

CAREER ANXIETY AND EMPLOYABILITY CONFIDENCE AMONG  
UNIVERSITY STUDENTS IN PAKISTANMaqsood Haider<sup>\*1</sup>, Anwar Khan<sup>2</sup><sup>\*1</sup>Department of Management Sciences, FATA University<sup>2</sup>Department of Management Sciences, Khushal Khan Khattak University<sup>\*1</sup>dr.haider@fu.edu.pk, <sup>2</sup>akpashtoon1981@gmail.comDOI: <https://doi.org/10.5281/zenodo.18668576>

## Keywords

Career Anxiety, Employability, University Students, Pakistan, Human Resource Management, Organizational Behavior.

## Article History

Received: 18 August 2025

Accepted: 02 September 2025

Published: 17 October 2025

Copyright @Author

Corresponding Author: \*

Maqsood Haider

## Abstract

**Background:** Economic uncertainty and labor market instability in Pakistan have intensified career-related concerns among youth, especially University students. However, published literature is scarce on this topic.

**Purpose:** This study aims to examine the dynamic relationship between career anxiety and perceived employability confidence among university students across Pakistan.

**Methodology:** A cross-sectional online survey was conducted using a structured questionnaire disseminated via social media pages of 14 universities as located in different provinces of Pakistan. A total of (n = 432) undergraduate and postgraduate students participated. Standardized scales were used to measure variables of career anxiety and perceived-employability confidence. Data was analyzed by using descriptive statistics and regression analysis.

**Findings:** Career anxiety was negatively associated with employability confidence ( $\beta=0.126$ ,  $p: <0.01$ ). Higher levels of career-related anxiety significantly predicted lower confidence in securing future employment.

**Discussion:** This study contributes to the limited Human Resource Management literature in Pakistan by empirically examining the psychological factors influencing students' perception of employability in a developing economy context. If universities fail to address escalating career anxiety, they risk graduating cohorts who possess degrees but lack the psychological confidence necessary to compete in an increasingly uncertain labor market.

## 1. INTRODUCTION

Youth unemployment and economic instability remain persistent structural challenges in Pakistan, particularly for university graduates transitioning into the labor market. Recent labor force reports indicate increasing graduate underemployment, delayed job entry, and skill-job mismatches, reflecting broader macroeconomic volatility and constrained employment growth. Such structural uncertainty amplifies psychological strain among emerging

adults, who must navigate career decisions in an unpredictable economic environment. Within this context, university students may experience heightened apprehension regarding their occupational futures, potentially shaping their confidence in securing employment after graduation.

Career anxiety refers to a future-oriented state of worry and tension associated with uncertainty about career development and employment prospects (Vignoli, 2015). It is conceptually

linked to broader constructs of career-related stress and vocational uncertainty, which have been shown to intensify during periods of labor market instability (Jiang et al., 2019; Blustein et al., 2020). Recent research suggests that economic precarity and perceived labor market barriers significantly contribute to elevated career anxiety among students and early career entrants (Choi et al., 2021; Restubog et al., 2020).

In contrast, perceived employability confidence reflects an individual's belief in their capacity to obtain and sustain employment consistent with their qualifications (Rothwell & Arnold, 2007). Contemporary employability research conceptualizes perceived employability as a psychosocial resource shaped not only by human capital but also by contextual and cognitive factors (Vanhercke et al., 2014; Forrier et al., 2018). Higher perceived employability has been associated with proactive career behaviors, adaptive coping, and improved psychological well-being (De Cuyper et al., 2012; Donald et al., 2019). Despite growing international attention to employability, most empirical work has been conducted in Western or high-income contexts. There remains limited evidence examining the psychological determinants of employability perceptions among students in South Asian developing economies, where structural employment constraints may intensify uncertainty. In countries characterized by economic volatility and limited formal employment opportunities, psychological responses to labor market conditions may play a particularly salient role in shaping career confidence.

Grounded in Social Cognitive Theory (Bandura, 1986), cognitive appraisals of threat and uncertainty influence self-efficacy beliefs and outcome expectations. Anxiety can undermine perceived competence by heightening perceptions of risk and diminishing confidence in one's abilities (Lent & Brown, 2019). Accordingly, students experiencing elevated career anxiety may interpret labor market challenges as personal inadequacy, thereby reducing employability confidence. Given the socio-economic realities of Pakistan and the limited empirical attention to

this relationship in the local context, the present study seeks to examine the association between career anxiety and perceived employability confidence among university students.

