

The Impact of Future Planning Resources on the Transition to Adulthood

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ABSTRACT

Adolescence is a critical developmental period during which young people shape the knowledge, attitudes, and behaviors that will influence their lives as adults. The educational system often provides limited instruction in essential life skills and career planning because of the emphasis on traditional academic content. As a result, many students may struggle with the transition to adulthood. Exposure to life-skills training and structured career guidance has been associated with smoother transitions to adulthood and may support successful adaptation. Research is scarce on the association between adolescent participation in these areas and outcomes in adulthood. The current study examines associations between access to early career/life-skills education and later career and life satisfaction. This study utilizes a structured questionnaire administered to college students ages 18-35 within the Chicagoland area. Multiple statistically significant correlations were observed, including perceptions of competence with adult challenges and prior educational experiences ($r = .27$, $p = .001$) and global satisfaction ($r = .45$, $p = .001$). A positive association was also observed between general satisfaction and use of future planning resources ($r = .48$, $p = .001$). Additionally, respondents reported a positive association between their own perceptions of the impact of future planning resources and general satisfaction ($r = .33$, $p = .001$).

Keywords: Adolescence, Career Skills, Development, Life Satisfaction, Life Skills

1. Introduction

Adolescence is widely recognized for its rapid and complex developmental and social changes (Wood et al., 2018). Over the past century, shifting social expectations have contributed to the recognition of adolescence and emerging adulthood as distinct developmental stages (Arnett, 2000). Successfully navigating the transition to adulthood requires the development of a strong sense of self as adolescents move from familial dependence to maturity and newfound responsibilities (Zarrett & Eccles, 2006). During this period, adolescents explore social roles, evaluate and reflect upon their strengths and limitations, manage increasing responsibilities, and develop a sense of direction and purpose within these roles (Serbes & Albay, 2017). School-based future planning resources (FPRs) may play an important role in strengthening adolescents' preparedness for adult roles and contribute to more positive long-term outcomes (Banati et al., 2025; Pellegrino et al., 2025).

2. Foundations of Adolescent Development

Developmentally, adolescents as young as 16 years of age can be comparable to fully-grown adults in "cold cognition" tasks that make use of cognitive structures like working memory and verbal fluency (Icenogle et al., 2019). There is, however, a "maturity gap" in tasks that require psychosocial maturation, such as resistance to peer influence, evaluation of risky behaviors and

situations, orientation toward the future (delayed gratification), and impulse control. Adolescent performance in these tasks shows that, while psychosocial maturity increases in adolescence, it continues to develop well into adulthood (Icenogle et al., 2019). While adolescents may show adult-like ability in their speaking and reasoning, there are other, more nuanced aspects to maturity and adulthood that require more time and guidance to grow and develop fully.

Adolescent development is also a period of vast and significant neurological development. Due to these changes, this is a crucial and opportune time to teach more complex aptitudes, knowledge, and skills that adolescents will retain throughout life (Jensen & Arnett, 2020). While the brain is easily malleable for learning and retaining new information during adolescence, other skills, such as impulse control and decision making are slower to develop and require continued practice through experience. This discrepancy is characterized by the imbalance between socioemotional reward systems and cognitive control systems, as described by the dual systems model (Shulman et al., 2015). This model explains that during adolescence, reward-related regions of the brain show earlier and heightened responsivity, whereas prefrontal systems supporting executive functions, such as impulse control continue maturing into young adulthood (Caballero et al., 2016; Shulman et al., 2015).

These patterns of developmental changes suggest that interventions should align with the timing of adolescent brain development, particularly the gap between heightened reward sensitivity to the lower, still maturing self-regulation (Casey et al., 2017). Structured life-skill and career preparation support may strengthen functioning, such as emotional regulation, decision making, and self-control (Casey et al., 2017). Recent evidence indicates that such interventions can promote positive development through adulthood and career preparation because the skills, habits, and mindsets acquired during this period are long lasting (Marciniak et al., 2020).

2.1. Risk Factors

A fundamental aspect of modern adolescence is the presence of populations that are particularly vulnerable or experience some type of disparity that creates inequities in access to resources (Banati et al., 2025). These populations are prone to missing out on opportunities to engage with FPRs and similar resources, more so than their less vulnerable peers (Ravindranath et al., 2022). Missing meaningful developmental opportunities in adolescence can have long-term negative effects on health, education, employment, and well-being (Aromatario et al., 2024; Edwin et al., 2022; Ravindranath et al., 2022). Adolescents who lack supportive environments and opportunities are at increased risk for poorer mental health, lower educational attainment, and reduced resilience and life satisfaction (Banati et al., 2025).

Risk factors vary across social, economic, and contextual conditions, suggesting that single-domain interventions are unlikely to be sufficient. However, educational initiatives such as early investment in educational access to FPRs may reduce risk for not in education, employment, or training (NEET) status (Rahmani et al., 2024). Mental health, social, and environmental struggles can complicate transitions but can be mitigated through support (Sherif et al., 2023). Mental health symptoms, including depression and low motivation, may further interfere with functioning and future planning (Sherif et al., 2023). Minoritized populations are also consistently associated with higher perceived difficulty of accessing mental health care (Mahmood et al., 2024). Hispanic and Asian adolescents are at higher risk for unmet mental health needs compared to other racial groups, aligning with well-documented data on racial disparities in healthcare equity (Fox & Hanes, 2023).

