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Exploring the landscape of entrepreneurship in Pakistan: a comparative analysis of perceptions, challenges, and the need for psychoeducational interventions in the academic sector

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Objectives: Entrepreneurship in Pakistan is steadily growing, significantly impacting on economic development and job creation, despite facing several challenges. This study aimed to investigate the perceptions of students and faculty members about entrepreneurship in public and private universities in Pakistan. It also sought to evaluate the barriers and motivational factors promoting entrepreneurship among these universities.

Methods: A cross-sectional study was conducted, and a comprehensive questionnaire was utilized to collect data. A total of 213 individuals from different disciplines took part in the study. This study examines the similarities and differences in the views of faculty members and students toward entrepreneurship by using SPSS 25.

Results: In terms of motivation, 72% of private sector participants cited income satisfaction as a key factor, compared to 58% in the public sector. The proportion of participants willing to apply for funding for entrepreneurial support was 68%, predominantly among private sector participants (75% vs. 61%). Access to training programs was reported by 62%, but private universities provided 35% more institutional support. The results of the chi-squared test revealed that institutional business courses, startup funding, and funding applications were significantly correlated in public and private sectors. Key risks identified included a lack of access to funding (42%), inadequate workforce skills (37%), and limited market opportunities (29%). Fresh graduate entrepreneurial failures were attributed to lack of experience (43%) and market adaptability (33%). The study also highlighted the connection between entrepreneurial activities and mental health issues, including frustration, burnout, and a lack of motivation for

business. Both groups showed similar perceptions regarding business potential and suggested mentorship as a key area for improving entrepreneurship.

Conclusion: The study suggests that promoting entrepreneurship in Pakistan should focus on targeted interventions through the initiation of psychoeducational training, networking opportunities, and mentorship. Additionally, these policies should identify the sectoral issues they aim to solve while incorporating mental health policies to create a robust entrepreneurial ecosystem. Extending the study to include various industries and stakeholders will be another direction for future research to improve policy and practice.

KEYWORDS

entrepreneurship challenges, business perceptions, academic sector, business motivation, business support, psycho-educational interventions

Introduction

Entrepreneurship is steadily gaining traction as a dynamic and intricate process that involves risk-taking and innovation. It serves as a primary driver of job creation, economic growth, and national prosperity (Kim et al., 2018). The growth and development of a nation depend heavily on its citizens who obtain a basic education and relevant skills. These factors vary significantly between developed and undeveloped economies (Bayo and Emmanuel, 2020). Additionally, early-stage, opportunity-driven, and necessity-driven entrepreneurship substantially affect economic growth (Stoica et al., 2020).

In Pakistan, entrepreneurship gained attention with the establishment of the entrepreneurship center, the Entrepreneurship and Small and Medium Enterprise Center (ESMEC), which was created in collaboration with Germany (Noor et al., 2020). The rapidly growing economy in Asia is expected to attract 2.1 million middle-class households by 2025, driven by improved digital connectivity and a high number of young individuals entering the workforce, which is conducive to entrepreneurship.

Pakistan ranks 122nd in the Global Entrepreneurship Development Institute (GEDI) index for entrepreneurship development but faces significant financial challenges, with only nine startups receiving venture capital funding in 2017. Of 190 nations, Pakistan is ranked 136th in terms of business accessibility (Syed, 2019). According to the latest economic consensus of Pakistan in 2005, approximately 3.24 million well-established businesses are operating in the country. Approximately 78% of non-agricultural laborers in Pakistan are employed by small and medium enterprises (SMEs), which account for roughly 90% of all privately owned companies (Manzoor et al., 2021). Pakistan's economy heavily relies on the SME sector, just like other developing countries. This sector plays a crucial role in economic growth, technological innovation, and providing resources to large corporations (Naveed et al., 2022).

Entrepreneurs in Pakistan face a challenging environment marked by limited resources, regulatory obstacles, and a need for mindset shift toward social innovation. One major obstacle that many entrepreneurs face is securing the financing necessary to start and grow their businesses. Banks often provide loans with high interest rates for entrepreneurship (Manzoor et al., 2021). Young innovators not only lack funding but also supportive networks and mentorship opportunities. Additionally, they face regulatory obstacles that often hinder growth and inhibit innovation. Further research is warranted to increase public acceptance and support for social entrepreneurship. For entrepreneurship to flourish and significantly boost Pakistan's economy by promoting sustainable development and meeting urgent social needs, these problems must be resolved (Asif et al., 2018). Entrepreneurship in Pakistan is hindered by the government's intrusive role, which hinders innovation and discourages risk-taking. The country's unstable sociopolitical conditions and numerous policy measures have failed to improve entrepreneurial activities despite efforts to enhance them. The country is encountering numerous significant and complex challenges. The American research community has paid close attention to Pakistan's entrepreneurial ecosystem. It has been suggested that fostering entrepreneurship will strengthen Pakistan's private sector and create an atmosphere conducive to entrepreneurship (Mubarak et al., 2019).

To address rising unemployment rates, which increased from 6.079% in 2018 to 6.140% in December 2019, Pakistan must encourage entrepreneurship among its youth, as it is vital for job creation in the emerging economy (Hussain, 2018; Ahsan and Ashfaq, 2023). Furthermore, Pakistan has a lower rate of entrepreneurship compared to other countries (Khalid et al., 2022). Encouraging entrepreneurship among Pakistani youth is crucial due to economic challenges such as inflation, poverty, and currency depreciation. New businesses can generate jobs and increase purchasing power, making this a beneficial solution (Ali et al., 2020).

Although entrepreneurship has been recognized as an essential factor for economic development and employment generation in Pakistan, little research has been conducted on understanding the perceptions, barriers, and contributions of university students and faculty members in promoting entrepreneurship among these universities. These gaps limit our understanding of how different educational environments can foster entrepreneurial potential and what challenges hinder this potential, contributing to burnout. To fill this gap, this research examines the experiences of students and faculty staff and develops an understanding of the critical need for mentorship.

The purpose of this study was to reveal the perception of students and faculty members on entrepreneurship in both public and private universities in Pakistan. Various factors, including inadequate government assistance, limited financing, and insufficient training, in addition to the reasons behind the failures of graduates, were evaluated to determine the involvement of students and faculty members in entrepreneurship in both public and private universities. The data obtained help educate students and faculty members about

the requirements and dynamics of Pakistan's entrepreneurial environment. These data help identify gaps in support and risk mitigation, ultimately contributing to economic growth and job creation. The study also points out areas for development, including strengthening industrial networks, providing funding grants, delivering specialist courses and workshops, setting up incubation centers, and providing mentorship programs. This study highlights the importance of a supportive ecosystem to promote entrepreneurship in Pakistani academic institutions.

Methods

A descriptive and cross-sectional study was conducted between 1 March 2023 and 15 August 2023. The study included two professional groups from public and private sector Pakistani universities: (1) students and (2) faculty members. The study involved 213 individuals from different disciplines, such as health sciences, sciences, engineering, social sciences, arts, and humanities. Participants were drawn from diverse age groups, income brackets, genders, and educational backgrounds. The ages of participants ranged from 15 to 51 years. The data were collected from all over Pakistan including Punjab, Sindh, KPK, Baluchistan, Gilgit Baltistan, and Azad Kashmir.

Survey

A comprehensive analysis and a single survey were conducted to examine the status of entrepreneurship in Pakistan's public and private sector universities. A questionnaire was designed to comprehend the perceptions of participants on business motivation, support for entrepreneurship, risk assessment, and challenge faced by students and faculty members. A total of 16 variables were studied for the two selected groups. These variables have been divided into four sections.

Composition of questionnaire

Section 1 consists of the demographics of students and faculty members in public and private universities. This section included age/gender-wise distribution and regional distribution of groups as data were taken from Punjab, Sindh, KPK, Baluchistan, Gilgit Baltistan, and Kashmir, and marital status was also analyzed.

