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Effect of career adaptability on flourishing among Pakistani university undergraduates: Mediating role of study engagement

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ABSTRACT. Il presente studio mira a capire se gli studenti universitari che sono più adattabili in termini di aspirazioni e obiettivi di carriera hanno maggiori probabilità di affermarsi nella loro vita accademica e personale e se questa relazione è influenzata dal loro livello di impegno nei loro studi. Basandosi su un campione mirato di 300 studenti universitari in varie università pubbliche nella provincia del Punjab in Pakistan, lo studio ha utilizzato il *Career Adapt-Abilities Short Form Questionnaire* (Maggiori, Rossier & Savickas, 2015), l'*Utrecht Study Engagement Scale* (Sui et al., 2014) e la *Flourishing Scale* (Diener, Napa Scollon & Lucas, 2009) da cui sono emersi effetti diretti positivi tra adattabilità alla carriera e impegno nello studio. Questa ricerca può fornire spunti di approfondimenti su come l'adattabilità alla carriera e l'impegno nello studio contribuiscano allo sviluppo di interventi per sostenere le attività accademiche e di carriera degli studenti.

SUMMARY. University students are at a critical stage of personal and professional development. Understanding the factors that contribute to their academic success and well-being can inform effective interventions and policies. The present study aims to understand whether students who are more adaptable in terms of their career aspirations and goals are more likely to flourish in their academic and personal lives and whether this relationship is influenced by their level of engagement in their studies. Thus, we hypothesized that study engagement plays a mediating role between career adaptability and flourishing. This study was based on a purposive sample of 300 undergraduate students at various public sector universities in the Punjab province in Pakistan. The study employed a cross-sectional survey design and used the Career Adapt-Abilities Short Form Questionnaire (Maggiori, Rossier & Savickas, 2015), the Utrecht Study Engagement Scale (Sui et al., 2014), and the Flourishing Scale (Diener, Napa Scollon & Lucas, 2009) to operationalize the focal constructs. Structured equation modeling indicated that after controlling for age, gender, and family background; career adaptability and study engagement had positive direct effects on flourishing, and career adaptability had positive direct effect on study engagement. Moreover, career adaptability had a significant positive indirect effect on flourishing through study engagement, indicating that career adaptability led to enhanced study engagement, resulting in improved flourishing. This study can provide insights into how career adaptability and study engagement influence flourishing and contribute to the development of interventions to support student's academic and career pursuits.

Keywords: *Study engagement, Career adaptability, Flourishing, University students*

INTRODUCTION

To successfully adapt to changes in the workplace, employees must improve their self-directed career management (SDCM) in terms of flexible self-management and adaptability (Sullivan, Carden & Martin, 1998). In line with this trend, there has been a significant increase in theoretical and empirical studies in the career literature. Entrenched in Super's (1951, 1990) developmental theory of career choice, career construct theory (CCT; Savickas, 2005) is one of the most influential recent theoretical approaches to career and work. CCT provides a way of thinking about how individuals choose and use their work. The theory presents a model for comprehending vocational behavior across the life cycle as well as the methods and materials that career counselors use to help clients make vocational choices and maintain successful and satisfying work lives. It seeks to be comprehensive in its purview by taking three perspectives on vocational behavior: differential, developmental, and dynamic.

From the perspective of individual differences in psychology, it examines the content of vocational personality types and what people prefer to do. Professional skills, values, interests, and needs shape vocational personalities (Savickas, 2005). It is based on a career guidance paradigm in which composition, career paths that individuals choose, and individual values are interrelated. People's images of themselves are formed as they fall into certain occupational categories (Savickas, 2011). CCT argues that occupational interests and related career characteristics should not be viewed as categories but as strategies for adapting to transitions and reflecting socially constructed meanings (Savickas, 2005).

From the perspective of developmental psychology, it examines the process of career adaptability to explain how individuals cope with vocational development tasks, occupational transitions, and work trauma. Career adaptability involves assessing an individual's developmental level, making one familiar with developmental challenges, and providing the behaviors and skills necessary for specialization (Savickas, 2011). Concern, control, curiosity, and confidence are the four dimensions of adaptability (Savickas, 2005). Adaptable individuals: (a) consider the future, (b) control the future, (c) see and be curious about their future self and goals, and (d) are confident in pursuing their goals (Savickas & Porfeli, 2012).

From the perspective of narrative psychology, it examines the dynamics by which life themes impose meaning on vocational behavior, and why individuals fit work into their lives in distinct ways. According to CCT, life themes address working life and examine why people practice their profession. Career development stories demonstrate how individuals use themes to make meaningful career decisions. Life themes refer to activities that promote self-creation, identity formation, and career structure through life-form paradigms (Savickas, 2011).