3. Importance of Future Planning Resources

3.1. Career Adaptabilities Framework

Trusted, structured guidance is especially important during adolescence and emerging adulthood, particularly for career identity development. Career interventions in high school consistently improve career adaptability, which is a developmental process that supports goal setting, self-reflection, long-term engagement, and more (Wang et al., 2024). The career adaptability framework identifies adaptability across four domains: concern, curiosity, control, and confidence (Porfeli & Savickas, 2012). These dimensions represent future orientation, personal agency, exploration, and problem solving in career development.

Career concern, reflected in planning and preparation, may reduce anxiety and increase readiness for future transitions. Structured career planning promotes direction and agency, which may strengthen motivation, persistence, and resilience in adulthood (Porfeli & Savickas, 2012). School-based FPRs also support career control by increasing adolescents' ability to make informed educational and vocational decisions (Kirchhoff & Keller, 2021). Participation in counseling, information sessions, and career courses is positively associated with career adaptability, whereas limited access to these supports is associated with greater uncertainty and lower perceived control over the future (Schoon & Henseke, 2023).

Career curiosity and academic aspirations during high school also shape adulthood outcomes. Unclear goals and unstable aspirations are associated with poorer decision making and lower likelihood of applying to college, persisting, or declaring a major (Edwin et al., 2022). Early support for career planning, advising, and goal setting may, therefore, reduce educational inequality (Pellegrino et al., 2025). Career exploration and self-exploration behaviors have been identified consistently as important dimensions in career preparedness (Marciniak et al., 2020). Prior research suggests that actively collecting information about occupations that reflect personal interests and strengths are associated with stronger career development outcomes (Marciniak et al., 2020).

Career confidence and self-efficacy are also central to career development, as adolescents with stronger self-beliefs are more likely to take initiative, persist through challenges, and engage in adaptive learning behaviors (Ginerva et al., 2018). Within the career adaptabilities framework, the authors defined career confidence as the extent to which individuals believe they can solve problems and overcome obstacles related to future career development as central indicators of career confidence (Porfeli & Savickas, 2012). Marciniak et al. (2020) further identified career confidence as adolescents' belief in their ability to successfully manage future career challenges and achieve occupational goals. Research has demonstrated that career preparedness is positively associated with well-being, generalized self-efficacy, and adaptive career outcomes among adolescents (Marciniak et al., 2020). Findings from the Career Adapt-Abilities Scale (CAAS) demonstrated that confidence was strongly associated with adaptive career behaviors across multiple international samples (Porfeli & Savickas, 2012). Together, these findings suggest that schools may play a central role in embedding career adaptability development into routine programming.

Career control is thought to develop through participation in structured school-based career activities, which have been associated with increased adaptability and reduced career anxiety (Kirchhoff & Keller, 2021). Greater involvement in school-based career activities (e.g., counseling, information sessions, and career classes) is positively associated with career adaptability (Schoon & Henseke, 2023). Students who lack structured career activities show significantly more uncertainty and a lower sense of control over their futures (Schoon & Henseke, 2023). Other than involvement in activities and experiences that increase career

adaptability, fostering personal responsibility and management of their own career plans allows for more feelings of readiness and certainty.

3.2. Successful Interventions

Given that career adaptability and preparedness develop through both individual and contextual resources, school-based FPRs and support can play an important role in strengthening adolescents' readiness for postsecondary and occupational transitions (Marciniak et al., 2020; Porfeli & Savickas, 2012). Guidance from trusted, qualified support is more important in adolescence and emerging adulthood than any other stage in life, particularly when building career identity. Numerous studies have demonstrated high school intervention systems and programs show positive effects in adolescent career adaptability, career decision making, career identity formation, career exploration, and self-efficacy (Wang et al., 2024). Interventions that support nuanced aspects of developing a career identity are also crucial to adolescents (Porfeli & Lee, 2012). Career development is more than just identifying what job fits an adolescent's skill set but involves supporting the adolescent as they discover their personal identity and career paths that align with their self-image (Porfeli & Lee, 2012). Counselors and program administrators are critical components in helping adolescents develop confidence in their career decisions as well as growing their ability to set and work toward goals (Rogers & Creed, 2011).

Life-skill, career planning, and adulthood preparation programs are most effective when they use interactive methods rather than passive instruction (Edwin et al., 2022). Programs that provide contextual relevance and repeated opportunities for practice also support stronger transfer of skills (Aromatario et al., 2024). Structured, multicomponent, hands-on, experience-based interventions demonstrate more efficacy than passive programs. Frequency and quality of resources also have an impact on feelings of preparedness, and being able to build skills improves confidence, direction, and academic engagement (Aromatario et al., 2024; Edwin et al., 2022). Goal setting and life-skill development have further been linked to improved self-confidence, mental well-being, school engagement, and resilience (Kirchhoff & Keller, 2021; Moulrier et al., 2019).

3.3. Transition to Emerging Adulthood: College & Career

Although FPRs are primarily implemented during adolescence, their intended benefits extend well beyond high school. Emerging adulthood is characterized by the transition from structured educational environments into increasingly independent roles involving higher education, employment, and long-term career development (Arnett, 2000; Wood et al., 2018). As individuals move from secondary education into higher education or the workforce, they encounter increasing expectations for independent decision-making, career planning, and self-management (Zarrett & Eccles, 2006). Because these responsibilities emerge rapidly, successful navigation of these transitions requires not only academic knowledge but also adaptable career planning skills, future-oriented thinking, and confidence in managing novel challenges.

