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Enhancing University Students' Career Orientation Through Personal Growth Tools: The Moderating Role of Career Self-Management

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Abstract

Gaining self-awareness can be accomplished through practicing personal growth tools. This study highlights how career self-management moderates the impact of coping strategies, mindfulness, and self-regulation on students facing challenges. Furthermore, the study contributes to an expanding body of research on how the university students in Lahore, Pakistan, relate mindfulness, coping mechanisms, and self-regulation to their career orientation. With a sample size of 384 students, the survey data were analyzed using the Statistical Package for Social Sciences (SPSS), employing descriptive analysis, Cronbach's Alpha, response rates, and response profiles. Structural Equation Modeling (SEM) was also used for hypothesis testing. The findings of this study reveal that effective coping strategies, when moderated by career self-management, significantly influence career orientation. Students who adeptly manage challenges are more likely to overcome failures and remain optimistic about their career future. Furthermore, it suggests that enhancing coping abilities can improve the student goal adjustment skills when facing future challenges. To align their effects and drive themselves towards realistic goal coping strategies is essential for building a successful career orientation. Additionally, these developmental strategies are recommended to the universities because by considering factors such as mindfulness, coping strategies and self-regulation, policy makers can design more effective interventions.

Keywords: career self-management, career orientation, coping strategies, mindfulness, self-regulation

Introduction

Embarking on university is commonly perceived as the commencement of an entirely new phase of life. When students leave their homes for university to pursue higher education, they begin with a new life path (Porein, 2018).

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Education is one of the most important factors in the development of human capital. Education plays a vital role in determining the productivity of an individual (Hatim et al., 2022). Students in university settings encounter numerous risk factors and problems, which can result into a variety of difficulties and complexities that are at times hard for them to handle on their own. Many adjustment issues confront students during university life, such as living away from their family and friends, adjusting into the university environment, taking care of daily life on their own, developing new social relationships in a new environment with new friends and university authority figures, housing issues, poor time management issues, poor self-care, and so on. The ability to recognize, pursue, and attain goals is thought to be necessary for adaptive and successful self-control (O'Connor & Forgan, 2007).

Indeed, a growing amount of data suggests that certain aspects of career orientation, particularly goal disengagement and goal reengagement, have important mental health implications. Mindfulness is regarded to differ both intra-individually and inter-individually; to put it in other words, mindfulness differs both inside and between persons (Brown & Ryan, 2003). Increased mindfulness has been linked to lower anxiety and stress levels in a variety of situations, including university settings (Kerrigan et al., 2018). The coping defense mechanisms are often termed coping strategies (Algorani & Gupta, 2020). Shift from high school to university is a major experience in the lives of students. This transition causes numerous stressful circumstances and situations in their lives like financial issues, pressure of examination, peer rejection, and low self-confidence (Evans et al., 2018). This study aims to examine the role of mindfulness, coping strategies, self-regulation in connection to career orientation under the moderating role of career self-management that university students have to improvise.

Problem Statement

Previous research by Pidgeon and Pickett (2017) and Palmer and Rodger (2009) has been conducted in the context of psychology, but this study aims to introduce personal growth tools in the light of public policy. Personal growth tools offer insights into human behavior, decision-making processes, and emotional responses, which can help policymakers develop more effective, equitable and sustainable solutions to challenges. The goal of this study is to better understand how mindfulness coping mechanisms

and self-regulation influence each other and how they enhance students' successful career orientation. University students are chosen for this study because they are in the formative stages of their careers, where they assess their goals and realign their ambitions. Therefore, examining career-related factors in university students is essential. Moreover, university students consider goals as essential aspect of their self-definition, as self-relevant goals help structure their daily lives according to their preferences (Wrosch et al., 2003).

Research Objectives

The current research intends to achieve the objectives mentioned below:

- To examine the relationship between mindfulness and career orientation in university students of Lahore, Pakistan.

- To examine the relationship between coping strategies and career orientation in university students of Lahore, Pakistan.

- To examine the relationship between self-regulation and career orientation in university students.

- To examine whether career self-management moderates the relationship between personal growth tools and career orientation.

Significance of Study

This study aims to elucidate how mindfulness, coping mechanisms and self-regulation relate to one another. By exploring this interrelation, the study seeks to uncover how these factors collectively contribute to students' successful career orientation moderated by career self-management.

Furthermore, examining the moderating impact of career self-management enables an improved understanding of the efficient application of personal growth tools by students. Students can better leverage their opportunities, abilities, as well as resources with the help of this information, which is essential for effective career planning and management. By examining how personal development, career orientation, and career self-management interrelate, this study adds to the existing body of knowledge in career development and education. It offers insightful and useful research findings that can further advance this subject.

<div align="center">

Literature Review

</div>

Mindfulness

The word "mindfulness" originates from the old English word 'mindful', which means having a good memory. Mindfulness is simply being fully aware of and engaged with the present moment, accepting it without judgment. It can be described as a powerful act of participatory observation.

Mindfulness is a mental practice for balancing attention with the aim of enhancing mental health and now it has become popular in many universities and in different institutions (Galante et al., 2018). Mindfulness is a mental practice that involves concentrating on the present moment and non-judgmentally embracing one's existing circumstances (Brown & Ryan, 2003). Daily practice of mindfulness can also increase the good health and decrease the level of stressors of daily routine. It is also perceived as a way to gain a deeper understanding of one's own self. According to Hayes and Kelly (2003), in psychology, mindfulness is regarded as an optimal state of mental processing and involves a range of methods for achieving it. It is widely considered that mindfulness is developed by directing attention to the ongoing events and understanding them while maintaining a non-judgmental attitude (Kabat-Zinn, 2003). Mindfulness training is an effective and powerful therapeutic tool for the various clinical and non-clinical health problems and a booster for healthy well-being (House, 2017).

Students who practice mindfulness often experience increases in optimism, self-discipline, affinity with others, perspective taking, setting pro-social goals, and attentiveness (Schultz, 2019). Mindfulness plays an important role in strengthening social and emotional learning skills and outcomes, which are necessary for coping with the daily life physical and emotional stressors that students face in their daily lives (Schonert-Reichl & Lawlor, 2010)

According to a study, mindfulness fosters increased awareness of previously undetected parts of circumstances and experiences, which aids in the identification of and reorientation toward new goals (Mahlo & Windsor, 2020). Furthermore, mindfulness practice is presented as an active strategy for redesigning an individual's goals relatively rather than an inactive reflection of loss and failure (Zhang et al., 2020). Crane et al. (2010) investigated the conditional career orientation and its relationship

with mindfulness in a similar way. Setting attainable objectives is also an indicator of mindfulness; attentive persons tend to score higher on self-esteem assessments as well. Mindfulness provides boundaries to work within, rather than fostering unrealistic aspirations and ongoing dissatisfaction with unattainable goals. These limitations should not be viewed as constraints but rather as sources of strength, as awareness enables the achievement of goals that align with one's true nature. When viewed in this perspective, pursuing unreachable goals can seem not only meaningless, but also emotionally and mentally destructive (Symth et al., 2020).

Mindful people achieve more satisfaction, because their aims are aligned with their true self. According to the findings of a research Symth et al. (2020) mindful people are adept at setting well-suited and achievable goals. Because mindfulness practitioners have high levels of self-awareness, the scholars hypothesized that they are generally effective at creating and completing their objectives. Self-awareness, according to a study, aids individuals in determining whether goals are appropriate. Goals that align with one's morals, beliefs, and living conditions and environment are not only easier to achieve, but also more meaningful. Researchers suggest that mindful individuals are better at identifying goals that match their true personalities by regularly paying attention to their thoughts, moods, sensations, and emotions.

