



The Impact of Psychological Empowerment on the Possession of Entrepreneurial Characteristics among Academic Leaders at Princess Nourah Bint Abdulrahman University

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Abstract: The current study aimed to reveal the impact of psychological empowerment on the possession of entrepreneurial characteristics among academic leaders at Princess Nourah Bint AbdulRahman University. The study utilized a descriptive correlational approach. A questionnaire was distributed to a sample of 121 academic leaders at PNU, following a random sampling technique. The findings indicated that psychological empowerment has a statistically significant positive impact on the possession of entrepreneurial characteristics among academic leaders at PNU, explaining 71.50% of the total variation. The study also revealed that psychological empowerment (including the four dimensions: meaning, competence, self-determination, and impact) impacted all four of the entrepreneurial characteristics (i.e. the need for achievement, initiative, innovation, risk-taking), explaining 65.5%, 60.6%, 43.5%, and 42.6% of the variation in these dimensions, respectively. It also concluded that self-determination was the most significant variable, influencing the four entrepreneurial characteristics. The study also found that the psychological empowerment and entrepreneurial characteristics of PNU academic leaders reached moderate levels: 3.63 and 3.57.

Keywords: psychological empowerment, entrepreneurial characteristics, academic leaders.

Introduction

Higher education institutions have become increasingly motivated and challenged in recent years to use creative and innovative methods to improve their performance and rankings. Entrepreneurship has emerged as one avenue by which significant improvements in education can be made. To maintain their distinction and high rankings, higher education institutions can consistently focus on transforming into entrepreneurial institutions and providing excellence in services and programs (Al Ghamdi, 2020; Bux & Honglin, 2015; Fayolle, 2018; Kuratko, 2016; Salamzadeh et al., 2022; Sancho et al., 2022). Entrepreneurship in higher education has also received considerable attention from economists and educators. Since entrepreneurship has emerged as a path to extraordinary success in higher education (Greene et al., 2015), academic institutions are among the organizations that have embraced creativity and innovation to develop new products and establish effective knowledge-sharing initiatives (Farahani & Falahati, 2007).

Moreover, academic leaders have taken responsibility for increasing the entrepreneurial level of their universities; if they were psychologically empowered, they would respond to complicated problems, institutional needs, and various changes even faster (Zare et al., 2007). Psychologically empowered leaders not only have higher morale and satisfaction but take responsibility for their own performance. They also have the ability to deal with and adapt to turbulent circumstances and strengthen competition to ensure that their organizations remain sustainable. Psychologically empowered leaders derive meaning from their work, possess the required competence to achieve it, have a high level of self-determination, and have a noticeable impact on the environment (Bux & Honglin, 2015; Henao-Zapata & Peiró, 2018). According to Spreitzer (1995), psychological empowerment comprises the feelings an individual has about his/her work and can be outlined in terms of four dimensions; meaning, competency, self-determination, and impact. Thus, academic leaders in higher education institutions must be psychologically empowered and should have entrepreneurial mindsets that enable them to take responsibility for their performance.

Entrepreneurial leaders are needed in all kinds of institutions, as they would allow universities to achieve higher rankings and leadership positions. A leader with entrepreneurial traits has a renewed sense of accomplishment, creates value, and takes calculated risks to seize opportunities. Entrepreneurship has always been associated with proactive, innovative, and risk-taking leaders (Kraus et al., 2012), and numerous studies have confirmed the critical need for leaders with entrepreneurial characteristics (Bagheri & Akbari, 2018; Bilal et al., 2022; Cai et al., 2019). For instance, entrepreneurial leaders have long-term visions, do not fear risks (Al Ghamdi, 2020; Hu et al., 2018), take advantage of the opportunities available (Fontana & Musa, 2017; Koryak et al., 2015), and enhance their subordinates' confidence in their leadership. More specifically, entrepreneurial leaders are highly capable of innovating and adding value to the organizations at which they work (Decker et al., 2014; Fernald et al., 2005; Fontana & Musa, 2017; Isenberg, 2011). They also inspire their employees to innovate, explore further opportunities, and proactively provide phenomenal initiatives (Bagheri, 2017; Bagheri & Akbari, 2018; Bilal et al., 2022). For this reason, entrepreneurial leaders differ from traditional leaders (He et al., 2017).

Researchers and practitioners have indicated a relationship between psychological empowerment and entrepreneurial characteristics (Haji et al., 2020; Safari et al., 2010; Soltani & Khanamani, 2019). Similarly, Bux and Honglin (2015) discovered a significant correlation between psychological empowerment and entrepreneurial intentions.

Entrepreneurship is a catalyst for new products and services and an incubator for revolutionary technological progress (Farrukh et al., 2017). Soltani and Khanamani (2019) identified a significant positive relationship between psychological empowerment and organizational entrepreneurship, which was mediated by knowledge sharing. The development of entrepreneurship activities is associated with technological progress and innovation, and innovative products are competitive and increase long-term university survival (Lumpkin & Dess, 1996; Mohar et al., 2007). Entrepreneurial leaders possess exceptional characteristics such as creativity, resilience, flexibility, and determination (Okyireh et al., 2021). However, it is the aspect of psychological empowerment that propels entrepreneurs to achieve higher levels of trust, self-determination, and competence.

Academic leaders in higher education have embraced innovation and creativity as strategies to improve institutional performance, and most are involved in the incubation of entrepreneurial skills. As universities embrace technology and expand their revenue streams, their role as knowledge-creating entities becomes significant (Xiong, 2022). For instance, some of the leading innovations in technology and healthcare started within universities. This shows that empowering academic leaders and students can go a long way in fostering entrepreneurial spirit and creativity. Therefore, the current study examined the impact of psychological empowerment on the possession of entrepreneurial characteristics among academic leaders at PNU.

Research Problem

Entrepreneurship and the necessity of leaders who possess entrepreneurial characteristics have gained significant attention from academics and researchers in higher education institutions because of their role in developing performance, increasing productivity, and becoming globally competitive (Al Ghamdi, 2020; Salamzadeh et al., 2022; Sancho et al., 2022; Okyireh et al., 2021). Accordingly, Saudi Vision 2030 focuses on increasing the spirit of entrepreneurship. One of the most critical goals of Saudi Vision 2030 is to make the nation a leading country in all aspects, including political, educational, and economic. As for higher education, it seeks to ensure that at least five Saudi universities are included among the leading 200 universities in the world by 2030 (Vision 2030, 2016).