In coordination, the three perspectives (vocational personality types, life themes, and career adaptability) enable counselors and researchers to survey how individuals construct their careers by using life themes to integrate the self-organization of personality and self-extension of career adaptability into a self-defining whole that animates work, directs occupational choice, and shapes vocational adjustment. CCT promotes skill development across different life stages and empowers individuals to accomplish career-related tasks (Savickas, 2005).

Higher education institutions can use CCT to support students in their career development by providing opportunities for them to explore their interests, values, and skills and to make informed career decisions based on their unique career construction. This can be achieved through career counseling, mentorship programs, and experiential learning opportunities such as internships and volunteer work. Furthermore, higher education institutions can create an environment that fosters career adaptability, which is a central construct in CCT. This can be achieved by providing students with the necessary knowledge, skills, and resources to manage their careers proactively, adapt to changing circumstances, and pursue meaningful and fulfilling careers. Institutions can also encourage students to reflect on their career construction and experiences to develop a more coherent and intentional career narrative. By applying CCT to the context of higher education, institutions can support students in their career development and enhance their well-being.

Career adaptability

The idea of career adaptability is at the heart of the career construction theory. A professional's adaptive capacity is influenced by self-regulation and psychological resources to

adapt and achieve adaptive goals. Career adaptability involves four basic elements as a multidimensional structure: concern, control, curiosity, and confidence, commonly known as the 4Cs (Savickas & Porfeli, 2012). Concerns include a focus on the future and a bright and hopeful outlook for the future (Savickas, 2005; Savickas et al., 2009; Savickas & Porfeli, 2012). This essentially means a future direction, a sense that it is important to prepare for the future (Savickas, 2013). Control emphasizes the need to take responsibility for building and shaping the professional future. It focuses on intrinsic self-discipline and processes of conscious, organized, and conscientious behavior and awareness of professional tasks and transitions. Control guides individuals to engage in career development tasks rather than avoiding career transitions (Savickas, 2013). Curiosity plays a central role in career development, with both exploratory and information-seeking behaviors as its main components, and self-knowledge and career information as direct consequences (Savickas, 2013). Those who demonstrate career curiosity explore their strengths and compatibility with the fields they seek (Savickas, 2013). Confidence refers to a sense of self-efficacy in one's ability to take the actions necessary to make and carry out appropriate educational and professional decisions. It is related to an individual's effectiveness in achieving their career aspirations, decisions, and goals, even in the context of limitations, problems, and obstacles (Savickas, 2005; Savickas et al., 2009; Savickas & Porfeli, 2012).

A person's occupational adaptability is related to current and anticipated employment challenges or transitions and the ability to cope with work-related traumas that have some impact on social cohesion (Savickas, 1997). Career adaptability resources are qualities or self-regulatory skills that individuals can rely on to resolve unexpected, complex, and uncertain situations due to stress, job changes, and trauma (Savickas et al., 2012).

Study engagement

Study engagement has been based on work engagement. Work engagement can be defined as "a person's state of mind toward positivity and work fulfillment, characterized by vigor, dedication, and absorption" (Schaufeli & Bakker, 2004, p. 295). Salanova and colleagues (Salanova, Schaufeli, Martinez & Breso, 2010) showed that there are core student activities that can be considered work. A student's main activity is attending lectures or working on and completing homework. Additionally, students may have specific academic goals to which they aspire. These goals may vary, such as the completion of courses and achievement of academic grades or degrees. Thus, in this study, engagement in learning was understood as a fulfilling and positive state that includes dedication, power, and immersion in an educational context.

A blend of involvement, interest, and focus on the learning process can represent student engagement. Despite these challenges, vigor is the driving force that motivates students to achieve their academic goals by investing a tremendous amount of perseverance, determination, and perseverance (Carmen et al., 2018). Students' dedication to learning is reflected in their excitement, inspiration, importance, challenge, pride, and relevance in study-related activities and their perception of these activities as meaningful to them (Carmen et al., 2018; Ouweneel, Le Blanc & Schaufeli, 2014; Salmela-Aro & Upadyaya, 2014; Upadyaya & Salmela-Aro, 2013). The characteristic of absorption is that time flies when one is completely focused on one's studies and enjoys doing so. Enthusiastic students are energetic and passionate about their studies. In addition, their studies are often so intensive that they lose track of time (Bakker & Demerouti, 2008). When one is completely immersed in one's studies, time flies by, and one is more likely to be unable to separate one activity from another (Isabel et al., 2019).