Section 2 includes entrepreneurship motivation. The level of income satisfaction from very dissatisfied to very satisfied was evaluated. The frequency of business potential was determined to find how many participants were interested in doing business. It also comprised business familiarity and the factors that motivated individuals toward business, including financial success, job frustration, influencers, innovation passion, and supportive ecosystems.

Section 3 mainly comprised support for entrepreneurship. The responses were collected from individuals regarding their access to funding. The level of awareness regarding entrepreneurship training and involvement in institutional business courses was also evaluated. The perception of support from banks, government, and startup funding toward entrepreneurship was also examined in both sectors. Startup funding further included contributions from the education sector, foreign agencies, and NGOs.

Section 4 of the questionnaire consisted of risk assessment and mitigation related to entrepreneurship. This section aimed to know people's perceptions of mitigating the risk associated with entrepreneurship and to evaluate the factors contributing to the failures of fresh graduates in entrepreneurial endeavors in both public and private sector universities. The risk associated with entrepreneurship in comparison to traditional employment was also explored. The challenges faced by entrepreneurs and the improvement of entrepreneurial facilities were also investigated. The areas of improvement discussed were industry networks, courses and workshops, financial grants, and mentorship. Cronbach's alpha value was computed to be 0.3.

Data analysis

The comparative analysis of perception about entrepreneurship in public and private sector universities was conducted using IBM SPSS Statistics 25. The data were interpreted and shown in the form of a pie chart using a GraphPad prism.

Results

Demographic features

Gender distribution of students and faculty members is illustrated in both public and private sector universities (Figure 1A).

In public sector universities, men and women comprised 43.3 and 56.7% of participants, respectively, while in private universities, the figures were 41.2 and 55.8%. The age-wise distribution of participants reveals a unique pattern (Figure 1B). A total of 171 individuals participated in public universities and 43 individuals in private universities. The age group 15–20 years comprises 14% in the private sector compared to 25.7% in the public sector. The 21–25 years age group constitutes the largest number of participants in both sectors, with 44.2% in the private sector and even higher, 49.7% in the public sector. The 25–30 years age group accounts for 11.6% of the private sector compared to very few individuals in the public sector. 8.2% of the population is in the age group 31–30 years in the public sector. In the age group 31-35 Y, the frequency of participants in the private sector is half that of 8.8% of participants in the public sector. The 36–40 years age group has 14% of individuals in the private sector and drops to 5.3% in the public sector. For older age groups, specifically those over the age of 41–45 years and those over 51, the private sector shows a higher percentage than the public sector.

The data indicate younger individuals are more prevalent in the public sector, while the private sector has a higher proportion of older participants. The data were collected from all provinces of Pakistan: Punjab, Sindh, Khyber Pakhtunkhwa, Baluchistan, and the regions of Gilgit Baltistan and Kashmir (Figure 1C). Out of 171 individuals in the public sector, 59.1% of participants were from Punjab, 25.1% were from South Punjab, and 12.9% were from Sindh. In the private sector, 79.1% of 43 participants were from Punjab, 13.9% from South Punjab, and 4.7% from Sindh. The marital status of participants is shown (Figure 1D). In the public sector, 56.7% of individuals were married, and 43.3% were single. In the private sector, a large number of individuals were single, with a percentage frequency of 74.4, and

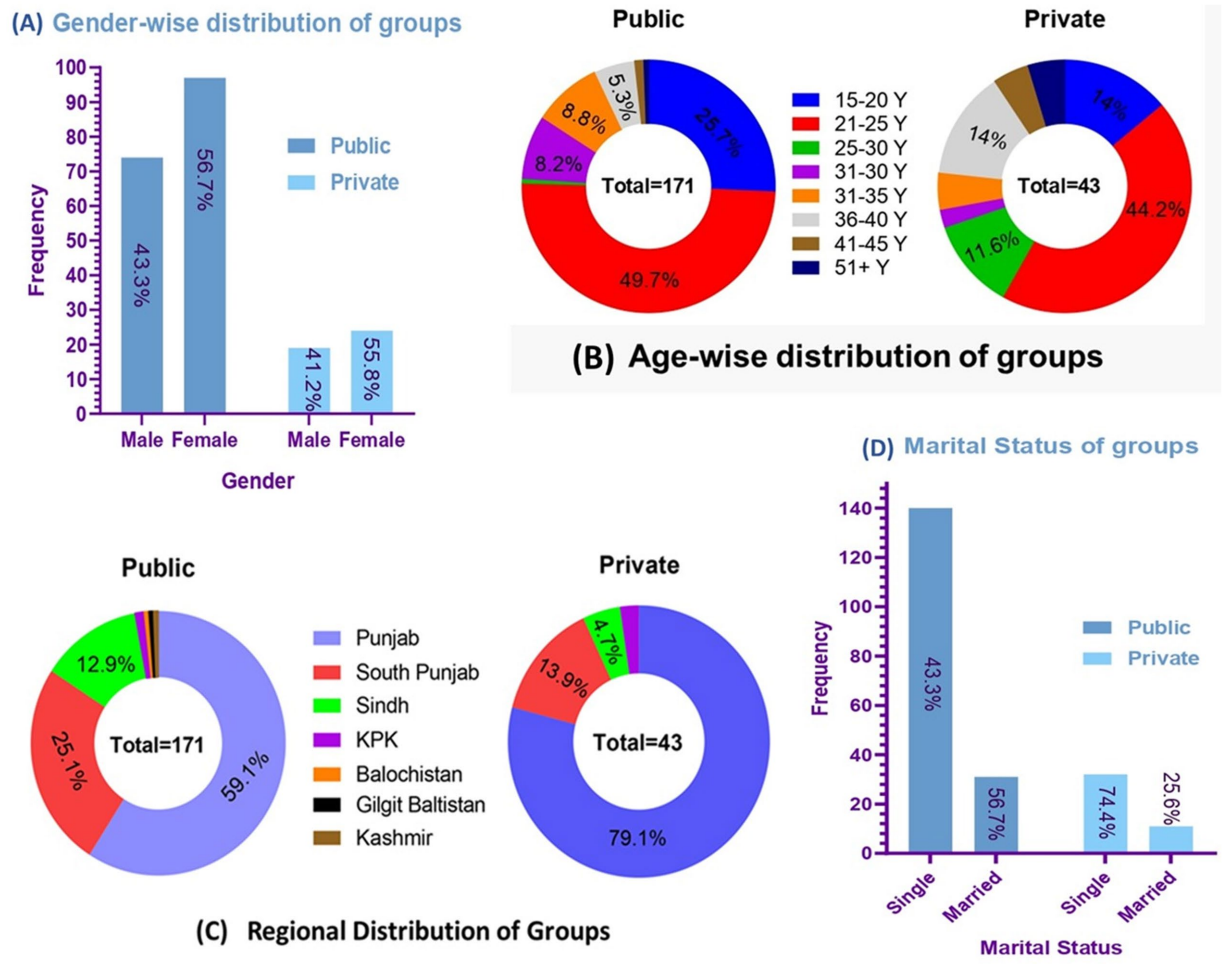

FIGURE 1
Demographic features. **(A)** Gender-wise distribution of groups. **(B)** Age-wise distribution of groups. **(C)** Regional distribution of groups. **(D)** Marital status of groups.

25.6% were married. More individuals were single in the private sector compared to the public sector.

