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Lynch School of Education & Human Development

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AN EMERGING ADULTHOOD PSYCHOLOGY OF WORKING THEORY MODEL OF VOCATIONAL IDENTITY AND PSYCHOLOGICAL FLEXIBILITY

Dissertation

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ALEKZANDER K. DAVILA

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An Emerging Adulthood Psychology of Working Theory Model of Vocational Identity and Psychological Flexibility

By Alekzander K. Davila, M.A.

Dissertation Chair: David L. Blustein, Ph.D.

Abstract

This study aimed to illuminate a piece of complexity behind vocational identity development in emerging adulthood. While identity development involves changes across various areas within one's life, the establishment of a vocational identity is thought to be among the most vital and daunting tasks to manage during the transition from adolescence to adulthood (e.g., Erikson, 1959). For those fortunate enough to experience positive developments in this aspect of their identity, a plethora of positive life- and career outcomes are associated with them (Diemer & Blustein, 2007; Hirschi, 2011a; Hirschi, 2011c; Klotz et al., 2014; Luyckx et al., 2010). While this form of identity development is historically understood to be among the most challenging, evolving changes in "macrostructural conditions" (i.e., technological innovation and AI) have further complicated things, leading some to feel discouraged from taking an "active engagement in the exploratory process," likely followed by a delay in making an occupational choice (Mortimer, 2002, p. 442). Despite the prominent role that establishing a vocational identity has in a young person's maturation process (Erikson, 1959), this phenomenon has yet to be introduced and examined in a modern career development theory, and more specifically, within psychology of working theory (PWT; Duffy et al., 2016). The current study postulates that both original and new PWT career variables: economic constraints, marginalization, work volition, career adaptability, and psychological flexibility, interact and contribute to the overall development of an emerging adult's vocational identity.

The purpose of the present study was to demarcate how specific paths of PWT (Duffy et al., 2016) were connected to vocational identity development for those within emerging adulthood (ranging in ages 18-25). Broadly, it was hypothesized that work volition and career adaptability would predict vocational identity development and that these relationships would be moderated by psychological flexibility. Additional exploratory models, which placed psychological flexibility in two other locations, were also assessed. These relationships were examined by surveying 283 emerging adults via an online survey tool. These participants responded to questions about their vocational identity, levels of psychological flexibility, work volition, career adaptability, experiences of macro-level barriers, and demographic characteristics. Data were analyzed using hierarchical linear regression. Findings revealed that the primary hypothesized model describing work volition and career adaptability to predict vocational identity was an excellent fit to the data.

Additionally, the model results indicate that psychological flexibility did not moderate these relationships. However, it does play a significant role in overall vocational identity development, career adaptability, and work volition independent of other variables. Among demographic variables, SES differences were found within the sample. These results are discussed and grounded in their unique contribution to the existing literature on vocational identity development, psychological flexibility, and career development. Theoretical, policy, and practical implications are discussed. Future directions and limitations of the study are also considered.

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The saying “If you want to go fast, go alone. If you want to go far, go together” has never felt more salient than right now as I write this section of my dissertation. Getting this far in my professional and educational journey is a life-long dream come true. I have so many people who have played a fundamental role in my studies, dissertation, and life in general whom I would like to thank. First and foremost, I would like to thank God for showing me favor throughout my life and giving me the skills, passion, and strength to journey down this path. Next, I would like to thank my Mother, Grandfather, and Grandmother. These three people, my family, have supported, encouraged, and lifted me up from the day I was born. I would not be where I am today without them, and I cannot thank them enough for all they have done for me. From the bottom of my heart, thank you.

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Chapter 1

Introduction

"In the social jungle of human existence, there is no feeling of being alive without a sense of identity" – Erik Erikson.

Developmental theorists have emphasized the importance of identity formation within early life (Erikson, 1959). While characterizations of this global process include a variety of different domains from family, politics, and religion to race, ethnicity, and gender, theorists argue that the centerpiece of this proverbial puzzle is the establishment of a vocational identity (VI; Blustein 1994; Erikson, 1959; Hirschi, 2011a; Super, 1980). This form of identity development is an evolving process that involves a relatively clear and stable sense of one's skills, abilities, and interests and the ability to set specific goals and make decisions related to those goals (Holland et al., 1980). Theorists maintain that establishing a VI is the most troublesome and challenging aspect of identity formation during the transition from adolescence to adulthood (e.g., Erikson, 1959). Fast forward to the 21st century, robotics and artificial intelligence (AI) are beginning to shift the landscape of work, business, and society, rendering various industries obsolete (Hirschi, 2018) and have left "many workers to face diminished employment opportunities, stagnant wages, and an uncertain work future" (Lent, 2018, p. 205). Thus, there is a compelling need for a more nuanced understanding of how vocational identity functions in modern career development.

Additionally, significant transformations to work can serve as antecedents to negative psychological changes in individuals like fear of job displacement, survivor syndrome, fear of autonomous robots and AI, and decreased commitment and motivation (Hellgren & Sverke, 2003; Kinicki & Scheck, 2002; Liang & Lee, 2017; Mohr, 2000). In light of these trends,

including a psychological construct within a new model of vocational identity that encompasses the capacity for one to manage these psychological challenges is also needed. This study argues that psychological flexibility, which is the ability to stay in the present moment, remain open to experiencing affective discomfort, and be able to commit to behaviors that are congruent with an individual's held values, even when those unpleasant internal experiences are present (PF; Kashdan & Rottenberg, 2010), is one promising possibility. Including this construct, which involves a set of trainable psychological processes, including mindfulness, cognitive defusion, connection with values, self-as-context, acceptance, and committed action (Wilson, 2014), is potentially useful if scholars and practitioners are to know where and how to target interventions aimed at helping people optimally adapt to drastic changes in their work environment.

Yet despite the prominent role that establishing a vocational identity has in a young person's maturation process (Erikson, 1959) and the role of psychological flexibility in promoting psychological health and resiliency (Goubert & Trompetter, 2017; Kashdan & Rottenberg, 2010; Kroska et al., 2020), these phenomena have yet to be introduced and examined in a modern career development theory, and more specifically, within psychology of working theory (PWT; Duffy et al., 2016). By examining how vocational identity and psychological flexibility function within PWT, this study aims to integrate critical contextual and psychological level factors that may significantly affect career development.

In this first chapter, I introduce PWT and then outline a significant critique of the model, setting the stage for this dissertation. I then elaborate on vocational identity and psychological flexibility, as these are the two new core constructs under examination in this project, and outline the intended population of focus. After presenting this material, I summarize the rationale for this study and conclude with a proposal for a new emerging adult PWT model of vocational identity -

including the main research questions. In Chapter 2, I dive deeper into the first half of the PWT model and the new additions and modifications that are the focus of this dissertation. In Chapter 3, I discuss the methods and procedure, including the selected indices, analytic plan, and the additional exploratory models to be examined. Then, in Chapter 4, I lay out the statistical results of this dissertation, followed by a discussion of them in Chapter 5.

Psychology of Working Theory and A Major Critique

PWT is a contemporary adult career model that places powerful contextual and structural barriers that many people who want and/or need to work regularly endure in the conceptual foreground of the model. PWT asserts that an individual who experiences economic constraints and marginalization is less likely to feel empowered to make career choices and less likely to have the necessary skills to adapt to current and future career issues. As such, they are less likely to have access to decent work. PWT theorists also proposed a set of moderating factors, including proactive personality, critical consciousness, and social support, which could mitigate the impact of economic constraints and marginalization (see Blustein, 2006; Duffy et al., 2016 for details).

While PWT's inclusive stance on important socio-cultural and economic variables is a significant strength and makes an important contribution to vocational psychology and career development theory, it is not without limitations. For example, in comprehensively mapping out the impacts of the broader socio-cultural and economic environment, this study posits that the authors of PWT overlooked some vital individual-level processes relevant to an individual's career development. As such, this dissertation aims to shine a light on these limitations by including vocational identity, a central aspect of identity development (Erikson, 1959; Holland et al., 1980), and psychological flexibility - a key element of how people effectively manage their

affective responses to contextual stimuli (Hayes et al., 2006). Furthermore, I aim to apply this adapted PWT model to an understudied emerging adulthood population (Kim & Na, 2017; Kim et al., 2019), characterized by their postponement of adult roles in favor of an exploration of work, educational possibilities, and vocational identity development (Arnett, 2000).

Vocational Identity

As discussed above, vocational identity symbolizes a relatively clear and stable sense of one's skills, abilities, and interests. It also encompasses the ability to set specific goals and make decisions related to them (Holland et al., 1980). Over the years, considerable research has linked vocational identity to a host of positive life- and career outcomes (Diemer & Blustein, 2007; Hirschi, 2011a; Hirschi, 2011c; Klotz et al., 2014; Luyckx et al., 2010). However, to the best of my knowledge, an examination of how this dimension of identity functions within a model incorporating a multitude of economic and demographic obstacles and key career constructs has not been developed or assessed. This study represents the next logical step in understanding the developmental impacts of diverse barriers on emerging adults' career development. In the next section, I introduce another impactful psychological factor that may have the power to moderate the negative impacts of these contextual barricades on vocational identity development.