Career adaptability and study engagement

Career adaptability can lead to better study engagement among university students because it promotes a proactive and forward-thinking approach to career development. Students who are more adaptable to their career plans tend to be more open to exploring new opportunities, taking risks, and being flexible in their career goals (Savickas, 2011). These attitudes can also translate into a more engaged and proactive approach to academic study. For example, students who have developed career adaptability skills may be more likely to engage in extracurricular activities, internships, or volunteer work, which can provide them with a range of experiences and skills that can be applied to their academic studies. They may also be more likely to seek out and take advantage of opportunities for mentorship, career counseling, or academic advice, which can further support their academic success.

Moreover, students who have developed career adaptability skills may have a clearer understanding of their career goals and aspirations, which can help increase their motivation and engagement in academic studies. By linking their academic pursuits to their long-term career goals, they may be more invested in their studies and more willing to invest the time and effort needed to achieve their academic and career aspirations.

Merino-Tejedor and colleagues (Merino-Tejedor, Hontangas & Boada-Grau, 2016) investigated the relationships between career adaptability and self-regulation, career construction, and academic engagement among Spanish university students. The findings suggest that career adaptability is positively related to self-regulation and academic engagement and that self-regulation partially mediates the relationship between career adaptability and academic engagement. Similarly, Paradnikė and Bandzevičienė (2016) found that career adaptability was positively related to study engagement and that this relationship was partially mediated by personal resources, such as self-efficacy and academic motivation, among Lithuanian university students. Overall, these studies suggest that developing career adaptability skills may be beneficial in promoting greater self-regulation and academic engagement among university students, which can lead to greater academic success.

Flourishing

Flourishing is a multidimensional concept that has been extensively studied in positive psychology. Researchers have proposed different definitions and conceptualizations of flourishing, but most agree that it involves the presence of positive emotions, engagement, positive relationships, meaning, purpose, and accomplishment (Diener et al., 2010). An influential model of flourishing is the PERMA model proposed by Seligman (2011). The PERMA model includes five key elements that contribute to flourishing: positive emotions, engagement, relationships, meaning, and accomplishments. According to Seligman, individuals with high levels of each of these elements are more likely to experience a sense of well-being and optimal functioning in their lives.

Other researchers have proposed similar conceptualizations of flourishing. For example, Keyes (2002) proposed a model of mental health that includes both the absence of mental illness (negative affect) and the presence of positive indicators of well-being such as positive emotions, positive relationships, and a sense of meaning and purpose in life. Huppert and So (2013) also proposed a model of flourishing that includes three components: feeling good (positive affect), functioning well (positive psychological functioning), and doing good (positive social functioning). Diener and colleagues (2010) assert that flourishing involves positive social relationships which means that people have supportive and rewarding relationships in their lives and they are contributing to the happiness of others. Thus, flourishing reflects a high degree of positive affect, life satisfaction, autonomy, competence, positive social relationships, and meaning in life and encompasses both subjective and psychological well-being.

Research has shown that flourishing individuals have higher levels of life satisfaction, positive affect, and overall well-being (Diener et al., 2010). Flourishing has also been associated with a range of positive outcomes such as better physical health, greater resilience, and higher levels of academic and work performance (Huppert & So, 2013; Ryan & Deci, 2001).

Flourishing is highly relevant to university students because they are at a critical stage in their personal and professional development. This is a time when individuals explore their identity, form relationships, and develop their skills and knowledge for future career paths. Flourishing can have important implications for academic success, personal well-being, and career prospects. Moreover, a university is an environment in which students are exposed to diverse experiences and opportunities that can shape their personal and professional aspirations. Developing a sense of purpose and meaning in life can help students make more informed decisions about their academic and career paths and can also motivate them to pursue goals that are aligned with their values and interests.

Mediating role of study engagement between career adaptability and flourishing

A possible link between subjective well-being (flourishing) and career adaptability has been found in theoretical literature (Konstam, Celen-Demirtas, Tomek

& Sweeney, 2015). Savickas's career construction theory (2005, 2013) attempts to explain how personal objectives are connected to subjective well-being and how work may contribute to fulfillment and pleasure in general life. Quantitative studies have shown that career adaptability and well-being are positively correlated. In longitudinal research involving 330 Swiss teens, career adaptability predicted life contentment over time (Hirschi, 2009). Another study found that all four components of career adaptability predicted satisfaction and subjective well-being in a sample of 2800 French- and German-speaking adults living in Switzerland (Maggiore et al., 2015). Brown and colleagues (Brown, Bimrose, Barnes & Hughes, 2012) and Rossier and colleagues (Rossier, Zecca, Stauffer, Maggiori & Dauwalder, 2012) found that career adaptability not only had a beneficial influence on work-related well-being but also improved psychological well-being.

Despite these positive results, it remains unclear why this relationship exists between career adaptability and well-being. Buyukgoze and colleagues (2015) noted that the literature investigated the association between career adaptability and well-being but did not consider why such associations exist. This study intends to fill this gap in the empirical literature by proposing study engagement as the missing link between career adaptability and well-being.

