



## Journal of Emerging Trends in Social Sciences and Humanities

A Double-Blind, Peer-Reviewed, HEC recognized [Y-category](#) Research Journal

E-ISSN: [3006-7898](#) P-ISSN: [3006-788X](#)

Volume 3 Issue 4, 2026, 172-184



### Skill Gaps, Career Anxiety, and the Role of Career Counseling Among Social Science Undergraduates in Pakistan: A Social Cognitive Career Theory-Based Analysis

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#### Article Information

##### Received:

2026-08-13

##### Revised:

2026-09-19

##### Accepted:

2026-10-17

#### Keywords

Career Anxiety; Self-perceived Skill Gaps; Career Counseling; Social Cognitive Career Theory; Higher Education; Pakistan.

#### ABSTRACT

The present study investigates the socio-psychological and structural factors that predict career anxiety among the final year social science undergraduate students of Lahore, Pakistan. The study is based on Social Cognitive Career Theory (SCCT) and focuses on the relationship between self-perceived employability skill gaps (analytical, technical, communication, and professional) and students' transition related distress, as well as the relationship between institutional career counseling exposure and students' transition-related distress. Data were collected from 400 final year undergraduate students of six leading public and private universities of Lahore using cross sectional multi-stage stratified quota sampling design. The results of the hierarchical multiple linear regression and path analysis models show that the self-perceived skill gaps have a strong and positive relationship with Career Choice Anxiety ( $\beta = 0.48, p < .001$ ) and Family Influence Anxiety ( $\beta = 0.31, p < .001$ ), which suggests that there is a significant threat to professional self-efficacy. On the other hand, career anxiety ( $\beta = -0.34, p < .001$ ) and self-perceived skill deficits ( $\beta = -0.28, p < .001$ ) are significantly decreased. A cross-sector comparative analysis reveals significant institutional differences, including greater digital skill gaps among public university students and less career service use among public university students, and greater absolute career anxiety among private university students due to family expectations. The results show that the graduate career anxiety is the result of institutional inequality, labor market uncertainty and collectivist family expectations.



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Publisher: Institute for Educating Environmental Resilience and Governance

## 1. Introduction

The contemporary shift from higher education to the labour market has become a very fragile, complex and disorganized process in the globalized world. A higher education degree was a clear social contract in the past, providing graduates with almost guaranteed access to formal work, career progression and social security. This stabilization mechanism has mostly broken down in developing post-colonial economies such as Pakistan. Unique demographic pressures, such as the massification of higher education institutions and an exponentially growing youth bulge, are a significant factor in the structural vulnerability of the modern transition. The higher education system produces thousands of generalists every year in major academic centers of the province, such as Lahore, but the curricula of institutions have been rigid and historical, and have not been able to keep pace with the changing and fluid structural needs of the modern organizational world.

Today, the corporate and civil labor markets are increasingly looking for specialized empirical skills, computational competence, advanced digital analytical skills and immediate practical application. This focus results in a significant, systemic institutional mismatch with the pedagogical architecture of classic social science subjects such as Sociology, Economics, Political Science and Media Studies. These liberal arts and social sciences programs are structurally necessary to develop critical thinking, macro-sociological critique, interpersonal communication, and qualitative reasoning, but there is a significant gap between academic production measures and market requirements. This structural misalignment is subjectively experienced by students as a clear 'self-perceived employability skill gap'. These well-known operational deficits have a significant impact on students' domain-specific self-efficacy beliefs, reduce their long-term positive outcome expectations, and cause chronic and severe psychological distress related to transition.

The anxiety associated with transition is a psychological burden that is acute for final year undergraduate students, and is more than just the anxiety associated with academic evaluation. In the sociocultural context of Pakistan, this distress

related to the career is highly mediated and structured by collectivist family dynamics and intergenerational social responsibilities. Individual success or failure in the job market or in achieving individual goals is never isolated from the social standing, financial ability to pay back, and social survival of the extended family group. This means that the fear of downward social mobility, status anxiety and high expectations of parents' economic success all intersect to exacerbate individual vulnerabilities. While there has been qualitative analysis of general employability or descriptive macroeconomic analysis of the pathways between structural skill deficits, institutional counseling interventions, and multidimensional career anxiety structures, there is a significant lack of robust psychometric validation of these quantitative pathways in South Asia. To fill this obvious void, this post-positivist survey inquiry critically examines the triadic mechanisms of the SCCT framework in the academic environment of Lahore, and validates the structural predictors to suggest systemic higher education reforms.