H₁: There is correlation between mindfulness and career orientation.

Coping Strategies

Coping strategies are defined as the human behavioral processes for dealing with internal and external demands in situations that are perceived as threatening (Algorani & Gupta, 2020)

Career orientations are associated to many behavioral, intellectual, and emotional consequences. According to Achievement Goal Theory (AGT), there are educational inferences in each of these consequences as students are tasked with achieving passing scores on examinations. The construct coping strategy is one component associated to career orientations. career orientations and coping techniques both have an impact on students' decision-making on achievement tasks. "With respect to the aim at stake, the individual examines his or her coping options." Individuals with

adaptive objectives (i.e., mastery goals) are more likely to use adaptive coping behaviors (Johnson & Nussbaum, 2012).

It is seen that career orientation abilities are likely linked to certain coping techniques, and these relationships stand especially strong when people face demanding and worrying life situations like helping sick children or parents with insufficient financial earnings. Individuals may require to focus their time and energy on controlling the annoyance or stressors in such situations, that might obstruct their capacity toward achieving other worthwhile goals (for example professional progress, going on holidays, or purchasing a new vehicle. As a result, people who persist in pursuing impossible goals may believe that they should have directed more efforts on dealing with the stressor and may blame themselves for recurring issues. Furthermore, they may deplete their self-control assets, which may make it difficult to deal with the stressful situation. Those individuals who can disengage from unattainable goals can utilize their possessions more efficiently to address demanding life circumstances. Furthermore, those who are less prone to use maladaptive coping mechanisms, and even if eliminating the distress shows challenging, they are less likely to blame themselves for issues that arise. It was also predicted that goal reengagement abilities are linked to effective coping (Wrosch et al., 2011).

H_2: There is a significant correlation between coping strategies and career orientation.

Self-Regulation

Self-Regulation is a vital ability that is essential to university students' academic achievement and overall well-being. It involves the ability to regulate, observe, and modify one's thoughts, emotions and behaviors in order to accomplish desired goals. The ability to regulate behavior, attention, volition and emotion is among the most important aspects of effective functioning. In today's world, the ability to plan, execute, and adapt behavior to meet one's objectives is particularly important (Brown et al., 1999). The fundamental goal of many researches in this area is to comprehend how self-regulated behavior arises, operates and is organized.

From this perspective, self-regulation encompasses both behavioral skills (behavioral self-regulation) and environmental self-regulation (managing environmental contingencies), as well as a feeling of personal agency to put these abilities into practice in the appropriate circumstances.

Self-regulation also involves planning, monitoring, and cyclically adapting one's inner thoughts, feelings and behaviors in accordance with objectives and feedback received.

According to Zimmerman (2002) and Gestsdottir et al. (2010), self-regulation (SR) is a critical ability that enables individuals to adjust to a wide range of contextual conditions that promote healthy life development. People who have a strong sense of self-control understand how to assess their own skills, keep track of their job progress, put in strategic effort, and take advantage of environmental chances to further their objectives (Gestsdottir et al., 2010). Research has shown that higher levels of self-regulation are associated with improved psychological well-being (Allard, 2007; Caprara & Steca, 2006).

Self-regulated learning (SRL) is defined in educational contexts as "an active, constructive process where learners set learning goals and attempt to monitor, regulate and control their cognitions, motivation, behavior, guided and constrained by their goals and the contextual features in the environment" (Pintrich, 2000).

Setting and pursuing professional objectives is made possible by self-regulation because strong self-control is associated with perseverance and fortitude in facing challenges (Duckworth et al., 2023). Moreover, adaptive career planning is made possible by effective self-regulation, which enables people to modify their objectives and approaches in response to shifting professional environments (Akün et al., 2023). High self-regulatory individuals are more inclined to pursue lifelong learning and skill development, which is crucial for advancing in one's job (Heslin, 2024). Better performance management and self-evaluation are facilitated by effective self-regulation, and these processes can result in opportunities for professional progress (Latham et al., 2023).

Self-regulation and professional adaptability- the ability to handle changes in one's job- are strongly related. Strong self-control makes a person more likely to take initiative in their work by looking for new possibilities and acquiring new skills (Kroger et al., 2024). Career counselors can benefit from their knowledge of self-regulation by providing clients with strategies to improve self-regulation, which, in turn, help them reach their job objectives and make better career decisions (Niles, 2014).

H₃: There is a significant correlation between self-regulation and career orientation.

Career Orientation

Career orientation is a vital adaptive response to poor goal accomplishment and provides a chance to modify one's aims and goals, detach from unachievable goals and recommit to alternate goals (Brandtstadter & Renner, 1990; Wrosch et al., 2003). Holding on to ambitions while they are out of reach may lead to a lack of goals in the future. According to self-regulation and control theory, individuals vary in their ability to adapt to goal-related challenges. Research indicates that some people are better equipped to adjust their objectives, regardless of whether the desired result exists or not (Wrosch et al., 2007). Career orientation abilities are individual factors that function across multiple domains of life and support two techniques for self-control: goal disengagement and goal reengagement. The two goal-adjustment capacities, goal disengagement and goal reengagement, are distinct but moderately related, and they reflect different tendencies in individuals (Wrosch et al., 2013). Both capacities of career orientation, goal disengagement and reengagement can either be same or can be different in the same individual.

Goal Disengagement

The term goal disengagement, refers as the loss of initiative and relational dedication aimed at predetermined goal, it is thought to be an adaptive mechanism that allows people to avoid the negative consequences of repeated goal failure incidents (Nesse, 2000).

Goal Reengagement

The drive to define, contribute to and follow additional goals is referred to as goal reengagement. This process is believed to provide renewed meaning to life and improve mental health. Goal disengagement capacity can also be influenced by success orientation, with individuals motivated to avoid disappointment may disengage from goals more than those eager to achieve success.

Career Self-Management

In today's labor markets, individual career success relies on self-management techniques, which include setting personal professional

objectives and engaging in goal-setting behaviors. These strategies can be defined using a broader definition of self-management as well as one that is extremely career-specific. Career self-management aids in identifying one's capabilities and potential for the future.

The term "career self-management" for undergraduate students refers to career planning, which is the process of determining one's educational and professional goals, evaluating personal strengths and weaknesses in relation to these goals, and outlining the necessary actions to achieve them Effective career planning requires making a series of logical and methodical decisions, such as selecting courses, managing free time, pursuing part-time work, and engaging in extracurricular activities like leading the student union.

Career self-management and career orientation are closely related in a number of ways. For example, effective career self-management frequently begins with clear career goals, which are influenced by an individual's career orientation. Proactive career planning tends to result in a clear career orientation, which helps people align their actions in the workplace with their long-term goals and values (Greenhaus & Callanan, 2023). One important aspect of career self-management is the ability to adjust to changing opportunities and circumstances. Career orientation influences how people perceive and react to changes in their careers (Creed & Patton, 2023). Using career self-management techniques, such as self-monitoring and using feedback, is essential for controlling professional performance. How someone approaches performance management is frequently influenced by their career orientation (DeNisi & Kluger, 2000). The alignment between a person's professional self-management and job orientation affects their level of job satisfaction. Maintaining a balance between one's professional behaviors and values requires self-regulation (Greenhaus & Allen, 2024).

However, career planning has to be followed up by successful implementation strategies, particularly in light of constantly changing conditions that are frequently hard to predict ahead. People are unlikely to succeed unless they can create and put into action techniques for carrying out their plans. There are several career strategies that have been promoted, all of which focus on influencing people's circumstances to their benefit in order to help them reach their objectives.