Previous research suggests that career resources acquired during adolescence contribute to greater career adaptability, confidence, and preparedness for future vocational decision-making (Marciniak et al., 2021; Porfeli & Lee, 2012). Furthermore, career uncertainty in adolescence has been linked to student difficulty navigating the demands of higher education (Edwin et al., 2022). Conversely, greater career preparedness is associated with stronger educational engagement and readiness for employment (Gee et al., 2021). These findings suggest that the influence of school-based future planning resources may extend beyond adolescence, making

emerging adulthood an appropriate developmental period in which to examine their potential long-term associations with career satisfaction, well-being, and life satisfaction (Schoon & Henseke, 2023).

4. Current Study

Despite growing evidence that school-based future planning resources support adolescent career development and preparedness, relatively little research has examined whether these experiences continue to relate to career and well-being outcomes during emerging and early adulthood.

The primary objective of the present study was the examination of the relationship between college students' retrospective reports of their exposure to FPRs during adolescence and their perceived functioning as adults. Specifically, the study sought to examine the association between access to FPRs during adolescence and perceived skill utilization and competence in adulthood, and to assess access to FPRs as a possible predictor of adult career and life satisfaction. Primary outcomes of the present study were measured via two variables selected a priori: global career satisfaction and global general life satisfaction.

We began with two hypotheses: (1) Participants reporting greater access to FPRs during adolescence would report significantly greater levels of our primary outcome measures. (2) Greater access to FPRs would be positively associated with greater utilization of skills learned, as well as higher perceived competence in the ability to face adult challenges. These hypotheses were evaluated using global composite scores and Spearman rank-order correlations. In addition, an ordinal regression model was conducted to examine whether specific adolescent FPR experiences predicted career satisfaction.

5. Methods

5.1. Participants

The overall sample included 121 current university students from the Chicagoland area aged 18 to 35 who had attended high school in the United States. Participants identified as White or Caucasian (33.9%), Black or African American (33.1%), Asian (12.4%), or Hispanic or Latino (11.6%), with the remaining participants (9.1%) selecting other or prefer not to identify. The sample included 77.7% women, 21.5% men, and .8% identified as nonbinary.

5.2. Procedures

This study was approved by the IRB at Governors State University, United States. Participants were recruited through the SONA participant pool at Governors State University and online recruitment. Data was collected as a self-administered retrospective survey anonymously via an online platform (Google Forms). To mitigate common method bias, the research team took all necessary measures to ensure participant anonymity. Names, email addresses, or other identifying information were not collected by researchers. The informed consent process ensured that participants could refuse to participate, exit the survey at any time, or skip questions they did not wish to answer. Concepts between items assessed conceptually distinct constructs (e.g., adolescent future planning experiences, career adaptability, psychological well-being, and adult life outcomes). Additionally, the survey employed multiple response formats, including frequency, agreement, satisfaction, and response scales, to reduce response pattern bias. Although retrospective surveys have some inherent flaws, including limited causality and recall bias (Talari & Goyal, 2020), the time and cost efficiency, as well as

accessibility of data, make this a valuable tool for investigating the impact of childhood events on current psychological outcomes (Zealley, 2021). The survey was conducted online between August 13, 2025, and December 9, 2025.

5.3. Measures

Researchers compiled a questionnaire that included demographic items and items from multiple established measures. Some items from established measures were slightly modified to best fit the goals of this study (see Appendix A for the full survey).

5.3.1. Career Resources Questionnaire – Adolescent Version

The Career Resources Questionnaire – Adolescent Version (CRQ-A) is an adaptation of the Career Resources Questionnaire, which focuses on the adult population. The CRQ-A assesses significant dimensions of career preparedness for adolescents in the school system. The resulting questionnaire contains 36 items representative of four higher-order dimensions (knowledge and skills, motivation, environment, and activities) and multiple subdimensions. Individual dimensions demonstrated high and acceptable levels of internal consistency, indicating appropriate reliability for the modified scale. Analysis was conducted with two samples and is reported respectively. These subdimensions include occupational expertise ($\alpha = .79/.76$), labor market knowledge ($\alpha = .84/.87$), soft skills ($\alpha = .79/.82$), career involvement ($\alpha = .69/.69$), career clarity ($\alpha = .82/.85$), career confidence ($\alpha = .76/.77$), self-exploration ($\alpha = .76/.76$), career exploration ($\alpha = .78/.80$), networking ($\alpha = .80/.84$), and social support from school ($\alpha = .81/.81$), family ($\alpha = .87/.85$), and friends ($\alpha = .90/.88$) and are rated on a 5-point scale. Some items were open-ended. The current study utilized six modified items from this measure. The items were modified to ask about experiences with listed services during adolescence rather than in the previous 12 months (see Appendix A).

5.3.2. Career Adapt-Abilities Scale

The Career Adapt-Abilities Scale (CAAS) is based on the career construction theory, a model of social adaptation concentrated on career resources or adaptabilities. The research team decided to jointly create and pilot the scale in multiple countries to limit the future need for translation and modification for administering the measure. The resulting scale consists of four subscales (concern, control, curiosity, and confidence) with six items each that address overall (career) adaptability ($\alpha = .92$). Items are rated from 1 (not strong) to 5 (strongest) and tested across 13 countries. The subscales indicate reliability values ranging from acceptable to excellent (concern $\alpha = .83$; control $\alpha = .74$; curiosity $\alpha = .79$; confidence $\alpha = .85$). The CAAS has 24 items. The current study used 7 items that best addressed the researchers' goals. These were all slightly modified to ask about experiences during adolescence rather than within the previous 12 months, as this tool is typically administered to adolescents. See Appendix A for the survey items used in the current study.