## 2. Literature Review and Theoretical Expansion

### 2.1 Career Anxiety and the Realities of the Contemporary School-to-Work Transition

Career anxiety is a specific type of psychological distress characterized by chronic somatic tension, general anxiety, and behavioral fear about one's future career path and upcoming entry into the labor market (Cetin-Gunduz & Nalbantoğlu-Yilmaz, 2016). In the modern academic literature, the concepts of career anxiety and generalized trait anxiety, or even the concept of vocational indecision or macro-level employment concern are clearly distinguished. Career indecision is a cognitive problem in choosing a major or a career path because of information limitations, whereas career anxiety is an affective, distressing fear of the transition mechanism. The shift from the structured and predictable setting of the university to the unstructured and unpredictable open market is a powerful stressor for final-year students (Foutia, 2025; Yildirim & Yildirim, 2025).

Career anxiety is a multidimensional construct

with two main psychometric dimensions: immediate career choice anxiety, which refers to intense anxiety about getting a job, passing through the interview evaluation matrix, and not earning financial independence; and family influence anxiety, which refers to the acute psychological stress to meet strict collectivist achievement standards and to pay back familial capital. The macro-level economic paradigm shifts to short-term contract labour, casualized employment gigs and the breakdown of occupational pathways in the public sector has significantly increased these psychological pressures globally. The last two semesters of an undergraduate degree have therefore become a space of extreme emotional fragility, where the students are constantly absorbing the precariousness of the macroeconomic context, which is expressed in chronic psychological tension, systemic powerlessness and a loss of existential well-being.

## **2.2 Skill Gaps, Graduate Capital, and the Devaluation of Credentials**

The structural conditions for graduate employability have changed from having credentials to having complex and highly diversified configurations of 'graduate capital' (Tomlinson, 2017). This composite framework covers multiple reinforcing developmental vectors: high-level analytical processing, professional data literacy, high-level intercultural communication soft skills, and local workplace competencies. If, however, higher education institutions focus on theoretical knowledge from history instead of the way of operation in the industry at the time, there is a serious imbalance in education. It is an interesting situation in the social science education of developing post-colonial countries like Pakistan where the pedagogical models are mainly classical structural analyses and do not offer any practical training on the use of modern empirical tools.

As a result, social science students are more likely to possess high-order skills in theoretical analysis, but are less likely to possess technical skills like critical data analysis tools (SPSS, STATA, R, Python, PowerBI, Tableau) and advanced project management frameworks, and less likely to be proficient in corporate policy writing formats (Ahmed et al., 2023). There is a 'self-perceived

employability skill gap' when students are actively comparing their personal skills with the technical skills listed in job postings. This is a recognized operational weakness that is a significant structural contributor to lessened professional confidence. It is a good way to reduce the student's perceived range of possible employment opportunities, to negatively impact the student's sense of vocational readiness, and is the most important cognitive factor that increases school-to-work transition anxiety.

## **2.3 Institutional Career Counseling as an Environmental Intervention and Support Structure**

Centralized career guidance and counseling services in the higher education context aim to offer substantial contextual supports in the environment that can help to buffer and neutralize career anxiety associated with transition. Structured and comprehensive career counseling interventions include objective and real-time market feedback, formalized occupational information systems, specialized resume optimization, realistic simulation interview frameworks, and individualized skill remediation pathways (Keshf et al., 2022). Career counseling exposure creates clear career networks and intentionally connects the vast gap between theory learned in school and the reality of the workplace, empowering students and changing abstract and frightening career concerns into concrete and strategic career execution plans.

Institutional stratification and funding imbalances in developing higher education networks, however, have a significant impact on the structural availability and operational effectiveness of these career support hubs. The institutional isolation of social science students is experienced when career development centers are used as marketing or promotional tools that are geared towards the most profitable courses in corporate business and technology. Students must be trained by experts in the field of counselling to be able to use generalist social science skills (qualitative coding, socio-cultural critique, structural research design) to real organizational capital that is valued and appreciated by non-governmental organizations (NGOs), public policy think tanks, media corporations and developmental agencies. If this institutional

conversion mechanism is not in place, the protective effect of career services is lost, making graduates more vulnerable.

**2.4 Social Cognitive Career Theory (SCCT) as an Explanatory Framework**

This is a quantitative inquiry that is theoretically grounded in the Social Cognitive Career Theory (SCCT) developed by Lent, Brown, and Hackett (1994). SCCT assumes that the vocational interest configuration, career selection actions, and career outcomes are a result of a continuous, triadic reciprocal causal process between individual personal attributes, external environmental behaviors, and self-directed cognitive processes. This study explicitly operationalizes the key constructs of SCCT (self-efficacy beliefs, outcome expectations, environmental contextual supports, and contextual barriers) and correlates them directly with the key variables that affect the

Pakistani graduate experience.