Educational and professional status of participants

The faculty type of participants in both public and private sector universities was distributed (Figure 2A). The frequency distribution in the public sector is 48.8% lecturer, 13.9% assistant professor, 16.3% associate professor, 4.7% professor, and 16.3% director. In the private sector, the participation frequency was 35% for lecturers, 20% for assistant professors, and the same for associate professors, 15% for professors, and 10% for directors. Out of 171 participants in the public sector, 75.4% of students and 7% of faculty participated. Out of 43 participants in the private sector, the percentage of students and faculty was 53.4 and 27.9%, respectively (Figure 2B). The education level of participants involved in the study is categorized as bachelor, master/MPhil, and PhD/MBBS/FCPS (Figure 2C). In public sector universities, 73.6% of participants were of bachelor level, 21.6% were students of master's and MPhil, and the remaining 4.7% of participants belonged to PhD/MBBS/FCPS. In the private sector, the percentage of participants at the bachelor level was 53.5, 37.2% at the master's/MPhil level, and 9.3% at the PhD/MBBS/FCPS level. Allied health sciences, with a percentage frequency of 55%, were more prevalent in both sectors, and a second area of knowledge observed was sciences, with a percentage frequency of over 20% (Figure 2D).

Comparative analysis of business motivation in both sectors

The percentage frequency of all responses about income satisfaction level in the public sector was given as very dissatisfied (4%), dissatisfied (12%), neutral (40.3%), satisfied (30.4%), and very satisfied (12.2%). On the other hand, in the private sector, the percentage frequency is given as very dissatisfied (4.6%), dissatisfied (13.9%), neutral (44.1%), satisfied (20.9%), and very satisfied (16.2%) (Figure 3A). Both the public and private sectors show income satisfaction, but overall, higher satisfaction is observed in the public sector, with a large proportion of very satisfied individuals in the private sector. Business potential was

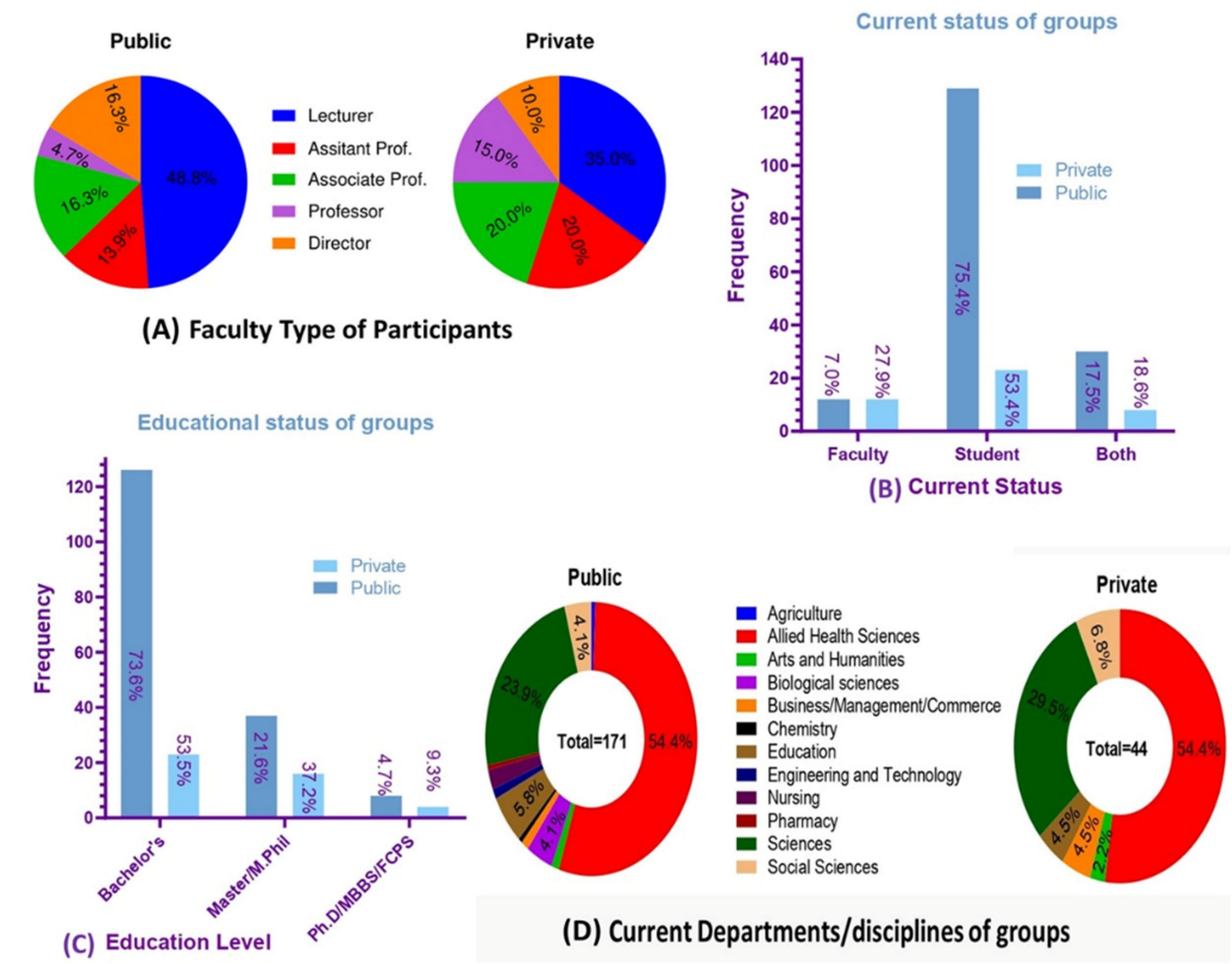

FIGURE 2
Educational and professional status of participants. **(A)** Faculty type of participants. **(B)** Current status. **(C)** Education level. **(D)** Current departments/disciplines of groups.

evaluated (Figure 3B). In the public sector, the frequency of all responses is given as 57.8% showed a response in favor of doing business, 31.5% were not sure, and the remaining 10.5% were not in favor of business, while in the private sector, 58.1% showed a response in favor of business, 32.5% were not sure, and 9.3% were not in favor of business. Both groups have shown similar perceptions regarding business potential, with slight variations. In the public sector, 14% of participants were familiar with the business, 55.5% were slightly familiar, and 30.4% were unfamiliar. In the case of the public sector, 23.2% of individuals showed familiarity, 44.1% were slightly familiar, and 32.5% were individuals without any familiarity with business (Figure 3C). A slightly higher proportion of individuals in the private sector reported familiarity with business. The percentage frequency of distributed motivational factors in the public sector is given as financial success (49.1%), job frustration (5.2%), influencers (6.4%), innovation passion (25.7%), supportive ecosystems (9.9%), and 3.5% with no motivation. In the private sector, the percentage frequency of motivation factors is given as financial success (37.2%), job frustration (11.6%), influencers (2.3%), innovation passion (41.8%), and supportive ecosystems (6.9%) (Figure 3D). The most prevalent motivational factors in the public sector are financial success and passion for innovation in the private sector.

Support and funding for entrepreneurship

A comprehensive analysis was conducted on individuals' willingness to apply for entrepreneurship funding (Figure 4A). In the public sector, the percentage frequency of individuals showing a willingness to apply for funding was 5.8%; about 72.5% have not applied for funding, and 16.9% of individuals are considering applying for funding in the future. A small fraction of 4.6% preferred not to disclose their opinion. In the private sector, 18.6% of individuals applied for funding, two times more than in the public sector. 65.1% of individuals have not applied for funding, 9.3% are considering applying in the future, and 6.9% prefer not to say anything. In short, more individuals in the private sector are interested in applying for entrepreneurship funding than those in the public sector who are hesitant. The failure to apply for funding, especially in the public sector, where only 5.8% applied, may be attributed to psychological