H₄: There is a significant relationship between mindfulness and career orientation moderated by career self- management.

H₅: There is a significant relationship between coping strategies and career orientation moderated by career self- management.

H₆: There is a significant relationship between self-regulation and career orientation moderated by career self- management.

Conceptual Framework

Independent Variables   Dependent Variables
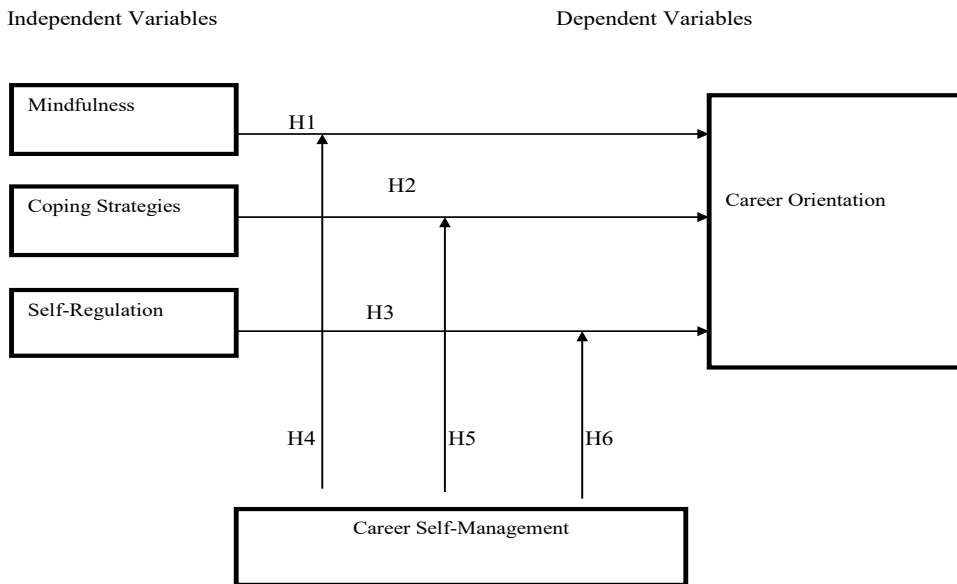

The research provides a brief understanding of how students deal with challenges by using coping mechanisms, self-control, and mindfulness, and explores strategies for reengaging when career goals become unachievable. Concurrently, a research framework, often referred to as a research methodology, is a collection of guidelines, presumptions, and practices that direct the planning and execution of a research project. It offers a methodical strategy to research and assists in guaranteeing the validity, dependability, and credibility of the study (Tasleem et al. 2023).

Theoretical Framework

The theoretical framework is the interrelated set of concepts that gives the study a course (Almalki, 2016; Creswell, 2014).

Figure 1

Collective Action Theory as a means for Enlightenment for University Students during Career Orientation
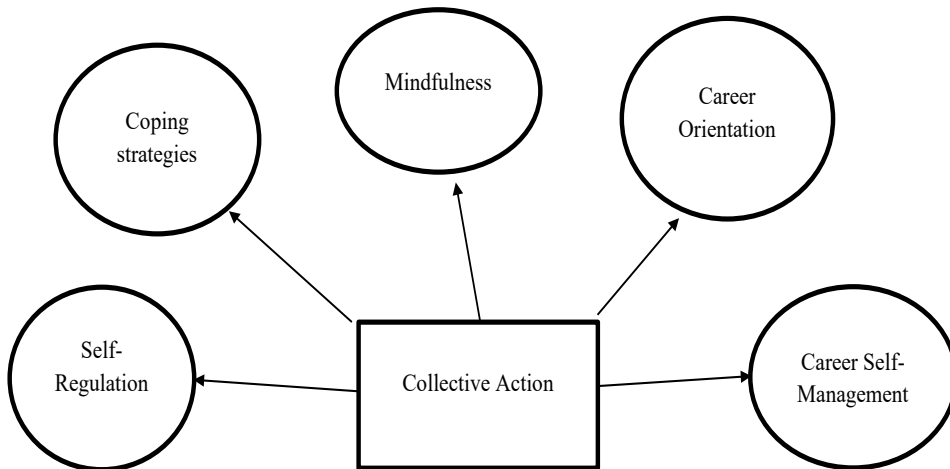
Collective Action Theory is a sociological framework that explains how people come together to collectively address social and political issues. Furthermore, Mancur Olson was the first who published collective action theory in 1965.

According to Holzel et al. (2011), Collective Action Theory can be instrumental in understanding how communities unite to foster a collective attitude that promotes mindfulness and well-being. For example, students can participate in group mindfulness activities like meditation, yoga, or mindfulness-based stress reduction programs, which help them, maintain focus, calmness, and balance amidst stress and challenges.

Collective Action Theory can guide individuals on how to collaborate to support one another through stressful situations using coping mechanisms. Students might join group therapy sessions, support groups, or attend seminars and training sessions to learn coping strategies and techniques. By sharing experiences and offering support, individuals can better manage stress and uncertainty.

By setting and achieving goals, managing time, adapting to changes, controlling emotions, staying motivated, and engaging in reflective practices, students can significantly contribute to collective action efforts.

This not only aids the success of these initiatives but also promotes personal growth and the development of vital skills among participants.

Collective action theory is also applicable to career orientation, helping individuals understand how collaboration can achieve common career objectives. Joining professional organizations or participating in networking events allows individuals to build relationships within their field, share resources, and collaborate on projects. Working together can make achieving career goals more efficient and effective (Lent et al., 2002).

Career self-management behavior can moderate the link between individuals' engagement in collective action and its outcomes. Those actively managing their careers bring unique skills, motivations, and perspectives to collective efforts. Their proactive nature, commitment to growth, and alignment with values positively influence group dynamics and the overall success of collective action. Additionally, participating in such efforts provides opportunities to enhance skills, expand networks, and align professional lives with personal values.

In summary, the concepts of common pool resources and collective action intersect with mindfulness, coping strategies, and career orientation among university students. By cultivating mindfulness, pursuing careers that promote sustainable resource management, and engaging in collective action, students can work towards a more sustainable and equitable future for themselves and the planet.

Methodology

The methodology part begins by describing the overall research design, which, depending on the study's needs, may be quantitative, qualitative, or a combination of both.

Research Design

The current research is quantitative in nature and examines the relationships among mindfulness, coping strategies, self-regulation and career orientation in moderating role of career self-management. The data for this study was collected from university students by using physical data collection methods. The students of universities were assured about confidentiality of their personal or academic details throughout the research.

Population of the Study

The study was conducted in three different universities of Pakistan with different population sizes. The diverse sampling represents the full set of individuals or occurrences that the researcher is trying to understand and extrapolate results. The details of the universities and their respective populations are outlined below.

Table 1

Population of Study

University	Population
University Of Central Punjab Lahore, Pakistan	22,000
University of Management and Technology Lahore, Pakistan	27,000
Punjab University Lahore, Pakistan	45678
Total	94678

Sample Size

Present research targeted three demographic variables such as age, gender and education. The sample included both male and female university students, with educational backgrounds ranging from undergraduate to PhD, and ages ranging from 18 to 38 and older. A total of 384 university students were selected using a convenience sampling technique, which was chosen due to ease of access. According to Krejcie and Morgan's (1970) sampling table, it was estimated that 384 people would respond to the current survey based on the entire population.

The sample comprised of both male and female students studying at University of Management and Technology, University of Central Punjab and Punjab University.

Operational Definition

Mindfulness

Mindfulness refers to the practice of paying attention to the present moment without passing judgment (Brown & Ryan, 2003).