Accordingly, this study addresses the following research question: *Does career anxiety significantly predict employability confidence among university students in Pakistan?*

## 2. Research Methodology

### 2.1. Research Design

A quantitative cross-sectional research design was employed (Cooper & Schindler, 2008).

### 2.2. Population and Sample Size

The general population of this study was whole university students' population of Pakistan. However, since it was logistically and economically not possible to collect data from such large population. Therefore, from each province/administrative unit of Pakistan two universities were randomly selected based on their size. In this way total 14 universities were selected. A priori power analysis was conducted. The required sample was estimated using Cochran's formula for large/unknown populations (Cochran, 1977).

$$n_0 = \frac{Z^2 p (1 - p)}{e^2}$$

Where:

$n_0$  = initial required sample size (assuming a large/unknown population)

$Z$  = Z-score for the desired confidence level (e.g., 1.96 for 95%)

$p$  = expected proportion (set at 0.50 when unknown to yield the maximum required sample size)

$e$  = desired margin of error (precision), typically 0.05

Following standard practice, we used 95% confidence ( $Z = 1.96$ ), maximum variability ( $p = 0.50$ ), and  $\pm 5\%$  precision ( $e = 0.05$ ) (Cochran, 1977; Bartlett, Kotrlik, & Higgins, 2001). Substituting:

$$\begin{aligned} n_0 &= \frac{(1.96)^2 \times 0.50 \times (1 - 0.50)}{(0.05)^2} \\ &= \frac{3.8416 \times 0.25}{0.0025} = 384.16 \end{aligned}$$

Thus, the minimum required sample was approximately:

$$n_0 = 385$$

Since online surveys typically experience incomplete submissions or partial dropout; therefore, the target sample was inflated by an anticipated nonresponse/incompletion rate (Israel, 1992). Assuming ~10% unusable responses:

$$n_{\text{target}} = \frac{n_0}{1 - r}$$

Where  $r$  is the expected nonresponse fraction.

$$n_{\text{target}} = \frac{385}{1 - 0.10} = \frac{385}{0.90} = 427.78 = 428$$

### 2.3. Measures

The following scales were used to design online questionnaire:

- i. Career Anxiety was assessed by ten items of the Career Anxiety Scale (Vignoli, 2015).
- ii. Perceived Employability Confidence was measured by using 12 items of Perceived Employability Scale (Noori & Azmi, 2024)

### 2.4. Data Collection

Data was collected through an online self-administered questionnaire. The survey link was disseminated via official and student-managed social media pages (e.g., Facebook groups) of major universities across all four provinces of Pakistan, including Punjab, Azad Kashmir, Gilgit, Sindh, Khyber Pakhtunkhwa, and Baluchistan. Participation was voluntary and anonymous. Data collection occurred over a two-month period.

### 2.5. Data Analysis

Data was analyzed using Python 3.15. Descriptive statistics, and linear multiple regression analyses

(Hair, Black, Babin, Anderson, & Tatham, 2016) were used to analyze the data.

## 3. Results

### 3.1 Missing Data Analysis

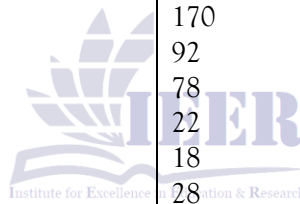
A total of (n=443) responses were initially received through the online survey. Data screening revealed that 35 questionnaires contained substantial missing responses (greater than 20% unanswered items) and were therefore removed/discarded from further final analysis. In this way the sample size dropped to (n=408). To examine the pattern of missing data, Little's Missing Completely at Random test (Little, 1988) was conducted. The test was non-significant  $\chi^2$  (df = 35) = 40.37,  $p = 0.172$ , which indicated that that missing data was randomly distributed.

### 3.2. Socio-Demographic Characteristics

Table 1 shows the sociodemographic characteristics of the sample. The sample was relatively balanced in terms of gender, with slightly more male (52.9%) than female (47.1%) respondents. Participants were fairly evenly distributed across age categories, although the largest group fell within the 18–20-year range (36.3%). Undergraduate students constituted the largest proportion of respondents (42.4%), while postgraduate representation was substantial, with Masters (30.1%), MPhil (20.8%), and PhD students (6.6%) collectively comprising more than half of the sample. In terms of academic disciplines, Pure Sciences (31.4%) and Social Sciences (28.7%) accounted for the largest shares, followed by Engineering (20.6%) and Health Sciences (14.5%). Overall, the sample demonstrates reasonable diversity across gender, age, academic level, and discipline, enhancing the representativeness of findings within the Pakistani higher education context.