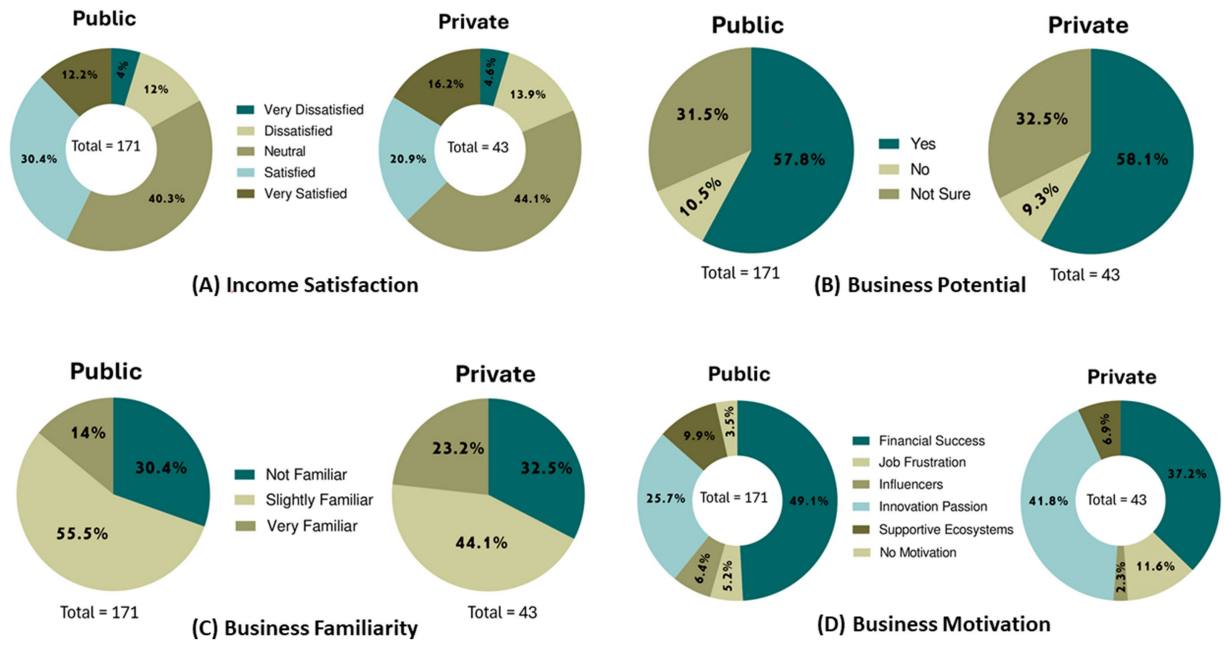

FIGURE 3
Comparison of business motivation in public and private universities. **(A)** Income satisfaction. **(B)** Business potential. **(C)** Business familiarity. **(D)** Business motivation.

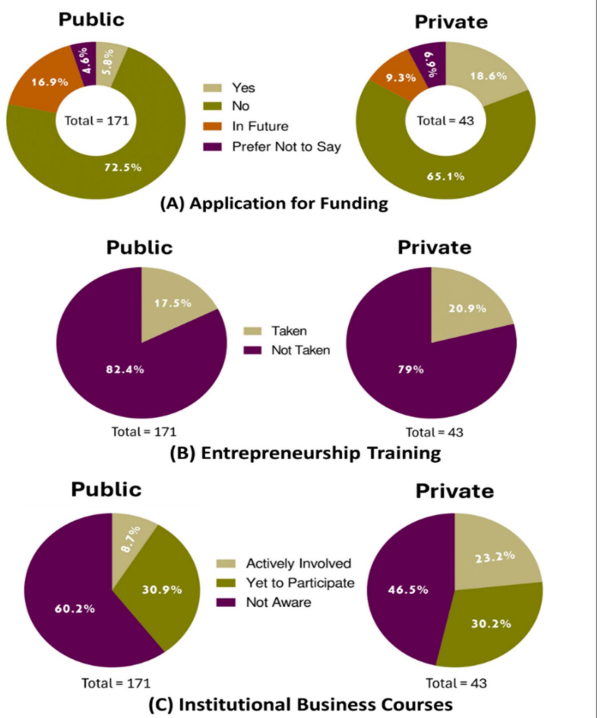

FIGURE 4
Support for entrepreneurship. **(A)** Application for funding. **(B)** Entrepreneurship training. **(C)** Institutional business courses.

reasons of hesitation like fear of failure, low self-esteem, and perceived difficulty of the process. Presumably, this hesitance could be alleviated through psychoeducational training programs aimed at the development of entrepreneurial self-efficacy and decreasing financial phobia.

Individuals' response to entrepreneurship training was assessed (Figure 4B). In the public sector, 17.5% of individuals were engaged in entrepreneurship-related training, and the remaining 82.4% were not taking training. In the private sector, 20.9% of individuals were interested in entrepreneurship training, and 79% of individuals were without training. Overall, fewer individuals are engaged in entrepreneurship training among both sectors, but comparatively more individuals are interested in taking entrepreneurship training in the private sector. The response of individuals toward institutional business courses was examined (Figure 4C). In the public sector, 8.7% of individuals are actively involved in institutional business courses, 30.9% of individuals have shown that they are yet to participate, and the remaining 60.2% were not aware of such courses. In the private sector, 23.2% of individuals actively participated in institutional business courses, 30.2% of individuals are yet to participate, and 46.5% of individuals were unaware of courses. Overall, more individuals in the private sector are interested in participating in institutional business courses and enhancing their skills than in the public sector.

Sources of funding for entrepreneurship

The responses of individuals were analyzed in terms of the perception of bank support for entrepreneurship (Figure 5A). The percentage frequency of individuals in the public sector is 34.5% type dependent, 12.2% show support from a bank for business, 29.2% comprehend lack of bank support, and 23.9% show concern about high interest. In the private sector, the distribution is given as 32.5% type dependent, 9.3% of individuals show that they get support from a bank for business, 20.9% lack bank support, and 37.2% have

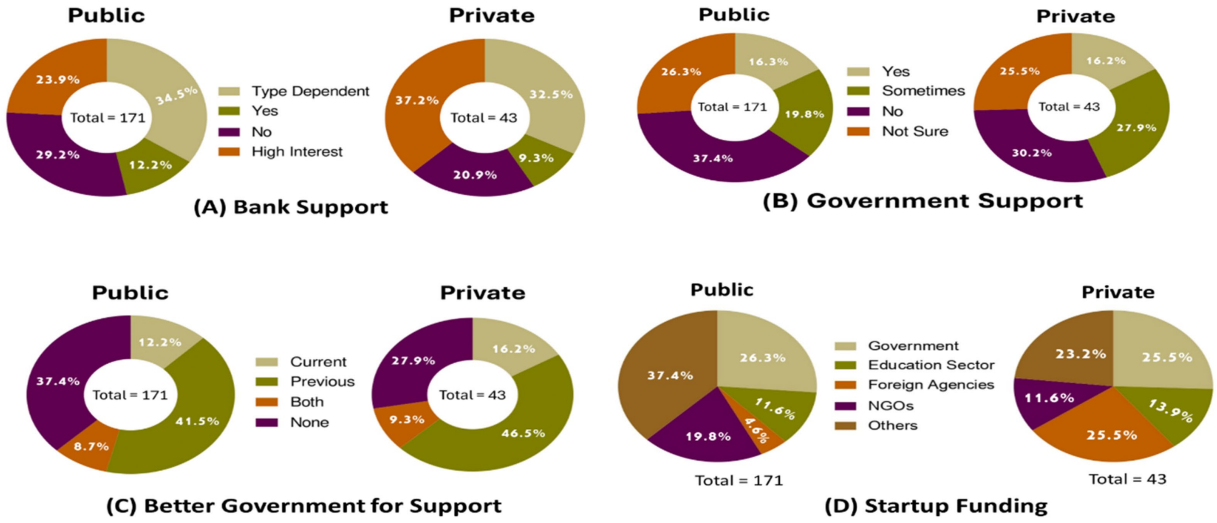

FIGURE 5
Sources of funding for entrepreneurship. **(A)** Bank support. **(B)** Government support. **(C)** Better government for support. **(D)** Startup funding.

high-interest concerns. This often results in anxiety, constructive tension, and burnout regarding matters arising from strains in financial matters, a more severe problem in the private sector, with 37.2% expressing concern over high interest rates.