PNU is a remarkable example of women's empowerment as it is the largest women's university in the world. Its establishment aimed to empower women for a better future as leaders in various fields. PNU has numerous programs, activities, and centers to support and empower women, which have proven successful. For instance, the university established the "Women's Leadership Center," a unique center to empower local and regional women by training them and providing them with advisory and professional support. PNU also established the "Leading Executive Leadership Program" to empower executive leaders throughout the Kingdom of Saudi Arabia. The university's efforts to empower women leaders are evident at the university level, locally, and regionally (Princess Nourah bint Abdulrahman University, 2023). However, psychological empowerment differs from administrative empowerment in that it originates within the individual and is mainly controlled by the individual him/herself based on what is provided by the external environment (Spreitzer, 1995; Thomas and Velthouse, 1990). Numerous previous studies have discussed the empowerment of academic leaders at Saudi universities (AlAtwai & Merhi, 2018; Aldighrir, 2018; Al Jalawi, 2020; Al-Rasheed, 2020).

However, despite the significance of psychological empowerment and entrepreneurial characteristics for academic leaders, only a few studies in Saudi Arabia have addressed these variables individually or in conjunction with others. For instance, Al-Enezi (2021) conducted a study on psychological empowerment and its correlation to academic life quality with a sample of students at Imam Muhammad ibn Saud Islamic University. Al-Faraj (2022) also examined psychological empowerment and its relationship to female students' attitudes toward professional life in the Al Qassim region. A study by Al-Qarni (2021) discussed psychological empowerment as a mediating variable in the relationship between empowering leadership and some individual work performance variables. The treatment was applied to all educational supervisors in the education departments in Jeddah. Al-Dhdan (2020) conducted a study on psychological empowerment and its relationship to creative behavior among a sample of faculty members at Saudi universities. Al Ghamdi (2016) examined the psychological empowerment of female academic leaders at Saudi universities and its relationship to their administrative creativity.

Regarding entrepreneurial characteristics, previous studies have addressed this topic in various environments with different populations. For example, Ghawanmeh's (2022) study discussed the ability of preparatory year students at Hail University to create entrepreneurial projects and encounter challenges. Likewise, Al Zahrani's (2021) study examined the entrepreneurial characteristics of Umm Al-Qura University students and the mechanisms by which they can be achieved. Al-Ramathi's (2019) study investigated the entrepreneurial characteristics of school leaders in Bisha Governorate and their relationship to strengthening teachers' commitment to the organization. However, previous research has not directly investigated the impact of psychological empowerment on the possession of entrepreneurial characteristics among academic leaders at Saudi universities. Thus, the present study aimed to identify this among academic leaders at PNU to narrow this research gap.

Research Questions

Considering the significance of psychological empowerment and entrepreneurial characteristics for academic leaders at higher education institutions, this study aims to investigate the impact of psychological empowerment on the possession of entrepreneurial characteristics among academic leaders at PNU. The research questions can be summarized as follows:

The main question is:

What is the impact of psychological empowerment on the possession of entrepreneurial characteristics among academic leaders at PNU?

The sub-questions:

RQ1: What is the level of psychological empowerment among academic leaders at PNU?

RQ2: What is the level of entrepreneurial characteristics among academic leaders at PNU?

RQ3: Does psychological empowerment have a statistically significant impact on the possession of entrepreneurial characteristics among academic leaders at PNU?

Research Hypotheses

The main hypothesis (H_0): Psychological empowerment (including its four dimensions: meaning, competence, self-determination, and impact) does not have a statistically significant impact on the possession of entrepreneurial characteristics (i.e., need for achievement, initiative, innovation, risk-taking) among academic leaders at PNU.

The sub-hypotheses:

The first sub-hypothesis (H_{0a}): Psychological empowerment (including its four dimensions: meaning, competence, self-determination, and impact) does not have a statistically significant impact on need for achievement (one of the entrepreneurial characteristics) among academic leaders at PNU.

The second sub-hypothesis (H_{0b}): Psychological empowerment (including its four dimensions: meaning, competence, self-determination, and impact) does not have a statistically significant impact on initiative (one of the entrepreneurial characteristics) among academic leaders at PNU.

The third sub-hypothesis (H_{0c}): Psychological empowerment (including its four dimensions: meaning, competence, self-determination, and impact) does not have a statistically significant impact on innovation (one of the entrepreneurial characteristics) among academic leaders at PNU.

The fourth sub-hypothesis (H_{0d}): Psychological empowerment (including its four dimensions: meaning, competence, self-determination, and impact) does not have a statistically significant impact on risk-taking (one of the entrepreneurial characteristics) among academic leaders at PNU.

Purpose of the Study

The current study aims to identify the impact of psychological empowerment on the possession of entrepreneurial characteristics among academic leaders at PNU.

Significance of the Study

Regarding the theoretical significance of the study, psychological empowerment and entrepreneurial characteristics considerably impact the dynamism of contemporary organizations. Thus, the significance of the current study lies in the academic enrichment it will provide by outlining the theoretical literature and previous studies of the variables (psychological empowerment and entrepreneurial characteristics) in a way that constitutes an integrated conceptual framework of their relationship. The lack of previous studies conducted at Saudi universities confirms the importance of the current study: it will pave the way for similar studies to be conducted at other Saudi universities. Its topic is also in line with the direction of Vision 2030 and its focus on entrepreneurship in various sectors, including higher education.

As for the implications, it is anticipated that the results of this study will help leaders at Saudi universities, in general, and at PNU, in particular, understand the current levels of psychological empowerment and entrepreneurial characteristics among academic leaders. Additionally, this study is expected to provide new knowledge related to the reality of the psychological empowerment of leaders and its impact on the possession of entrepreneurial characteristics, which may benefit officials when they are planning their universities' future.

Study Delimitations

The study was delimited to reveal the impact of psychological empowerment (including four dimensions: meaning, competence, self-determination, and impact) on four entrepreneurial characteristics (the need for achievement, initiative, innovation, and risk-taking). The study focused on academic leaders at PNU, including the dean, vice dean, chair, and vice chair. The study data were collected during the academic year 2021/2022.

Study Terminology

Psychological Empowerment

Psychological empowerment represents internal motivation and can be divided into four cognitive dimensions: meaning, competence, self-determination, and impact (Spreitzer, 1995). psychological empowerment can be defined as intrinsic job motivation that generates a sense of an individual's self-control of work and effective participation in the work function (Seibert et al., 2011). According to the current study, psychological empowerment for academic leaders is the ability to comprehend the meaning of work while possessing the necessary competence with more autonomy and self-determination, and influence in the workplace.