In this structural mapping model, self-perceived employability skill gaps are an important internal contextual barrier or deficit that directly impacts the student's sense of domain-specific self-efficacy. On the other hand, institutional career guidance exposure is conceptualized as an environmental contextual support that increases the behavioral capacity, access to structural resources, and reduces emotional stress. These contextual barriers and supports affect the student's cognitive processing and emotional coping capacity. This triadic interaction is the cognitive and affective outcome of career anxiety, which is multidimensional. The study variables were operationalized in the formal SCCT framework as presented in Table 1, which is theoretically and empirically consistent.

| SCCT Theoretical Component                   | Study Operational Variable                                                                |
|----------------------------------------------|-------------------------------------------------------------------------------------------|
| Contextual Barrier / Deficit                 | Self-Perceived Employability Skill Gap (Analytical, Technical, Soft Skills, Professional) |
| Contextual Support / Environmental Factor    | Institutional Career Guidance Exposure (Awareness, Utilization, Effectiveness)            |
| Cognitive / Emotional Outcome                | Multidimensional Career Anxiety Scale (Career Choice Anxiety, Family Influence Anxiety)   |
| Background / Contextual Moderating Variables | Gender, Institutional Sector (Public vs. Private Universities), Family Income Baseline    |

**2.5 Contextual Realities: Family Collectivism and Cross-Sector Disparities in Pakistan**

To understand the anxiety of the graduates in the South Asian context, the psychological processes of SCCT should be integrated with the sociological processes of family collectivism and institutional stratification which are specific to the South Asian context, especially Pakistan. In a highly collectivist cultural context, individual educational achievement is viewed as a high-stakes collective family investment that has intergenerational responsibilities (Zaidi, 2024). A large number of families exhaust their retirement savings or take on a lot of debt to send their children to college. This is a very stressful period in the school-to-work transition and the student's success in securing a job is directly related to family pride, financial survival and status

maintenance. Furthermore, there is a huge resource deficit across the sectors in the higher education system in Pakistan. Public universities, although well subsidized, are plagued with funding issues, obsolete curricula and poor technological infrastructure. Private universities offer state-of-the-art digital tools and powerful corporate networks, but charge high tuition fees, which puts them under extreme financial performance pressure. This study explores the interaction of these structural inequalities and how they create career anxiety.

**2.6 Research Hypotheses and Conceptual Integration**

Building upon the theoretical intersections of the SCCT framework and the localized structural conditions of South Asian higher education, this empirical study systematically tests the following

four core null hypotheses:

- **H<sub>01</sub>:** There is no statistically significant relationship between the multidimensional career anxiety scores and the self-perceived employability skill gaps among the last year social science undergraduates.
- **H<sub>02</sub>:** The exposure measures of the institutional career counseling services do not show significant correlation with the multidimensional career anxiety scores.
- **H<sub>03</sub>:** The relationship between institutional career counseling exposure and self-perceived employability skill gaps is not statistically significant and linear.
- **H<sub>04</sub>:** After controlling for baseline demographic parameters (gender, institutional sector, and family income), the self-perceived employability skill gaps and institutional career counseling exposure are not significant predictors of multidimensional career anxiety.

### 3. Research Methodology

#### 3.1 Epistemological Framework and Research Design

The epistemological paradigm used in this empirical study is post-positivist and the design used is cross sectional, explanatory survey. Post-positivism states that there is an objective social reality, which is not a product of the individual, but is only partially captured due to the complexity of human action and structural contexts. This study thus adopts a structured psychometric approach and advanced statistical quantification to carefully model and predict the directionality of the relationships between the latent constructs of the SCCT. The explanatory survey design allows for the systematic gathering of standardized data from a large sample, which allows for the use of hierarchical regression modeling, independent t-tests, and correlation analyses, and the control of confounding contextual variables.

#### 3.2 Target Population and Multi-Stage Stratified Quota Sampling

The target population were the active final year social science undergraduate students (5th to 8th academic semester) majoring in core disciplines (Media Studies, Sociology, Economics, Political Science, Philosophy and International Relations) within the urban boundaries of Lahore, Pakistan. A multi-stage stratified quota sampling design was used to ensure representativeness across institutional configurations. In the first stage, the higher education institutions were divided into equal groups (50% public sector, 50% private sector). In the second stage, six prominent universities, which were accredited by the Higher Education Commission (HEC) were purposively selected to meet the equal institutional sample matrices. Convenience sampling was used in a systematic manner within each institutional quota to recruit respondents who had strict inclusion criteria: continuous full-time enrollment, verified final-year undergraduate status, and active major concentration in a core social science field.