Psychological Flexibility

As detailed earlier, psychological flexibility refers to an individual's ability to be willing and accepting of the experience of negative thoughts and feelings, all the while maintaining a commitment to value-driven behavior (Hayes et al., 2006). Within this construct are six mechanisms, all of which comprise the third-wave cognitive-behavioral clinical model Acceptance and Commitment Therapy (ACT): cognitive defusion, acceptance, self-as-context, mindful awareness, values, and committed action. High levels of these six factors reflect

psychological flexibility, and low levels suggest psychological inflexibility (PI; Hayes et al., 2006). In this dissertation, I examine the role of psychological flexibility within the interrelationships of PWT variables. Furthermore, given the solid empirical and clinical evidence suggesting that psychological flexibility is trainable (Wilson, 2014), the value of examining this dynamic cannot be understated. Next, I discuss the population of interest for this research project.

Emerging Adulthood

As discussed in Kim et al. (2019), over the last few decades, we have seen an increased appeal from the psychological field for a more inclusive career theory that addresses work experience for marginalized individuals in society. While PWT is an excellent step towards this call to action, since its publication in 2016 (Duffy et al., 2016), much of the research utilizing PWT has been concentrated on adulthood, leaving emerging adulthood (18-25) relatively understudied (Kim & Na, 2017; Kim et al., 2019). People in this age group tend to put off traditional adult roles to explore potential work and educational opportunities (Arnett, 2000). We now know that neurodevelopment continues throughout this period through advances in neuroscience and that it is "marked by a prolonged developmental transition to adulthood" (Taber-Thomas & Perez-Edgar, 2014, p. 11). Furthermore, the transactional nature between brain development during this period, and modern social, cultural, and technological pressures, have led some scholars to suggest that the transition to adulthood is much slower, positing that people become more fully developed and launched into adulthood by their late 20s as opposed to late adolescence (Arnett, 2005).

Even with significant developments in our understanding of young peoples' cognitive development (Arnett, 2005; Taber-Thomas & Perez-Edgar; 2014), research on PWT's

implications for emerging adults lags. With calls for a new theory aimed at elucidating the experience of marginalized and understudied populations in mind (Blustein, 2006), this research makes the case that an emerging adult PWT model incorporating a mix of the aforementioned psychological and contextual factors is required.

Dissertation Rationale

With an understanding of the critical role that vocational identity has within identity and career development and the positive implications of psychological flexibility in helping individuals navigate their cognitive and emotional responses to significant life- and work challenges, this dissertation contends that they should both be centrally positioned within the modern, context-focused framing of PWT (Duffy et al., 2016), and targeted at emerging adulthood. While prominent scholars have supported this type of endeavor (Kenny et al., 2019), the creation and in-depth examination of such a model has yet to be done with this population.

A model incorporating a multifaceted form of vocational identity development and psychological flexibility would strengthen the field's ability to accurately capture the interplay between these constructs concerning several other vital career-related variables. By creating a new model, the present research can positively impact future policy, clinical work, and research, and it could serve as a foundational framework of relevant career and psychological constructs for researchers and clinicians alike. What follows in Chapter 2 is an extensive literature review of the PWT predictor variables, vocational identity, and psychological flexibility; I discuss our current understanding of them and where our gaps in knowledge lie. This review then culminates with an outline of this dissertation's research questions and resultant hypotheses.

Chapter 2

Literature Review

This second chapter begins with an in-depth overview and critique of psychology of working theory (Duffy et al., 2016). Then, it transitions into a discussion of a theoretical understanding of vocational identity development and underscores some meaningful relationships it has with important career-related variables. Next, it examines how vocational identity relates to career adaptability and work volition, previewing two of the four PWT predictor variables. Following this is a review of the relationships between the full PWT predictor variables and the role they may play in predicting vocational identity. Then, it includes a review of psychological flexibility (Hayes, 2006) and the position that it may have in moderating these relationships. The chapter then concludes with an outline of the present study, research questions, and hypothesis.

Psychology of Working Theory

Throughout much of the 20th century, vocational psychology posited various theories to help people make decisions about their work, relying primarily on their personality, values, interests, and abilities. However, these theories focused on those with a degree of privilege and volition in their lives, leaving behind those with marginalized or constrained contexts and identities (Blustein et al., 2019). In response to this historical practice, Duffy et al. (2016) proposed a new theory that places powerful contextual and structural realities that many people endure in the conceptual foreground. PWT (see Figure 1) asserts that an individual who experiences economic constraints and marginalization is less likely to have a choice in what they do for work and a developed sense of career adaptability. As such, they are less likely to have access to decent work. The authors of this model also proposed a set of moderating factors, including proactive personality, critical consciousness, economic conditions, and social support, which could mitigate the impact of these factors.

In bringing influential contextual variables like poverty, racism, classism, and other forms of structural barriers to the model's foreground, PWT theorists effectively highlight the daily struggles of many people of color, women, and the poor/working class regularly withstand (Blustein, 2017). However, in doing so, this dissertation makes the point that the authors of PWT inadvertently overlooked key psychological level factors that have significant implications for an individual's career development, leaving a substantial gap in conceptual understanding.

With an understanding of both the developmental implications for vocational identity formation during adolescence and emerging adulthood (Arnold, 2000; Erikson, 1963) and the impending surge of new barriers and shifts in global labor markets shifts as a result of technological advancement, among other variables (Lent, 2018), the need to fill this substantial gap in knowledge cannot be understated. Given PWT's comprehensive nature and omission of fundamental psychological level variables, I argue that it is an ideal springboard for adaptation. In the next section, this dissertation sets the stage for broadening the scope of PWT by including the vital individual-level factor of vocational identity.

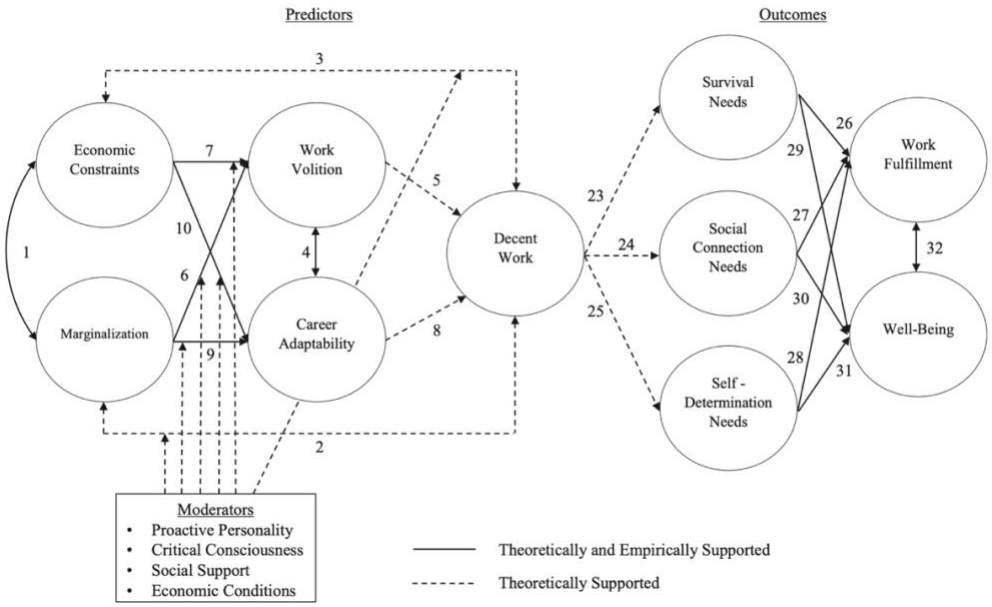

Figure 1. Psychology of Working Theory Model (Duffy et al., 2016).

Vocational Identity

As described in Chapter 1, vocational identity is a relatively clear and stable sense of one's skills, abilities, and interests, encompassing the ability to set specific goals and make decisions related to those goals (Holland et al., 1980). This concept of identity formation relies upon Erikson's (1959) and Marcia's (1966, 1993) model of identity status, which involves the dichotomized (i.e., high and low) constructs of exploration and commitment. This dichotomy results in four separate but related statuses: achievement (high exploration and high commitment), foreclosure (low exploration and high commitment), moratorium (high exploration and low commitment), and diffusion (low exploration and low commitment). Of these identity statuses, identity achievement is the most desirable. It encompasses those who have done their due diligence in exploring various career options and have been able to commit to a given role (Porfeli et al., 2011). With the previously stated research questions in mind, a more nuanced understanding of how vocational identity develops concerning social and economic barriers is vital to the vocational psychological field's capacity to proactively adapt its scholarship and clinical intervention development.

Expounding the identity literature base further, researchers have underscored the role of internal barriers (lack of abilities, interests) and external barriers (perceived restrictions in the environment) in the development of a vocational identity (Gushue et al., 2006; Karaś et al., 2014; Urbanaviciute et al., 2016). For example, Koo and Kim (2016) found vocational identity achievement to differ according to monthly family income in a group of nursing students. They concluded that socioeconomic status (SES) might play a significant role in vocational identity development. More specifically, those from a lower SES group may have fewer opportunities to explore their interests and take risks, contributing to a lag in identity development. Alternatively,

in exploring promotive factors of vocational identity, researchers have indicated that increased levels of social support, career adaptability, and an orientation towards purpose positively predict vocational identity development (Hirschi, 2011; Kenny et al., 2003; Negru-Subtirica et al., 2015). In particular, in a specific study on emerging adults, Shin and Kelly (2012) found that a sense of optimism and positive relationships both predicted vocational identity despite barriers. This finding suggests that strong social ties and an adaptive perspective may aid emerging adult's ability to establish a vocational identity.