Entrepreneurial Characteristics

Gibb (2008) stated that an entrepreneur is a person who searches for opportunities and innovatively creates products by exploiting opportunities and gaps in the market. Obschonka and Stuetzer (2017) highlight a leader's four essential entrepreneurial characteristics: the need for achievement, initiative, innovation, and risk-taking. In the current study, entrepreneurial characteristics encourage academic leaders to take calculated risks, constantly seek accomplishments, and introduce new and innovative initiatives into the workplace.

Literature Review

Psychological Empowerment (PE)

The concept of empowerment has attracted tremendous scientific interest in the past few decades in many sub-fields, including management, psychology, and leadership. The main focus has been psychological empowerment, which is connected to individual, group, and institutional attitudes and actions (Khan et al., 2020). Given this growing interest in empowerment as a topic in the field of leadership, conceptions of the idea have multiplied. However, most focus on giving greater freedom to individuals in participation and decision-making. One essential definition of empowerment was provided by Conger and Kanungo (1988): it focuses on increasing self-efficacy among an organization's members by eliminating conditions that promote powerlessness.

The concept of psychological empowerment is a contemporary one that has been given considerable research and attention, primarily in the workplace. Conger and Kanungo (1988) connected psychological empowerment with situational attributes and incumbent job cognitions, while Thomas and Velthouse (1990) defined psychological empowerment as the increased intrinsic motivation of an individual to complete a task, which produces motivation and satisfaction. The specific dimensions of empowerment highlighted by researchers differ due to their diverse aspects. Conger and Kanungo (1988) identified four dimensions of empowerment as a motivational concept. Thomas and Velthouse (1990) utilized the same dimensions but added a cognitive aspect, considering the research of

Conger and Kanungo (1988) and Thomas and Velthouse (1990). Spreitzer (1995) defined four dimensions of psychological empowerment (meaning, competence, self-determination, and impact), which were employed in this study. The following sections provide explanations of these terms one by one:

Meaning is the first dimension of psychological empowerment. It describes how an individual's beliefs, values, and standards correspond to their work (Rani et al., 2021). Individuals find meaning in their work if they can align their values and beliefs with their work and the organization for which they work (Gong et al., 2020). An empowered employee is more confident, more likely to share work-related knowledge with colleagues, and more motivated to achieve shared goals and show initiative because they believe their work is meaningful and positively impacts society (Gong et al., 2020; Khan et al., 2020).

Competence is the second dimension of psychological empowerment, defined as an individual's belief and confidence in their ability to carry out their tasks at work skillfully (Seibert et al., 2011). A psychologically empowered person also tends to be more competent. Competence is acquired through experience, training, and knowledge of one's responsibilities (Rani et al., 2021). Rani et al. (2021) confirm that employee competence relates to capabilities and motivation, both of which significantly influence performance. Similarly, Lan and Chong (2015) state that employees who demonstrate competence are more motivated to complete tasks and are more satisfied with their jobs. Competent employees show self-confidence and believe they can perform their jobs skillfully and successfully (Malik et al., 2021). As such, employee confidence, knowledge levels, and motivation can predict the quality of job performance (Rani et al., 2021).

Self-determination is the third dimension of psychological empowerment, which refers to a sense of independence. Autonomy is a critical aspect of how an individual perceives their role in an organization. Hence, employees who believe they have control over their work are more motivated, which increases their sense of self-determination (Deci et al., 2017). According to Javed et al. (2016), self-determination increases task-related motivation. As a result, employees with high self-determination engage in work-related behavior due to intrinsic motivators such as curiosity, taking on new challenges, and meeting and/or exceeding goals (Deci et al., 2017; Javed et al., 2016).

Lastly, **impact** is the fourth dimension of psychological empowerment, defined as employees' perception of the influence they have over what happens in their organizations and departments (Kong et al., 2015). Specifically, Ölçer and Florescu (2015) define impact- as a part of the psychological empowerment paradigm- as "the degree to which a person can influence strategic, administrative, or operational outcomes at work" (pp. 117–118). Employees who are confident they can have an impact on their work also believe they can influence operational processes and outcomes (Kong et al., 2015).

Meaning, competence, self-determination, and impact are the four dimensions of psychological empowerment that motivate university leaders to perform well and achieve shared university goals. Therefore, employee empowerment is critical and considered one of the most effective strategies for organizational success.

Entrepreneurial Characteristics (ECs)

The term entrepreneurship has become widely known, particularly through public debates. It is utilized by policymakers to forecast future prosperity and encourage international comparisons (Saygin, 2022). Entrepreneurship is an economic growth

engine, positively correlated with job creation, institutional survival, and technological change (Etzkowitz, 2003). Greene et al. (2015) and Wach (2014) emphasize that entrepreneurship education is a powerful tool for engaging individuals in entrepreneurial activities and facilitating economic movement, describing it as a required step in societal growth and development. Wilson (2008) states that the earlier individuals acquire their entrepreneurial training, the more straightforward it will be for them to participate in such activities in the future. For this reason, entrepreneurship in education and the entrepreneurial qualities of leaders are essential. Numerous researchers have suggested a set of characteristics that an entrepreneurial leader must have. The Trait Theory of Entrepreneurship defines four essential characteristics: need for achievement, initiative, innovation, and risk-taking (Al Ghamdi, 2020; Obschonka & Stuetzer, 2017). Research into these characteristics has revealed that they have a significant relationship with entrepreneurial success. The four entrepreneurial characteristics can be summarized as follows:

The **need for achievement** is considered to be an entrepreneurial characteristic (Gupta & Fernandez, 2009; Gupta et al., 2004), which can be defined as the extent to which an individual aspires to achieve goals and works hard to be satisfied with their outcomes (Gerba, 2012). Salamzadeh et al. (2014) state that numerous empirical studies indicated a relationship between the need for achievement (n-Ach) and entrepreneurship. A high level of n-Ach is a critical entrepreneurial characteristic leadership characteristic. A study conducted at the university level discovered that colleges focusing on practical approaches to entrepreneurship had a more significant positive impact on intention (initiative, need for achievement) than those with a more theoretical approach (Moraes et al., 2018).