Coping Strategies

Coping strategies are thoughts and behaviors that individuals use to manage stressors or alarming situations (Compas et al., 2001).

Self-Regulation

Self-regulation is the ability to monitor, manage, and control one's thoughts, feelings, and actions in accordance with personal objectives or circumstantial demands (Vohs & Baumeister, 2004).

Career Orientation

According to Savickas (2002), career orientation refers to a person's attitudes, values, and beliefs about aspects of work and career, which influence their career choices, motivations, and behaviors within the professional realm.

Career Self-Management

Career self-management encompasses the proactive process through which individuals take responsibility for their career development, involving activities such as goal setting, skill enhancement, and strategic decision-making towards career advancement (Hirschi, 2012).

Instruments

For data collection, a questionnaire was constructed using an adaptive method. Additionally, the concepts of self-regulation, coping mechanisms, career orientation, and professional self-management were developed and tested using a Likert scale. 1 = *strongly disagree*, 2 =*Disagree*, 3 =*Neutral*, 4 =*Agree*, 5=*strongly agree* the response categories for this scale. The questionnaire was designed to be completed in no more than 5 minutes. Scores for all items were summed to determine the final score.

Unit of Analysis

The units of analysis in this research are the students from three universities, enrolled in various degree programs and educational levels (i.e., Bachelor's, Master's, PhD), spanning different semesters from freshman year to senior year.

Data Analysis Strategy

Data analysis of the study was done by using combination of descriptive and inferential analysis. Statistical Package of Social Sciences (SPSS) was used to carry out the descriptive analysis which provided a general overview of the data and helped profile the respondents. SPSS was used for

summarizing the data, making various tabular presentations and for measuring the frequency of outcomes.

On the other hand, for making predictions from the data, inferential analysis was conducted using SEM because of more than one reason as follows: Firstly, it studies all equations simultaneously and then tries to detect the extent and direction of relationships among the variables; Secondly, it takes into account the measurement errors. Thirdly, it can facilitate the modeling of complex models. Fourthly, it can differentiate and estimate with precision the reflective and formative measures. Lastly, it is in line with the modern trend as it is categorically required by the highly indexed journals and also Hair et al. (2010) supports the use of it for highest precision as on date. This SEM software has its own strengths as it can easily analyze different kind of measures and it is free of any assumption.

Results

Response Rate

The various departments of the three universities in Lahore provide the evidence. Surveying 384 respondents from Lahore was deemed appropriate based on the study's design. Each questionnaire was examined as soon as the respondents finished it. Following the appropriate safety measures, it was found that there were no missing responses while entering the data.

Table 2
Demographics

Demography	Indicator	Frequency	Percentage
Gender	Male	212	55.2
	Female	172	44.8.
Age	18-25	336	87.5
	26-33	33	96.1
	34-41	7	97.1
	42 and above	8	2.1
Qualification	Bachelors	268	69.8
	Masters	73	88.8
	M-Phil	29	96.4
	PHD	14	3.6
Institution	UMT	128	33.3
	UCP	128	33.3
	PU	128	33.3

Cronbach Alpha

This study employed the Cronbach Alpha technique to assess the reliability. The values of Cronbach's alpha range between 0 and 1. Reliability values of 0.5 to 0.6 are acceptable in some circumstances (Kerlinger & Lee, 2000). Table 3 presents the internal consistencies of study variables which were excellent.

Table 3

Cronbach Alpha

Constructs	No. of items	Cronbach Alpha
Mindfulness	7	.922
Coping Strategies	7	.921
Self-Regulation	7	.921
Career Orientation	7	.921
Career self- Management	7	.921

Descriptive Analysis

To explain the main characteristics of the data set, a descriptive analysis is conducted.

Table 4

Descriptive Statistics

	Minimum	Maximum	*M*	*SD*
Mindfulness	1.00	5.00	2.69	0.70
Coping Strategies	1.00	5.00	3.93	0.70
Self-Regulation	1.00	5.00	3.01	0.76
Career Orientation	1.00	5.00	3.08	0.82
Career self- Management	1.00	5.00	3.10	0.83

If the mean is high and the standard deviation is low, it is likely that respondents' replies were typically consistent and comparable. The standard deviation will be higher if the mean is low and it suggests that there is not much consensus on the subject and that respondents had a range of perspectives. In the above table, the mean is greater than the standard deviation. When the mean and standard deviation are both moderate, it indicates that there is a fair amount of agreement and disagreement among the respondents.

Partial Least Square (PLS) Structural Equation Modeling Approach

This particular study implants structural equation modelling (SEM) for hypothesis testing. Two most popular approaches in SEM are covariance-based approach and variance-based approach. Covariance based structural equation modelling (CBSEM) is confirmatory in nature; however, variance based structural equation modelling (VBSEM) is prediction oriented.

Convergent Validity

In an attempt to explain the convergent validity, researchers attempt to explain the fact that constructs are theoretically related to each other. According to Hair et al. (2013), three techniques are used for examining convergent validity namely, factor loading (outer loading), average variance extracted (AVE) and composite reliability. The values of factor loading demonstrate the strength of each item on its respective construct. According to Fornell and Larcker (1981) suggestion, the items with loading higher than 0.50 or more is acceptable for multivariate analysis.

It can be evidently seen in the table that loadings of all the items are well above the minimum acceptable range of 0.50. Composite reliability is the extent to which the items seek to designate the latent construct (Hair et al., 2011). The ideal value for composite reliability suggested by Fornell and Larcker (1981) and Hair et al. (2010) is 0.70. It can be seen in the table that all scores for composite reliability lie between the ranges of 0.75-0.833. Average variance extracted (AVE) is the third criteria for determining the convergent validity of the model. The ideal scores being suggested by Fornell and Larcker (1981) and Hair et al. (2010) for average variance extracted (AVE) are above 0.50. As it is presented in the table that all the values of AVE fall within the range of 0.501to 0.552. All the results affirm that convergent validity exists in the model

Table 5

Measurement Model- Convergent Validity

Variables	Items	Loadings	C.R	AVE
Career Orientation	CO1	0.851	0.809	0.517
	CO2	0.707		
	CO3	0.640		
	CO5	0.660		

Variables	Items	Loadings	C.R	AVE
Coping Strategies	CS1	0.779		
	CS5	0.696	0.787	0.552
	CS6	0.752		
Career Self-Management	CSM1	0.801		
	CSM2	0.732		
	CSM3	0.646	0.833	0.501
	CSM4	0.660		
	CSM6	0.690		
Mindfulness	MF1	0.735		
	MF2	0.735	0.75	0.501
	MF6	0.650		
Self-Regulation	SR1	0.742		
	SR5	0.684	0.815	0.524
	SR6	0.732		
	SR7	0.737		

Discriminant Validity

According to Hair et al. ([2013](#)), discriminant validity is termed as the extent to which construct measures what it is intended to measure. Hair et al. ([2013](#)) suggests two criteria for checking out the discriminant validity. The prior one is Fornell and Larcker's criteria which is the square root of AVE of each construct. These criteria state that a particular construct should share higher value than any other off diagonal element in the row or column. The next method which is suggested by Hair et al. ([2013](#)) is to examine the cross loadings of each item. The loadings of every indicator on its construct should be higher than the loadings on other constructs (Hair et al., [2011](#)).