Engagement and well-being can be seen as similar states representing the positive and malleable states of people that yield positive outcomes (Robbertson & Cooper, 2010). In a survey of 952 tertiary students in Australia, Bowden and colleagues (Bowden, Tickle & Naumann, 2019) found that student expectations, interest, and commitment played an important role in study engagement. Emotional engagement is the most important determinant of institutional reputation, well-being, and transformative learning. Behavioral engagement predicted self-efficacy and self-esteem. Well-being is central to learning. Numerous studies show that students' well-being, engagement, and academic success are closely intertwined (Heffner & Antaramian, 2016; Pipere & Mieriņa, 2017; Plominski & Burns, 2018). For instance, Boulton et al. (Boulton, Hughes, Kent, Smith & Williams, 2019) showed that personal well-being not only enhances academic performance but also improves attitudes, behavior, and engagement. Antaramian et al. (Antaramian, Huebner, Hills & Valois, 2010) found that individuals with high levels of engagement demonstrated high levels of flourishing, low psychopathology, and improved academic performance. Furthermore, cognitive and academic engagement in schools have been positively related to subjective well-being (Datu & King, 2018; Lewis, Huebner, Malone & Valois, 2011). In a recent study, Iqbal and colleagues (Iqbal, Hassan, Jadoon & Ehsen, 2021) showed a strong positive correlation between engagement and the well-being of students.

Evidence suggests that career adaptability can improve study engagement. A recent study by Magnano and colleagues (Magnano, Lodi, Zammitti & Patrizi, 2021) in a sample of 352 Italian college students of the last year examined the relationships between courage, career adaptability, and readiness to improve well-being. The findings showed that career adaptability had a positive direct effect and a positive indirect effect on well-being through courage. Similarly, Rossier and colleagues (2012) found that career adaptability remained a significant positive predictor of engagement even after controlling for the Big Five personality factors. Moreover, career adaptability is mediated by personality dimensions and engagement. In another study involving 672 undergraduate students from nine colleges and universities in Lithuania, Akkermans and colleagues (Akkermans, Paradniké, Van der Heijden & De Vos, 2018) showed that career adaptability and competencies were positively associated with students' life satisfaction. This relationship is both direct and indirect, with study engagement mediating the relationship between career resources and life satisfaction. Additionally, this study found that career resources were indirectly linked to academic performance through study engagement. In summary, this study concluded that career resources play a crucial role in promoting study engagement, life satisfaction, and academic performance among undergraduate students.

In university education, student engagement refers to the dedication of time, effort, and resources to activities that enhance learning. In addition to being a critical construct, it is one of the best measures of student learning, as it includes the dimensions of the self-set challenge, effort, interaction with academics and teaching institutions, participation in educational programs and extracurricular activities, and feelings of belonging and value (Devlin et al., 2008). Engagement in coursework is linked to persistence (Bridges, Cambridge, Kuh & Leegwater, 2005) and student satisfaction, both of which contribute to students' well-being (Kuh, Kinzie, Schuh & Whitt, 2005).

In light of the aforementioned literature, this study formulated the following hypotheses:

H1: Career adaptability will have a positive direct effect on flourishing;

H2: Career adaptability will have a positive direct effect on study engagement;

H3: Study engagement will have a positive direct effect on flourishing;

H4: Career adaptability will have a positive indirect effect on flourishing through study engagement.

METHOD

Sample

To determine the appropriate sample size, we conducted a power analysis using G*Power (version 3.0; Faul, Erdfelder, Buchner & Lang, 2008). The analysis indicated that for multiple regression involving three predictors, we may detect a small-to-medium effect size of Cohen's $f^2 = .07$, with a power of 95% and α of .05, in a sample of $N = 250$. To be more cautious methodologically, we recruited a purposive sample of $N = 300$ undergraduate students from various public sector universities of the Punjab province including the University of Sargodha, University of the Punjab Lahore, and Govt. College University Faisalabad. All participants were enrolled in BS programs of various departments/disciplines (3rd semester to 8th semester). The ages of the participants ranged from 18 to 25 years ($M = 20.71$, $SD = 1.80$). Boys constituted 46.7% and girls constituted approximately 53.3% of the whole sample. 67.3% of students belonged to the nuclear family system and 32.7% belonged to the joint family system. Of the participants, 57.3% had an urban background (belonging to Sargodha, Lahore, and Faisalabad cities) and 42.7% had a rural background (belonging to villages surrounding Sargodha, Lahore, and Faisalabad cities). The sample included 28% of students from the arts and social sciences and 72% from the sciences.