Initiative is one of the distinguishing characteristics of entrepreneurial leaders (Al Ghamdi, 2020). There is always room to seize unanticipated opportunities and utilize new methods to achieve excellence; thus, being proactive and enterprising is one of the most significant characteristics of an entrepreneurial leader. According to Osaze (2003), initiative determines one's future goals and whether they are achieved. Crant (2000) describes proactivity as taking the initiative to enhance the present situation; it entails challenging the status quo rather than quietly adapting to current conditions. Li (2020) mentions that proactive individuals act in advance by thinking, planning, and performing based on future results, thus selecting, modifying, and even creating the desired results. In other words, a proactive person decides to change the environment on purpose. Osaze (2003) argues that a proactive leader is equally passionate about the past, present, and future, aiming to comprehend the present and build a proactive future. More specifically, being proactive is essential for university leaders; in a rapidly changing environment, opportunities must be seized before they are wasted.

Innovation is a point of difference between entrepreneurs and non-entrepreneurs (Chye Koh, 1996). Lumpkin and Dess (2001) define innovation as generating new ideas, conducting experiments, and creating novel products or services. It also includes technological improvement procedures that allow an organization to enter a new market. Innovation is considered one of the fundamental characteristics of an entrepreneurial leader. Universities face intense competition; thus, they must integrate innovation into their activities to be entrepreneurial. Aas et al. (2020) found that diversity, new perspectives, and training increased academic leaders' innovation and openness to strategies that enhanced university innovation. Supapawawisit et al. (2018) also mention that innovation reaches high rates when universities encourage employees to take risks.

Empowering employees and giving them the confidence to take calculated risks makes them more innovative, which improves the university's progress and rankings.

Risk-taking is another vital characteristic of an entrepreneurial leader, defined by Teece et al. (2016) as utilizing the resources available to perform in uncertain conditions. Knight (2012) distinguished between risk-taking and uncertainty, stating that uncertainty is uncontrollable, whereas risk-taking is calculable. According to Kuratko (2007), numerous risks are worth taking, and can eventually lead to outstanding success. Accordingly, taking risks in ambiguous situations has positive and negative sides. However, the difference is that entrepreneurial leaders take calculated risks based on the information available, aiming to reduce losses. Hanaysha and Al-Shaikh (2022) argue that entrepreneurship is associated with considerable risk-taking, which suggests that leaders must detect, alleviate, and manage risk factors.

These four characteristics can serve as a framework for encouraging teamwork, as entrepreneurs rarely work alone. According to Lazar et al. (2020), forming an entrepreneurial team is often perceived as a critical first step to successfully balancing the traits. A team lacking initiative, for example, may be too passive to face competitors, whereas one comprised primarily of risk-takers may be too aggressive to survive long enough to cement success (Lazar et al., 2020). Ultimately, teams that possess the four characteristics of entrepreneurship are more successful than others. Nevertheless, the most effective teams have high levels of need for achievement, which tends to make them more focused on their objectives and goals (Jin et al., 2017).

Psychological Empowerment (PE) and Entrepreneurial Characteristics (ECs)

Research has sought to establish the impact of psychological empowerment on the possession of entrepreneurial characteristics among academic leaders. Previous studies have demonstrated that the psychological empowerment of leaders can positively impact work outcomes. Employee empowerment is critical and one of the most effective strategies for organizational success. There are many methods to empower leaders. According to Xiong (2022), psychological empowerment can help employees remain productive and involved. An employee needs to be psychologically empowered to be ready to face challenges in the workplace. The idea of work engagement as a business strategy has been widely researched. It is based on the belief that empowering employees improves their productivity, supplementing their entrepreneurial characteristics (Xiong, 2022).

Despite several studies highlighting the significance of psychological empowerment in work environments, studies on its impact on the possession of entrepreneurial characteristics among leaders in the university context are still lacking compared to other studies in the field of leadership. However, in the past years, some studies have appeared. For instance, Safari et al. (2010) investigated the relationship between psychological empowerment (including four dimensions: meaningfulness, competence, influence, self-determination, and trust) and entrepreneurship in higher education. The results revealed that psychological empowerment can predict entrepreneurship. In another study, Nguyen et al. (2021) examined its impact on innovative work behavior, as well as the mediating role of psychological empowerment. The finding indicated that psychological empowerment fully mediated the relationship between entrepreneurial culture and innovative work behavior. Moreover, Mahmoud et al. (2021) examined the relationship between psychological empowerment and individual performance mediated by

entrepreneurial behavior. According to the outcomes, psychological empowerment is directly correlated with entrepreneurial behavior and individual performance.

In the context of Saudi universities, no study has investigated the impact of psychological empowerment on the possession of entrepreneurial characteristics among academic leaders. Current research examines this relationship, as previous studies have confirmed that higher education has a critical need for leaders who are psychologically empowered.

Previous Studies

This section reviews some previous studies related to psychological empowerment and entrepreneurial characteristics. It also identifies some similarities and differences between these studies and the current study.

Previous Studies Related to Psychological Empowerment

Al-Faraj (2022) performed a study to determine the association between psychological empowerment and attitudes toward professional life. The psychological empowerment scale (Spreitzer, 1995) was applied to a group of female consultants in KSA. The study revealed an association between psychological empowerment and positive attitudes regarding work life. Another finding was that student counselors had a high level of psychological empowerment. Haji et al. (2022) explored the effect of psychological capital on entrepreneurial spirit, as well as the significance of psychological empowerment as a moderator. According to the study's findings, psychological empowerment had a considerable positive impact on entrepreneurial spirit.

Similarly, Okyireh et al. (2021) evaluated the effect of three business directions on entrepreneurial behavior, one of which was psychological empowerment. The study discovered that psychological empowerment was positively associated with entrepreneurial action. Rani et al. (2021) researched the association between four characteristics of psychological empowerment and employee performance in Malaysia. According to the study's findings, meaning, competence, self-determination, and impact are all significantly associated and predict employee performance.

Al-Qarni (2021) conducted another study that considered the impact of psychological empowerment as a moderating variable. The findings revealed that psychological empowerment has a direct impact on contextual performance. The study also discovered that psychological empowerment completely moderated the effect of empowering leadership on task and contextual performance. Additionally, Al-Dhdan (2020) explored the extent of psychological empowerment and its connections to creative activity among Saudi university faculty members. One of the key findings was a significant positive relationship between psychological empowerment and creative behavior. Moreover, Meng and Sun's (2019) study aimed to evaluate the connection between psychological empowerment and work engagement among Chinese university faculty members. The findings revealed that psychological empowerment influenced work engagement, with total psychological empowerment and work engagement scores being somewhat high. According to the study results, psychological empowerment mainly influenced work engagement through two dimensions: meaning and competence.