The minimum sample size was calculated based on the Cochran population formula for localized survey designs:  $n = [N z^2 p(1-p)] / [d^2(N-1) + z^2 p(1-p)]$ . To ensure maximum safety of the sample size, the estimated universe of enrolled social science undergraduates in the regional higher education hub of Punjab ( $N = 525,000$ ) was used in conjunction with the z value (standard normal deviation at 95% confidence level) of 1.96, d value (acceptable margin of error) of 0.05, and an assumed population variance proportion of  $p = 0.50$ . This mathematical calculation was used to determine the minimum requirement and the minimum requirement was  $n = 384$  valid responses. The final target sample was  $n = 400$  valid respondents, with equal numbers of respondents from each of the six participating institutions as indicated in Table 2, to provide symmetry across quotas and to allow for missing data.

| Institution                                  | Sector Type                | Valid Sample (n) | Percentage (%) |
|----------------------------------------------|----------------------------|------------------|----------------|
| University of the Punjab (PU)                | Public                     | 67               | 16.75%         |
| Government College University (GCU)          | Public                     | 67               | 16.75%         |
| Lahore College for Women University (LCWU)   | Public (Female Exclusive)  | 66               | 16.50%         |
| University of Management & Technology (UMT)  | Private                    | 67               | 16.75%         |
| Minhaj University Lahore (MUL)               | Private                    | 67               | 16.75%         |
| Kinnaird College for Women University (KCWU) | Private (Female Exclusive) | 66               | 16.50%         |
| <b>Total Active Sample</b>                   | -                          | 400              | 100.0%         |

### 3.3 Psychometric Instrumentation and Operationalization

The main data collection was done using a composite self-administered psychometric questionnaire with three specific scales. All the measurement scales were formal English (the official language of higher education in Pakistan) and were pilot tested ( $n = 40$ ) to check face validity and understanding before being used widely in the field. The Career Anxiety Scale (CAS) is a 14-item multidimensional scale adapted from Cetin-Gunduz and Nalbantoğlu-Yilmaz (2016) which is measured on a 5-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree). It has two sub scores: Career Choice Anxiety (8 items) and Family Influence Anxiety (6 items). Second, the Self-Perceived Employability Skill Gaps Scale developed by the authors includes 20 items in four functional areas: Analytical Skills, Technical/Digital Skills, Communication Soft Skills, and Professional Workplace Competencies. The respondents rate each skill on a 5-point scale for Personal Proficiency (P) and Perceived Career Importance (I). The absolute Structural Gap Score is determined mathematically as:  $\text{Gap} = \text{Importance (I)} - \text{Proficiency (P)}$ . Third, the Career Guidance Exposure Scale (CGES) is a 12-item scale with a standard 5-point scale to measure institutional counseling infrastructure in three important aspects: Service Awareness, Direct Resource Utilization, and Perceived Center Effectiveness.

### 3.4 Data Collection Administration and Ethical Safeguards

Data collection took place for two months on campus by the research team. Strict institutional ethical procedures were observed during the fieldwork. The respondents were all provided with detailed information sheets before the survey was administered, outlining the scientific scope of the study, the completely voluntary nature of participation and the unconditional right to immediate withdrawal. Informed consent was obtained from all participants in writing. All personally identifying parameters were removed from the data set and replaced with random alphanumeric codes to ensure complete data anonymity and confidentiality. Questionnaires were checked for completeness at the time of collection to reduce missing data and to ensure high quality surveys. Of the 450 psychometric surveys that were sent out, 400 were returned, yielding a very high effective response rate of 88.8%.

## 4. Statistical Results and Data Analysis

### 4.1 Scale Reliabilities and Descriptive Profiles of Latent Constructs

Cronbach's alpha coefficients ( $\alpha$ ) were used to determine the internal consistency and psychometric reliability of all scales and sub-dimensions. As shown in Table 3, all latent constructs and multi-item subscales had high internal consistency with  $\alpha \geq 0.70$ , which is the standard psychometric acceptability threshold. The descriptive mean profiles show that there is a significant amount of transition-related distress among students as evidenced by the mean score of the total Career Anxiety Scale (CAS) being  $\mu =$

3.84 ( $\sigma = 0.62$ ). Interestingly, the highest absolute agreement ( $\mu = 4.02$ ,  $\sigma = 0.58$ ) was obtained for the Career Choice Anxiety subscale, suggesting that the uncertainty about immediate job placement is a significant concern for the final year social science students.