As per the inclusion criteria of the present study, regular full-time university undergraduate students enrolled in BS programs of various departments/disciplines studying in the third to eighth semesters within the age range of 18-25 years were eligible to participate in the study. Graduate, post-graduate, private, and part-time students; students age range 18-25 years, and students of BS programs in semester I or II were excluded from the present sample.

The researchers approached undergraduate students in lecture halls at different university campuses to recruit them for this study. The method of contact was face-to-face interaction. They were briefed on the scope and nature of the study. Rapport was built and they were further assured that their information would be used only for research purposes. Written consent was signed by each participant, and all scales were individually administered. All confusion regarding the research on the part of participants was satisfied. Participants were not offered any incentives to participate in the study, and they were free to withdraw from the study at any point. Finally, we thank the participants for their cooperation. Among the participants, 370 questionnaires were distributed, 321 of which were returned. Of these, 21 questionnaires were excluded from the analysis due to excessive missing responses (any questionnaire with 5% or more missing response data was considered excessively missing) and random responses. The response rate was 86.75%.

Study design

A cross-sectional survey research design was used in the present research.

Measures

Psychometrically sound self-reporting instruments were used to measure all focal variables in the current study, which provided the best operationalization of the variables. These instruments have been used across different cultures and have sound psychometric properties. The details are as follows.

– *Career Adapt-Abilities Short Form Questionnaire* (Maggiori et al. 2015) was used to measure career adaptability. The scale comprised 12 items, and Maggiori and colleagues (2015) reported that it measured four career adaptability resources: (a) concern (e.g., thinking about what my future is like) (Cronbach α = .79; items 1 to 3), (b) control (e.g., counting on myself) (Cronbach α = .78; items 4 to 6), (c) curiosity (e.g., observing different ways of doing things) (Cronbach α = .74; items 7 to 9), and (d) confidence (e.g., working up to my abilities) (Cronbach α = .76; items 10 to 12). The reliability of the total *Career Adapt-Abilities Scale – Short Form* was .85 (Maggiori et al. 2015). The response format was a 5-point Likert scale ranging from 1 (not a

strength) to 5 (greatest strength). The scale did not contain any reverse-coded items. The total score is computed by summing the individual scores for each item.

– *Utrecht Study Engagement Scale* (Sui et al., 2014) was used to assess study engagement among university students. The scale included 9 items on a 7-point Likert scale (0 = Never and 6 = Always) and it measures three components of engagement: (a) vigor (e.g., "I feel energetic and capable when I'm studying or going to class"), (b) dedication (e.g., "I feel happy when I am studying intensely"), and (c) absorption (e.g., "I get carried away when I am studying"). None of the items were negatively coded. Sui and colleagues (2014) reported that Cronbach's α of the scale was .90. All the items were summed to create a total score for study engagement.
– *Flourishing Scale.* Flourishing was measured using the *Flourishing Scale* (Diener et al., 2009), which consists of eight items with a response format of a 7-point Likert-type scale ranging from 0 (Never) to 6 (Always), with Cronbach's α = .86. It is an indicator of psychosocial development, based on new psychological and social welfare theories. All items were summed to create a total score for flourishing. The scale is intended to quantify sociopsychological prosperity to supplement current subjective well-being scales. An example item from the scale is "I lead a purposeful and meaningful life".

Data analysis

The data collected for the study were analyzed using the IBM SPSS software. The analysis involved calculating Cronbach's alpha reliability coefficients and descriptive statistics, such as mean, standard deviation, range, and skewness. In addition, a correlation matrix was computed to investigate the relationship patterns among the focal constructs of the study. Finally, to test the proposed hypotheses, structured equation modeling was performed using IBM Amos software.

RESULTS

Table 1 displays the mean, standard deviation, range, skewness, kurtosis, and alpha coefficient for each measurement instrument used in the current study. From standard deviation scores, it can be discerned that mean scores were representative of their respective distribution, and minimal differences between actual and potential ranges suggest that restriction of the range is not a pertinent issue in the present study. The results in Table 1 show that all scales yield a high satisfactory magnitude of reliability, which justifies their use in the present research. The skewness and kurtosis values are within the acceptable range, which

Table 1 – Descriptive statistics and alpha reliability coefficient of the scales (N = 300)

Scales	*M*	*SD*	Range		Sk[a]	Ku[b]	α	1	2	3	4
			Actual	Potential							
1. Career adaptability	44.6	6.90	21-60	12-60	−.33	.11	.75	–	.37*	.51*	−.03
2. Flourishing	45.32	6.88	11-56	8-56	−1.27	2.63	.75	–	–	.56*	−.05
3. Study engagement	63.15	38.85	3-54	0-54	−1.06	.62	.78	–	–	–	−.08
4. Age	20.71	1.80	16-27	–	.46	.47	–	–	–	–	–

Legenda. [a] Standard error of skewness = .14; [b] Standard error of kurtosis = .28
*$p<.001$

indicates that the total scores on various measures used in the present study are normally distributed.