In conclusion, vocational identity is a fundamental developmental construct researched extensively and thought to include a fluid dynamic involving the level someone has explored and committed to a specific job or career (Porfeli et al., 2011). Research suggests that exposure to different social and structural barriers can negatively impact vocational identity development (Gushue et al., 2006; Koo & Kim, 2016; Urbanaviciute et al., 2016). Alternatively, the experience of support, a helpful perspective, and career adaptability can lead to positive vocational identity development. By adding vocational identity to PWT, this study combines two robust frameworks and further illuminates how these barriers predict vocational identity for emerging adults. With this in mind, the following section discusses how it relates to two of the four PWT predictor variables: career adaptability and work volition.

Review of PWT Predictor and Outcome Variables

This section introduces and outlines the literature on the relationships between career adaptability and vocational identity. It then explores available empirical research on the relationships between work volition and vocational identity, concluding with a summary of these dynamics and how they connect to this dissertation's research questions and hypotheses.

Career Adaptability and Vocational Identity

Career adaptability is a construct that generally involves a sense of personal readiness and access to adaptive resources or strategies to manage present and future career problems (Savickas, 2013). Savickas (2005) identified four distinct adapt-abilities or dimensions of career adaptability: concern, control, confidence, and curiosity, linked to positive aspects of career development for adolescents and emerging adults (Soresi et al., 2012; Stringer et al., 2011). With the previously stated research questions in mind, having a better grasp of how well career adaptability predicts vocational identity development within a contextually comprehensive model, this study holds, is crucial for the career development field. This developed understanding could directly impact where the field aims at developing new research projects and clinical interventions.

Elaborating on this relationship between career adaptability and vocational identity, research has uncovered strong associations between the two constructs. For example, Porfeli and Savickas (2012) found higher levels of career adaptability to positively predict both dimensions of vocational identity: career exploration and career commitment. Moreover, they found lower levels of career adaptability related to increased levels of worry and ambiguity about career choices and commitments. Subsequent studies looking into the relationship between career adaptability and vocational identity have also found similar findings suggesting the positive association between the two constructs to be significant (Haibo et al., 2018; Kirchknopf, 2020; Rudolph et al., 2017). In contrast, research posits that career adaptability is inversely related to the reconsideration of career dimensions of vocational identity (Porfeli & Savickas, 2012). This finding suggests that individuals with lower career adaptability levels will likely experience more significant uncertainty around career options and commitments.

Conceptualizing these findings within this dissertation, individuals who have a greater sense of readiness and access to adaptive management resources and strategies will likely be better able to progress through their vocational identity development. However, how this dynamic will likely function differently concerning social and economic barriers resulting from a rise in uncertainty in the workplace merits further investigation and serves as a significant research question of this project.

With an understanding of the empirical evidence supporting the connection between career adaptability and vocational identity and also how these constructs differ (Haibo et al., 2018; Kirchknopf, 2020; Porfeli & Savickas, 2012; Rudolph et al., 2017), I now shift our focus to the second PWT predictor with direct implications for vocational identity: work volition (Duffy et al., 2012).

Work Volition and Vocational Identity

Work volition refers to an individual's perceived capacity to make career-related decisions despite various constraints (Duffy et al., 2012). This conception translates to those with high work volition being more likely to feel like they can make career-related decisions despite constraints (Jadidian & Duffy, 2011). In contrast, people who are low in work volition and experience high levels of constraints like oppression based on social class, race, and gender are less likely to feel like they can make career-related decisions (Duffy et al., 2013). With the previously stated research questions in mind, understanding how this perceived capacity to make these career decisions relates to an individual being able to make a potentially life-altering decision to commit to a specific job or career, this dissertation posits, is a vital chapter worth exploring in the larger story of vocational identity development among emerging adults.

While numerous studies have identified many links between work volition and job satisfaction, career adaptability, social class, sense of control, and meaning (e.g., Buyukgoze-Kavas et al., 2015; Duffy et al., 2015; Holtom et al., 2002), to the best of my knowledge, research investigating direct links between work volition and vocational identity is sparse. However, Kim et al. (2018) made a related conceptual argument that those with a higher sense of work volition will be less impacted by potential obstacles like social status, poverty, and immigration, and thus, they are more likely to engage in their career development process. With this conceptual position in mind, this dissertation contends that an emerging adult who feels like they have the internal and external resources to explore and commit to a potential career will be more likely to make a positive stride in their vocational identity development.

There are important implications that work volition has for vocational identity development. Yet, the question remains: will work volition significantly predict vocational identity in a sample of emerging adults? Given the rich theoretical dynamic between these constructs, one expects these relationships to be positively linked. This is to say that those who feel ready and capable of managing future career issues and constraints will have a clearer and more stable sense of their skills, abilities, and interests and the ability to set specific goals and make decisions related to those goals. The following section expands this perspective to include the two remaining PWT predictor variables which may have the capability to constrain vocational identity development and other aspects of career development: economic constraints and marginalization.

Review of PWT Predictor Variables

This section introduces and outlines the literature on the relationships between economic constraints, career adaptability, and work volition. It then dives into available empirical research

on the relationships between marginalization, career adaptability, and work volition. It concludes with a summary of these dynamics and discusses how they connect to this dissertation's research questions and hypotheses.

Economic Constraints

Economic constraints are defined as limited access to opportunity in the world of work (Duffy et al., 2016). These constraints can have devastating effects on an individual's career development (Autin et al., 2018; Duffy et al., 2019); PWT theorizes that those with economic resources are more likely to experience greater levels of work volition and career adaptability. (Duffy et al., 2016). With the previously stated research questions in mind, having a clear understanding of how economic constraints impact an individual's level of career adaptability and work volition and how this interplay affects vocational identity development for emerging adults encapsulates a large proportion of this research project. It also has significant implications for the vocational psychology and career development field.

Economic Constraints and Career Adaptability

Economic constraints can have debilitating effects on an individual's career development (Diemer & Ali, 2009; Huston & Bentley, 2010). As these effects relate to career adaptability, several researchers have found that an individual's social class can have a similar impact. For example, Thompson and Subich (2006) found that college students from a higher social class were more likely to express confidence in their career decision-making and certainty. In a longitudinal study on a group of undergraduate students investigating the relationship between subjective social status and career adaptability, Autin et al. (2017) found that social status predicted career adaptability over time. Other researchers found similar results, positing that students from a higher social class were more likely to experience career adaptability related

variables such as enhanced work-related learning, higher self-efficacy, achievement motivation, and exposure to/evaluation of career options (Argyle, 1994; Lapour & Heppner, 2009; Thompson & Dahling, 2012). Moreover, Blustein et al. (2002) found that individuals from a higher social class were more likely to report higher career adaptability levels than their lower social class counterparts, thus supporting a clear relationship between having access to economic resources and career adaptability. From this body of research, and as it relates to the primary research questions of this study, this dissertation posits that that economic constraints are widely present today and, as a result, will likely impede an individual's ability to manage and cope with critical career-related decisions, thus, leaving an individual less likely or able to engage in their vocational identity development.

Economic Constraints and Work Volition

Limited access to financial resources can adversely affect an individual's ability to make career decisions. For example, Allan et al. (2014) found financial constraints to be moderate predictors of a decreased sense of work volition, and they suggested that individuals from a lower social class are more likely to struggle to make career decisions. In addition, there have been a variety of studies identifying links between access to financial resources and work volition and other vocational identity-related constructs like career decision self-efficacy, locus of control, and career barriers (e.g., Allan et al., 2019; Duffy et al., 2015; Kraus et al., 2009; Thompson & Subich, 2006). Furthermore, in analyzing the direct and indirect effects of PWT predictor variables in a sample of 287 working adults, Duffy et al. (2019) found that economic constraints predicted decent work via work volition. These relationships indicate that having access to financial resources can directly impact work volition and other vocational identity-related phenomena. Similar to this project's position on economic constraints and career

adaptability, this study contends that economic constraints will likely overwhelm an individuals' sense of agency, thus, leaving them less likely or able to engage in their vocational identity development.

Marginalization

Marginalization is defined as the experience of having less power or position within a society, likely as a result of social class, gender, race, nationality, religion, and related factors (Duffy et al., 2016). Similar to economic constraints, experiences of marginalization can have distressing effects on an individual's career development (Autin et al., 2018; Duffy et al., 2019) and are a phenomenon that racial and sexual minorities continue to experience in the 21st century (England et al., 2020; Garriott et al., 2014). From a PWT perspective, an individual who does not experience marginalization is more likely to experience greater work volition and career adaptability (Duffy et al., 2016). With the previously stated research questions in mind, having a mature understanding of how experiences of marginalization impact an individual's level of career adaptability and work volition and how this interplay impacts vocational identity for emerging adults captures a sizable share of this dissertation.

Marginalization and Career Adaptability

Investigating social barriers to career adaptability has been an important area of research for many scholars and identified some critical associations. For example, in a study of sexual minorities, Douglas et al. (2017) found that experiences of marginalization, conceptualized as experiences of heterosexist discrimination, were not correlated with lower levels of career adaptability. Other studies of racial and ethnic minorities found similar results where experiences of marginalization did not predict lower levels of career adaptability (Duffy et al., 2018; Duffy et al., 2019).