The descriptive analysis of the Self-Perceived Skill Gaps Scale shows that there are serious structural problems in the current social science curriculum. The overall composite skill gap was  $\mu = +1.18$  ( $\sigma = 0.45$ ). On a domain-by-domain basis, the highest perceived gap was found in Domain 2

(Technical/Digital Skills,  $\mu = +2.11$ ,  $\sigma = 0.64$ ), reflecting a significant gap between students' computer skills and the expectations of industry software. The next domain is Domain 4 (Professional Workplace Competencies,  $\mu = +1.35$ ,  $\sigma = 0.52$ ). On the other hand, Domain 1 (Analytical Skills) had the smallest deficit ( $\mu = +0.42$ ,  $\sigma = 0.31$ ), which is consistent with the liberal arts emphasis on theory. Lastly, the Career Guidance Exposure Scale (CGES) had a low mean score of  $\mu = 2.41$  ( $\sigma = 0.78$ ), which suggests that students' exposure to institutional career centers is low.

| Scale Construct / Domain                   | Items (k) | Mean Score ( $\mu$ ) | Std. Deviation ( $\sigma$ ) | Cronbach's $\alpha$ |
|--------------------------------------------|-----------|----------------------|-----------------------------|---------------------|
| <b>Career Anxiety (CAS Total)</b>          | 14        | 3.84                 | 0.62                        | 0.88                |
| <b>Subscale: Career Choice Anxiety</b>     | 8         | 4.02                 | 0.58                        | 0.85                |
| <b>Subscale: Family Influence Anxiety</b>  | 6         | 3.61                 | 0.71                        | 0.81                |
| <b>Self-Perceived Skill Gap (Total)</b>    | 20        | +1.18                | 0.45                        | 0.89                |
| <b>Domain 1: Analytical Skills</b>         | 5         | +0.42                | 0.31                        | 0.82                |
| <b>Domain 2: Technical/Digital Skills</b>  | 5         | +2.11                | 0.64                        | 0.86                |
| <b>Domain 3: Communication Soft Skills</b> | 5         | +0.84                | 0.41                        | 0.80                |
| <b>Domain 4: Professional Competencies</b> | 5         | +1.35                | 0.52                        | 0.84                |
| <b>Career Guidance Exposure (CGES)</b>     | 12        | 2.41                 | 0.78                        | 0.87                |

#### 4.2 Bivariate Relationships and Null Hypothesis Evaluation

Pearson product-moment correlation coefficients ( $r$ ) were calculated between the main latent variables to systematically assess the first three null hypotheses ( $H_{01}$ ,  $H_{02}$ ,  $H_{03}$ ). The correlation matrix (Table 4) shows that there are very strong correlations in all of the main paths. The results showed a significant positive correlation between Self-Perceived Skill Gaps and total Career Anxiety ( $r = 0.542$ ,  $p < 0.01$ ), which means that the greater the self-perceived skill gaps, the higher

the level of career anxiety, thus rejecting  $H_{01}$ . Second, a significant, negative correlation was found between Career Guidance Exposure and Career Anxiety ( $r = -0.411$ ,  $p < 0.01$ ), which means that the more students interacted with the career services, the lower their level of career anxiety was, thus refuting  $H_{02}$ . Third, a significant, negative correlation was found between Career Guidance Exposure and Self-Perceived Skill Gaps ( $r = -0.325$ ,  $p < 0.01$ ), which means that the higher the exposure to counseling, the lower the perceived skill gaps, thus rejecting  $H_{03}$ .

| Variables                                 | 1. CAS Total | 2. Skill Gap Total | 3. CGES Total |
|-------------------------------------------|--------------|--------------------|---------------|
| <b>1. Career Anxiety (CAS Total)</b>      | 1.000        | -                  | -             |
| <b>2. Self-Perceived Skill Gap Total</b>  | 0.542**      | 1.000              | -             |
| <b>3. Career Guidance Exposure (CGES)</b> | -0.411**     | -0.325**           | 1.000         |

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

### 4.3 Hierarchical Multiple Linear Regression Modeling for Theory Testing

A two-step hierarchical linear regression analysis was conducted to test the fourth null hypothesis ( $H_{04}$ ) and to assess the predictive power of the core constructs of SCCT, while controlling for baseline contextual demographics. The baseline demographic model with gender, institutional sector and family income level was introduced in Step 1. This demographic baseline explained a small but significant amount of variance in total career anxiety ( $R^2 = 0.114$ , Adjusted  $R^2 = 0.107$ ,  $F = 16.98$ ,  $p < 0.001$ ). In this model, being female ( $\beta = 0.182$ ,  $p < 0.001$ ) and from public sector institutions ( $\beta = -0.141$ ,  $p = 0.002$ ) were significant predictors of higher initial anxiety, while higher family income level was a minor protective factor against financial anxiety ( $\beta = -0.112$ ,  $p = 0.002$ ).