As stated by many respondents (37.4% of the public sector and 30.2% of the private sector), the absence of government support stability also possibly creates a feeling of being unsupported. Timely management of the variations in the levels of support could also be managed through the integration of resilience-building strategies into entrepreneurship training programs.

Overall, type-dependent support was more prevalent in the public sector and high-interest concern in the private sector. Compared to the private sector, public-sector participants reported higher access to bank financial assistance for entrepreneurship. In the public sector, 16.3% of individuals showed support from the government, 19.8% showed government support sometimes, 37.4% reported a lack of support, and 26.3% were not sure about government support. In the private sector, 16.2% reported yes, 27.9% showed government support sometimes, 30.2% had a lack of support, and 25.5% were not sure (Figure 5B). In the public sector, 12.2% showed the current government is more supportive, 41.5% favored the previous government, 8.7% showed both current and previous governments are supportive, and 37.4% believed that none of the governments support entrepreneurship. In the private sector, 16.2% showed the current government supports entrepreneurship more, 46.5% showed the previous government was more supportive, 9.3% favored both governments, and 27.9% showed no support from any government (Figure 5C). In both sectors, the largest proportion of individuals believe that the previous government has contributed more to supporting entrepreneurship.

In contrast, the private sector has shown more support from the current government. The response toward support from each government was almost equal in both sectors. The responses from individuals of both sectors about the sources of startup funding were investigated (Figure 5D). The percentage frequency of all responses in the public sector is given as 26.3% contribution by the government, 11.6% by the education sector, 4.6% by foreign agencies, 19.8% by NGOs, and 37.4% contributed by other sources. Similarly, in the private sector, 25.5% of government funding is contributed by government, 13.9% by the educational sector, 25.5% by foreign agencies, 11.6% by NGOs, and 23.2% by other sources. The government contributed in both sectors equally. The educational sector has contributed more to the private sector. The contribution of foreign agencies in the private sector is equal to that of the government. NGOs contribute more to the public sector than to the private sector.

Addressing the challenges and management strategies in entrepreneurship

The success of risk mitigation strategies across various experience levels was highlighted (Figure 6A). In the public sector, 17.5% of individuals pointed out the fresh entrepreneurs, 52.6% recommended the experienced entrepreneurs, 21% suggested both (fresh and experienced) in mitigating the risk, and the remaining 8.7% could not be decided. On the other hand, in the private sector, the distribution is given as 20.9% with fresh entrepreneurs, 48.8% recommended experienced entrepreneurs, 20.9% with both, and the remaining 9.3% could not be decided. Implanting psychoeducational interventions toward building up the coping and self-esteem of newly established short-capital businessmen could help decrease the possible load on the psyche due to the high risks of business activity. Newcomers, particularly those in the private sector where they are employed more (20.9%), could benefit from such support in managing the stresses and anxieties associated with managing uncertainty.

In both sectors, a large proportion of individuals have recommended the experienced level as a useful strategy to reduce the risk associated with entrepreneurs. The private sector promoted the freshers more than the public sector. Other experience levels were similarly distributed across both sectors. The factors contributing to the failures of fresh graduates in entrepreneurship were evaluated

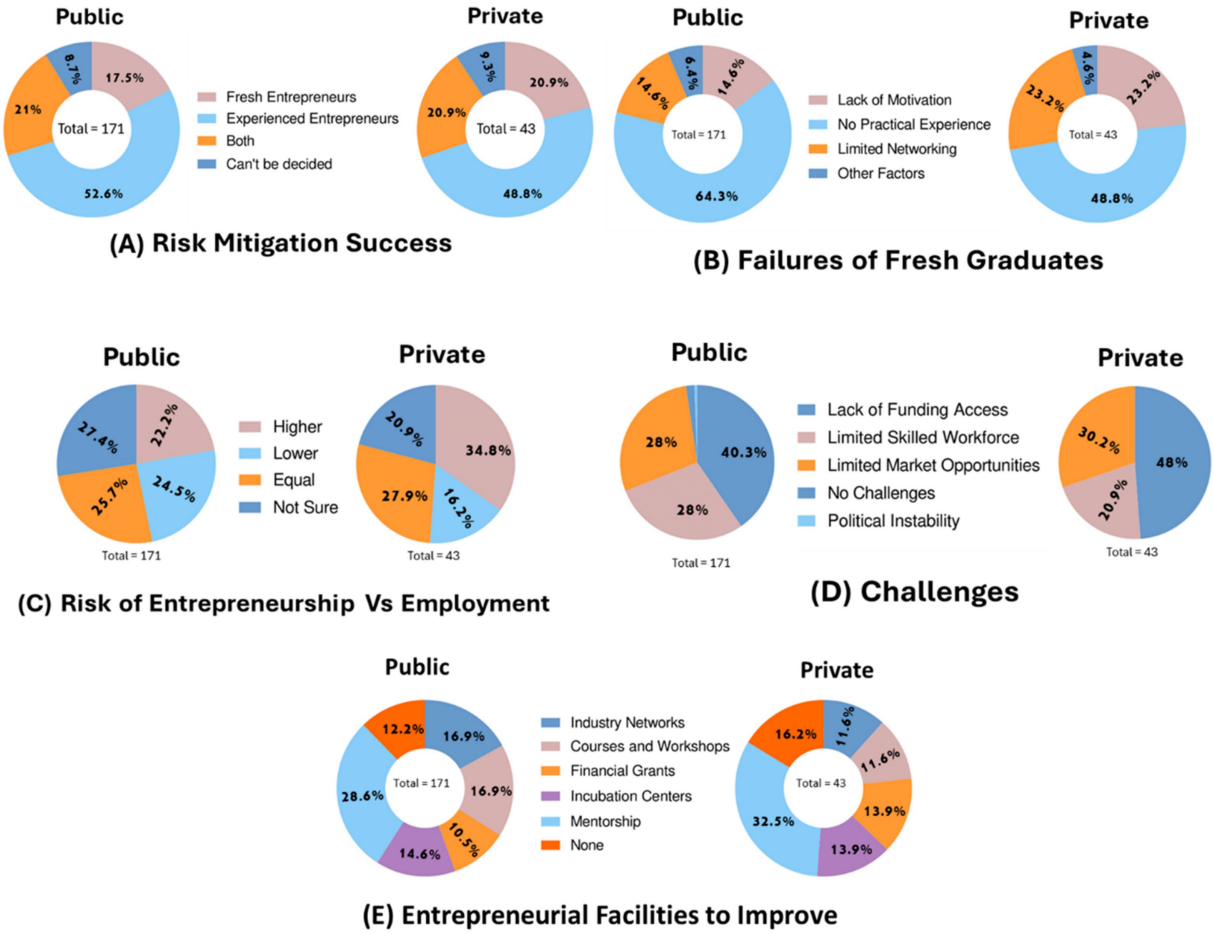

FIGURE 6
Risk assessment and mitigation of entrepreneurship. **(A)** Risk mitigation success. **(B)** Failures of fresh graduates. **(C)** Risk of entrepreneurship vs employment. **(D)** Challenges. **(E)** Entrepreneurial facilities to improve.

(Figure 6B). The data indicates the percentage frequency of factors: 14.6% lack of motivation, 64.3% lack of practical experience, 14.6% limited networking, and 6.4% other factors in public sectors. In the private sector, the factors were distributed as 23.2% lack of motivation, 48.8% no practical experience, 23.2% limited networking, and 4.6% other factors. Including the psychological barriers as aspects that could be corrected through psychoeducation would expand the array of possible motivation and interpersonal skills among the fresh graduates as well as their better mental health and improved business networks.