5.3.3. Ryff's Psychological Well-Being Scale

Ryff's Psychological Well-Being Scale (PWB) is a theoretically grounded measure that assesses subjective, social, and psychological dimensions of well-being. The scale's dimensions include autonomy, environmental mastery, personal growth, positive relations with others, purpose in life and self-acceptance (Ryff, 1989, as cited in Ryff et al., 2007). While the 42-item version is more statistically sound (Ryff et al., 2007), both the 42-item and shortened 18-item version of the PWB have been widely used (Ryff & Keyes, 1995) with adults of various ages (Curhan et al., 2014). Internal consistency of the shortened version has also been used

with Latinx college students (Gloria et al., 2009) and Mexican-Americans in the Chicagoland area (Ryff et al., 2003). The items are rated on a 6-point scale (1 = strongly agree; 6 = strongly disagree). The current study utilized eight items that best fit the researchers' goals (see Appendix A for items used).

6. Results

6.1. Descriptive Statistics

Descriptive statistics were conducted for demographic variables (e.g., age, gender, ethnicity). Categories of particular interest for analysis included general well-being, career satisfaction, and FPR opportunities and usage. Global scores were created for life-skills variables, overall career, and general life satisfaction. Global scores are helpful for various reasons. In the current study, global scores were created to assist in simplifying overall constructs rather than using individual dimensions of the construct. This aided in statistical efficiency and interpretation (Stefana et al., 2024), which was also important for the secondary analysis (ordinal regression). Scale reliability was assessed for each of the three global scores using Cronbach's alpha. Both the global scores for life satisfaction ($\alpha = .81$) and career satisfaction ($\alpha = .83$) demonstrate good reliability (Menon et al., 2025). Although lower, the global score for life skills ($\alpha = .66$) is considered acceptable, given the small number of items in the scale (Menon et al., 2025; Tavakol & Dennick, 2011). Life-skills variables included access to and frequency of participation in life-skills workshops, career-planning activities, and discussions with family about future goals, while current well-being variables included career satisfaction, confidence in financial management, work-life balance, sense of purpose, and goal achievement. Finally, general life satisfaction included satisfaction with work-life balance, social connections and relationships, and personal growth.

Because of the nature of the data (ordinal scale), Spearman's Rho was used to determine correlations between variables of interest. For this pilot study, researchers examined correlations between life skills, current well-being, and general life-satisfaction variables. Global general life satisfaction scores were computed by adding variable scores for balance (*How satisfied are you with your ability to manage a work-life balance?*), social connections (*How satisfied are you with your ability to manage social connections and relationships?*), and personal growth (*How satisfied are you with your ability to manage personal growth and self-improvement and self-reflection efforts?*), and dividing by three. Global career scores were created by adding the career variables of satisfaction (*I am satisfied with my current career path*) finance (*I feel confident in managing my finances/living*), balance (*I effectively balance work, personal life, and social commitments*), purpose (*I have a clear sense of purpose and direction in my life*), achievement (*I frequently set and achieve personal and professional goals*) and dividing by 5. Finally, the global life skills score was determined by adding scores for skills workshops (*How often did you participate in life skills workshops?*), career planning sessions (*How frequently did your school provide career counseling or planning sessions for the future?*), family engagement (*How often did your family discuss career planning and future goals with you during adolescence?*), and activities for practical skills (*How often did you engage in extracurricular activities aimed at building practical skills?*) and dividing by four. As expected, significant positive correlations were observed for global general life satisfaction and both global career scores ($r = .60, p = .01$) and global life skills ($r = .40, p = .01$). Additionally, global career scores and global life skills were significantly positively correlated ($r = .34, p = .01$; see Table 1).

Table 1. Correlations of Global Scores

Variable Names	M	SD	1.	2.	3.
1. Global Career	3.49	.80	-		
2. Global Well-Being	3.48	.88	.60**	-	
3. Global Life Skills	3.03	.86	.34**	.40**	-
Note: * $p < .05$, ** $p < .01$					

Significant positive correlations were observed for global life skills and how often participants used FPRs in their adult life ($r = .48, p = .01$), as well as how competent participants felt when faced with adult challenges ($r = .27, p = .01$). Significant positive correlations were also noted for global career scores and use of FPRs in adult life ($r = .46, p = .01$), perception of FPRs on current career/life success ($r = .33, p = .01$), and feelings of competency with adult challenges ($r = .45, p = .01$; see Table 2).

Table 2. Correlations of Global Scores and FPRs

variable names	m	sd	1.	2.	3.	4.	5.	6.
1. global career	3.49	.80	-					
2. global well-being	3.48	.88	.60**	-				
3. global life skills	3.03	.86	.34**	.40**	-			
4. skill use	3.68	.99	.46**	.33**	.48**	-		
5. shaped success	3.96	.91	.33**	.29**	.19*	.60**	-	
6. challenge competence	3.77	.79	.45**	.45**	.27**	.44**	.31**	-
Note: * $p < .05$, ** $p < .01$								

Career satisfaction score was significantly correlated with key variables of adult well-being and life success. In particular, satisfaction in ability to manage work-life balance was significantly correlated with frequency of FPR use in adult life ($r = .28, p = .01$), perceptions of adolescent experiences as shaping current career/life success ($r = .21, p = .01$), and feelings of competency when faced with adult challenges ($r = .40, p = .01$; see Table 3).