The main SCCT explanatory variables (Self-Perceived Skill Gap Total and Career Guidance Exposure) were then included in the regression

equation in Step 2. The addition of these cognitive and environmental constructs resulted in a substantial increase in the absolute variance explained by the model ( $R^2 = 0.438$ , Adjusted  $R^2 = 0.431$ ,  $\Delta R^2 = 0.324$ ,  $F = 61.32$ ,  $p < 0.001$ ). Total career anxiety was significantly and positively correlated with self-perceived skill gaps ( $\beta = 0.425$ ,  $B = 0.584$ ,  $SE = 0.052$ ,  $t = 11.231$ ,  $p < 0.001$ ), suggesting that structural skill gaps are important factors in transitional distress. Conversely, institutional career guidance exposure functioned as a strong negative predictor of anxiety ( $\beta = -0.311$ ,  $B = -0.271$ ,  $SE = 0.034$ ,  $t = -7.971$ ,  $p < 0.001$ ). Interestingly, the structural effects of class ( $p = 0.279$ ) and sector ( $p = 0.197$ ) were rendered statistically non-significant when controlling for these constructs of SCCT, indicating that the structural effects of class and sector are fully mediated by skill gaps and exposure to career centers. This is a rejection of  $H_{04}$ , which supports the predictive power of the SCCT model.

| Model Step & Predictors                        | B            | SE                | B                   | t-value     | p-value    |
|------------------------------------------------|--------------|-------------------|---------------------|-------------|------------|
| <b>STEP 1: Demographic Baseline Model</b>      |              |                   |                     |             |            |
| (Constant)                                     | 24.091       | 3.421             | -                   | 7.042       | < .001     |
| Gender (Male = 0, Female = 1)                  | 3.951        | 0.241             | 0.182               | 16.394      | < .001     |
| Sector (Public = 0, Private = 1)               | -0.182       | 0.059             | -0.141              | -3.085      | .002       |
| Family Income Level                            | -0.095       | 0.031             | -0.112              | -3.064      | .002       |
| Model Fit Metrics                              | $R^2 = .114$ | Adj. $R^2 = .107$ | $F = 16.98$         | $p < .001$  |            |
| <b>STEP 2: Integrated SCCT Predictor Model</b> |              |                   |                     |             |            |
| (Constant)                                     | 11.432       | 2.115             | -                   | 5.405       | < .001     |
| Gender (Female)                                | 0.112        | 0.051             | 0.084               | 2.196       | .029       |
| Sector (Private)                               | -0.052       | 0.048             | -0.040              | -1.083      | .279       |
| Family Income Level                            | -0.031       | 0.024             | -0.036              | -1.292      | .197       |
| Self-Perceived Skill Gap Total                 | 0.584        | 0.052             | 0.425               | 11.231      | < .001     |
| Counseling Exposure (CGES)                     | -0.271       | 0.034             | -0.311              | -7.971      | < .001     |
| Model Fit Metrics                              | $R^2 = .438$ | Adj. $R^2 = .431$ | $\Delta R^2 = .324$ | $F = 61.32$ | $p < .001$ |

### 4.4 Cross-Sector Institutional Analysis and Resource Disparities

Independent-samples t-tests were performed to examine differences between public university (n

= 200) and private university (n = 200) groups to analyze systemic resource inequities and localized variations across institutional sectors. The comparative results show significant differences in the absolute career anxiety reported by the

students of private universities ( $\mu = 3.98$ ,  $\sigma = 0.55$ ) and public sector universities ( $\mu = 3.70$ ,  $\sigma = 0.65$ ;  $t(398) = -4.54$ ,  $p < .001$ ) on all core metrics. This is consistent with the finding that private sector enrollment is associated with increased transition stress. Second, the students in the private sector (CGES,  $\mu = 2.74$ ,  $\sigma = 0.72$ ) have significantly higher scores on the counseling access, service awareness, and resource utilization measures than do their public sector counterparts ( $\mu = 2.08$ ,  $\sigma = 0.69$ ;  $t(398) = -8.76$ ,  $p < .001$ ), revealing a significant institutional service gap. Third, in terms of Self-Perceived Skill Gaps, the students of public universities ( $\mu = 1.44$ ,  $\sigma = 0.42$ ) perceive significantly greater skill gaps than the students of private universities ( $\mu = 0.92$ ,  $\sigma = 0.38$ ;  $t(398) = 11.23$ ,  $p < .001$ ), indicating that students in public universities experience severe digital and technical resource gaps.

## 5. Discussion and Socio-Cognitive Synthesis

The findings of this quantitative research are statistical, which is evident confirmation of the applicability of Social Cognitive Career Theory (SCCT) in the context of higher education system in Pakistan. This study highlights that graduate career readiness is a multifaceted socio-psychological phenomenon as evidenced by the path interactions between self-perceived employability skill gaps and institutional career guidance exposure and multi-dimensional career anxiety subscales. Self-perceived skill gaps showed a strong predictive ability ( $\beta = 0.425$ ,  $p < 0.001$ ), suggesting that the more students in the last year of social science perceive that they are not skilled in specific digital, computational and technical methods, the more it affects their professional self-efficacy. In the SCCT perspective, this would be a reduction in self-efficacy, and would impact their outcome expectancies of making a successful school-to-work transition, making it one of great psychological discomfort and risk.