Related to gender and experiences of marginalization, some studies have found no gender differences in career adaptability (Hirschi, 2009; Maggiori et al., 2013). In a similar survey of adults, O'Connell et al. (2008) found no significant differences between genders in their levels of career adaptability. Other studies highlight comparable results, indicating no difference in career adaptability based on gender (Havenga, 2011; Rocha, 2012). Conversely, other researchers find contradicting evidence. For instance, in a study among Chinese students, Hou et al. (2012) posit that men had higher rates of career adaptability than women.

Although these data points are not uniform, they suggest and support further investigation into the relationship between marginalization and career adaptability. From this, and as it relates to this study's primary research questions, this study argues that widespread forms of marginalization are present in our society. As a result, they could negatively impact an individual's ability to manage and cope with critical career-related decisions. As such, this dynamic could leave an individual less likely or able to engage in their vocational identity development.

Marginalization and Work Volition

While the impacts of marginalization on career adaptability are variable, its negative impact on work volition is clear. For example, in a study on the impact of experiencing subtle and overt racial discrimination, Duffy et al. (2018) found that those experiences were negatively related to work volition in a sample of employed adults. Another research project conducted by Duffy et al. (2014) discovered similar findings, concluding that the experience of marginalization is a significant constraint that negatively affects levels of work volition. Other studies have found similar findings where experiences of marginalization predicted lower levels of work volition (Douglass et al., 2017; Duffy et al., 2019). These studies show the intuitive notion that when a

person experiences discrimination based on various social constructs, their career development is adversely impacted. Similar to this project's position on marginalization and career adaptability, it contends that these experiences of marginalization will likely negatively affect an individual's sense of agency, thus leaving them less likely or able to engage in their vocational identity development tasks.

In summary, with an understanding of the relationship between economic constraints and marginalization, and a host of PWT and other career-related variables, the question remains: will experiences of economic constraints and marginalization serve as significant barriers to vocational development in a sample of emerging adults? Given the ample foundation of research available, this study expects these barriers to impede vocational development. This final section of Chapter 2 explores a new potential moderating factor that may have the power to buffer the negative impacts of these social and economic barriers.

Review of Psychological Flexibility: A Potential New Career-Related Moderator

This section begins with introducing psychological flexibility and nests it within this dissertation project. Then it discusses empirical studies examining the moderating power of psychological flexibility. Following this, it examines the relationship that psychological flexibility has with other career constructs generally, as research on these relationships are scarce (Bond et al., 2013). It concludes with a concise summary of these dynamics and their connection to this project's research questions and hypotheses.

Psychological Flexibility

Psychological flexibility refers to an individual's ability to open themselves up to and accept difficult thoughts and feelings while maintaining a commitment to value-driven behavior (Hayes et al., 2006). This construct encompasses six distinct psychological processes:

acceptance, cognitive defusion, mindfulness, self-as-context, values, and committed action that aggregate to form one's level of psychological flexibility (Gregoire et al., 2020). At higher levels, these processes help individuals effectively regulate their affective experience and adapt to changing environments to promote a deep connection to a personal sense of meaning and value (Kashdan & Rottenberg, 2010). Alternatively, psychological inflexibility encompasses an unwillingness to experience difficult thoughts and emotions, a lack of self-awareness and clarity of personal values, and a tendency to fuse with negative affective experiences, leading to maladaptive forms of coping (Gregoire et al., 2020). Antithetical to each other, these distinct constructs are associated with numerous positive benefits and adverse effects, respectively. For example, psychological flexibility is associated with lower stress, physical health issues, and improved psychological health and well-being (Gloster et al., 2017), while psychological inflexibility is associated with negative experiences like depression, anxiety, obsessive-compulsive disorder, and PTSD (Chawla & Ostafin, 2007; Ruiz, 2010).

With the previously stated research questions in mind, filling the gap in understanding how psychological flexibility functions within the interrelationships between career adaptability, work volition, and vocational identity is crucial and could aid researchers and practitioners' ability to help emerging adults. Furthermore, examining psychological flexibility's power to moderate the indirect negative impacts of economic constraints and marginalization on vocational identity for emerging adults is a cornerstone of this dissertation.

Psychological Flexibility as a Moderator

While to the best of my knowledge, no study exists examining the moderating role of psychological flexibility concerning the dynamic between career adaptability, work volition, and vocational identity. However, psychological flexibility's moderating potential is well established

across other research areas. For example, psychological flexibility has proven to be a significant moderator of psychosomatic symptom management, stress, job performance, low self-efficacy, poor mental and physical health, and COVID-19 symptom management (Bond & Flaxman, 2006; Chang et al., 2018; Jeffords et al., 2020; Kashdan & Rottenberg, 2010; Leonidou et al., 2019; Pakenham et al., 2020; Pienaar et al., 2018). Across the board, these studies suggest that psychological flexibility could moderate the negative impacts of various phenomena, with some going so far as to say that psychological flexibility is a salient and worthwhile target for widespread public health initiatives (Gloster et al., 2017). Following this critical body of work, this study argues that psychological flexibility should be the subject of closer examination within the career development field. This inclusionary step is not only in line with widespread public health initiatives but also represents an opportunity to stimulate future scholarship and clinical intervention with life-altering implications (Gloster et al., 2017).

Psychological Flexibility and Career/Work-Related Behavior

Given that psychological flexibility is a relatively new construct to psychology, it has received only modest attention in organizational behavior and career development research (Bond et al., 2013). For example, Waldeck et al. (2021) examined the potential overlap between adaptability, a significant dimension of career adaptability (Savickas, 2005), and psychological flexibility, positing that while there is a modest conceptual connection, these constructs are indeed distinct. This study is significant for this dissertation because it supports the notion that career adaptability and psychological flexibility are separate psychological processes. Other research studies have examined the dynamics between psychological flexibility and constructs like procrastination, mental health, burnout, absence rates, and the likelihood of using work environment resources (Bond et al., 2008; Hayes et al., 2004; Sutcliffe et al., 2019). These

studies have demonstrated that psychological flexibility predicts improvements across physical and behavioral health contexts.

In the career counseling world, psychological flexibility has received support from career counselors to help people find and sustain a meaningful direction in their life via ACT, suggesting that ACT is a helpful and effective complement to career counseling. For example, Hoare et al. (2012) presented ACT as part of a new empirical research agenda. They posit that ACT could serve as a "strategy for enhancing flexibility in clients' cognitive and emotional function regarding career-related problems" (p. 182). In response to this article, Luken and De Folter (2019) expanded on this point, publishing a case study highlighting how ACT helped a client "live with insecurity and ambiguity, and to find direction while remaining flexible and adaptable" (p. 11). Furthermore, in career counseling, the efficacy of web-based ACT therapy programs has been examined concerning adolescent career preparation, with researchers similarly concluding that ACT was effective for career-related insecurity and career-choice self-efficacy (Kiuru et al., 2021). This evidence is promising, and as a result, this study contends that psychological flexibility should enter the forefront of vocational psychological research.

In summary, calls for incorporating ACT into career counseling and vocational psychology are becoming more prevalent (e.g., Hoare et al., 2012). Newly discovered positive relationships between psychological flexibility and career-related variables (Bond et al., 2008; Bond & Flaxman, 2006; Hayes et al., 2004; Sutcliffe et al., 2019), and strong evidence supporting its moderating capacity across different environments (Bond & Flaxman, 2006; Chang et al., 2018; Jeffords et al., 2020; Kashdan & Rottenberg, 2010; Leonidou et al., 2019; Pakenham et al., 2020; Pienaar et al., 2018), underscore the potential positive impact this mechanism could have in career theory and intervention. Understanding the role of

psychological flexibility within vocational identity development will clarify its relevance within this complex process, which could have major implications for career counseling and therapeutic settings (Kroska et al., 2020).

The Present Study

Drawing on the PWT perspective and literature, the present study seeks to answer the following research questions and will explore the following hypotheses:

Research Question 1: To what extent does work volition predict vocational identity?

WV has a vital role in an individual's journey towards decent work and contributes to several basic human needs, including survival, self-determination, and social connection (Duffy et al., 2016). While research on direct associations between work volition and vocational identity is limited, this construct predicts career decision self-efficacy, career maturity, and a sense of work-related control, all of which relate to critical dimensions of vocational identity (Duffy et al., 2015; Jadidian & Duffy, 2011). In other words, those who feel like they can have a greater sense of agency over their career-related decisions are more likely to manifest a sense of exploration and commitment to what their future work-life will be, advancing their vocational identity.

Hypothesis 1: Work volition will positively correlate with and predict vocational identity.

Research Question 2: To what extent does career adaptability predict vocational identity?

Career adaptability is a significant predictor of survival, social connection/social contribution, and self-determination (PWT needs), which are all associated with overall psychological well-being (Duffy et al., 2016). Additionally, career adaptability predicts career exploration and commitment (Haibo et al., 2018; Kirchknopf, 2020; Porfeli & Savickas, 2012), which are foundational aspects of vocational identity. This study argues that people who feel

ready and have the resources to cope with vocational development are more likely to establish a vocational identity further.