According to the data, no practical experience is one of the main reasons behind the failures of fresh graduates. It constitutes a large proportion in both sectors but is more prevalent in the public sector. Lack of motivation and limited networking are the most dominating factors in the private sector. The risk associated with entrepreneurship compared to traditional employment was explored (Figure 6C). 22.2% of individuals in the public sector believe the risk of starting your own business is greater than that of traditional employment. 24.5% of individuals show a lower risk of entrepreneurship due to its secure nature compared to conventional employment paths. 25.7% of individuals consider entrepreneurship and employment equally risky, and 27.4% are unsure about it and cannot assess the risk. In the private sector, 34.8% of individuals show a higher risk of entrepreneurship than employment. 16.2% indicated a lower risk of entrepreneurship, 27.9% showed equal risks of both entrepreneurship and employment, and 20.9% were confused about the risk. The private sector has shown a higher risk of entrepreneurship than employment, while the public sector has a higher employment risk. The challenges faced by entrepreneurs are investigated (Figure 6D). In addition, the perception that entrepreneurship is riskier than conventional employment, as measured by 34.8% among private sector entrants, captures the stress and fear of business startups.

For the public sector, the challenges distribution is given as 40.3% lack of funding access, 28% limited skilled working force, and 28% limited market opportunities. People have shown a very small percentage of no challenges and political instability. In the private sector, individual responses have shown three dominating challenges: lack of funding access, limited skilled workforce, and limited market opportunities, with percentage frequencies of 48, 20.9, and 30.2%, respectively. The data shows that lack of funding access is the primary challenge in both sectors. The challenge of a limited skilled workforce is more prevalent in the public sector, with limited marketing opportunities in the private sector.

The individuals in both sectors were asked about their perception of improving entrepreneurial facilities (Figure 6E). In the public sector, 16.9% of individuals have recommended expanding industrial

networks, and the same percentage of individuals identified the courses and workshops as areas of improvement. A total of 10.5% of individuals have shown the need to secure financial grants to facilitate entrepreneurship. However, 14.6% have emphasized setting up incubation centers for startup development. In total, 28.6% of individuals selected mentorship as a main area of improvement, showing the importance of guidance from well-trained and experienced entrepreneurs, and the remaining 12.2% indicated their satisfaction level with pre-existing facilities. In the private sector, industry networks, courses, and workshops both gained equal importance as a main area of improvement, as indicated by the identical percentage of 11.6%. Similarly, the percentage frequency of both financial grants and incubation centers was 13.9%, showing both are equally significant areas of improvement according to the data provided. A high proportion of individuals, 32.5%, suggested mentorship as a valuable factor in promoting entrepreneurship. No further improvement is required by the remaining 16.2% of individuals.

Overall, mentorship is the major area of improvement in both sectors, according to the study, showing the importance of guidance and advice from experienced businessmen. Hence, aside from the strategic importance, especially for business owners, mentorship also has the health implication of safeguarding the sanity of these entrepreneurs.

The chi-square test shows in Table 1 that only institutional business courses, startup funding, and funding applications were significantly correlated between the public and private sectors.

TABLE 1 Chi-square association results between public and private sectors.

Categories		Pearson chi-square	*p*-value	df
Motivation	Income satisfaction	1.59	0.8	4
	Business potential	0.06	0.9	2
	Business familiarity	2.69	0.2	2
	Business motivation	8.87	0.1	5
Support	Bank support	2.55	0.4	3
	Entrepreneurship training	0.36	0.5	1
	Government support	2.01	0.5	3
	Better government support	1.11	0.7	3
	Institutional business courses	7.94	0.01**	2
	Startup funding	16.21	0.003***	4
	Application for funding	8.94	0.03*	3
Risk	Risk mitigation	0.33	0.9	3
	Fresh graduates failures	7.15	0.06	3
	Entrepreneurship risk vs. employment	0.49	0.9	3
	Challenges	2.77	0.6	4
	Entrepreneurial facilities to improve	4.4	0.4	5

*, **, *** indicates statistically significant.

Discussion

This research is a comprehensive study covering the facets of entrepreneurship, including business motivation, training, institutional courses, sources of funding such as banks, government support, startup funding, risk assessment, and mitigation of entrepreneurship. The results show the obstacles to entrepreneurship encountered by students and faculty members in public and private universities in Pakistan. The percentage of males and females was 43.3 and 56.7% in public universities and 41.2 and 55.8% in private universities, respectively. The 21–25 years age group constitutes the largest number of participants in both sectors, with 44.2% in the private universities and 49.7% in the public sector.

The data indicate that younger individuals are more prevalent in the public sector, with an increasing proportion in the private sector as age increases. The regional distribution shows that the major participants of both sectors were from Punjab and Sindh.

This geographical variation highlights potential regional differences and challenges faced by entrepreneurs.

Regarding marital status, more individuals were single in the private sector than in the public sector. The major participant was designated as a lecturer. The study was conducted on students and faculty members. The percentage frequency of students was higher than that of faculty, and the majority of students were at the bachelor's level. Sciences and allied health sciences were more dominant in universities in both sectors.

The analysis of income satisfaction influences motivation and decision power toward entrepreneurship. The respondents from the universities of both sectors show income satisfaction, but a large proportion of very satisfied individuals are observed in the private sector. According to a study by Salman in 2012, faculty staff of private universities were more satisfied with their income than public universities (Khalid et al., 2012). Both groups have shown similar perceptions regarding business potential, with slight variations. Approximately 58% of individuals in both sectors intend to start their own business. The GUESSS 2021 survey was conducted in 18 different public and private universities in Pakistan, and more than 56% of students intended to start their own businesses (Hussain, 2021). The private sector is more familiar with business concepts than individuals from the public sector, showing the mindset of participants toward entrepreneurship. 23.2% of individuals in the private sector and 14% in the public sector were familiar with business.

The most prevalent motivational factor in the public sector is financial success, while passion for innovation takes precedence in the private sector. Yalcin and Kapu (2008) found the desire to earn more money as a key motivational factor in their study of entrepreneurs in Kyrgyzstan. The differences in the level of income satisfaction, both in the public and private sectors, are not only economic figures but may also be connected with health problems, particularly mental health and frustration. Because financial dissatisfaction can cause job-related stress and anxiety, especially in the private sector, 13.9% of people expressed dissatisfaction with their financial rewards. Thus, it is important to deliver psychoeducational interventions to clients in

relation to financial literacy and resilience in mental health. Moreover, higher levels of motivation in relation to innovation passion, 41.8% of which is observed in the private sector, indicate the need for psychoeducational measures to develop creativity while minimizing excessive mental load. More people are inclined toward business in the private sector due to job frustration. Influencers and supportive ecosystems are prompting both the private and public sectors equally, with slight variations.

Similarly, innovation has an impact on the sustainability of businesses, as Hurley (Hurley and Hult, 1998) reported. More people are inclined toward business in the private sector due to job frustration. The push theory of entrepreneurship suggests that unfavorable circumstances, such as job dissatisfaction, can drive employees to pursue entrepreneurial activities, igniting their inherent entrepreneurial potential. The frustrated employees are more inclined to think about starting their own business as a different career path (Brockhaus, 1980; Gilad and Levine, 1986; Henley, 2007). Influencers and supportive ecosystems are prompting both the private and public sectors equally, with slight variations.

Individuals' responses were evaluated regarding access to funding entrepreneurship training and institutional support status. More individuals in the private sector have applied for entrepreneurship funding than those in the public sector who have a hesitant attitude. Training is essential to equip entrepreneurs with the knowledge and skills for starting a business. Fewer individuals are engaged in entrepreneurship training in both sectors, but comparatively, more individuals are interested in taking entrepreneurship training in the private sector. Individuals in private universities are more interested in attending institutional business courses and enhancing their skills than those in the public sector. Institutional courses are crucial in providing practical guidance to students and faculty members. A total of 60.2% of individuals in the public sector and 46.5% of individuals in the private sector were not aware of such courses. According to a GUESSS report published in 2021 in both public and private sectors, showing 46.2% of students had not attended any entrepreneurship program in 2018, which is nearly equal to the percentage observed in the private sector in our study. Our study reported that 30% of individuals in the private and public sectors have not taken any course in 2023. GUESSS 2021 report has shown about 40% of individuals have not participated in courses (Hussain, 2021). The trend of entrepreneurship training among school teachers must be encouraged. One of the previous studies emphasized that Pakistan can increase the number of successful entrepreneurs by encouraging entrepreneurial aspirations among teachers who may effectively influence the attitude of their students toward entrepreneurship (Akhtar et al., 2011).