Previous Studies Related to Entrepreneurial Characteristics

Saygin (2022) conducted a study to determine the entrepreneurial traits of the Young Entrepreneurs. According to the findings, participants emphasized courage and self-

confidence as essential aspects of entrepreneurship. Participants also agreed that the most fundamental entrepreneurial attributes are courage, innovation, and self-confidence. Likewise, Al Zahrani's (2021) research aimed to determine the entrepreneurial qualities existing among Umm Al-Qura University students. According to the findings, students at Umm Al-Qura University showed significant levels of entrepreneurial qualities.

Wahab and Tyasari's (2020) study examined the function of entrepreneurial leadership as a moderator in the link between management competency and job performance. The study found that entrepreneurial leadership mediated both associations between managerial competency and job performance and the connection between learning orientation and job performance among university leaders.

The main objective of Al-Ramathi's (2019) research was to determine the level of entrepreneurial qualities among school leaders and their relationship to increasing organizational engagement among teachers. The study findings revealed that school leaders had high levels of entrepreneurial qualities. As a result, the study recommended that school leaders should improve their entrepreneurial skills through workshops and seminars. Another suggestion was encouraging a sense of adventure and calculated risk-taking by empowering school leaders to make decisions. Similarly, Salamzadeh et al. (2014) investigated the association between entrepreneurial traits and the students' fields of study. The findings show a substantial link between entrepreneurial traits and the fields of study of the participants.

Gupta and Fernandez (2009) conducted an international study examining entrepreneurial traits in three nations and observed parallels and variations. Students from India, Turkey, and the United States rated the importance of several attributes of an entrepreneur. The study found that while entrepreneurs from different cultures had similar features, there were considerable variances. The study advocated identifying country-specific entrepreneurship ideas to aid scholars and practitioners interested in studying and educating entrepreneurs worldwide.

Overall, the review of the previous literature clearly shows similarities and differences between the current study and prior studies. One of the parallels is that the current study focuses on psychological empowerment and entrepreneurial characteristics. The present study also conforms with previous studies in terms of research methodology, as it uses a quantitative research design (Al-Faraj, 2022; Al-Qarni, 2021; Al-Ramathi, 2019; Al Zahrani, 2021; Meng & Sun, 2019; Rani et al., 2021; Salamzadeh et al., 2014; Wahab & Tyasari, 2020). However, it also differs from previous studies in aspects such as the study environment. For instance, most previous studies were in the public education context (Al-Faraj's, 2022; Al-Qarni, 2021; Al-Ramathi, 2019), while Okyireh et al.'s (2021) study was conducted in various municipalities in Ghana.

The current study is comparable to previous research in the university context (Al-Dhdan, 2020; Al Zahrani, 2021; Gupta & Fernandez, 2009; Meng & Sun, 2019; Salamzadeh et al., 2014; Wahab & Tyasari, 2020). Another difference concerns the current study's sample: academic leaders at PNU. In contrast, Al-Dhdan's (2020) sample was faculty members at various Saudi universities, while Al Zahrani (2021), Gupta and Fernandez (2009), and Salamzadeh et al. (2014) all sampled students. This study differs from earlier research because it is one of the first to examine the impact of psychological empowerment on the entrepreneurial characteristics of academic leaders at Saudi universities. The current study also benefitted from the previous studies, which provided

a broader theoretical background related to the research topic and indicated the appropriate study method.

Methodology

The study utilized the descriptive correlational approach based on a situation statement to test hypotheses and clarify the study's results. The current study adopted a survey designed by Spreitzer (1995) to measure psychological empowerment. The questionnaire had 12 items with four dimensions: Meaning (3 items), Competence (3 items), Self-Determination (3 items), and Impact (3 items). Additionally, a questionnaire was adopted by Al Ghamdi (2020) to measure entrepreneurial characteristics. The questionnaire had 12 items with four dimensions: the need for achievement (3 items), initiative (3 items), innovation (3 items), and risk-taking (3 items). A six-point Likert scale (1 = strongly disagree to 6 = strongly agree, with no neutral point) was utilized to measure study variables. A pilot study containing 30 respondents was conducted to measure the survey's validity and reliability. An online survey was also sent to participants at PNU.

Study Population and Sample

The study population consisted of all of academic leaders at PNU such as, dean, vice dean, chair, and vice chair. Respondents were determined through a stratified random sampling approach. The appropriate sample size for the target population was 121 individuals, based on Krejcie and Morgan's (1970) table for determining sample size. Demographic variables were leadership position, experience as an academic leader, disciplines, and number of leadership courses.

Study Instrument

The questionnaire was used to collect study data to achieve the study objectives based on its methodology. The present study contained two questionnaires. The first questionnaire was Spreitzer's (1995) psychological empowerment survey, and the second was Al Ghamdi's (2020) entrepreneurial characteristics items. The study instrument consists of two sections: demographic variables such as leadership position, experience as an academic leader, disciplines, and leadership courses. The second section consists of psychological empowerment with 12 items of four dimensions: Meaning (3 items), Competence (3 items), Self-Determination (3 items), and Impact (3 items), and entrepreneurial characteristics with 12 items of four dimensions: the need for achievement (3 items), initiative (3 items), innovation (3 items), risk-taking (3 items)

The participants were recruited randomly from PNU and invited to complete an online questionnaire. The purpose of the questionnaire was mentioned, and the participants were confirmed that their responses would remain confidential.

A six-point Likert scale (1 = strongly disagree to 6 = strongly agree, with no neutral point) was utilized to measure study variables, and it was divided into three levels by the statistical method as 1.00 – < 2.68 low level, 2.68 – < 4.36 Moderate level, and 4.36 – 6.00 High level.

Validity and Reliability

After being translated into Arabic with its original in English, the instrument was presented to a group of experts in educational leadership, management, and entrepreneurship among faculty members at Saudi universities who work as (full professor, associate professor, and assistant professor) to ensure face validity, and their observations were taken. Regarding internal consistency and reliability, a pilot study of

(30) respondents was conducted to examine the instruments utilized in this study to measure the level of psychological empowerment and entrepreneurial characteristics of academic leaders at PNU. The collected data within the pilot study were excluded from the sample.