Hypothesis 2: Career adaptability will have a positive relationship with and predict vocational identity.

Research Question 3: To what extent does psychological flexibility moderate the relationship between work volition and vocational identity?

Psychological flexibility predicts positive mental health, physical health, and career outcomes (Bond & Flaxman, 2006; Bond et al., 2013; Kashdan & Rottenberg, 2010). However, its relevance within identity development is limited to athletics (Chang et al., 2018). Further, to the best of my knowledge, a study on any connection between psychological flexibility and work volition does not exist. However, given its history of identified moderating capabilities and positive associations to healthy development, this study argues that it will buffer the impacts of low work volition on vocational identity.

Hypothesis 3: Psychological flexibility will significantly moderate the relationship between work volition and vocational identity.

Research Question 4: To what extent does vocational identity moderate the relationship between career adaptability and vocational identity?

As reviewed, psychological flexibility predicts several positive life and career outcomes (Bond & Flaxman, 2006; Bond et al., 2013; Kashdan & Rottenberg, 2010). However, examining its role within identity development has been limited to athletics, where they found it to buffer the negative impacts of emotional exhaustion on athletic identity development (Chang et al., 2018). Further, to the best of my knowledge, only one study examined the relationship between

adaptability (albeit not career adaptability) and psychological flexibility, concluding that the constructs are related but sufficiently distinct (Waldeck et al., 2021).

While there is admittedly a significant lack of research investigating the relationships between psychological flexibility, career adaptability, and vocational identity, based on its considerable potential of demonstrated buffering capabilities and positive associations to healthy development alluded to above, this study argues that it will buffer the impacts of low career adaptability on vocational identity.

Hypothesis 4: Psychological flexibility will significantly moderate the relationship between career adaptability and vocational identity.

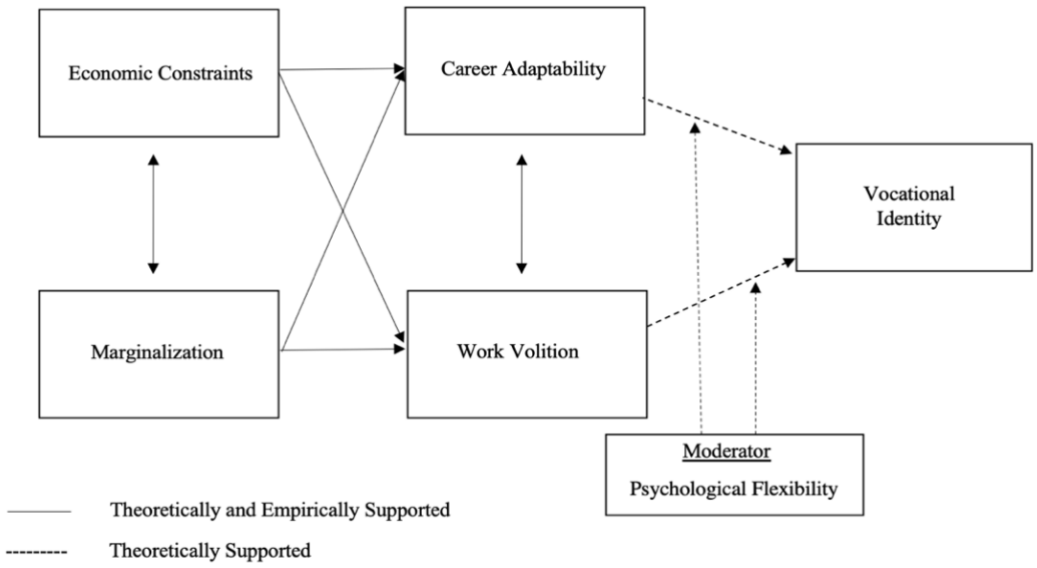

Figure 2. Primary Hypothesized Model

Exploratory Alternative Models

In this study, a primary question is whether psychological flexibility will moderate the relationship between PWT predictor variables and vocational identity in a sample of emerging adults? Given the theoretical and empirical support that these variables have received, this project expects to observe significant moderating effects of psychological flexibility on the

relationship between the PWT predictor variables and vocational identity. However, given that this is a novel research question and project, it is unclear where precisely psychological flexibility will optimally function in the model. While the primary research questions and hypotheses discussed in the next section pertain to the primary model (see Figure 1), this research proposes two additional models that may better explain the data (see Figures 2 & 3).

Alternative Models Rationale

While the primary research questions, hypotheses, and model involve examining the moderating power of psychological flexibility on the individual relationships between career adaptability and work volition on vocational identity, two untested alternative theoretical models warrant examination.

The first alternative model (see Figure 3) places psychological flexibility within the macro and career development factors dynamic. The rationale for this model stems from theory and empirical evidence suggesting that psychologically flexible individuals effectively manage complex cognitive and affective states, which often result from disruptive events in the environment (Hayes et al., 2006). With this in mind, this study argues that psychological flexibility may moderate the negative impacts of economic constraints and marginalization on an individual's career adaptability and work volition. In turn, this could then promote positive vocational identity development.

The second alternative model (see Figure 4) places psychological flexibility as a mediating variable between economic constraints, marginalization, and vocational identity. The rationale for this model stems from theory and empirical evidence denoting psychological flexibility as a fundamental marker of physical and mental health (Kashdan & Rottenberg, 2010). Given its substantial role in overall psychological health and functioning, this project posits that

psychological flexibility could directly impact how effectively an emerging adult can develop their vocational identity, especially when contextual barriers are present.

Undeniably, there are several ways that one can structure a new model. For example, one could propose a model moving psychological flexibility to the front and suggest a negative relationship between psychological flexibility and economic constraints and marginalization. While a model like this could highlight some interesting connections, it is atheoretical. Thus, it could lead to takeaways that neglect underlying processes that might explain a given phenomenon.

With this notion in mind, this study focuses on these two specific alternative models as they reflect and build on solid theoretical arguments (Hayes et al., 2006; Gloster et al., 2017) and empirical evidence (Chang et al., 2018; Jeffords et al., 2020; Kashdan & Rottenberg, 2010; Leonidou et al., 2019; Pakenham et al., 2020; Pienaar et al., 2018) that highlight PF's ability to disrupt the negative relationship between environmental barriers and healthy psychological development.

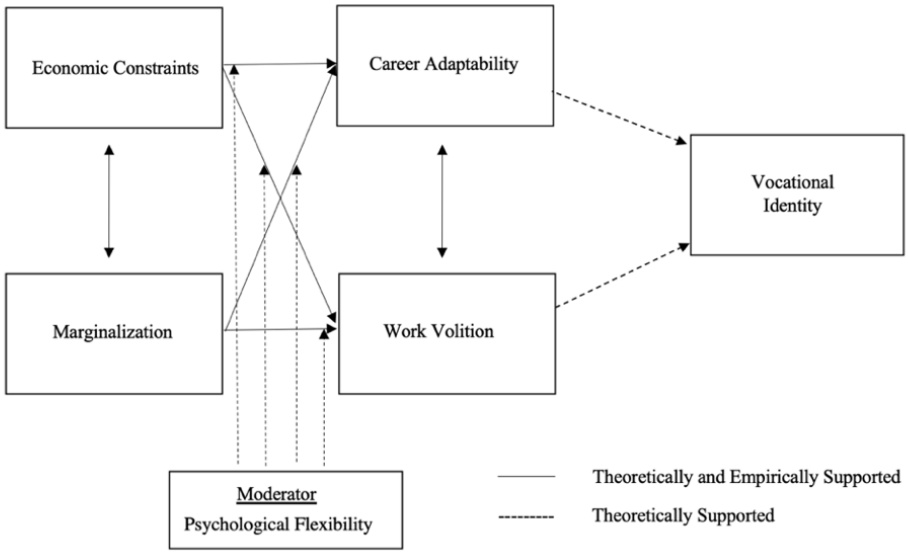

Figure 3. Alternative Moderation Model

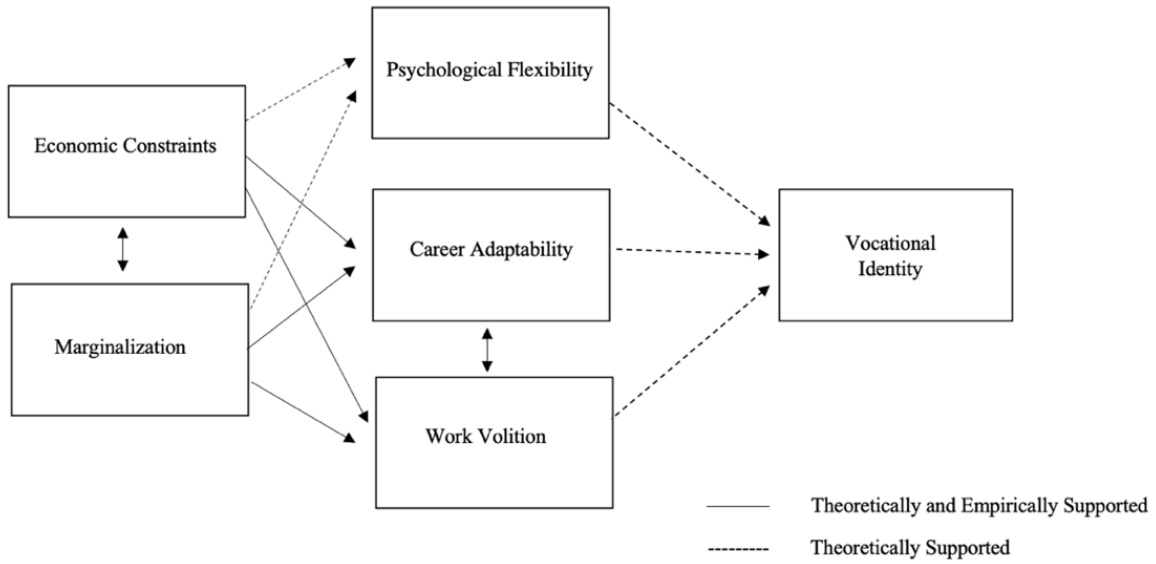

Figure 4. Alternative Mediation Model

Chapter 3

Methods

Research Design

This study was a non-experimental, explanatory, cross-sectional design (Johnson, 2001). It utilized a descriptive survey-based quantitative design, relying on a hierarchical linear regression (HLR) as its' primary statistical analysis approach. HLR was chosen for this dissertation as it allows for ascertaining the relationship between vocational identity and several other independent variables (Field, 2009). In testing the previously outlined research questions and hypothesis, HLR was employed to assess the relationships between six measured variables (marginalization, economic constraints, career adaptability, work volition, psychological flexibility, and vocational identity).