Table 1 further shows that career adaptability has a significant positive correlation with flourishing and study engagement and non-significant results with age. Flourishing is significantly and positively related to study engagement but has a non-significant correlation with age. All demographics taken as the control variables had a non-significant relationship with flourishing.

Table 2 presents the fit indices for the measurement models used in this study. The first model tested was Harman's single-factor model, in which all indicators of flourishing, study engagement, and career adaptability were loaded onto one latent factor. The fit indices showed that this model did not fit the data well, suggesting that common method variance was not a biasing factor in the current study. In the second model, the indicators were loaded onto their respective factors, resulting in improved model fit. All fit indices indicated a good fit to the data, which was superior to that of the first model ($\Delta\chi^2 = 710.33$ and $\Delta df = 27$).

Table 3 presents the results of path the proposed structural model analysis. The proposed model of the present study was tested in IBMSPSS Amos v 24 (IBM Corp., 2016) using the maximum likelihood method with 5000 bootstrapped samples. According to Hooper et al. (Hooper, Coughlan & Mullen, 2008), for a good model fit; the chi square test should be non-significant, whereas CFI, GFI, and TLI values should be ≥.95. Moreover, values of RMSEA and SRMR should be <.07. The analysis revealed that the model provided a very good fit to the data, as indicated by the chi-square statistic of 12.45 with 9 degrees of freedom and a non-significant p-value of .19. Additionally, all other fit indices also indicated a very good fit, including a Comparative Fit Index (CFI) of .98, the Goodness of Fit Index (GFI) of .99, Tucker-Lewis Index (TLI) of .97, Root Mean Square Error of Approximation (RMSEA) of .036, p-value for the RMSEA close fit test ($p$close) of .65, and standardized root mean square residual (SRMR) of .052. Figure 1 shows a schematic diagram of the path model used in the present study.

After controlling for the effect of age, gender, and family background; career adaptability and study engagement demonstrated significant positive direct effects on flourishing. Career adaptability has a significant positive direct effect on study engagement. Finally, the indirect positive effect of career adaptability on flourishing through study engagement was significant, indicating that study engagement mediates career adaptability and flourishing.

Table 2 – Fit indices of measurement model

Model	χ^2	*df*	CFI	GFI	TLI	RMSEA	$\Delta\chi^2$	Δdf
Model 1 (Single factor)	1440.56*	337	.67	.67	.60	.09		
Model 2 (3-Factor)	730.23*	364	.95	.94	.92	.06	710.33*	27

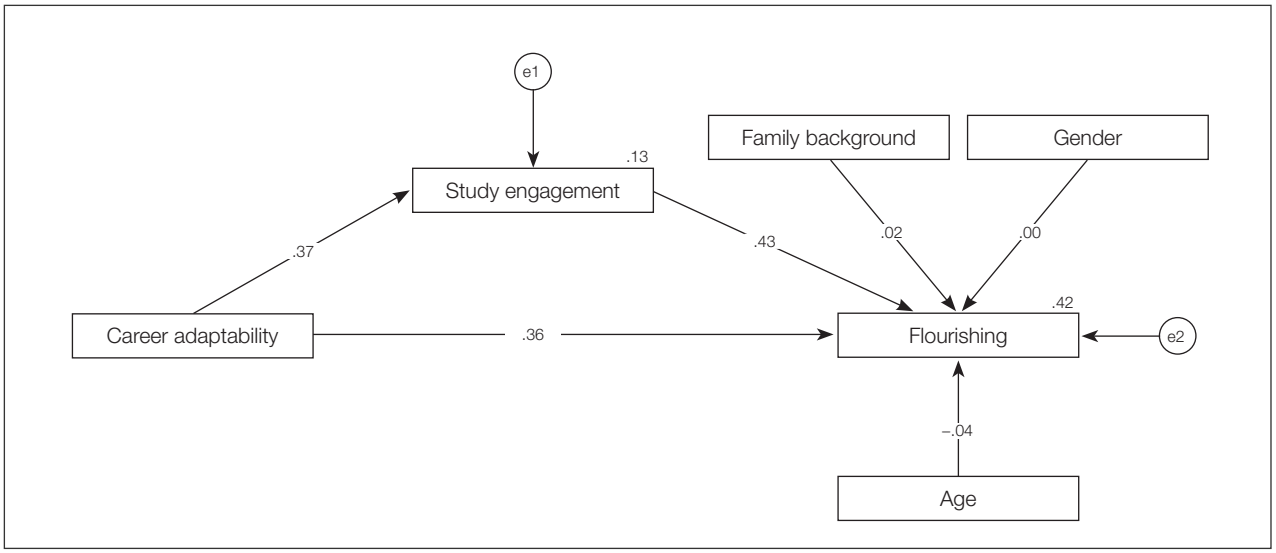
Legenda. df = degree of freedom; CFI = Comparative Fit Index; GFI = Goodness of Fit Index; TLI = Tucker-Lewis Index; RMSEA = Root Mean Square Error of Approximation.
*p<.001