Table 3. Correlations of Career Scores and FPRs

Variable Names	M	SD	1.	2.	3.	4.	5.	6.	7.	8.
1. Career Satisfaction	3.87	.99	-							
2. Financial Confidence	3.19	1.04	.44**	-						
3. Effective Balance	3.30	1.05	.44**	.49**	-					
4. Purpose	3.56	1.13	.62**	.46**	.45**	-				
5. Goals	3.57	.97	.38**	.54**	.42**	.57**	-			
6. Skill Use	3.68	.99	.31**	.42**	.30**	.44**	.43**	-		
7. Shaped Success	3.96	.91	.32**	.22*	.25**	.25**	.31**	.56**	-	
8. Challenge Competence	3.77	.79	.31**	.41**	.35**	.40**	.36**	.44**	.31**	-
Note: * $p < .05$, ** $p < .01$										

Satisfaction in ability to manage social connections and relationships was significantly correlated with frequency of FPR use in adult life ($r = .32, p = .01$), perceptions of adolescent

experiences as shaping current career/life success ($r = .28, p = .01$), and feelings of competency when faced with adult challenges ($r = .41, p = .01$; see Table 4).

Table 4. Correlations of Career and General Well-Being Scores

Variable Names	M	SD	1.	2.	3.	4.	5.	6.	7.	8.
1. Career Satisfaction	3.87	.99	-							
2. Financial Confidence	3.19	1.04	.44**	-						
3. Effective Balance	3.30	1.05	.44**	.49**	-					
4. Purpose	3.56	1.13	.62**	.46**	.45**	-				
5. Goals	3.57	.97	.38**	.54**	.42**	.57**	-			
6. Balance Satisfaction	3.31	1.05	.43**	.42**	.68**	.46**	.42**	-		
7. Social Relationships	3.5	1.10	.23*	.37**	.49**	.29**	.40**	.53**	-	
8. Personal Growth	3.63	.96	.34**	.33**	.48**	.32**	.41**	.57**	.61**	-
Note: * $p < .05$, ** $p < .01$										

Finally, satisfaction in ability to manage personal growth, self-improvement, and self-reflection efforts was significantly correlated with frequency of FPR use in adult life ($r = .31, p = .01$), perceptions of adolescent experiences as shaping current career/life success ($r = .29, p = .01$), and feelings of competency when faced with adult challenges ($r = .42, p = .01$; see Table 5).

Table 5. Correlations of FPRs and General Well-Being

Variable Names	M	SD	1.	2.	3.	4.	5.	6.
1. Skill Use	3.68	.99	-					
2. Shaped Success	3.96	.91	.60**	-				
3. Challenge Competence	3.77	.79	.44**	.31**	-			
4. Balance Satisfaction	3.31	1.05	.28**	.21**	.40**	-		
5. Social Relationships	3.5	1.10	.32**	.28**	.40**	.53**	-	
6. Personal Growth	3.63	.96	.31**	.29**	.42**	.57**	.61**	-
Note: * $p < .05$, ** $p < .01$								

Although multiple correlational analyses were conducted, which may increase the risk of a false positive or Type I error, given the current study's sample size, such a risk is relatively low. Even so, the present analyses were intended to identify patterns of association for this pilot investigation and provide information for future studies and analysis.

6.2. Ordinal Regression Model

To further evaluate the relationship between adolescent FPR experiences and career satisfaction while accounting for multiple variables, an ordinal logistic regression analysis was conducted. One major aim of this work is to investigate the relationship between FPRs and career satisfaction. To determine this, an ordinal regression was conducted with the outcome variable Y (global career satisfaction). The explanatory variables for this model include the five FPR variables of adolescent career planning (practical and relevant life skills training, realistic career goal setting, family as an active role in career planning, perception of preparation for adulthood due to skills work, and support of school and community in building career-related

skills), each rated 1 (never) to 5 (very often). Additionally, the model controlled for age, gender, and high school type. The proportional odds assumption was satisfied, and the overall model was a significant improvement over the baseline intercept-only model, $\chi^2(10) = 43.77$, $p < .001$. The model accounted for a modest proportion of the variance in the outcome, with Pseudo R^2 values ranging from .07 to .31.

Further, the assumption of proportional odds was met, as assessed by a non-significant test of parallel lines, $\chi^2(160) = 149.22$, $p = .72$. These results indicate that FPRs significantly predicted the odds of being in a higher category for career satisfaction. Two predicting factors in the model, life skills workshop and family career discussions, were significant. For both variables, more engagement predicted higher career satisfaction (see Table 6). For example, participation in life skills workshops significantly predicted higher career satisfaction, .71, $SE = .23$, $Wald(1) = 9.25$, $p = .002$, 95% CI [.25, 1.16]. Additionally, family career discussions significantly predicted higher career satisfaction, .26, $SE = .14$, $Wald(1) = 3.79$, $p = .05$, 95% CI [.00, .53]. Table 6 displays full parameter estimates for life skills and family career discussions as predicting career satisfaction.