As Field (2009) outlined when running an HLR, checks by the researcher to ensure there is no violation of multi-collinearity are vital. This analysis should be done in various ways,

including reviewing the Pearson Correlation Coefficient between variables, the tolerance level, and the variance inflation factor between different sets of predictive variables (Field, 2009).

As is routine, the level of significance for this study was set at $p < .05$ (Field, 2009). To check the statistical significance when analyzing different relationships throughout the regression analysis, the study examined the unstandardized coefficient beta weights, standard error, standardized beta weights, and the significance level. Lastly, it utilized the R squared and adjusted R square output to assess the unique impact of specific independent variables on the dependent variable.

A Priori Power Analysis Procedure

To determine the necessary sample size to achieve a power of .80, using "G*Power," an a priori power analysis was conducted. With a desired effect size f^2 of .10, α err probability equaling .05, Power (1- β err probability) equaling .80, the number of tested predictors equaling 4, and the total number of predictors equaling 10, the determined total sample size was 244 (Faul et al., 2007).

Procedure

After receiving IRB approval from Boston College, an online survey of all of the measures described below was distributed electronically using Prolific. This online platform allows researchers to post surveys, which individuals can complete for payment. Online surveys have been increasingly used in counseling psychology research to collect quantitative and qualitative data (e.g., Dahling et al., 2013; Douglass et al., 2017; Duffy et al., 2017). While other data recruitment platforms like Amazon Mechanical Turk (MTurk) are used to collect reliable and diverse samples (i.e., Allan et al., 2020), some researchers have found Prolific to provide a higher data quality compared to MTurk (Eyal et al., 2021).

Given Prolific's capability to recruit people across the globe, participants need to meet particular inclusion and exclusion criteria. These criteria included being born in and currently residing in the United States and being between the minimum age of 18 and maximum age of 25. Following their recruitment and consent to participate in the study, participants were redirected to the survey hosted by Qualtrics. Participants were offered $1.50 as compensation for completing the survey.

Participants

Two hundred eighty-five individuals initially completed the survey. However, two were removed due to answering all four of the validation questions incorrectly, which were used to ensure that the participants maintained a high level of focus. The demographics of the prolific sample can be found in Table 1. The sample was composed of a total of 283 participants. 125 were self-identified men (44.2%), 154 self-identified women (54.4%), and four self-identified gender Non-conforming (1.3%). The racial and ethnic distribution of the sample was 39.9% White, 12.0% Black, 16.3% Latino, 14.1% Asian, 17.3% Multiracial, and .4% Other. Participants ranged from 18 to 25, with a mean age of 22.36 and a standard deviation of 2.542, indicating that most participants clustered around the mean age. All participants (100.0%) were born in the U.S. At the time of data collection, 36.7% of participants were working full-time, 27.6% were working part-time, 31.1% were unemployed, and 4.6% were entering the workforce. Of the entire sample, 18% were students, and 82% were not students. Concerning their self-identified social class, 13.1% of participants identified as being in the lower class, 32.2% in the working class, 42.0% in the middle class, 12.0% in the upper-middle class, and .7% in the upper class.

Table 1

Demographic Characteristics of the Prolific Sample (*n = 283*)

Participant Characteristics		*n*	Percentage
Race/Ethnicity			
	Asian/Asian American	40	14.1
	Black/African American	34	12.0
	Hispanic	46	16.3
	Multiracial	49	17.3
	White	113	39.9
	Other	1	.4
Gender Identity			
	Man	125	44.2
	Woman	154	54.4
	Other (Transgender, Nonbinary, etc.)	4	1.3
Age			
	18-20	53	18.7
	21-23	132	46.7
	24-25	98	34.6
Student Status			
	Yes	51	18
	No	232	82
Social Class			
	Lower Class	37	13.1
	Working Class	91	32.2
	Middle Class	119	42.0
	Upper Middle Class	34	12.0
	Upper Class	2	.7
Employment Status			
	Full-Time	104	36.7
	Part-Time	78	27.6
	Unemployed	88	31.1
	Entering Work Force	13	4.6

Measures

The following measures were aggregated into the online survey and distributed to participants. The measures included in the survey can be found in Appendix A.

Demographic Characteristics. The demographic questionnaire included open-ended questions about the participants' age, gender, race/ethnicity, current employment status, socioeconomic status, income, highest educational level achieved, and country of origin.

Marginalization. Lifetime experiences of marginalization will be measured using the Lifetime Experiences of Marginalization Scale (LEMS; Duffy et al., 2019). This measure contains a total of three items. This measure uses a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*), with higher scores representing more significant levels of experienced marginalization. Sample questions include, "During my lifetime, I have had many interpersonal interactions that have often left me feeling marginalized."

This scale's reliability and validity are strong across various populations compared to multiple related constructs. In a study of incoming college students, the scale demonstrated strong internal consistency reliability of scale scores ($\alpha = .95$) (Duffy et al., 2021). Evidence supporting the validity of the Marginalization scale can be derived from studies in which this measure has functioned by theoretical predictions (Duffy et al., 2019; Duffy et al., 2021). The present study will estimate the internal consistency reliability of the LEMS using Cronbach alpha coefficients.

Economic Constraints. Lifetime experiences of economic constraints will be measured using the 5-item Economic Constraints Scale (ECS; Duffy et al., 2019). Sample questions include the following: "For as long as I can remember, I have had very limited economic or financial resources," Across three studies with samples of racial and ethnic minority employed

adults (Duffy, Gensmer, et al., 2019), the scale responses were shown to demonstrate strong internal consistency reliability. This measure uses a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*), with higher scores representing more significant experience levels with economic constraints.

This scale's reliability and validity are strong across various populations compared to multiple related constructs. For example, in a study of incoming college students, the scale demonstrated strong internal consistency reliability of scale scores ($\alpha = .94$) (Duffy et al., 2021). Evidence supporting the validity of the economic constraints scale can be derived from studies in which this measure has functioned in accordance with theoretical predictions (Duffy et al., 2019; Duffy et al., 2021). The present study will estimate the internal consistency reliability of the ECS using Cronbach alpha coefficients.

Career Adaptability. Career adaptability will be assessed using the Career Adapt-Abilities Scale-Short Form (CAAS-Short Form), developed by Maggiori et al. (2017). The CAAS is a 12-item scale that combines to yield a global score of career adaptability. The twelve items are divided equally into four subscales with three items that capture each adaptability resource: concern, control, curiosity, and confidence. Higher scores on each subscale correspond to higher levels of career adaptability.

This scale's reliability and validity evidence are strong across various populations compared to multiple related constructs. In a study on college students and as reported by the authors, Paradnike and Bandzevičienė (2016), the Cronbach's alphas were .79, .74, .70, and .80 for each respective subscale, and .89 for the total scale. In a sample of 2,800 adults, the CAAS was positively associated with work-related constructs such as job satisfaction (r values ranging between 0.13 and 0.20) and occupational self-efficacy (r values ranging between 0.35 and 0.48)

and negatively related to psychological strain (r values ranging between −0.06 to −0.14) (Maggiori et al., 2015). The present study will estimate the internal consistency reliability of the CAAS-Short Form using Cronbach alpha coefficients.

Work Volition. Work volition will be measured by the Work Volition Scale (WVS; Duffy et al., 2012). This is a 13-item scale with three subscales: Volition, Financial Constraints, and Structural Constraints. Example items include "I feel able to change jobs if I want to," and "Due to my financial situation, I need to take any job I can find." The scale utilizes a 7-point Likert scale ranging from *strongly disagree* to *strongly agree,* with higher scores indicating greater levels of work volition.

Reliability and validity evidence for this scale is strong across various populations compared to multiple related constructs like barriers and a sense of control (Douglass et al., 2017; Kim et al., 2020). Duffy et al. (2012) found that the global scale scores demonstrated strong reliability in the instrument development study. In this study on employed adults, the estimated internal consistency of the total scale scores was α = .92. The estimates for the three subscale scores were as follows: Volition (α = .83), Financial Constraints (α = .88), and Structural Constraints (α = .82) (Duffy et al., 2012). The present study will estimate the internal consistency reliability of the WVS using Cronbach alpha coefficients.