**Table 1. Sociodemographic Characteristics of Students**

Sociodemographic Variables	Number
Gender	
Male	216
Female	192
Age	
18 to 20 years	148
21 to 23 years	136
24 and above	124
Educational Programs Enrolled	
BS (Undergraduate)	173
Masters (Post-graduate)	123
MPhil (Post-graduate)	85
PhD (Post-graduate)	27
Fields/Areas of Study	
Pure Sciences	128
Social Sciences	117
Engineering	84
Health Sciences	59
Humanities and Arts	20
Locations	
Punjab	170
Sindh	92
Khyber Pakhtunkhwa	78
Azad Kashmir	22
Gilgit	18
Baluchistan	28



**3.3. Regression Analysis Results**

In the model one, demographic variables (gender, age, educational program, field of study, and province) collectively explained 18% of the variance in employability confidence. This indicates that structural background characteristics have a modest but statistically significant association with perceived employability of students. In model two, career

anxiety was introduced into the regression model. The inclusion of this psychological variable resulted in a substantial increase in explained variance. It demonstrates that career anxiety independently accounts for an additional variance in employability confidence beyond demographic factors. The overall model was statistically significant as seen in Table 2.

**Table 2. Model Summary Statistics**

Models	n	R	R <sup>2</sup>	F-test	p
Model One (Demographic)	408	0.223	0.180	F(15,392)=2.28	0.004
Model Two (Demographic and Career Anxiety)	408	0.420	0.340	F(16,391)=7.71	<0.001

Furthermore, Table 3 shows that estimations. In model one, age ( $\beta = -0.112$ ) showed a negative

association with employability confidence, suggesting that as age increases, employability

confidence slightly decreases. Educational program ( $\beta = 0.126$ ) demonstrated a positive relationship, indicating that students enrolled in higher academic programs reported greater employability confidence. Gender ( $\beta = 0.019$ ), field of study ( $\beta = 0.007$ ), and province ( $\beta = -0.018$ ) exhibited very small beta values, suggesting minimal practical influence on employability confidence at this stage of the model. In similar way, after adding career anxiety in model two, the beta values of demographic variables generally decreased in magnitude. Gender ( $\beta = 0.005$ ), field ( $\beta = 0.004$ ), and province ( $\beta = -0.015$ )

showed negligible effects, indicating very weak relationships with employability confidence when career anxiety was controlled.

Age ( $\beta = -0.107$ ) retained a small negative association, while educational program ( $\beta = 0.110$ ) maintained a modest positive relationship. Most notably, career anxiety ( $\beta = -0.404$ ) emerged as a strong negative predictor of employability confidence. The magnitude of this beta indicates that higher levels of career anxiety are substantially associated with lower employability confidence.

Table 3. Standardized Estimates

Variables	$\beta$	t	p
<b>Model One</b>			
Gender	0.019	1.87	0.062
Age	-0.112*	-2.34	0.020
Educational Program	0.126**	3.11	0.002
Field	0.007	1.41	0.059
Province	-0.018	-1.63	0.104
R <sup>2</sup>	0.111		
Adjusted R <sup>2</sup>	0.107		
F	2.76**		
<b>Model Two</b>			
Gender	0.005	1.08	0.081
Age	-0.107	-1.49	0.037
Educational Program	0.110*	2.12	0.035
Field	0.004	0.88	0.080
Province	-0.015	-1.07	0.086
Career Anxiety	-0.404*	-9.46	0.001
R <sup>2</sup>	0.271		
Adjusted R <sup>2</sup>	0.124		
$\Delta R^2$	0.16***		
F	9.121***		

#### 4. Discussion on Results

The present study examined the relationship between career anxiety and employability confidence among university students in Pakistan using a hierarchical regression framework. The findings provide clear support for the central hypothesis: career anxiety emerged as a strong and negative predictor of employability confidence, even after controlling demographic variables. In model one, demographic

characteristics accounted for a modest proportion of variance in employability confidence. Educational program demonstrated a positive association, suggesting that students enrolled in advanced academic levels reported higher confidence in securing employment. This finding aligns with human capital theory, which posits that higher educational attainment enhances perceived labor market value (Becker, 1993). Conversely, age showed a small negative

association, potentially reflecting increased awareness of labor market constraints among older students nearing graduation.