To measure the items' validities, the Pearson Correlation Coefficient was determined for each item in the pilot study within its dimension and the total questionnaire scores within each dimension. As shown in Table 2, the psychological empowerment items correlation scores ranged from .570* to .870**, and most correlations were significant at $p \leq 0.01$. The correlation coefficients for the total score in each dimension ranged from .679** to .854**, and most were significant at $p \leq 0.01$.

Table 2

Pearson Correlation Coefficients for each Items of psychological empowerment with the total Score of its Dimension

Dimension 1		Dimension 2		Dimension 3		Dimension 4	
N	R	N	R	N	R	N	R
1	.608**	4	.870**	6	.743**	10	.830**
2	.747**	5	.695**	8	.692**	11	.732**
3	.856**	6	.753**	9	.570*	12	.684**

Pearson Correlation Coefficients for each Dimension of psychological empowerment with the total score of the questionnaire

Dimension 1		Dimension 2		Dimension 3		Dimension 4	
R	.854**	R	.764**	R	.679**	R	.837**

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Similarly, Table 3 illustrated the entrepreneurial characteristics items correlation scores ranged from .540* to .837**, and most correlations were significant at $p \leq 0.01$. The correlation coefficients for the total scores in each dimension ranged from .632** to .893**, and most were significant at $p \leq 0.01$.

Table 3

Pearson Correlation Coefficients for each Items of entrepreneurial characteristics with the total Score of its Dimension

Dimension 1		Dimension 2		Dimension 3		Dimension 4	
N	R	N	R	N	R	N	R
1	.673**	7	.782**	13	.540*	19	.653**
2	.615**	8	.687**	14	.837**	20	.835**
3	.767**	9	.704**	15	.651**	21	.771**

Pearson Correlation Coefficients for each Dimension of entrepreneurial characteristics with the total score of the questionnaire

Dimension 1		Dimension 2		Dimension 3		Dimension 4	
R	.632**	R	.893**	R	.679**	R	.726**

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

The instrument for psychological empowerment had a large Cronbach’s alpha of 0.862, and the four main dimensions had acceptable reliabilities of 0.857, 0.836, 0.731, and 0.769, respectively. Likewise, the instrument for the entrepreneurial characteristics had a large Cronbach’s alpha of 0.812, and the four main dimensions had acceptable reliability of 0.922, 0.757, 0.892, and 0.741, respectively. This indicates that the study instrument has a high degree of reliability and can be relied upon to achieve the purpose of the study.

Results

The current study focused on examining the impact of psychological empowerment on the possession of the entrepreneurial characteristics for academic leaders at PNU by measuring the level of psychological empowerment with its four dimensions (meaning, competence, self-determination, and impact) and the level of entrepreneurial characteristics with its four dimensions (the need for achievement, initiative, innovation, risk-taking). The study received responses from 121 participants. The respondents held leadership positions at PNU, including dean (4.1%), vice dean (35.5%), departmental chair (37.2%), and vice-departmental chair (23.1%). Only a tiny proportion (4.1%) had less than five years of experience in these positions, with the rest (95.9%) having worked for at least five years. Most respondents worked in human science (62.8%) and natural science (27.3%). Therefore, the sample was sufficiently representative to make inferences about the larger population.

Results Related to the Level of Psychological Empowerment (PE) and Entrepreneurial Characteristics (ECs):

To answer the *RQ1* “What is the level of psychological empowerment among academic leaders at PNU?” and *RQ2* “What is the level of entrepreneurial characteristics among academic leaders at PNU?” Means (M) and Standard Deviations (SD) were calculated for the PE and ECs and their dimensions, as shown in Table 4.

Table 4

Means (M) and standard deviations (SD) for PE & ECs (N=121)

Variables/ Dimensions	<i>M</i>	<i>SD</i>
Psychological Empowerment (PE)	3.63	0.77
D1: Meaning	3.70	0.79
D2: Competence	3.61	0.80
D3: Self-Determination	3.93	0.76
D4: Impact	3.28	1.14
Entrepreneurial Characteristics (ECs)	3.57	0.73
D1: The need for achievement	3.17	1.07
D2: Initiative	3.65	0.86
D3: Innovation	3.68	0.68
D4: Risk-Taking	3.77	0.75

Table 4 demonstrates the Means and Standard Deviations of PE with its dimensions and ECs with its dimensions. Accordingly, the level of PE and ECs reached a moderate level (3.63 and 3.57), respectively. For the PE dimensions the self-determination dimension was the highest with (M= 3.93, and SD= 0.76), while the impact dimension was the lowest with (M= 3.28, and SD= 1.14). For the ECs dimensions the risk-taking

dimension was the highest with (M= 3.77, and SD= 0.75), while the need for achievement dimension was the lowest with (M= 3.17, and SD= 1.07).

Results Related to the Impact of Psychological Empowerment (PE) on Entrepreneurial Characteristics (ECs):

To answer the RQ3 “Does psychological empowerment have a statistically significant impact on the possession of entrepreneurial characteristics among academic leaders at PNU”? The study hypotheses related to the assumed impact of PE on the possession of ECs were tested using the multiple linear regression analysis.

The first sub-hypothesis (H0a):

Psychological empowerment (including its four dimensions: meaning, competence, self-determination, and impact) does not have a statistically significant impact on need for achievement (one of the entrepreneurial characteristics) among academic leaders at PNU. A regression analysis was performed to determine whether the four PE factors significantly impacted the need for achievement. Table 5 shows the regression results for this analysis.

Table 5

Impact of PE dimensions on the need for Achievement (N=121)

Dependent Variable	Independent Variable	B	Std. Error	Beta	t	Sig.
The need for Achievement	(Constant)	-.174	.127		-1.375	.172
	Meaning	.473	.149	.315	3.174	.002
	Competence	.245	.155	.169	1.584	.116
	Self-determination	-.043	.116	-.027	-.366	.715
	Impact	.368	.065	.440	5.678	<.001
	F				58.037	
	R Square				.667	

The resulting model is $the\ need\ for\ Achievement = 0.368\ Impact - 0.043\ Self-determination + 0.245\ Competence + 0.473\ Meaning - 0.174$. The four variables explained 65.5% of the variation in *the need for Achievement* variable. However, only the *Meaning* and *Impact* variables significantly impacted *the need for Achievement*, with $p < 0.05$. Nevertheless, the model exhibits statistical significance, $F(4,116) = 58.037$, $p < .05$. Consequently, this F statistic provides sufficient evidence to reject the null hypothesis, as four dimensions significantly impact the need for *the need for Achievement*.