The Multidimensional Psychological Flexibility Inventory – 24. Psychological Flexibility will be measured by the Multidimensional Psychological Flexibility Inventory (MPFI-24; Rolffs et al., 2018). This is a 24-item scale assessing both psychological flexibility and psychological inflexibility. This scale was created from the 60-item MPFI using the item response theory analyses, which allowed for identifying the two most valuable items of each 5-item subscale. Items are rated on a 6-point scale ranging from 1 = *Never true* to 6 = *Always true*.

Scores on pairs of items are averaged to represent the 12 specific dimensions of psychological flexibility and inflexibility in the Hexaflex model. This scale also allows for a flexibility and inflexibility composite score. Higher scores represent higher levels of the dimension being assessed.

While psychometric data on the short version is limited, reliability and validity evidence for the original 60-item MPFI is strong across various populations compared to multiple related constructs. As reported by Thomas et al. (2021), both the scales and subscales of the MPFI have exhibited satisfactory internal consistency and both convergent (i.e., Acceptance and Action Questionnaire - II) and discriminant validity (i.e., Emotional intelligence; Rolffs et al., 2018). Additionally, a validation study of the short-form version reported that the measure had adequate internal consistency reliability measured by Cronbach's alpha ($\alpha = .83$) (Gregoire et al., 2020). In a cross-cultural validation study, Cronbach's alpha ranged from .87 to .94 and demonstrated excellent internal consistency and construct validity (Yi-Ying et al., 2020). The present study will estimate the internal consistency reliability of the MPFI-24 using Cronbach alpha coefficients.

Vocational Identity. Vocational identity will be measured using the vocational identity measure (VIM; Gupta et al., 2015). The scale assesses an individual's vocational goals, interests, and abilities. It is a unidimensional scale comprising 20 items rated on a 5-point Likert-type scale *(1=strongly disagree; 5=strongly agree).* Sample items in the scale are: "I feel like I am on a definite vocational path for the future." Higher total scores on this measure indicate that a vocational identity has been founded.

This scale's reliability and validity evidence are strong across various populations compared to multiple related constructs. In a follow-up validation study, the VIM scale yielded a

reliability of α = .96, which suggested a high internal consistency. As summarized by Gupta et al. (2015), the VIM was correlated with related career constructs like career decision self-efficacy (r = .53) and vocational exploration and commitment (r = .64). It was also positively correlated with Holland et al.'s (1980) My Vocational Situation score (r = .72, p < .01), which indicates some similarity between the two measures, but a satisfactory amount of discriminant validity. Alternatively, the VIM was not correlated significantly with parents' educational level (r = -.09). The present study will estimate the internal consistency reliability of the VIM using Cronbach alpha coefficients.

Data Analysis Strategy

Following preliminary descriptive, MANOVA, and bivariate correlational analyses being conducted on the data (see Chapter 4), a series of hierarchical linear regressions (HLR) were conducted to test the conceptual model of the direct and indirect effects of economic constraints, marginalization, work volition, and career adaptability on vocational identity. Additionally, this method was used to assess the moderating and mediating role of psychological flexibility on the relationships between the aforementioned predictor variables on vocational identity. This statistical method allows for ascertaining the unique predictive capacities of a specific variable above and beyond other independent variables on vocational identity. All of these analyses were conducted using SPSS 28.

Pertaining to the primary hypothesized conceptual model, four HLRs were conducted. The first two assessed the direct effects of work volition and career adaptability on the dependent variable: vocational identity. In step 1, each regression analysis controlled for a host of demographic variables, including age, gender, SES, and race/ethnicity. In step 2, the principal investigator entered work volition and career adaptability into their respective analyses.

Following this, the final two HLR analyses were conducted to assess the moderating capacity of psychological flexibility. Consistent with the previous two regression analyses, step 1 and step 2, both included demographic variables, followed by work volition and career adaptability in their respective analyses/blocks. In step 3, the principal investigator entered psychological flexibility to gauge its contribution to vocational identity. Then, to gauge the moderating capacity of psychological flexibility, the principal investigator entered the interactive term (product of predictor variable and psychological flexibility) into step 4. This final step allowed for an assessment of psychological flexibility's moderating power independent of the unique contribution of each variable on vocational identity.

As they relate to the second hypothesized moderation model, four separate HLR analyses were conducted to assess the moderating effects of psychological flexibility on economic constraints and marginalization on the outcome variables: work volition and career adaptability. In all four analyses, the principal investigator entered the demographic variables, including age, gender, SES, and race/ethnicity, in step 1. In step 2, the principal investigator entered economic constraints and marginalization into their respective analyses. Following this, In step 3, the principal investigator entered psychological flexibility to gauge its contribution to work volition and career adaptability. Then, to gauge the moderating capacity of psychological flexibility, the principal investigator entered the interactive term (product of predictor variable and psychological flexibility) into step 4. Consistent with the previous analyses, this final step allowed for an assessment of psychological flexibility's moderating power independent of the unique contribution of each variable on work volition and career adaptability.

Lastly, concerning the third hypothesized mediation model, six separate mediation analyses were conducted using a statistical bootstrapping technique. Through the use of the SPSS

PROCESS v4.0 macro by Andrew Hayes, in each analysis, the principal investigator entered vocational identity in the “Y variable” block, economic constraints, and marginalization into their respective “X variable” blocks, race/ethnicity, age, gender, and SES in the “Covariate(s)” block, and finally, the principal investigator entered psychological flexibility, career adaptability, and work volition into the “Mediator(s) M” block into their respective analyses. The results of all three sets of these analyses are reviewed in chapter 4.

Chapter 4

Results

Overview of Analyses

The following analyses were conducted on the Prolific sample. The analyses progressed from descriptive to multiple linear regressions of the three proposed models.

Preliminary Analysis

Following the data collection via Qualtrics and data transfer to IBM SPSS 28, correlations, frequencies, and descriptive analyses were conducted to assess the simple relationships among the study variables (See Table 2.)

Table 2

Correlation Matrix of Measured Variables (*n = 283*)

Measure	**1**	**2**	**3**	**4**	**5**	**6**
1.Vocational Identity	-					
2. Economic Constraints	-.069	-				
3. Work Volition	.437**	-.485**	-			
4. Career Adaptability	.483**	-.068	.349**	-		
5. Marginalization	.041	.310**	-.191**	.063	-	
6. Psychological Flexibility	.327**	.002	.253**	.578**	-.018	-

Note: ** $p < .01$.

Missing Data

In assessing for missing data, descriptive analyses indicated less than .01% missing data across participants. Given the limited presence of missing data, a series mean imputation was used to account for the small number of missing values, as recommended by Roth et al. (1999). Following this imputation process, zero cases were eliminated. Descriptive analyses did not indicate any univariate outliers.

Data Diagnostics

In addition to the initial descriptive analyses, an examination for adherence to statistical assumptions of the multiple regression analyses was conducted (Field, 2009). Before running the regression analyses, the study variables were centered to reduce multilinearity issues and simplify the interpretation of results (Aiken & West, 1991; Frazier et al., 2004). There was no evidence of multicollinearity as the highest correlation among individual study variables was .483, considerably lower than the .80 high correlation designation (Field, 2009). Furthermore, with the understanding that multiple regression analyses rely on normally distributed data (Field, 2009), values of skewness (< |3|) and kurtosis (< |10|) were all within acceptable levels on the vocational identity outcome variable (See Table 3.) Additionally, the tolerance level and the variance inflation factor results between different sets of predictive variables were all within normal ranges of <.1 and <10, respectively (Field, 2009). All variables appeared normally distributed on visually inspected histograms and box plots.

Table 3

Descriptive Statistics of Measured Variables (*n = 283*)

Variable	Mean	SD	Skewness	Kurtosis
1. Vocational Identity	61.60	21.06	-.173	-1.019
2. Economic Constraints	18. 55	10.01	.195	-1.322
3. Work Volition	56.19	15.64	-.061	-.512
4. Career Adaptability	39.52	9.99	-.186	-.002
5. Marginalization	11.51	5.21	-.047	-1.050
6. Psychological Flexibility	22.33	5.07	.165	.093

Relationships Between Demographic Variables of Interest and Study Variables

Conducting a multivariate analysis of variance (MANOVA), I examined the relationships between race/ethnicity, gender, age, and SES and the study variables of interest (See Table 4.)

These demographic variables were selected based on their global and vocational identity development implications.

The MANOVA revealed only a few significant differences between groups related to the study variables. While race/ethnicity, age, and gender were not associated with any differences between groups on the study variables, SES did yield significant differences. More specifically, SES appears to be a strong predictor of vocational identity, economic constraints, career adaptability, and marginalization. Looking at the parameter estimates of SES (See Table 5), we see that the relationship between SES, vocational identity, and career adaptability is positive and significant. In contrast, the relationship between SES, economic constraints, and marginalization is negative and significant. Practically, these results suggest that an emerging adult who has a lower socioeconomic status is more likely to experience difficulty forming their vocational identity and feel like they do not have the necessary skills to cope with career-based challenges. In addition to this, these data also suggest that that same emerging adult is also more likely to experience macro-level barriers like economic constraints and experiences of oppression.