Table 6. Parameter Estimates for Ordinal Regression

								95% CI	
Threshold		Estimate	SE	Wald	df	Sig	Exp (B)	Lower Bound	Upper Bound
	Career Sat = 1.2	-2.51	2.34	1.15	1	.28	.72	-7.11	2.08
	Career Sat = 1.6	-1.35	2.21	.37	1	.54	2.34	-5.67	2.98
	Career Sat = 2.0	-.79	2.17	.13	1	.72	4.06	-5.06	3.48
	Career Sat = 2.2	-.40	2.15	.03	1	.86	5.97	-4.64	3.85
	Career Sat = 2.4	.37	2.15	.03	1	.86	14.12	-3.85	4.59
	Career Sat = 2.6	.72	2.15	.11	1	.74	19.66	-3.50	4.93
	Career Sat = 2.8	1.06	2.15	.24	1	.62	27.46	-3.16	5.27
	Career Sat = 3.0	1.80	2.15	.70	1	.40	56.98	-2.42	6.01
	Career Sat = 3.2	2.28	2.15	1.12	1	.29	92.66	-1.94	6.50
	Career Sat = 3.4	2.89	2.16	1.80	1	.18	171.03	-1.34	7.12
	Career Sat = 3.6	3.17	2.16	2.15	1	.14	225.53	-1.07	7.41
	Career Sat = 3.8	3.59	2.17	2.74	1	.10	343.73	-.66	7.84
	Career Sat = 4.0	4.50	2.18	4.25	1	.04	846.43	.22	8.77
	Career Sat = 4.2	4.84	2.19	4.90	1	.03	1188.56	.55	9.13
	Career Sat = 4.4	5.34	2.20	5.91	1	.02	1951.67	1.04	9.64
	Career Sat = 4.6	6.37	2.22	8.19	1	.00	5435.62	2.01	10.72
	Career Sat = 4.8	6.57	2.23	8.67	1	.00	6683.90	2.20	10.95
Location									
	Life Skills	.71	.23	9.25	1	.00	1.18	.25	1.16
	Fam Career Discussions	.26	.14	3.79	1	.05	1.31	.00	.53

In order to control for Type II errors, the Holm-Bonferroni correction was applied. This test adjusts the critical p-value threshold to control the family-wise error rate (FWER), thereby preventing false positives when conducting multiple simultaneous hypothesis tests for the ordinal model. In contrast to the Bonferroni method, the Holm-Bonferroni method uses graduated thresholds, which minimize Type II errors and do not inflate the probability of Type I errors. Although three variables were included in the analysis as controls, these were used only to isolate the effect of the main predictors. As such, they were not included in the Holm-Bonferroni correction (CITE). When the correction was applied, only the life skills variable was significant in the ordinal regression model, as the family career discussions variable failed to meet the adjusted threshold of $p \leq .0125$, and was therefore deemed not statistically significant.

7. Discussion

The current study found that participants who reported greater exposure to FPRs in adolescence used the skills they learned more often as adults and were also more likely to report higher perceived competence when facing adult challenges. This higher frequency in skill use was also associated with greater overall career and life satisfaction, with participants who expressed greater valuing of adolescent experiences reporting the highest levels of satisfaction in these areas. These findings suggest that greater reported access to FPRs was associated with outcomes such as increased confidence when applying to jobs or higher education, as well as longer-term benefits, including broader vocational and personal satisfaction into adulthood. This is consistent with the current literature and supports the notion that even relatively brief interventions can positively affect well-being and developmental outcomes in adolescents (Moulier et al., 2019; Sherif et al., 2023).

Although the current study did not measure the quality of resources, findings suggest a consistent association across resources through mere exposure and access. The ordinal regression model indicates that adults reporting higher levels of career satisfaction were more likely to have greater participation in life skills workshops during adolescence. Implementations such as embedding resources directly into school curricula could represent one approach for expanding exposure and access to students by addressing the challenges students often face when attempting to access resources (e.g., transportation, time constraints, motivation). The current study demonstrates that participants reported continued use of skills learned during adolescence and suggests that by exposing adolescents to an integrated FPR curriculum, schools may contribute to positive change in student comprehension and skills regarding core college and career readiness concepts (Gee et al., 2021).

The current study presented some limitations. For example, the current study did not measure the quality of participant resources, only the presence and access of resources. Even so, this study observed that participants who reported greater exposure to FPRs also reported greater application of these skills into adulthood. This implies that counselors, educators, advisors, and other professionals responsible for supporting postsecondary transitions may benefit from reaching a broader student population by incorporating FPRs. Schools may consider investing in these specific resources with the knowledge that expanding access to FPRs may contribute to impactful results and improved outcomes.

Additionally, due to the potentially significant effects common method biases can have on research findings, we sought to identify and mitigate as many potential sources as possible in the study's design, although the nature of retrospective self-report research suggests these biases cannot be eliminated entirely. Due to the self-report nature of the survey, common source biases, particularly consistency-motif bias and social desirability bias, must be

considered (Podsakoff et al., 2003). Respondent motivation to appear rational and consistent in responses to maintain consistency between their cognitions and their attitudes could result in relationships that do not accurately reflect the measure of the item, but instead the respondent's desire to maintain this consistency (Podsakoff et al., 2003). Similarly, social desirability bias wherein respondents reply based on a desire to present themselves in a favorable light has the potential to not only produce spurious relationships but also hide authentic relationships between measured items (Podsakoff et al., 2003).