**Table 6**

Discriminant Validity Fornell - Larcker Criterion

		1	2	3	4	5
1	Career Orientation					
2	Career Self-Management	0.88				
3	Coping Strategies	0.887	0.771			
4	Mindfulness	0.827	0.75	0.838		
5	Self-Regulation	0.942	0.851	0.843	0.751	

The values for the square root of AVE should be above 0.50, as these values account for the percentage of variance in the indicators. In the table shown above elaborates that the square root of the respective constructs (diagonal values) are greater than the rest of the values in the column, hence affirming the construct validity of the measurement model (outer model). Conclusively, construct validity was established in this study by confirming content validity, convergent validity, and discriminant validity.

Original and Revised Model

Originally the framework contained five constructs. These constructs were put to analysis in PLS. There were items of the model constructs before applying confirmatory factor analysis. Figure below shows the original model of the study by implementing confirmatory factor analysis approach in PLS produced certain changes.

Figure 2
Structural Model
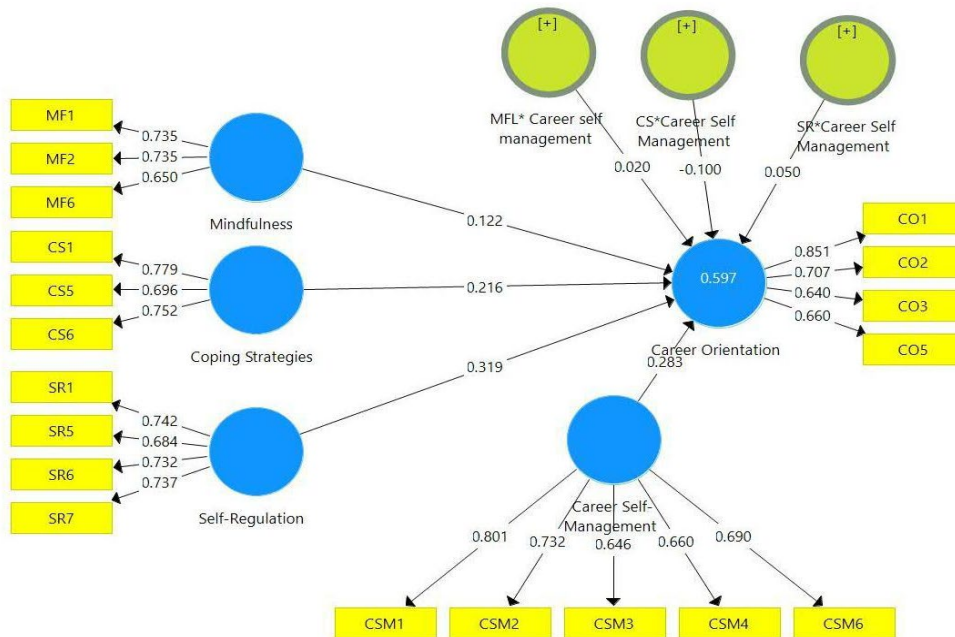
Four items from the construct of Mindfulness (MF 3, 4, 5, 7), Four items from the construct of coping Strategies (CS 3,4,2,7). Three items from the construct of Career Orientation (CO 4, 6,7) were deleted. Two items from

the construct Career Self-Management (CSM 5,7) were deleted. From the construct of Self-Regulation three indicators were deleted (SR 2, 3,4) items. However, the remaining items of the constructs remained intact and no item was deleted. The number of items was deleted from 35 to 16 prior to the evaluation of structural model.

Evaluation of Inner Model (Structural Model)

After the evaluation of measurement model, the next step is to determine the structural model. To test the inner model of theoretical framework Hensler and Sarstedt (2013) suggested the following criteria: coefficient of determination (R^2), and path coefficients.

Determination of R^2

The primary step for conducting the measurement model assessment is the determination of R^2. According to Hair et al. (2010) value of 0.75 is considered to be high however in few other research disciplines the value of 0.20 is considered to be high. A general rule of thumb has been described by Chin (2010) where the values of 0.67, 0.33, and 0.19 are considered as substantial, moderate, and weak, respectively. The criteria described by Cohen (1988) states that R^2 value of 0.26 or more is considered as substantial, 0.13 as moderate, and 0.02 as weak. Coefficient of determination or R^2 is used to evaluate the predictive accuracy of the model (Hair et al., 2013). According to suggestion of Hair et al. (2010) R^2 determines the combined effect of the exogenous variables on the endogenous variable. The value of effect size ranges between 0 and 1. The two minimum acceptable criteria for assessing R^2 or the coefficient of determination are Hair et al. (2013) as well as Cohen (1988). Table states the difference between the two.

This particular research followed Cohen (1988), according to which the coefficient of determination is substantial. The results of PLS algorithm explains endogenous variable accounts for 59.7% of the total variance explained which is pretty fine value practically. Table below shows the results of R^2 and adjusted R^2.

Table7

R Square of Endogenous Variable

	R Square	*R* Square Adjusted
Career Orientation	0.60	0.59

Path Coefficients and Significance Test

According to Hair et al. (2011), the significance level, path coefficients and the t-values are utilized for testing of hypotheses. The path coefficients are standardized beta values. The values of coefficients range from +1 to -1. The strong positive relationship is signified by the values which are closer to +1 and a strong negative relation is depicted by the values which are closer to negative 1 (Henseler et al., 2009). When the signs of the path coefficients are opposite to the hypothesized direction, the hypothesis is considered to be not supported. As per Hair et al. (2013), the paths which are empirical supported exhibit the sign which is inline with the hypothesized direction. The researcher initially runs PLS algorithm to obtain the path coefficients and afterwards bootstrapping is done on structural model in order to test the hypotheses. Table below shows the path coefficient and significance levels of the constructs under investigation.

Table 8

t-Value Criteria

t-value criteria	Results based on Chin criteria
T-value less than 1.64	Rejected
From 1.65 to 1.95, with *p*-value from 0.05 to0.10	Accepted with weak evidence
From 1.96 to 2.58, with *p*-value from 0.1 to 0.05	Accepted with significant relationship
Above 2.58, with *p*-value of 01% and below	Accepted with strong significance

The table above shows the criteria for the acceptance and rejection of hypotheses.

Hypotheses Testing (Direct Paths)

Primarily, the function of algorithm was applied to produce the path coefficients. The sample size selected while running Smart PLS must be greater than the actual sample size which a condition is recommended by Hair et al. (2013).

Table 9 shows the summary of all the main hypotheses which are direct in nature. The following hypothesized relationships were examined in the study. The study hypothesizes that mindfulness has a significant impact on career orientation of university students. The bootstrapping results also

show that (β= 0.122, t= 2.864, p= 0.004). The results (β= 0.216, t= 4.568, p= 0.000) indicate a significant relationship between coping strategies and career orientation. The third hypothesis of the study posits that self-regulation has a positively significant impact on student career orientation. Bootstrapping results provides support to the hypothesis (β= 0.319, t= 6.028, p= 0.040).

Table 9

Path Coefficients of Direct Paths

Relationship	Hypothesis	Coeff.	t	p	Decision
Career Self-Management -> Career Orientation	H1	0.283	5.641	0.000	Accepted
Coping Strategies -> Career Orientation	H2	0.216	4.568	0.000	Accepted
Mindfulness -> Career Orientation	H1	0.122	2.864	0.004	Accepted
Self-Regulation -> Career Orientation	H3	0.319	6.028	0.000	Accepted

The Interaction Effects (Indirect Paths)

The variable which interacts with the predictor variable to elucidate the criterion variable is called as moderator variable (Baron & Kenny, 1986).