More individuals in the public sector get financial assistance from banks for entrepreneurship than in the private sector. Participants also assessed government support for entrepreneurship. The majority have shown a lack of support from the government. In both public and private universities, the largest proportion of individuals believe that the previous government has contributed more to support entrepreneurship. In contrast, the private sector has shown more support from the current government. The response toward support from each government was almost equal in both sectors. The government is providing youth with funding for entrepreneurship and has launched different programs, such as the Kamyab Jawan Youth Entrepreneurship Scheme (PMKJ-YES), the Prime Minister's Youth Business Agriculture Loan Scheme, and the Punjab Rozgar Scheme. The responses from individuals in both sectors about the sources of startup funding have shown that the government contributed equally to both sectors. The educational sector has contributed more to the private sector. The contribution of foreign agencies in the private sector is equal to that of the government. NGOs contribute more to the public sector than the private sector.

The success of risk mitigation strategies across various experience levels highlights the large proportion of individuals who have recommended the experienced over freshers as a useful strategy to reduce the risk associated with entrepreneurs. Experienced and successful entrepreneurs can quickly process information by utilizing their prior knowledge and expertise (Ucbasaran et al., 2009). The private sector promoted fresh candidates more than the public sector. The proportion of other experience levels was nearly equal in both sectors.

The theory of planned behavior explains individual behavior as resulting from intentions, which in turn are influenced by attitudes, subjective norms, and perceived behavioral control.

Self-efficacy, one of the components of the TPB known as perceived behavioral control, is boosted through mentoring for improved enterprising capability. Mentors offer tools, tactics, and advice that can make a difference and empower the mentee to handle the risks and obstacles of business ownership (Alam et al., 2019). According to the data, no practical experience is one of the main reasons behind the failures of fresh graduates. It constitutes a large proportion in both sectors but is more prevalent in the public sector. Lack of motivation and limited networking are the most dominating factors in the private sector. Personal barriers may result in a lack of motivation in fresh graduates. Organizational and social networks are crucial for brand-new startups. By removing systemic factors like poor networking and inadequate experience, the mentorship creates a favorable environment that fits the TPB by changing the perception of entrepreneurship as an attainable and rewarding endeavor. An entrepreneur's social capital is largely composed of social networks, which also increase the return on human capital like intelligence and education (Burt, 2009). In a study conducted in China, Wong reported the importance of Guanxi, or social entrepreneurship networking, for establishing long-term business relationships and lowering unforeseen risks (Wong, 2007).

The private sector perceives entrepreneurship as riskier than traditional employment, reflecting concerns over financial instability and other uncertainties. These business owners claimed that the main issues they had to cope with were financial instability, conflicts of interest, heavy responsibility, long workdays, task management, and administrative load, while the public sector depicted a higher risk of employment because of lack of funding access is the primary challenge in both sectors. It was discovered that financial and economic obstacles significantly impact the entrepreneurial process. Entrepreneurs needed more than just their own assets to launch a large-scale firm (Taormina and Lao, 2007). Personal development, flexibility, and income potential are limited (Lek et al., 2020). Psychoeducational interventions could solve such systemic challenges and help entrepreneurs deal with financial pressures by offering learning instruments and counseling adjusted to their needs.

The challenge of a limited skilled workforce is more prevalent in the public sector, with limited marketing opportunities in the private sector. In Pakistan, a survey conducted in 2022 has shown the proportion of workers trained was just 37% of firms (The World Bank

Group, 2022). According to our data, the proportion observed was 28% in the public sector and 21% in the private sector. According to the study, mentorship is the major area of improvement in both sectors, showing the importance of guidance and advice from experienced businessmen. Mentorship programs play a pivotal role in shaping the attitudes of aspiring entrepreneurs by providing motivation and imparting essential concepts through guided support. Mentorship enhances the attitude component of the Theory of Planned Behavior because it positively influences the belief in the relevancy and possibility of business adventures (Spencer et al., 2024). As posited in the TPB, subjective norms are highly influenced by the creation of mentorship programs. Experienced mentors, often seen as role models, help shape societal and occupational expectations to align with entrepreneurial objectives, encouraging mentees to follow established norms and goals (Sagnak and Baran, 2021). The performance of businesses is positively impacted by mentorship. Employee value is increased by mentoring programs, which also improve the efficacy of business (Shah et al., 2016). 16.9% of individuals in the public sector and 11.6% of individuals in the private sector have shown that industrial networks and courses and workshops are equally important as an area of improvement. Industrial networks play a vital role in business expansion by creating an environment with entrepreneurship facilities and giving access to resources, marketing opportunities, and knowledge.

Consequently, literacy training specifically aimed at different spheres of business and risk management can assist in dealing with financial problems better than before. Mentorship programs are recommended in such fields that generally lack funding and mentors since the interventions reduce distressed emotions as people tackle the hindrances.

Mentorship stood out as an area of development in both sectors, suggesting the need for healthy and more structured forms of support that go beyond the business advisory in helping these individuals. As the TPB emphasizes, such psychological aspects are essential to sustain positive control beliefs and low fear of failure. With its help, an entrepreneur can ground their positive thoughts and feelings with the help of a mentorship. Integrating mental well-being awareness into nuclear guardship resources might assist businesspersons in coping with the psychological impacts inherent in higher-risk business contexts, resulting in enhanced enterprising success.

Conclusion

The findings highlight key distinctions and similarities in entrepreneurship between public and private sector universities in Pakistan. Private sector participants showed greater interest in applying for funding, participating in institutional business courses, and demonstrating business knowledge. However, the private sector also has to deal with issues like restricted networking and marketing opportunities and concerns about the risks of becoming an entrepreneur. However, due to increased bank backing for entrepreneurship, public universities have a comparative edge regarding long-term financing. Both groups had similar opinions about the potential for their businesses, highlighting mentoring as a key component in boosting entrepreneurship in Pakistan.

The study highlights the need for targeted interventions to address industry-specific issues, improve networking opportunities, and provide mentorship support to cultivate a strong entrepreneurial ecosystem in both public and private sectors. By integrating business advice and psychological counseling, such programs can foster business acumen and mental resilience in entrepreneurs, equipping them to overcome the challenges of creating, financing, and sustaining a business enterprise.

Limitations

Future studies could resolve various limitations of this study, even though it offers insightful information about the obstacles and attitudes of entrepreneurship in Pakistan. The study's sample size was restricted to particular colleges and locations, which could limit the findings' applicability to a large entrepreneurial population. Future results could improve the validity of the results by increasing the sample size.

The study mostly used self-reported survey data, which is prone to social desirability and response bias. The results could be more reliable and valid by adding objective measurements and combining data from several sources, including observational studies or interviews.

The perspectives and experiences of academic staff and students were the main emphasis of this study. Future studies might examine the viewpoints of investors, policymakers, practicing entrepreneurs, and other stakeholders to obtain a more thorough picture of Pakistan's entrepreneurial ecosystem. The fact that this study was limited to Pakistani public and private universities is a significant restriction. Further studies could broaden the focus to encompass entrepreneurs from other industries, backgrounds, and geographical areas to offer a more thorough picture of entrepreneurship in Pakistan.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Ethics statement

The Institutional Review Board of Lahore Medical Research Center LLP gave the ethical approval for this study. All the participants were agreed to take part in this study voluntarily and informed written consent was taken. Approval number of this study was lmrc/IRB/8th/2023-02-02.