Because the present study relied on adults' retrospective reports of adolescent experiences, it is important to recognize the strengths and limitations of autobiographical self-report. Research suggests that autobiographical memories are reconstructive rather than exact reproductions of past events, meaning that current beliefs, personality characteristics, and later experiences may influence how individuals remember earlier developmental experiences (Dalglish & Hitchcock, 2023). Likewise, retrospective reports of adolescent experiences have been shown to be susceptible to recall bias and individual differences in emotional processing (Schmidt et al., 2023; Zurbriggen et al., 2021). Nevertheless, retrospective self-report remains a widely accepted methodology for examining long-term developmental processes when prospective longitudinal data are unavailable, provided findings are interpreted as perceived rather than objectively verified experiences.

The current study was also conducted primarily at a regional university in the Midwest with a minority student population, leading to an ethnically diverse sample. However, over 77% of respondents were female, whereas only 58% of college students nationwide are female (Institute of Education Sciences, 2026). A more robust, multiphase follow-up study may yield more extensive data on FPR curriculum models and their future impact. The demographic characteristics of the sample also somewhat limited analyses. For example, given a more equally spread gender identification, or more variability in ethnicity or SES, these variables could have been included as controls in the ordinal regression model. Additionally, the sample size was too small to meet the preferred size, given the variables assessed in the ordinal regression model, for sufficient power. However, as this is a first step toward studying a new area, we believe that focus on a larger, more variable participant population is logical and important for future studies.

The next step in this research process should investigate integrated FPR curriculum and evaluate the quality of such resources. Quality may be determined by overall impact as well as perception of quality from students. Future studies should also seek to understand the reasons students reported reduced engagement in FPRs and their opinions regarding gaps in resources provided that may be beneficial, based on their current perspectives on their personal and vocational circumstances. This information could aid in more effective FPRs design. While the current study asked adults aged 18-35 about their experiences with FPRs in adolescence, future studies could benefit from directly surveying adolescents currently accessing FPRs. This perspective could strengthen the understanding of FPRs and developmental outcomes. Furthermore, a more thorough exploration of empirically successful interventions is warranted.

School-based FPRs may contribute to students' lives in the long term by strengthening adolescents' preparedness for adulthood and may be associated with supporting healthier, more positive long-term outcomes (Banati et al., 2025; Pellegrino et al., 2025). Given the associations observed in the present study and the broader literature on career development and life-skills education, expanding access to FPRs may be a valuable and productive area for future educational investment and evaluation.

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Appendix A: Survey Items

Ryffs Psychological Well-Being Scale

1. I am not interested in activities that will expand my horizons.
2. I live life one day at a time and don't really think about the future.
3. My decisions are not usually influenced by what everyone else is doing.
4. Maintaining close relationships has been difficult and frustrating for me.
5. In general, I feel confident and positive about myself.
6. I am quite good at managing the responsibilities of my daily life.
7. I have the sense that I have developed a lot as a person over time.
8. I do not mind being in new situations that require me to change my old familiar ways of doing things.

Career Services Student Survey

**Questions are edited to ask about experiences with services during adolescence, not in the past 12 months.*

1. If you have NOT used career services at all in your high school experience, indicate the reason(s) by checking the items below.
 - N/A- I have used career services
 - Not aware of available services
 - The center seemed uninviting or unhelpful
 - Know what I want to do and how to do it
 - Inconvenient location
 - Inconvenient office hours
 - It was not a priority of mine at the time
 - Getting help/advice from another source (family/parents/guardians)
 - Heard career services are not helpful
 - Using outside career services/resources
 - Services seemed oriented to other students
 - My schedule has not allowed me to reach out or go to the center
 - No time to use services/resources due to outside responsibilities
2. What would have motivated you to use the resources and services? If you did use career services, mark the option 'N/A'. *(Write Answer)*
3. Original: How important is it to you to receive help with each of the following services?

Modified: How important was it to you to have received help with each of the following services during adolescence? *Likert scale (4- Very Important, 3- Important, 2- Somewhat Important, 1- Not Important, 0- No Opinion)*

- Help in understanding my interest skills, personality strengths, and values and relating them to career choices.
 - Help in finding and researching career, educational, and employment information.
 - Help in establishing and planning career goals.
 - Help in exploring career options through field visits, informational interviews, internships, shadowing experiences, summer/part-time jobs, and/or cooperative education.
4. If you used services that are listed below, indicate your satisfaction with each. Likert Scale (4- Excellent, 3- Good, 2- Fair, 1- Poor, 0- Did not Use)
- Discussions with the career counselor
 - Self-assessment inventories
 - Computerized career guidance systems
 - Career planning workshops/groups
 - Career planning course for credit
 - Resume/cover letter review
 - Job/college/internship search assistance
 - Career/college major exploration resources
5. Is there a career planning service that you would have liked to have been offered that was not available to you, or are there any skills or areas you wish had been covered more during your adolescence? (Write Answer)

Items created by research team

1. What types of career/life planning services or resources were available to you during adolescence? (*Select all that apply*)
- Discussions with the career counselor
 - Self-assessment inventories
 - Computerized career guidance systems
 - Career planning workshops/groups
 - Career planning course for credit
 - Resume/cover letter review
 - Job/college/internship search assistance
 - Career/college major exploration resources
2. If you used the services that are listed below, indicate your satisfaction with each. (Likert 1-5)
- Discussions with the career counselor
 - Self-assessment inventories
 - Computerized career guidance systems
 - Career planning workshops/groups
 - Career planning course for credit
 - Resume/cover letter review
 - Job/college/internship search assistance

- Career/college major exploration resources

Items influenced by CRQ-A and CAAS. Original refers to the source (CAAS, CQR-A, or research team created).