Table 10

Interaction Path Coefficients and Significance Level

Moderating Relationship	Hypothesis	Coeff.	t	p	Decision
CS*Career Self-Management -> Career Orientation	H5	-0.100	2.413	0.02	Accepted
MFL* Career self-management -> Career Orientation	H4	0.020	0.444	0.66	Rejected
SR*Career Self-Management -> Career Orientation	H6	0.050	1.319	0.19	Rejected

Table 10 shows that that mindfulness has no significant impact on career self-management of university students. The bootstrapping results also show that (β= 0.020, t= 0.444, p= 0.657). The results (β= 0.100, t= 2.413, p= 0.016) indicate that a significant relationship exists between coping

strategies and career self-management of university students. Hypothesis of the study states that self-regulation has no significant impact on student career self-management. Bootstrapping results provides support to the hypothesis ($\beta= 0.050$, $t= 1.319$, $p= 0.187$).

Figure 3
Measurement Model
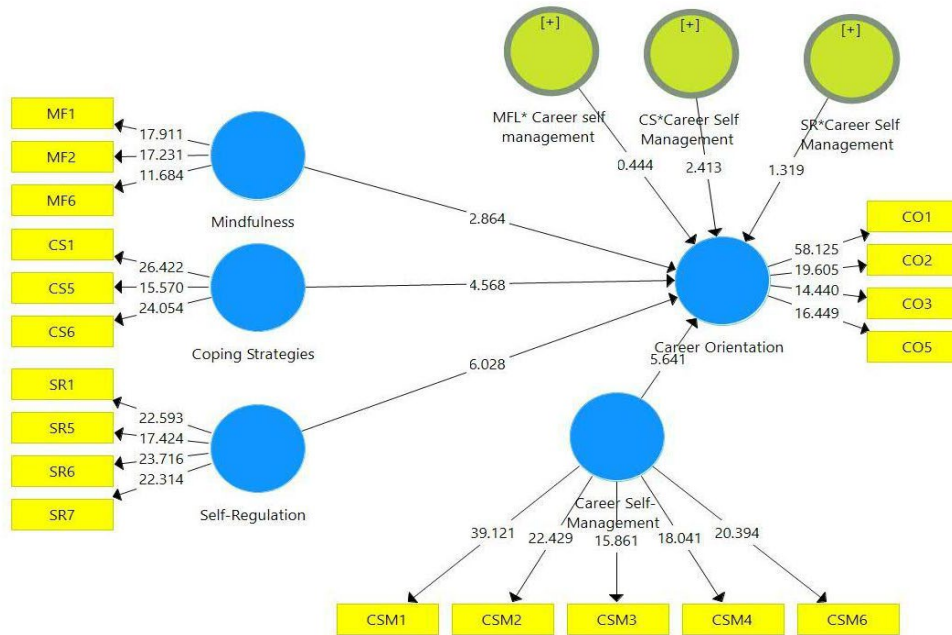
Discussion

The current study aimed to explore the relationships between mindfulness, coping strategies, self-regulation and career orientation among university students. Different statistical analyses were done to assess the data from a statistical standpoint as per the set objectives of the study. Furthermore, this particular study implants structural equation modelling (SEM) for hypothesis testing. Two most popular approaches in SEM are covariance-based approach and variance-based approach.

The First objective of the study was to examine the relationship between mindfulness and career orientation in university students. The first research objective under the main objective was to determine the impact of mindfulness on students. To achieve this objective, the first hypothesis (H1)

was formulated. Mindfulness was taken as an independent variable and career orientation was taken as a dependent variable. The first hypothesis was accepted using PLS bootstrapping technique. It has been hypothesized in the study that Mindfulness has a significant impact on career orientation of university students and bootstrapping results endorsed this. Mindfulness is a mental practice for balancing attention with the aim of enhancing mental health and now it has become popular in many universities and in different institutions (Galante et al., 2018).

The second objective of the study is to examine the relationship between coping strategies and career orientation in university students. The second research objective under the main objective was to determine the impact of coping strategies on university students. The results of the second hypothesis of the study indicate that a significant relationship exists between coping strategies and career orientation. The hypothesis was accepted. The positively significant relationship possibly emerges from the fact that coping strategies is becoming health conscious, for university students. It was also predicted that goal reengagement abilities are linked to effective coping (Wrosch et al., 2011).

The third objective of the study is to examine the relationship between self-regulation and career orientation in university students. The third research objective under the main objective was to determine the impact of self- regulation on university students. The third hypothesis posits that self-regulation has a positively significant impact on student career orientation. Bootstrapping results provide support to the hypothesis. Moreover, university students consider goals as essential aspect of their self-definition, as self-relevant goals help structure their daily lives according to their preferences (Wrosch et al., 2003).

Hypothesis four posited that career self-management moderates the relationship between mindfulness and career orientation. However, this hypothesis was not supported by the data. The absence of the moderating relationship signifies that variation in the levels of mindfulness related to career orientation does not pave into any momentous change in university student career orientation. It has been hypothesized in the study that mindfulness has no significant impact on career self-management of university students. This outcome is in line with results of Talat et al. (2016) but contrary to the findings of Bialkova et al. (2016).

The next hypothesis posited that the relationship between coping strategies and career orientation is moderated by career self-management. This hypothesis was supported by the data. The results indicate that a significant relationship exists between coping strategies and career self-management of university students. Career orientation influences how people perceive and react to changes in their careers (Creed & Patton, 2023)

Last but not the least, Hypothesis six asserted a moderating impact of career self-management on the relationship between self-regulation and career orientation. However, this hypothesis was not supported by the data. The absence of the moderating relationship signifies that variation in the levels of self-regulation related to career orientation does not pave into any momentous change in university student career orientation.

Conclusion

The current study provided insights into how students employed coping strategies, mindfulness and self-regulation when they confronted by any challenges. Additionally, it explored how these factors enabled students to disengage from or reengage with unattainable career goals. Furthermore, previous research has been conducted in the context of psychology regarding these variables, mindfulness, coping strategies and self-regulation but this study introduced these psychological aspects in the light of public policy using "collective action theory" and "common pool resource". This study also investigated the abiding relationships between mindfulness, coping strategies and self-regulation by also looking at its impact on students' successful career orientation.

Based on the findings, it can be inferred that mindfulness has a negative relationship with career orientation when moderated by career self-management. However, it had a positive relationship with coping mechanisms. Furthermore, the study suggests that self-regulation has no significant impact on student career self-management. Demographic characteristics such as age, gender, and education did not significantly influence career orientation.

Implications of Current Research

The study offers several significant insights and implications. This research provides valuable additions to the existing literature and lead to design better interventions and management programs. The link between mindfulness, coping strategies, self-regulation and career orientation, in the

context of career self-management as a moderating variable may provide counselors and educators the enhanced information on how coping strategies can make way for appropriate goal setting, goal pursuance, and goal accomplishment among students. This research can also help the educational institutions to understand the importance of coping strategies practices and techniques that should be implemented and practiced at educational institutions. By implementing practices that enhance students' well-being and their ability to handle challenges, educational institutions can help students develop positive coping mechanisms and improve their situational awareness.

Theoretical Contribution

By providing a comprehensive framework that incorporates instruments for personal improvement with a focus on career self-management, this study broadens the existing knowledge on career development. Through the integration of these components into academic environments, instructors and career counselors may proficiently assist learners in cultivating a strong career focus that promotes sustained achievement and satisfaction.

Methodological Contribution

This work has contributed slight to methodological research in addition to theory. First off, this study uses careful sampling procedures. Second, while valid measurements were adopted/adapted from a variety of sources, the research was done in various locations. In such cases, it is critical to show validity and dependability. This study conducted a complete set of statistical computations to prove the validity and trustworthiness of Pakistani universities. This research now offers, a valid and reliable instrument for Pakistani as well as global researchers who are enthusiastic to investigate the use of personal growth tools to improve university students' career orientation; the moderating effect of career self-management

Limitations

As with any scientific study, this research has several limitations that should be considered when interpreting the results:

- The current study solely looked at the city residents, while rural residents were completely overlooked, limiting the scope of the current research.