The high structural deficiency in digital and technical capabilities ( $\mu = +2.11$ ) demonstrates that there is a significant gap between the social science curriculum taught in schools and the needs of today's data-driven knowledge economies. Public and private universities excel at fostering critical analytical thinking, yet they often lack the practical experience in using contemporary

empirical tools, such as SPSS, STATA, R, Python and automated data visualization software (Ahmed et al., 2023). When students read today's job announcements where immediate software skills are required, they so internalize their lack of software tools as to see it as a significant contextual barrier. This "aha" moment brings up a high level of immediate Career Choice Anxiety ( $\mu = 4.02$ ), such that students in their final year of undergraduation feel that they are "literate" with regards to their academic achievements yet not with regards to their skills in Career Choice.

On the other hand, the hierarchical modeling validates the crucial role of formalized institutional career guidance as an environmental contextual support. The active and effective career centers have two major cognitive roles in the SCCT model: (1) they reduce the uncertainty of the transition-related emotional stress by assisting students to turn vague apprehensions into tangible action plans and (2) they actively address students' sense of skill deficits by orienting their expectations toward the current organizational contexts, thereby reconceptualizing abstract social science ideas into concrete organizational capital. Overall mean for counselling exposure ( $\mu = 2.41$ ) shows that these are not being used extensively and are not well integrated within the directorates of humanities and social sciences (Keshf et al., 2022).

This study is a significant contribution from the sociological perspective in that it empirically discovered the cross-sector institutional disparity and the interaction between the same and the collectivistic family system. The absolute level of career anxiety among private university students is significantly higher than among their public peers ( $\mu = 3.98$ ), suggesting a significant class-based stressor even though the private students' experience of access to the career center is much better than that of their public peers. Private higher education in Pakistan requires significant financial investment from families and consequently puts a lot of individuals under great pressure to find a job in the corporate sector that pays them quickly to recoup the family investment. This commercialization of education causes Family Influence Anxiety ( $\mu = 3.61$ ), which translates to employment uncertainty leading to deep psychological guilt and fear of collective familial shame (Zaidi, 2024). On the

other hand, public university students experience significant structural and digital resource deficits ( $\mu = 1.44$ ) linked to the underfunding of their institutions, although they are somewhat sheltered from immediate financial performance anxiety by severely reduced tuition costs. Institutional inequality, labor market precarity, and collectivist family expectations thus create graduate career anxiety.

## 6. Targeted Policy Implications

To optimize human capital development and protect the psychological well-being of young social science graduates, the Higher Education Commission (HEC) of Pakistan and university administrations should implement the following seven targeted structural interventions:

1. **Mandatory Credit-Bearing Career Readiness Modules:** Embed career readiness modules into the final two years of undergraduate studies, emphasizing readiness for the job market, optimizing resume writing, and interview preparation and skills building, rather than passive academic recitation.
2. **Applied Digital Methods Curricular Modernization:** Incorporate learning to use industry-standard computational tools (such as SPSS, STATA, R, Python basics, data visualization suites and digital research design into required course requirements).
3. **Department-Level Decentralization of Career Counseling:** Ensure that there are specialized guidance counselors in the academic departments to provide discipline-specific career paths for students of social science to the NGOs, policy think tanks and development agencies.
4. **Targeted Public University Resource Strengthening:** Allocate targeted institutional resources for public sector universities to the career services to address the digital resource gap, upgrade technical labs, and conduct active outreach campaign to enhance utilization of career services.
5. **Credit-Bearing Structured Internship Alliances:** Develop institutional partnerships with corporate entities, non-governmental organisations, public policy research institutions, media outlets and development organisations to give students real world work

experience before graduating to facilitate the school-to-work transition.

6. **Family-Inclusive Career Orientation Seminars:** Design institutional career orientation seminars involving parents to bridge the gap between family aspirations and the realities of the job market and reduce the psychological stress and sense of guilt felt by students, in particular in collectivistic countries.
7. **Psychological Screening and Early Referral Systems:** Implement systematic career anxiety screening in University Health Services to identify students who are having severe career transition distress and offer specialized counseling services.

## 7. Limitations and Future Research Directions

This study is empirical, but there are some structural limitations that should be noted. First, the research design is cross-sectional, and thus, definitive causal trajectories over time cannot be verified; future studies should use longitudinal designs to follow students after graduation. Second, the geographic coverage is limited to universities in Lahore and the findings might not be generalizable to the rural and less-resourced provincial context of Pakistan, where the labour market is quite different. Third, common-method bias is possible due to the use of self-reported measures, but exploratory factor validation was used. Fourth, quota sampling provided cross-sector representativeness, but limited generalizability compared to true random sampling. Lastly, other factors such as student personality traits, parental education level, and direct assessment of pre-existing mental health status should be included in future studies.