Table 3 – Standardized path coefficients with bias corrected 95% confidence intervals (N = 300)

Paths	β	*p*	95% CI	
			LL	UL
Career adaptability → Study engagement	.37	.001	.28	.45
Study engagement → Flourishing	.43	.001	.36	.52
Career adaptability → Flourishing	.35	.001	.27	.43
Career adaptability → Study engagement → Flourishing	.16	.001	.11	.21
Age → Flourishing	–.04	.31	–.11	.03
Gender → Flourishing	.001	.92	–.08	.07
Family background→ Flourishing	.02	.65	–.06	.09

Note. χ^2 = 12.45; *df* (degree of freedom) = 9; *p* = .19; CFI (Comparative Fit Index) = .98; GFI (Goodness of Fit Index) = .99; TLI (Tucker-Lewis Index) = .97; RMSEA (Root Mean Square Error of Approximation) = .036; p_{close} = .65; Standardized RMR (Root Mean Residual) = .052

Figure 1 – Path model of the present study



DISCUSSION

The primary objective of this study was to examine the impact of career adaptability on flourishing. Furthermore, this study also examined the mediating role of study engagement between career adaptability and flourishing. The results of the present study show that career adaptability has a direct positive impact on study engagement and flourishing. Study engagement also has a positive direct impact on flourishing. Furthermore, career adaptability had an indirect positive impact on flourishing.

Our first two hypotheses suggested that career adaptability would have positive direct effects on study engagement and flourishing, and both hypotheses have been supported by our results. If a student has all the 4Cs (concern, control, curiosity, and confidence) of career adaptability, they are more likely to be engaged in her/his studies, since studies provide an optimal balance between her/his personal resources and academic challenges that may lead to a state of flow and engagement. This finding of the present study is also in line with the pertinent literature; Tladinyane and Van der Merwe (2016) found a strong positive association between career adaptability and work engagement in a South African sample of insurance employees. These findings clearly explain that the higher the career adaptability, the higher the engagement, and vice versa. So, it can be concluded that career adaptability and engagement foster each other mutually.

Concerning the positive association between career adaptability and flourishing, individuals with career adaptability possess the ability to carry out various career tasks and adapt to changes in the workplace in general (Duffy, 2010), which may enhance their well-being. To facilitate a successful transition from school to work, university students must place immense importance on self-belief in their abilities, openness to change, and a willingness to embrace and adapt to new circumstances (Wang & Fu, 2015). This is why career adaptability leads to an improved sense of well-being among students. This finding of the present study is consistent with that in the pertinent literature. Kirdok and Bolukbasi (2018) found that career adaptability is positively associated with subjective well-being among Turkish university seniors. This study found that control was the strongest predictor of subjective well-being among the career adaptability subscales. Moreover, the concern and confidence dimensions of career adaptability were found to be predictive of subjective well-being. In contrast, curiosity failed to predict subjective well-being. Similarly, Savickas (2005) found that career adaptability could be utilized for challenges outside the work environment as well as for challenges encountered in daily life. Thus, career adaptability increases the likelihood of finding suitable jobs, well-being, and career success (Hirschi, 2010; Skorikov, 2007).

Our third hypothesis proposed that study engagement has a direct positive impact on flourishing, which was also supported by the analysis. Students' participation in activities that enhance their academic learning is a critical part of their engagement. Student engagement and optimal functioning are also associated with subjective well-being (Steele & Fullagar, 2009). This includes the development of self-acceptance, positive relationships with others, autonomy, competence, and a goal-oriented sense (Ryff, 1989). Engaged students are more likely to persist (Bridges et al., 2005) and be satisfied with their education (Kuh et al., 2005). Bakker and Demerouti (2008) suggest that engaged employees enjoy higher levels of well-being. For example, one's engaged experience of work includes factors such as autonomy, mastery of one's environment, and purpose in life, which are also characteristic of eudaimonic well-being.