The second sub-hypothesis (H0b):

Psychological empowerment (including its four dimensions: meaning, competence, self-determination, and impact) does not have a statistically significant impact on initiative (one of the entrepreneurial characteristics) among academic leaders at PNU. Regression analysis used *Initiative* as the dependent variable and PE factors as the explanatory variables. Table 6 shows the results of this analysis.

Table 6

Impact of PE dimensions on Initiative (N=121)

Dependent Variable	Independent Variable	B	Std. Error	Beta	t	Sig.
Initiative	(Constant)	.291	.096		3.029	.003
	Meaning	.095	.113	.089	.843	.401
	Competence	.187	.118	.181	1.592	.114
	Self-determination	.256	.088	.229	2.896	.005
	Impact	.246	.049	.414	4.995	<.001
F			47.118			
R Square			.619			

The resulting model is $Initiative = 0.246 Impact + 0.256 Self-determination + 0.187 Competence + 0.095 Meaning + 0.291$. These variables accounted for 60.6% of the variation in *Initiative*. However, only *Self-determination* and *Impact* variables had a significant impact on *the need for Achievement*, with $p < .05$. Even so, the combined impact of these variables was significant, $F(4, 116) = 47.118, p < .05$. Consequently, there is sufficient justification to reject the null hypothesis, as the four dimensions have a statistically significant impact on *Initiative* variable.

The third sub-hypothesis (H0c):

Psychological empowerment (including its four dimensions: meaning, competence, self-determination, and impact) does not have a statistically significant impact on innovation (one of the entrepreneurial characteristics) among academic leaders at PNU. A third regression analysis was performed using *Innovation* as the dependent variable and PE factors as the independent variables, as presented in Table 7.

Table 7

Impact of PE dimensions on Innovation (N=121)

Dependent Variable	Independent Variable	B	Std. Error	Beta	t	Sig.
Innovation	(Constant)	.440	.099		4.441	<.001
	Meaning	.126	.117	.137	1.081	.282
	Competence	.153	.121	.172	1.261	.210
	Self-determination	.290	.091	.301	3.179	.002
	Impact	.089	.051	.174	1.749	.083
F			24.090			
R Square			.454			

The predictive model is $Innovation = 0.089 Impact + 0.290 Self-determination + 0.153 Competence + 0.126 Meaning + 0.440$. The adjusted r-square indicates that these variables explain up to 43.50% of the variation in *Innovation*. However, only *the Self-determination* variable had a significant impact on *Innovation*, with $p < .05$. Nevertheless, these variables taken collectively had a significant impact on *Innovation*, $F(4, 116) = 47.118, p < .05$. For this reason, the null hypothesis is rejected, as the four PE dimensions have a statistically significant impact on *Innovation*.

The fourth sub-hypothesis (H0d):

Psychological empowerment (including its four dimensions: meaning, competence, self-determination, and impact) does not have a statistically significant impact on risk-taking (one of the entrepreneurial characteristics) among academic leaders at PNU. A fourth regression analysis was performed using *Risk-Taking* as the dependent variable and the PE factors as the explanatory variables. The results of this analysis are presented in Table 8.

Table 8

Impact of PE dimensions on Risk- Taking (N=121)

Dependent Variable	Independent Variable	B	Std. Error	Beta	t	Sig.
Risk - Taking	(Constant)	.344	.104		3.325	.001
	Meaning	.276	.122	.290	2.266	.025
	Competence	.189	.127	.205	1.491	.139
	Self-determination	.315	.095	.316	3.310	.001
	Impact	-.050	.053	-.094	-.941	.349
	F				23.304	
R Square						.446

The explanatory model is $Risk-Taking = -0.05 Impact + 0.315 Self-determination + 0.189 Competence + 0.276 Meaning + 0.344$. The adjusted coefficient of determination indicates that PE variables explain up to 42.60% of the variation in *Risk-Taking*. However, only *Self-determination* and *Meaning* variables significantly impacted the dependent variable. Further, the four variables taken collectively significantly impacted *Risk-taking*, $F(4,116) = 23.304, p < .05$. Consequently, we reject the null hypothesis, as the four PE dimensions have a statistically significant impact on *Risk-Taking*.

The main hypothesis (H0):

Psychological empowerment (including its four dimensions: meaning, competence, self-determination, and impact) does not have a statistically significant impact on the possession of entrepreneurial characteristics (i.e., need for achievement, initiative, innovation, risk-taking) among academic leaders at PNU. A last regression model analyzed the relationship between ECs and PE. The average and log-transformed scores for all ECs were the dependent variable, while the log-transformed PE factors were the explanatory variables as presented in Table 9.

Table 9

Impact of PE dimensions on ECs (N=121)

Dependent Variable	Independent Variable	B	Std. Error	Beta	t	Sig.
Entrepreneurial Characteristics (ECs)	(Constant)	.262	.068		3.843	<.001
	Meaning	.214	.080	.239	2.654	.009
	Competence	.212	.084	.246	2.538	.012
	Self-determination	.230	.063	.247	3.670	<.001
	Impact	.126	.035	.253	3.590	<.001
	F				76.170	
R Square						.724

The impact of PE dimensions on ECs is explained by the model *Entrepreneurial Characteristics (ECs) = 0.126 Impact + 0.230 Self-determination + 0.212 Competence + 0.214 Meaning + 0.262*. The PE factors explain 71.50% of the change in ECs. All the coefficients for the explanatory variables were statistically significant at 5% level, with $p < .05$. In addition, the four variables taken collectively significantly impacted ECs, $F(4, 116) = 76.170, p < .05$. Consequently, the main hypothesis is rejected, as PE dimensions are significant determinants of the variation in ECs.

Discussion

The current study investigated the levels of psychological empowerment and entrepreneurial characteristics among academic leaders at PNU and determined the impact of psychological empowerment on the possession of entrepreneurial characteristics. According to the findings, PE levels were moderate, as were the levels of all its dimensions. Self-determination was the highest and impact was the lowest. These results show that the leaders experience a degree of autonomy and freedom in performing their jobs; however, their influence might be limited. The findings correspond with the conclusions reached by other studies (Al-Dhdan, 2020; Almadei & Albasal et al., 2022; Al-Qarni, 2021; Alshenaifi, 2021). They differ from the results of Ambad and Bahron (2012), who found above-average PE levels, and Meng and Sun (2019), who found that PE scores among faculty members and university leaders were moderately high.

