Lead, Relational Energy, Job Engagement