Author contributions

KM: Data curation, Investigation, Methodology, Writing – original draft. MA: Formal analysis, Methodology, Writing – original draft. NH: Data curation, Methodology, Writing – original draft. ZM: Formal analysis, Investigation, Methodology, Writing – original draft. MM: Data curation, Formal analysis, Methodology, Project administration, Writing – original draft. RU: Formal analysis, Investigation, Methodology, Project administration, Writing – original

draft. MZ: Data curation, Formal analysis, Methodology, Project administration, Writing – original draft. MT: Conceptualization, Investigation, Writing – review & editing. KP: Formal analysis, Investigation, Resources, Writing – review & editing. RM: Conceptualization, Supervision, Writing – review & editing.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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References

Ahsan, N., and Ashfaq, M. (2023). Predicting entrepreneurial intentions among students: evidence from Pakistan higher education institutions. *South Asian J. Manag.* 17, 37–60. doi: 10.21621/sajms.2023171.03

Akhtar, A., Topping, K., Tariq, R. H., and Wakefield, P. (2011). Entrepreneurial propensity in Pakistan and UK: A comparative study of Pakistani and UK prospective teachers. *Pak. J. Commer. Soc. Sci.* 5, 243–265.

Alam, M. Z., Kousar, S., and Rehman, C. A. (2019). Role of entrepreneurial motivation on entrepreneurial intentions and behaviour: theory of planned behaviour extension on engineering students in Pakistan. *J. Glob. Entrep. Res.* 9, 1–20. doi: 10.1186/s40497-019-0175-1

Ali, H., Farooq, F., and Parveen, K. (2020). Inflation and growth nexus in Pakistan: a time series analysis. *Rev. Appl. Manag. Soc. Sci.* 3, 113–129. doi: 10.47067/ramss.v3i1.29

Asif, M., Asghar, F., Younis, A., Mahmood, A., and Wang, L. (2018). The role of social entrepreneurship in Pakistan and its impact on economy. *Econ. Manag.* 5, 117–127. doi: 10.18488/journal.62.2018.55.117.127

Bayo, P. L., and Emmanuel, K. (2020). Knowledge-based entrepreneurship: an agent for economic development. *Int. J. Adv. Acad. Res.* 6, 32–42. doi: 10.46654/ij.24889849.s6811

Brockhaus, R. H. (1980). The effect of job dissatisfaction on the decision to start a business. *J. Small Bus. Manag.* 18:37.

Burt, R. S. (2009). The contingent value of social capital. *Adm. Sci. Q.* 42, 255–286. doi: 10.2307/2393923

Gilad, B., and Levine, P. (1986). A behavioural model of entrepreneurial supply. *J. Small Bus. Manag.* 24, 45–53.

Henley, A. (2007). Entrepreneurial aspiration and transition into self-employment: evidence from British longitudinal data. *Entrep. Reg. Dev.* 19, 253–280. doi: 10.1080/08985620701223080

Hurley, R. F., and Hult, G. T. M. (1998). Innovation, market orientation, and organizational learning: an integration and empirical examination. *J. Mark.* 62, 42–54. doi: 10.1177/002224299806200303

Hussain, S. R. (2018). Toward nurturing the entrepreneurial intentions of neglected female business students of Pakistan through proactive personality, self-efficacy and university support factors. *Asia Pac. J. Innov. Entrep.* 12, 363–378. doi: 10.1108/APJIE-03-2018-0015

Hussain, A. (2021). Global university entrepreneurial Spirit students survey (GUESSS) 2020-2021. Pakistan: Sukkur Institute of Business Administration.

Khalid, S., Irshad, M. Z., and Mahmood, B. (2012). Job satisfaction among academic staff: a comparative analysis between public and private sector universities of Punjab, Pakistan. *Int. J. Bus. Manag.* 7:126. doi: 10.5539/ijbm.v7n1p126

Khalid, R., Raza, M., Sawangchai, A., and Somtawinpongsai, C. (2022). The challenging factors affecting women entrepreneurial activities. *J. Lib. Int. Aff.* 8, 51–66. doi: 10.47305/JLIA2281051k

Kim, K. C., El-Tarabishy, A., and Bae, Z. T. (2018). Humane entrepreneurship: how focusing on people can drive a new era of wealth and quality job creation in a sustainable world. *J. Small Bus. Manag.* 56, 10–29. doi: 10.1111/jsbm.12431

Lek, J., Vendrig, A., and Schaafsma, F. (2020). What are psychosocial risk factors for entrepreneurs to become unfit for work? A qualitative exploration. *Work* 67, 499–506. doi: 10.3233/WOR-203299

Manzoor, F., Wei, L., and Siraj, M. (2021). Small and medium-sized enterprises and economic growth in Pakistan: an ARDL bounds cointegration approach. *Heliyon* 7:e06340. doi: 10.1016/j.heliyon.2021.e06340

Mubarak, M. F., Yusoff, W., Mubarik, M., Tiwari, S., and Kaya, K. A. (2019). Nurturing entrepreneurship ecosystem in a developing economy: myths and realities. *J. Technol. Manag. Bus.* 6:59. doi: 10.30880/jtmb.2019.06.01.001

Naveed, R. T., Rehmani, M., Khokhar, M. N., Shah, S. R., Ali, A., Shahzadi, S., et al. (2022). Small and medium-sized enterprises failure in providing workers' rights concerning sustainable development Goals-2030 in Pakistan. *Front. Psychol.* 13:927707. doi: 10.3389/fpsyg.2022.927707

Noor, S., Isa, F. M., and Nor, L. M. (2020). Identifying the current trends of entrepreneurial education in Pakistani higher education institutions. *Sains Humanika* 12, 25–33. doi: 10.11113/sh.v12n3.1642

Sagnak, H. C., and Baran, E. (2021). Faculty members' planned technology integration behaviour in the context of a faculty technology mentoring programme. *Australas. J. Educ. Technol.* 37, 1–21. doi: 10.14742/ajet.5912

Shah, M. H., Bin Othman, A. R., and Bin Mansor, M. (2016). Mentoring and organizational performance: a review of effects of mentoring on small and medium enterprises. *J. Bus. Soc. Rev. Emerg. Econ.* 2, 143–158. doi: 10.26710/jbsee.v2i2.31

Spencer, M. T., Alter, T. R., and Malcolm, J. (2024). Student voice, mentorship, and co-development of curriculum: creating entrepreneurial agency for graduate students. In Cases on Transformational Entrepreneurship (pp. 88–108). Edward Elgar Publishing.

Stoica, O., Roman, A., and Rusu, V. (2020). The Nexus between entrepreneurship and economic growth: a comparative analysis on groups of countries. *Sustain. For.* 12:1186. doi: 10.3390/su12031186

Syed, A. (2019). Pakistan's start-up landscape: three ways to energize entrepreneurship. New York: McKinsey & Company.

Taormina, R. J., and Lao, S. K. (2007). Measuring Chinese entrepreneurial motivation: personality and environmental influences. *Int. J. Entrep. Behav. Res.* 13, 200–221. doi: 10.1108/13552550710759997

The World Bank Group (2022). Enterprise Surveys (What Business experience): Pakistan 2022. Washington, DC: The World Bank Group.

Ucbasaran, D., Westhead, P., and Wright, M. (2009). The extent and nature of opportunity identification by experienced entrepreneurs. *J. Bus. Ventur.* 24, 99–115. doi: 10.1016/j.jbusvent.2008.01.008

Wong, M. (2007). Guanxi and its role in business. *Chin. Manag. Stud.* 1, 257–276. doi: 10.1108/17506140710828532

Yalcin, S., and Kapu, H. (2008). Entrepreneurial dimensions in transitional economies: a review of relevant literature and the case of Kyrgyzstan. *J. Dev. Entrep.* 13, 185–204. doi: 10.1142/S1084946708000922