However, the most substantive finding emerged in Model Two. The inclusion of career anxiety significantly increased the explained variance, and career anxiety demonstrated a comparatively large negative beta coefficient ( $\beta = -.404$ ). This indicates that students experiencing higher levels of worry and uncertainty about their future careers reported substantially lower employability confidence. This result is consistent with Social Cognitive Career Theory (Lent, Brown, & Hackett, 1994), which emphasizes the role of cognitive appraisals and emotional states in shaping career-related self-beliefs. Anxiety can undermine self-efficacy by amplifying perceived barriers and diminishing perceived personal competence. Empirical research similarly suggests that career-related anxiety is negatively associated with career decision-making self-efficacy and employment optimism (Vignoli, 2015; Jiang et al., 2019).

The magnitude of the effect observed in this study suggests that psychological variables may be more influential than structural demographic factors in shaping employability perceptions. This aligns with contemporary employability models that conceptualize employability as a psychosocial construct rather than merely an objective qualification-based outcome (Fugate, Kinicki, & Ashforth, 2004; Donald et al., 2019). In uncertain labor market contexts—particularly in developing economies, subjective perceptions may play a critical role in transition from education to work.

In the Pakistani context, economic instability, high youth unemployment, and limited formal employment growth may intensify anticipatory anxiety among students. When future opportunities are perceived as scarce or unpredictable, students may internalize macroeconomic uncertainty as personal inadequacy, thereby reducing their employment confidence. This finding resonates with emerging evidence indicating that labor market uncertainty heightens psychological distress among emerging adults (Blustein et al., 2020). Importantly, the

reduction in the magnitude of demographic effects in Model Two suggests that career anxiety may partially account for variance previously attributed to structural factors. In other words, it is not merely who the student is (gender, province, or field), but how the student psychologically interprets their career future that shapes employability and confidence.

### 5. Practical Implications

- i. First, the strong negative association between career anxiety and employability confidence suggests that universities should not conceptualize employability solely as a skills-based or curriculum-driven outcome. While technical competencies and academic credentials remain important, psychological factors, particularly career-related anxiety appear to play a substantial role in shaping students' employment confidence. Universities may therefore consider integrating structured career counseling services, anxiety management workshops, and resilience-building programs within academic settings. Embedding career planning modules into the curriculum, providing mentorship opportunities, and facilitating industry exposure may help reduce anticipatory anxiety regarding employment. Interventions grounded in career adaptability and self-efficacy enhancement frameworks may be particularly beneficial in strengthening students' confidence during the transition from education to work.
- ii. Second, given that demographic variables accounted for comparatively less variance than career anxiety, institutional efforts should prioritize psychological support mechanisms rather than relying solely on structural interventions. Addressing students' cognitive and emotional interpretations of labor market uncertainty may yield stronger improvements in employability perceptions.
- iii. Finally, from a broader policy perspective, the findings underscore the importance of aligning higher education policies with labor market realities. Transparent communication regarding employment pathways and improved linkage between academia and industry may mitigate uncertainty-driven anxiety among students.

## 6. Limitations and Future Research Directions

- i. First, cross-sectional research design restricts causal inference. Although career anxiety was found to be strongly associated with employability confidence, longitudinal studies are needed to examine temporal relationships and potential reciprocal effects.
- ii. Second, data were collected through self-reported measures using an online survey method. While this approach facilitated wide geographic participation across provinces, it may introduce common method bias and social desirability effects. Future studies could incorporate multi-source data or behavioral indicators of employability readiness.
- iii. Third, although the sample included respondents from multiple provinces and academic disciplines, the use of social media-based recruitment may limit full representativeness of the national student population. Subsequent research could employ stratified sampling methods to enhance generalizability. Future research should also explore potential mediators and moderators in the anxiety-employability relationship. Constructs such as career adaptability, self-efficacy, psychological capital, and institutional career support may clarify underlying mechanisms. Additionally, comparative studies across public and private universities could provide deeper contextual insights.

## 7. Conclusion

This study set out to examine whether career anxiety meaningfully shapes employability confidence among university students in Pakistan. The findings provide clear empirical evidence that career anxiety is not a peripheral emotional experience but a central psychological determinant of students' employment-related self-perceptions. While demographic characteristics such as age and educational level explained a modest proportion of variance, the inclusion of career anxiety substantially increased explanatory power, underscoring the primacy of psychological processes over structural background variables in predicting employability confidence.

These results suggest that employability should not be understood purely as an objective function of qualifications, institutional affiliation, or academic discipline. Rather, it is also a subjective construct shaped by how students cognitively and emotionally interpret their future career prospects. In contexts marked by economic volatility, high youth unemployment, and intense labor market competition, anticipatory anxiety may distort self-appraisals, weaken confidence, and potentially inhibit proactive career behaviors. The findings carry broader implications for emerging economies. In developing labor markets, structural constraints are often beyond the immediate control of educational institutions; however, students' psychological preparedness remains modifiable. Strengthening emotional resilience, enhancing career adaptability, and reducing maladaptive anxiety may represent critical intervention points for improving graduates' transition outcomes.