Adolescent Life Skills and Career Planning Participation

Likert Scale: Frequency (1 - Never to 5 - Very Often)

Original: CAAS “Learning new skills.”

2. How often did you participate in life skills workshops (e.g., financial literacy, communication skills) during adolescence?

Original: CQR-A “*My school offers support in my career development.*”

3. How frequently did your school provide career counseling or planning sessions for the future?

Original: CRQ-A “*My family provides support in answering my career questions.*”

4. How often did your family discuss career planning and future goals with you during adolescence?

Original: CAAS “*Looking for opportunities to grow as a person*”

5. How often did you engage in extracurricular activities aimed at building practical skills (e.g., leadership, teamwork)?

Quality of Adolescent Life Skills and Career Planning

Likert Scale: Agreement (1 - Strongly Disagree to 5 - Strongly Agree)

Original: research team created

6. The life skills training I received as a teenager was practical and relevant to adult life.

Original: CRQ-A “I have clear career goals that match my personal interests and skills.”

7. Career planning sessions in my school helped me set realistic career goals.

Original: CQR-A “In choosing an occupation, I receive substantial support from my family.”

8. My family played an active role in helping guide me in my career choices.

Original: CAAS “Preparing for the future.”

9. I felt prepared for adult responsibilities due to the skills I learned during adolescence.

Original: CQR-A “I can rely on the support of my school to overcome difficulties and challenges in my career development.”

10. I felt supported by my school and community in building career-related skills.

Adult Well-Being and Life Success

Likert Scale: Agreement (1 - Strongly Disagree to 5 - Strongly Agree)

Original: CQR-A “*I have thought a lot about which occupations are suitable for me.*”

11. I am satisfied with my current career path.

Original: research team created

12. I feel confident in managing my finances/living.

Original: research team created

13. I effectively balance work, personal life, and social commitments.

Original: CAAS “Thinking about what my future will be like.”

14. I have a clear sense of purpose and direction in my life.

Original: CAAS “Planning how to achieve my goals.”

15. I frequently set and achieve personal and professional goals.

Likert Scale: Frequency (1 - Never to 5 - Very Often)

Original: research team created

16. How often do you use the skills you learned as a teenager in your adult life?

Original: research team created

17. How often do you feel that your adolescent experiences shaped your current career/life success?

Original: CAAS “*I believe that I can successfully overcome challenges in my future career.*”

18. How often do you feel competent when faced with adult challenges?

Life Satisfaction and General Well-Being

Likert Scale: (1- Very Dissatisfied to 5- Very Satisfied)

Original: research team created

19. How satisfied are you with your ability to manage a work-life balance?

Original: research team created

20. How satisfied are you with your ability to manage social connections and relationships?

Original: CAAS “Looking for opportunities to grow as a person.”

21. How satisfied are you with your ability to manage personal growth and self-improvement and self-reflection efforts?

Demographic Items

Multiple Choice (Click one option for each question)

1. What is your Age?
 - ☐ 18-23
 - ☐ 24-29
 - ☐ 30-35
 - ☐ 35 or older
2. How would you describe your gender?
 - ☐ Man
 - ☐ Woman
 - ☐ Nonbinary
 - ☐ Genderfluid
 - ☐ Transgender man
 - ☐ Transgender woman
 - ☐ Other or prefer not to identify
3. How would you describe your racial/ethnic identity?
 - ☐ Native American
 - ☐ Asian
 - ☐ Black or African American
 - ☐ White or Caucasian
 - ☐ Hispanic or Latino
 - ☐ Native Hawaiian
 - ☐ Pacific Islander
 - ☐ Identity not listed or prefer not to identify
4. What is your current student status?
 - ☐ Undergraduate student
 - ☐ Graduate student
 - ☐ Non-degree student
5. What is your current employment status?
 - ☐ Working full-time for pay
 - ☐ Working part-time for pay
 - ☐ Internship
 - ☐ Seeking employment
 - ☐ Not working and not seeking employment
 - ☐ Retired
 - ☐ Other
6. What is the highest level of education completed by either of your parents/guardians?
 - ☐ No schooling
 - ☐ Elementary School
 - ☐ Middle School
 - ☐ High School
 - ☐ Completed an associate's degree
 - ☐ Completed a bachelor's degree
 - ☐ Completed a graduate or advanced degree
7. What kind of college do you attend?
 - ☐ 4-year institute
 - ☐ Community college
8. What kind of high school did you attend?
 - ☐ Private

- Public
 - Charter
9. Which best describes your high school?
- Urban
 - Suburban
 - Rural
10. Approximately how many students attended your high school (grades 9-12)?
- 1-600
 - 601-999
 - 1000-2000
 - 2001+

*Several survey items were developed by the research team to address study-specific research questions regarding the long-term application of adolescent life skills and career planning experiences. These items were informed by constructs represented in the Career Resources Questionnaire–Adolescent Version (CRQ-A; Marciniak et al., 2020) and the Career Adapt-Abilities Scale (CAAS; Savickas & Porfeli, 2012), particularly the dimensions of career support, future preparation, skill development, and adaptability. Additional items assessing adult financial management, work-life balance, relationship management, and perceived influence of adolescent experiences were created to capture outcomes not directly measured by either instrument.