- The data was collected through self-report measures only. So, the data obtained could not be cross-validated. Further research can be done by utilizing more measurement techniques to increase the validity of the collected data.

- In the current study, the quantitative method was used to evaluate the variables that might have bounded the reactions and responses of respondents. Furthermore, future research may also use qualitative methods or a mixed method approach; instead of quantitative methods to study the relationship between selected variables.

Conflict of Interest

The authors of the manuscript have no financial or non-financial conflict of interest in the subject matter or materials discussed in this manuscript.

Data Availability Statement

The data associated with this study is not available due to ethical restrictions, however, data will be provided by the corresponding author upon request.

References

Akün, C., Işık, E., & Savickas, M. (2023). Examining differentiation of self within career construction model of adaptation. *Journal of Career Development*, *50*(1), 135–149. https://doi.org/10.1177/08948453211070027

Algorani, E. B., & Gupta, V. (2020). *Coping mechanisms*. StatPearls Publishing.

Allard, M. (2007). The impact of self-regulation on psychological well-being: A meta-analysis. *Journal of Applied Psychology*, *92*(4), 978–988. https://doi.org/10.1037/0021-9010.92.4.978

Almalki, M. (2016). Integrating quantitative and qualitative methods in mixed methods research. *Journal of Education and Learning*, *5*(3), 10–19. https://doi.org/10.5539/jel.v5n3p10

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social*

Psychology, *51*(6), 1173–1182. https://doi.org/10.1037/0022-3514.51.6.1173

Bialkova, S., van Trijp, H. C. M., & van der Lans, I. (2016). The effect of visual product characteristics on consumer decision-making. *Appetite*, *101*, 57–66. https://doi.org/10.1016/j.appet.2016.02.020

Brandtstadter, J., & Renner, G. (1990). Tenacious goal pursuit and flexible goal adjustment: Explication and age-related analysis of assimilative and accommodative strategies of coping. *Psychology and Aging*, *5*, 58–67. https://doi.org/10.1037//0882-7974.5.1.58

Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology*, *84*(4), 822–848. https://doi.org/10.1037/0022-3514.84.4.822

Brown, S. D., Miller, S. C., & Lawendowski, L. A. (1999). The role of self-regulation in career development and adjustment. *Journal of Career Assessment*, *7*(2), 184–201. https://doi.org/10.1177/106907279900700205

Caprara, G. V., & Steca, P. (2006). The contribution of self–regulatory efficacy beliefs in managing affect and family relationships to positive thinking and hedonic balance. *Journal of Social and Clinical Psychology*, *25*(6), 603–627. https://doi.org/10.1521/jscp.2006.25.6.603

Chin, W. W. (2010). How to write up and report PLS analyses. In V. E. Vinzi, W. W. Chin, J. Henseler & H. Wang (Eds.), *Handbook of partial least squares: Concepts, methods, and applications* (pp. 655–690). Springer. https://doi.org/10.1007/978-3-540-32827-8_29

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Lawrence Erlbaum Associates.

Compas, B. E., Connor-Smith, J. K., Saltzman, H., Thomsen, A. H., & Wadsworth, M. E. (2001). Coping with stress during childhood and adolescence: Problems, progress, and potential in theory and research. *Psychological Bulletin*, *127*, 87–127. http://doi.org/10.1037/0033-2909.127.1.87

Crane, C., Jandric, D., Barnhofer, T., & Williams, J. M. G. (2010). Dispositional mindfulness, meditation, and conditional goal setting. *Mindfulness*, *1*(4), 204–214. https://doi.org/10.1007/s12671-010-0029-y

Creed, P. A., & Patton, W. (2023). Career adaptability and career orientation: Exploring the connections. *Journal of Vocational Behavior*, *136*, 78–92. https://doi.org/10.1016/j.jvb.2024.01.005

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approach* (4th ed.). Sage Publications.

DeNisi, A. S., & Kluger, A. N. (2000). Feedback effectiveness: Can 360-degree appraisals be improved? *Academy of Management Perspectives*, *14*(1), 129–139. https://doi.org/10.5465/ame.2000.2909845

Duckworth, A. L., Quinn, P. D., & Seligman, M. E. P. (2023). Positive predictors of career success: The role of self-regulation. *Journal of Applied Psychology*, *108*(1), 123–136. https://doi.org/10.1037/apl0000928

Evans, D., Borriello, G. A., & Field, A. P. (2018). A review of the academic and psychological impact of the transition to secondary education. *Frontiers in Psychology*, *29*(9), 1482–1494. https://doi.org/10.3389/fpsyg.2018.01482

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, *18*(1), 39–50. https://doi.org/10.1177/002224378101800104

Galante, J., Dufour, G., Vainre, M., Wagner, A. P., Stochl, J., Benton, A., Lathia, N., Howarth, E., & Jones, P. B. (2018). A mindfulness-based intervention to increase resilience to stress in university students (the mindful student study): A pragmatic randomized controlled trial. *The Lancet Public Health, 3*(2), e72–e81. https://doi.org/10.1016/S2468-2667(17)30231-1.

Gestsdottir, S., Bowers, E., von Eye, A., Napolitano, C. M., & Lerner, R. M. (2010). Intentional self regulation in middle adolescence: The emerging role of loss-based selection in positive youth

development. *Journal of Youth and Adolescence*, *39*, 764–782. https://doi.org/10.1007/s10964-010-9537-2

Greenhaus, J. H., & Allen, T. D. (2023). The relationship between self-regulation and work-life balance: Implications for career satisfaction. *Journal of Management*, *49*(4), 764–780. https://doi.org/10.1177/0149206322111956

Greenhaus, J. H., & Allen, T. D. (2024). Work-life balance, career orientation, and self-regulation. *Journal of Management*, *50*(1), 45–63. https://doi.org/10.1177/0149206322111956

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2010). *Multivariate data analysis* (7th ed.). Pearson Education.

Hair, J. F., Gabriel, M., & Patel, V. (2014). AMOS covariance-based structural equation modeling (CB-SEM): Guidelines on its application as a marketing research tool. *Brazilian Journal of Marketing*, *13*(2), 44–55. https://doi.org/10.5585/remark.v13i2.2718

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing theory and Practice*, *19*(2), 139–152. https://doi.org/10.2753/MTP1069-6679190202

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2013). Partial least squares structural equation modeling: Rigorous applications, better results and higher acceptance. *Long Range Planning*, *46*(1–2), 1–12. https://doi.org/10.1016/j.lrp.2013.01.001

Hatim, M., Tasleem, Z., & Nadeem, M. (2022). The Influence of education and health on rural household poverty: A moderating role of culture in Punjab, Pakistan. *Bulletin of Business and Economics (BBE)*, *11*(2), 120–133.

Hayes, S. C., & Kelly G. W. (2003). Mindfulness: Method and process. *Clinical Psychology: Science and Practice*, *10*(2), 161–65. https://doi.org/10.1093/clipsy. bpg018

Henseler, J., & Chin, W. W. (2010). A comparison of approaches for the analysis of interaction effects between latent variables using partial least squares path modeling. *Structural Equation Modeling*, *17*(1), 82–109. https://doi.org/10.1080/10705510903439003

Heslin, P. A. (2024). The role of self-regulation in professional development and career advancement. *Journal of Vocational Behavior*, *84*(3), 487–501.