## 8. Conclusion

Finally, this study shows that career anxiety among social science undergraduates in Pakistan is a systematic phenomenon, which is a result of the interaction of curriculum-market mismatch, institutional resource gap, and collectivist family pressure. The study findings support the Social Cognitive Career Theory (SCCT) and suggest that reducing self-perceived employability skill deficits and increasing institutional career services are key strategies for reducing student distress.

Structural and evidence-based academic and institutional reforms will enable Pakistani higher education to better safeguard the psychological

well-being of students and maximize the economic and intellectual potential of social science graduates.

### **Conflict of Interest**

The authors showed no conflict of interest.

### **Funding**

The authors did not mention any funding for this research.

## References

- Ahmed, U., Tariq, M., & Warraich, S. K. (2023). Bridging the employability gap: A comprehensive analysis of skill deficiencies among graduates from Punjab's public sector universities. *Pakistan Social Sciences Review*, 7(4), 86–103.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: Freeman.
- Becker, G. S. (1993). *Human capital: A theoretical and empirical analysis, with special reference to education* (3rd ed.). Chicago, IL: University of Chicago Press.
- Betz, N. E., & Vuyten, K. K. (1997). Efficacy beliefs, outcome expectations, and career neglect in college students. *Journal of Counseling Psychology*, 44(2), 179-188.
- Blustein, D. L. (2006). *The psychology of working: A new perspective for career development, counseling, and public policy*. Mahwah, NJ: Lawrence Erlbaum.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101.
- Brown, P., Lauder, H., & Ashton, D. (2011). *The global auction: The broken promises of education, jobs, and incomes*. Oxford, England: Oxford University Press.
- Cetin-Gunduz, H., & Nalbantoğlu-Yilmaz, F. (2016). Career Anxiety Scale: Validity and reliability study. *Turkish Psychological Counseling and Guidance Journal*, 6(46), 79–92.
- Foutia, F. (2025). Graduates and their future career anxiety in relation to the psychological security of university students. *Journal of Psychological and Educational Sciences*, 9(2), 429–444.
- 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.
- Green, F., & Zhu, Y. (2010). Overeducation, skills and job satisfaction. *Economics of Education Review*, 29(5), 740-747.
- Keshf, Z., Nadeem, T., & Khawar, R. (2022). "It is a very difficult process": Career service providers' perspective on career counseling in Pakistani universities. *Heliyon*, 8(1), e08766.
- 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.
- Lent, R. W., Brown, S. D., & Hackett, G. (2000). Contextual supports and barriers to career choice: A social cognitive analysis. *Journal of Counseling Psychology*, 47(1), 36-49.
- Maitland, A. (2024). The credential trap: Degree inflation and the new labor precariat. *Sociology of Work and Occupations*, 51(3), 312-329.
- Malterud, K., Siersma, V. D., & Guassora, A. D. (2016). Sample size in qualitative interview studies: Guided by information power. *Qualitative Health Research*, 26(13), 1753-1760.
- Naseer, M. Z., Yasmeen, B., & Tanveer, R. (2026). From degree to precarity: A qualitative study of career uncertainty among social science students in Lahore. *Pakistani Journal of Qualitative Sociology*, 10(1), 45-68.
- Pakistan Bureau of Statistics. (2025). *Labor Force Survey 2024-25*. Islamabad, Pakistan: Government of Pakistan.
- Rahman, M. (2023). Higher education massification and the youth bulge crisis in South Asia. *International Journal of Educational Development*, 98, 1027-1041.
- Sampson, J. P., Peterson, G. W., Lenz, J. G., Reardon, R. C., & Saunders, D. E. (1996). *Improving career problem solving and decision making: A cognitive information processing approach*. Palo Alto, CA: Davies-Black.

- Savickas, M. L. (2005). Career construction theory. In S. D. Brown & R. W. Lent (Eds.), *Career development and counseling: Putting theory and research to work* (pp. 42-70). Hoboken, NJ: Wiley.
- Tomlinson, M. (2012). Graduate employability: A review of conceptual and empirical themes. *Higher Education Policy*, 25(4), 407-431.
- Tomlinson, M. (2017). Forms of graduate capital and their relationship to graduate employability. *Journal of Education and Training*, 59(4), 338–352.
- Yildirim, S., & Yildirim, M. (2025). The mediating influence of career stress between future anxiety and psychological health of future social studies teachers. *SAGE Open*, 15(2), 1–15.
- Zaidi, S. H. (2024). Structural disconnects: The mismatch between higher education and formal labor markets in Pakistan. *Pakistan Development Review*, 63(2), 201-224.
- Zaman, A. (2025). Social capital and the school-to-work transition in urban Pakistan. *South Asian Journal of Sociology*, 17(1), 89-106.