Ultimately, this study contributes to the growing body of literature positioning employability as a psychosocial phenomenon rather than a purely credential-based outcome. By demonstrating the substantial role of career anxiety, the research highlights the need to integrate psychological well-being into employability discourse within higher education policy and practice. Addressing career anxiety is not merely a counseling issue, it is a strategic imperative for workforce readiness in uncertain economic environments.

## REFERENCES

- Achakzai. (2021). *Characteristics of youth unemployment in Pakistan*. Pakistan Institute of Development Economics (PIDE).
- Becker, G. S. (1993). *Human capital: A theoretical and empirical analysis* (3rd ed.). University of Chicago Press.
- Blustein, D. L., Duffy, R., Ferreira, J., Cohen-Scali, V., Cinamon, R. G., & Allan, B. A. (2020). Unemployment in the time of COVID-19: A research agenda. *Journal of Vocational Behavior*, 119, 103436. <https://doi.org/10.1016/j.jvb.2020.103436>

- Cochran, W. G. (1977). *Sampling techniques* (3rd ed.). John Wiley & Sons.
- Cooper, D., & Schindler, P. (2008). *Business research methods*. McGraw-Hill.
- Donald, W. E., Ashleigh, M. J., & Baruch, Y. (2019). Students' perceptions of education and employability: Facilitating career transition from higher education. *Studies in Higher Education, 44*(9), 1505-1519. <https://doi.org/10.1080/03075079.2018.1439379>
- Exploring university students' career resources profiles: Links psychological resources, career insecurity, employability among university students. (n.d.). MDPI.
- Fugate, M., Kinicki, A. J., & Ashforth, B. E. (2004). Employability: A psycho-social construct, its dimensions, and applications. *Journal of Vocational Behavior, 65*(1), 14-38. <https://doi.org/10.1016/j.jvb.2003.10.005>
- Gunawan, et al. (2024). Young adults' perceived future employability within a social cognitive career framework. *Springer*.
- Hair, J., Black, W., Babin, B., Anderson, R., & Tatham, R. (2016). *Multivariate data analysis* (7th ed.). Prentice Hall.
- Hiaruman, Pratama, & Ernawati. (2025). Effect of career anxiety and social support on work readiness in Gen Z students. *Humanitas Journal*.
- Hong, Soifer, Lee, Choi, & Ruetzler. (2023). Job search anxiety's influence on employment risk perception.
- Jiang, Z., Hu, X., Wang, Z., & Jiang, X. (2019). Career anxiety and career exploration: The mediating role of career adaptability. *Journal of Career Development, 46*(3), 296-309. <https://doi.org/10.1177/0894845317733496>
- Job search anxiety and flourishing among university students. (n.d.). PMC.
- Job-seeking anxiety and job preparation behavior. (n.d.). PMC.
- Lent, R. W., Brown, S. D., & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance. *Journal of Vocational Behavior, 45*(1), 79-122. <https://doi.org/10.1006/jvbe.1994.1027>
- Little, R. J. A. (1988). A test of missing completely at random for multivariate data with missing values. *Journal of the American Statistical Association, 83*(404), 1198-1202.
- Noori, M. I., & Azmi, F. T. (2024). Measuring perceived employability among higher education students: A scale development study in Afghanistan. *Management and Labour Studies, 49*(2), 317-336.
- Perceived employability of students in higher education: Empirical findings on students' perceived employability. (n.d.). ResearchGate.
- Savickas, M. L., & Porfeli, E. J. (2012). Career Adapt-Abilities Scale: Construction, reliability, and measurement equivalence across 13 countries. *Journal of Vocational Behavior, 80*(3), 661-673. <https://doi.org/10.1016/j.jvb.2012.01.011>
- Shahid, Ramzan, & Ashraf. (2025). Perceived stress and anxiety among unemployed psychology/sociology degree holders in Pakistan. *JRSR*.
- Students' career anxiety: A systematic literature review. (n.d.). ResearchGate.
- Vignoli, E. (2015). Career indecision and career anxiety: The role of perceived career barriers. *Journal of Vocational Behavior, 86*, 99-107. <https://doi.org/10.1016/j.jvb.2014.11.002>
- Vignoli, E. (2015). Career indecision and career exploration among older French adolescents: The specific role of general trait anxiety and future school and career anxiety. *Journal of Vocational Behavior, 89*, 182-191.