Hirschi, A. (2012). The role of career self-management in the career development of individuals. *Career Development Quarterly*, *60*(3), 261–275. https://doi.org/10.1002/j.2161-0045.2012.00012.x

Holzel, B. K., Carmody, J., Vangel, M., Congleton, C., Yerramsetti, S. M., & Gard, T. (2011). Mindfulness practice leads to increases in regional brain gray matter density. *Psychiatry Research: Neuroimaging*, *191*(1), 36–43. https://doi.org/10.1016/j.pscychresns.2010.08.006

House, A. E. (2017). *Embodyness: A mindfulness-based program for fostering positive embodiment and subjective well-being in women with non-clinical body image concerns* (Publication no. 10823131) [Doctoral dissertation, The Chicago School of Professional Psychology]. ProQuest Dissertations & Theses.

Johnson, M. L., & Nussbaum, E. M. (2012). Achievement goals and coping strategies: Identifying the traditional/nontraditional students who use them. *Journal of College Student Development*, *53*(1), 41–54. https://doi.org/10.1353/csd.2012.0002

Kabat-Zinn, J. (2003). Mindfulness-based stress reduction (MBSR). *Constructivism in the Human Sciences*, *8*(2), 73–107.

Kerlinger, F. N., & Lee, H. B. (2000). *Foundations of behavioral research* (4th ed.). Harcourt College Publishers.

Kerrigan, D., Grieb, S. M., Ellen, J., & Sibinga, E. (2018). Exploring the dynamics of ART adherence in the context of a mindfulness instruction intervention among youth living with HIV in Baltimore, Maryland. *AIDS Care*, *30*(11), 1400–1405. https://doi.org/10.1080/09540121.2018.1492699

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, *30*(3), 607–610. https://doi.org/10.1177/001316447003000308

Kroger, J., Koopmann, B., Stierand, I., & Fränzle, M. (2024). Contract-based specification of mode-dependent timing behavior. *Innovations in*

Systems and Software Engineering, *20*(1), 31–47. https://doi.org/10.1007/s11334-023-00531-4

Latham, G. P., Chen, X., Piccolo, R. F., & Itzchakov, G. (2023). An updated meta-analysis of the primed goal-organizational behavior relationship. *Royal Society Open Science*, *10*(4), Article e221494. https://doi.org/10.1098/rsos.221494

Lent, R. W., Brown, S. D., & Hackett, G. (2002). Social cognitive career theory. *Career Choice and Development*, *4*(1), 255–311.

Mahlo, L., & Windsor, T. D. (2020). Older and more mindful? Age differences in mindfulness components and well-being. *Aging & Mental Health*, *25*(7), 1–12. https://doi.org/10.1080/13607863.2020.1734915

Nesse, R. M. (2000). Is depression an adaptation? *Archives of General Psychiatry*, *57*(2), 14–20.

Niles, S. G. (2014). Training career practitioners: Opportunities and challenges. In G. Arulmani, A. J. Bakshi, F. T. L. Leong & A. G. Watts (Eds.), *Handbook of career development: International perspectives*. Springer

O'Connor, R., & Forgan, G. (2007). Suicidal thinking and perfectionism: The role of goal adjustment and behavioral inhibition/activation systems (BIS/BAS). *Journal of Rational-Emotive and Cognitive-Behavior Therapy*, *25*(2), 321–341. https://doi.org/10.1007/s10942-007-0057-2.

Palmer, A., & Rodger, S. (2009). Mindfulness, stress, and coping among university students. *Canadian Journal of Counselling and Psychotherapy*, *43*(3), 34–45.

Pidgeon, A. M., & Pickett, L. (2017). Examining the differences between university students' levels of resilience on mindfulness, psychological distress and coping strategies. *European Scientific Journal*, *13*(12), 103–113. https://doi.org/10.19044/esj.2017.v13n12p%25p

Pintrich, P. R. (2000). The role of goal orientation in self-regulated learning. In M. Boekaerts, P. R. Pintrich & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 451–502). Academic Press. https://doi.org/10.1016/B978-012109890-2/50043-3

Porein, M. (2018, May 28). *9 common problems students face during university life*. Youth Incorporated. https://youthincmag.com/9-common-problems-students-face-during-university-life.

Savickas, M. L. (2002). Career construction: A development theory of vocational behavior. In D. Brown (Ed.), *Career choice and development* (pp. 149–205). John Wiley & Sons.

Schonert-Reichl, K. A., & Lawlor, M. S. (2010). The effects of a mindfulness-based education program on pre-and early adolescents' well-being and social and emotional competence. *Mindfulness*, *1*(3), 137–151. https://doi.org/10.1007/s12671-010-0011-8

Schultz, D. (2019). *Effect of Mindfulness on gratitude and psychological wellbeing*. [Doctoral dissertations, The University of Southern Mississippi]. Aquila Dissertations. https://aquila.usm.edu/dissertations/1704

Symth, A., Werner, K., Milyavskaya, M., Holding, A., &Koestner, R. (2020). Do mindful people set better goals? Investigating the relation between trait mindfulness, self-concordance, and goal progress. *Journal of Research in Personality*, *88*(1), 2–15. https://doi.org/10.1016/j.jrp.2020.104015

Talat, M. A., & El Shahat, E. (2016). Prevalence of overweight and obesity among preparatory school adolescents in Urban Sharkia Governorate, Egypt. *Egyptian Pediatric Association Gazette*, *64*(1), 20–25. https://doi.org/10.1016/j.epag.2015.11.004

Tasleem, S., Masud, S., Habib, S. S., Naz, S., Fazio, F., Aslam, M., Ullah, M., & Attaullah, S. (2023). Investigation of the incidence of heavy metals contamination in commonly used fertilizers applied to vegetables, fish ponds, and human health risk assessments. *Environmental Science and Pollution Research*, *30*(45), 100646–100659. https://doi.org/10.1007/s11356-023-29480-y

Vohs, K. D., & Baumeister, R. F. (2004). Understanding self-regulation. In R. F. Baumeister & K. D. Vohs (Eds.), *Handbook of self-regulation* (pp. 1–13). The Guilford Press.

Wrosch, C., & Sabiston, C. M. (2013). Goal adjustment, physical and sedentary activity, and well-being and health among breast cancer

survivors. *Psycho-Oncology*, *22*(3), 581–589. https://doi.org/10.1002/pon.3037

Wrosch, C., Amir, E., & Miller, G. E. (2011). Goal adjustment capacities, coping, and subjective well-being: The sample case of caregiving for a family member with mental illness. *Journal of Personality and Social Psychology*, *100*(5), 934–946. https://doi.org/10.1037/a0022873

Wrosch, C., Miller, G. E., Scheier, M. F., & De Pontet, S. B. (2007). Giving up on unattainable goals: Benefits for health? *Personality and Social Psychology Bulletin*, *33*(2), 251–265. https://doi.org/10.1177/0146167206294905

Wrosch, C., Scheier, M. F., Carver, C. S., & Schulz, R. (2003). The importance of goal disengagement in adaptive self-regulation: When giving up is beneficial. *Self and Identity*, *2*(1), 1–20. https://doi.org/10.1080/15298860309021

Zhang, A., Hu, R., Wang, K., & Antalis, E. P. (2020). Age moderates the association between psychological distress and engagement in mindfulness among cancer patients and survivors: A population-based study. *Journal of Psychosocial Oncology*, *38*(5), 513–526. https://doi.org/10.1080/07347332.2020.1764158

Zimmerman, B. J. (2002). Becoming a self-regulated learner: Possible selves and self-regulation. *Contemporary Educational Psychology*, *27*(1), 30–47. https://doi.org/10.1006/ceps.2001.1098