ECs levels were also moderate, as were the levels of the individual characteristics. Risk-taking was the highest, while the need for achievement was the lowest. These results can be explained by the fact that the university was established for women, and its leaders are also female. They dare to face difficulties, pursue challenges, and enter high-risk situations because they believe that the highest levels of leadership lie behind the most dramatic risks. However, the fact that the need for achievement was at a lower level may be attributed to the fact that the leaders have sufficient achievements in the field of their specializations. These outcomes are consistent with those of Hussein (2013) and disagree with those of Saygin (2022), Al Zahrani (2021), and Al-Ramathi (2019), who found high EC levels among the respondents in their studies.

A multiple regression analysis indicated that psychological empowerment had a positive impact on the possession of entrepreneurial characteristics among academic leaders at PNU, explaining 71.50% of the total variation. The findings also revealed that psychological empowerment factors predict entrepreneurial characteristics. The findings support the results of existing studies on the role of psychological empowerment in influencing entrepreneurial characteristics. In this regard, Haji et al. (2022) indicated the significant positive impact of psychological empowerment on entrepreneurial spirit. Additionally, Okyireh et al. (2021) found that psychological empowerment had a positive impact on entrepreneurial behavior. The findings of Meng and Sun (2019) demonstrated that psychological empowerment was positively related to all aspects of work engagement for faculty members and university leaders.

More specifically, the need for achievement, initiative, innovation, and risk-taking are the principal entrepreneurial characteristics. Therefore, the four PE factors drive people to develop these entrepreneurial characteristics and motivate them to work. It was also noticed that self-determination was the most significant variable in influencing the four entrepreneurial characteristics, ahead of the remaining dimensions (meaning, competence, and impact). This reinforces the importance of focusing on self-determination, especially because its level was average but it had a more significant

impact on the four entrepreneurial characteristics than the other dimensions. Similarly, Meng and Sun's (2019) findings confirmed that the positive effect of psychological empowerment was primarily realized through two dimensions: meaning and competence. Aceituno-Aceituno et al. (2018) confirmed the statistical significance of self-determination in their regression models, showing that a lack of job opportunities enhances the psychological motivation to get involved in entrepreneurship. Therefore, self-determination is more vital for a leader than competence, influence, and understanding of the meaning of work because it affects the other aspects directly. In contrast, if a leader does not have autonomy and self-determination, efficiency and influence decrease accordingly. According to Romero-Galisteo et al. (2022), the differences in entrepreneurial intentions can be explained by differences in the psychological willingness to begin work.

The results also indicate that the need for achievement directly influences a person's psychological predisposition to entrepreneurship. These findings validate Sun et al. (2020)'s findings that a sense of personal achievement and influence impact entrepreneurial intentions and actions. Karimi and Makreel (2020) also supported these findings, stating that power and achievement are closely associated with social status and personal success. Consequently, leaders with a strong drive for achievement are more likely to enter entrepreneurial work.

The study finds that psychological dimensions drive personal initiative. Entrepreneurs possess an enhanced capacity to turn ideas into action through creativity, risk-taking, and innovation (Kerr et al., 2019). Ogba et al. (2022) reported that taking initiative is vital in transforming entrepreneurial intention into action, particularly among young graduates. Consequently, a psychological predisposition to action and risk-taking significantly impacts the entrepreneurial drive of academic leaders

Entrepreneurial innovation enables universities to surmount challenges and develop a unique competitive advantage. Yu and Du (2021) observed that innovation encourages entrepreneurs to use natural resources and integrate themselves into the natural environment more easily, resulting in a competitive advantage. It also allows entrepreneurs to overcome constraints and achieve sustainable development (Li et al., 2022; Zhou et al., 2022). Bawn et al. (2022) mention that innovation permits entrepreneurs to take advantage of change, adding that entrepreneurs are defined by this trait. PE factors enhance academic leaders' capacity to innovate and enable them to develop solutions to existing and emerging problems.

Lastly, risk-taking refers to utilizing the resources available under uncertain conditions (Teece et al., 2016). Kuratko (2007) added that despite uncertainties, numerous risks are worthwhile as they may lead to exceptional success. Numerous studies have emphasized the significance of risk-taking attitudes among entrepreneurs (Al-Mamary & Alshallaqi, 2022; Razak et al., 2021; Salameh et al., 2022; Zeng et al., 2022). These studies state that risk-taking creates learning opportunities, builds resilience, and generates a feeling of accomplishment after success. Consequently, PE factors that drive leaders to greater risk-taking enhance their entrepreneurial prowess.

Conclusion

The current study investigated the level of psychological empowerment and entrepreneurial characteristics among academic leaders at PNU and determined the impact of psychological empowerment on the possession of entrepreneurial characteristics. The levels of psychological empowerment and entrepreneurial

characteristics of academic leaders at PNU were moderate. Psychological empowerment was found to have a statistically significant positive impact on entrepreneurial characteristics, explaining 71.50% of the total variation. Specifically, the principal drivers of entrepreneurial activities are the need for achievement, initiative, innovation, and risk-taking. These ECs are driven by the four PE factors, of which self-determination had the greatest influence on the four aspects of entrepreneurship.

Recommendations

Based on the findings from the study on the impact of psychological empowerment on the possession of entrepreneurial characteristics among academic leaders at PNU, it is possible to offer the following recommendations for universities:

1. Consider other factors that affect leaders' entrepreneurial characteristics. Although psychological empowerment promotes ECs among academic leaders, it is not the only critical factor to do so.
2. Focus on raising levels of psychological empowerment and entrepreneurial characteristics among academic leaders.
3. Provide academic leaders with more autonomy and self-determination because these factors have a significant impact on their possession of entrepreneurial characteristics.
4. Give special consideration to providing development programs that enhance the entrepreneurial characteristics of academic leaders at various administrative levels of the university based on their needs.
5. Create special programs to identify academic leaders who possess entrepreneurial characteristics, develop their skills, and empower them to develop entrepreneurial universities that can compete locally and globally.
6. Promote an entrepreneurial culture within Saudi universities, especially among university leaders.
7. Encourage the concept of the entrepreneurial leader by creating an award for the best entrepreneurial leader at a Saudi university according to specific criteria.
8. Finally, as the current research examined the impact of PE on ECs by studying only one university, it is recommended that a similar analysis be carried out at other universities so the outcomes can be compared with the findings of the current study.

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