The fourth and last hypothesis of the present study postulated that study engagement is a mediator between career adaptability and flourishing. Our findings support this hypothesis as we found that career adaptability leads to enhanced study engagement, which in turn leads to improved well-being. The theoretical basis for the mediating role of study engagement between career adaptability and flourishing comes from the conservation of resources theory (Hobfoll, 1989) and self-determination theory (Deci & Ryan, 2008). These theories suggest that individuals who possess personal resources such as career adaptability are more likely to engage in positive behaviors and experiences such as study engagement. In turn, this engagement leads to an improved sense of well-being and flourishing. Specifically, the conservation of resources theory proposes that individuals strive to build and maintain their resources and that this process can be facilitated by engaging in resource-building behaviors. Similarly, self-determination theory suggests that individuals have innate psychological needs for autonomy, competence, and relatedness, which can be fulfilled by engaging in activities that foster growth and development, such as study engagement. Therefore, the mediating role of study engagement in the relationship between career

adaptability and flourishing is grounded in the idea that possessing personal resources promotes engagement in positive behaviors, which in turn leads to improved well-being and flourishing.

Students who exhibit elevated levels of career adaptability are inclined to take an active stance in their career development and decision-making processes. This predisposition enables them to remain open to a range of career options and be equipped to navigate the complexities and challenges of contemporary workplaces. Furthermore, individuals with greater career adaptability are more likely to be engaged in their studies, displaying higher motivation and commitment toward their academic goals. Such students exhibit active participation in class discussions, the timely completion of assignments, and opportunities for learning and development. This engagement is likely to contribute to a sense of purpose and meaning, an essential component of flourishing, further leading to positive emotions, meaningful relationships, a sense of accomplishment, and personal growth.

Existing literature provides evidence that supports the relationship between career adaptability and well-being. Studies by Zhuang and colleagues (2018) and Parola and Marcionetti (2022) indicate that career adaptability is positively related to life satisfaction, positive affect, and flourishing among university and high school students. Our study contributes to this understanding by highlighting the mediating role of study engagement in this relationship. Empirical evidence suggests that study engagement positively influences flourishing among university students, as demonstrated by Montano's (2021) study on the positive association between academic engagement and flourishing mediated by psychological needs satisfaction (i.e., autonomy, competence, and relatedness) among online learners. Therefore, it can be concluded that career adaptability and study engagement are essential components in promoting the well-being of university students.

CONCLUSION

The present study demonstrated the impact of career adaptability on well-being via study engagement among university undergraduates. The findings showed that career adaptability positively predicted study engagement and well-being. The results also indicated that study engagement led to improved flourishing. The findings of this study also shed light on the mediating role of study engagement in the relationship between career adaptability and well-being. Overall, the present study indicated the significance of career adaptability, which should be harnessed in students so that they may enjoy being engaged in their studies and consequently enjoy a better, happier, and healthier life.

Implications

The implications of career adaptability for promoting students' academic work and well-being in the actual academic context are multifaceted. By cultivating career adaptability, educational institutions can empower students to navigate challenges, make informed career decisions, and foster a sense of purpose and satisfaction. Recognizing the value of career adaptability as a resource in higher education can lead to more effective support systems, curriculum design, and interventions that enhance student success and well-being. To manage the demands and challenges of the twenty-first century, career adaptability is an essential psychosocial resource for the development of students' careers. Students should be psychometrically tested for their natural aptitudes and be guided as to the right choice of career that may suit their unique talent. They should also be taught the skills to adapt flexibly to the challenges of their careers to excel in their fields. Workshops and seminars should be arranged to highlight the importance of career adaptability so that students might be equipped with flexible career plans commensurate with their talents so that they can enjoy their work by deeply engaging in it. The findings of this study indicate that career adaptability and study engagement are two salient predictors of flourishing. Career counseling centers in educational institutions should launch intervention programs designed to inspire study engagement. Teachers, educationists, school counselors, and educational policymakers should be aware of study engagement and career adaptability so that they can help students improve their psychological health, leading to a healthier, happier, and more fulfilling life. Furthermore, there should be a balance between the academic skills of the students and academic demands or challenges, because an imbalance between both could harm the well-being of the students.

Limitations and suggestions for the future research

1. The sample of the present study may not be reflective of the population of Pakistani university undergraduates because the sample was collected from approachable universities in the Punjab province. A larger, more diverse, and nationally representative sample should be used in future studies to maximize the external validity of the findings of the present research.
2. The present study utilized a cross-sectional survey research design that does not warrant a causal interpretation of the findings. Therefore, we were unable to offer any evidence for the causal interpretation of our results. Thus, further studies should use experimental or longitudinal designs to determine causal relationships.
3. The current study was limited in its ability to examine the specific components or facets of career adaptability and study engagement. It would be valuable for future research to investigate the relationships between the individual components of career adaptability and those of study engagement, to gain a deeper understanding of how these constructs are related and how they impact well-being outcomes.
4. Future research should be undertaken with a sample of young adults who have completed their academic degrees and are searching for jobs.
5. Future research should investigate vocational personality as a depositional variable related to career resources, career success, well-being, and academic performance. Vocational personality may be studied as a predictor or moderator of career success.

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