Table 4

MANOVA of Gender, Age, Socioeconomic Status, and Race/Ethnicity (*n = 283*)

Variable		Sum of Squares	df	Mean Square	F	Significance
Black/African American	Vocational Identity	148.942	1	148.942	.335	.563
	Psychological Flexibility	3.605	1	3.605	.145	.704
	Economic Constraints	96.003	1	96.003	.952	.330
	Work Volition	42.542	1	42.542	.174	.677
	Career Adaptability	33.950	1	33.950	.340	.560
	Marginalization	1.778	1	1.778	.064	.800
Asian/Asian American	Vocational Identity	228.380	1	228.380	.514	.474
	Psychological Flexibility	12.209	1	12.209	.490	.485
	Economic Constraints	64.802	1	64.802	.643	.423
	Work Volition	61.661	1	61.661	.252	.616
	Career Adaptability	61.661	1	61.661	.617	.433
	Marginalization	2.344	1	2.344	.085	.771
Hispanic	Vocational Identity	274.645	1	274.645	.618	.432
	Psychological Flexibility	.449	1	.449	.018	.893
	Economic Constraints	51.341	1	51.341	.509	.476
	Work Volition	114.574	1	114.574	.468	.494
	Career Adaptability	46.425	1	46.425	.465	.496
	Marginalization	3.328	1	3.328	.121	.729

Note: * p <.05; ** p < .000.

Table 4 Continued

MANOVA of Gender, Age, Socioeconomic Status, and Race/Ethnicity (*n = 283*)

	Variable	Sum of Squares	df	Mean Square	F	Significance
White	Vocational Identity	287.062	1	287.062	.646	.422
	Psychological Flexibility	2.571	1	2.571	.103	.748
	Economic Constraints	63.298	1	63.298	.628	.429
	Work Volition	128.980	1	128.980	.527	.469
	Career Adaptability	65.704	1	65.704	.658	.418
	Marginalization	1.312	1	1.312	.048	.828
Mixed	Vocational Identity	182.678	1	182.678	.411	.522
	Psychological Flexibility	2.711	1	2.711	.109	.742
	Economic Constraints	108.676	1	108.676	1.078	.300
	Work Volition	90.163	1	90.163	.368	.544
	Career Adaptability	58.939	1	58.939	.590	.443
	Marginalization	3.840	1	3.840	.139	.709
Gender	Vocational Identity	.056	1	.056	.000	.991
	Psychological Flexibility	6.072	1	6.072	.235	.628
	Economic Constraints	358.402	1	358.402	3.601	.059
	Work Volition	.871	1	.871	.004	.953
	Career Adaptability	343.132	1	343.132	3.458	.064
	Marginalization	91.113	1	91.113	3.371	.067
Age	Vocational Identity	1621.353	1	1621.353	3.689	.056
	Psychological Flexibility	37.384	1	37.384	1.456	.229
	Economic Constraints	30.553	1	30.553	.304	.582
	Work Volition	320.713	1	320.713	1.313	.253
	Career Adaptability	32.364	1	32.364	.323	.570
	Marginalization	.063	1	.063	.002	.962
SES	Vocational Identity	5905.700	1	5905.700	13.921	.000**
	Psychological Flexibility	3.386	1	3.386	.131	.717
	Economic Constraints	9264.982	1	9264.982	136.915	.000**
	Work Volition	499.936	1	499.936	5.077	.025*
	Career Adaptability	331.636	1	331.636	12.718	.000**

Marginalization	5905.700	1	5905.700	13.921	.000**

Note: * p <.05; ** p < .000.

Table 5

MANOVA Parameter Estimates of SES (*n = 283*)

Measure	**B**	**Std. Error**	**t**	***p* value**
Vocational Identity	2.772	.743	3.731	.000
Psychological Flexibility	.066	.183	.362	.717
Economic Constraints	-3.473	.297	-11.701	.000
Work Volition	.429	.565	.760	.025
Career Adaptability	.807	.358	2.253	.000
Marginalization	-.657	.184	-3.566	.000

Note: * p <.05; ** p < .000.

Primary Analyses Results

The primary aim of the current study was to assess four major hypotheses originating from the primary hypothesized model. The research questions, hypotheses, results, and statistical output (see Tables 6 and 7) are outlined below.

Q_1: To what extent does work volition predict vocational identity?

H_1: Work volition will have a positive relationship with and predict vocational identity.

Result: Work volition had a significant positive relationship with vocational identity, suggesting that the more an emerging adult feels like they have power over their career-related decisions, the more likely they are to advance their vocational identity. Thus, hypothesis 1 is supported by the data.

Q_2: To what extent does career adaptability predict vocational identity?

H_2: Career adaptability will have a positive relationship with and predict vocational identity.

Result: Career adaptability had a significant positive relationship with vocational identity, suggesting that the more an emerging adult feels like they have the skills to manage career issues, the more likely they are to advance their vocational identity. Thus, hypothesis 2 is supported by the data.

Q_3: To what extent does psychological flexibility moderate the relationship between work volition and vocational identity?

H_3: Psychological flexibility will significantly moderate the relationship between work volition and vocational identity.

Result: Psychological flexibility did not significantly moderate the relationship between work volition and vocational identity. Thus, hypothesis 3 is not supported by the data. However, psychological flexibility was a significant predictor of vocational identity when controlling for work volition and demographic variables. This suggests that while psychological flexibility may not decrease the impact of low work volition on an emerging adult, it still does aid in advancing vocational identity.

Q_4: To what extent does psychological flexibility moderate the relationship between career adaptability and vocational identity?

H_4: Psychological flexibility will significantly moderate the relationship between career adaptability and vocational identity.

Result: Psychological flexibility did not significantly moderate the relationship between career adaptability and vocational identity. Thus, hypothesis 3 is not supported by the data.

Table 6

Hierarchical Regression Analyses Exploring Work Volition and Psychological Flexibility as a Moderator in Relation to Vocational Identity (n = 283)

	b ***(SE)***	**R-sq**	**Adj Rsq**	**Delta Rsq**	***p* value**
Step 1: Demographics		.08	.06	.08	<.001
Gender	1.70 (2.2)				.44
Age	-1.64 (.61)				.01
Race/Ethnicity	-.18 (.48)				.71
SES	2.49 (.74)				<.001
Step 2		.22	.20	.14	<.001
Work Volition	.57 (.08)				<.001
Step 3		.28	.26	.06	<.001
Psychological Flexibility	1.03 (.22)				<.001
Step 4		.28	.26	.00	.89
Interaction	.002 (.01)				.89

Table 7

Hierarchical Regression Analyses Exploring Career Adaptability and Psychological Flexibility as a Moderator in Relation to Vocational Identity (n = 283)

	b ***(SE)***	**R-sq**	**Adj Rsq**	**Delta Rsq**	***p* value**
Step 1: Demographics		.08	.06	.08	<.001
Step 2		.28	.26	.20	<.001
Career Adaptability	.95 (.11)				<.001
Step 3		.28	.27	.01	.11
Psychological Flexibility	.43 (.27)				.11
Step 4		.28	.27	.00	.86
Interaction	.003 (.02)				.86

Secondary Analysis of Alternative Models

In addition to its primary objectives and analyses, the current study took an exploratory approach in assessing the best placement of psychological flexibility within the hypothesized PWT model of vocational identity. As outlined above, two separate alternative models were evaluated. A summary of results and their respective output are outlined below.

Alternative Moderation Model Results

Psychological flexibility appears to moderate only one of the four examined relationships in this alternative model (See Figure 3). However, when analyzed on its own after controlling for demographic and other predictor variables, psychological flexibility does appear to contribute a significant amount of unique variance to the outcome variables. This suggests that while psychological flexibility may not function as a moderator, it is a vital psychological factor that may aid in advancing an emerging adult's work volition and career adaptability.

Q_1: To what extent does psychological flexibility moderate the relationship between economic constraints and work volition?

Result: Psychological flexibility did not moderate the relationship between economic constraints and work volition. However, psychological flexibility does contribute a significant amount of unique variance to work volition in a direct relationship.

Q_2: To what extent does psychological flexibility moderate the relationship between marginalization and work volition?

Result: Psychological flexibility did not significantly moderate the relationship between marginalization and work volition. However, psychological flexibility does contribute a significant amount of unique variance to work volition in a direct relationship.

Q_3: To what extent does psychological flexibility moderate the relationship between economic constraints and career adaptability?

Result: Psychological flexibility did not significantly moderate the relationship between economic constraints and career adaptability. However, psychological flexibility does contribute a significant amount of unique variance to career adaptability in a direct relationship.

Q_4: To what extent does psychological flexibility moderate the relationship between marginalization and career adaptability?

Result: Psychological flexibility did not significantly moderate the relationship between marginalization and career adaptability. However, psychological flexibility does contribute a significant amount of unique variance to career adaptability in a direct relationship.

Table 8

Hierarchical Regression Analyses Exploring Economic Constraints and Psychological Flexibility as a Moderator in Relation to Work Volition (n = 283)

	b ***(SE)***	**R-sq**	**Adj Rsq**	**Delta Rsq**	***p* value**
Step 1: Demographics		.21	.20	.21	<.001
Gender	-.93 (1.51)				.54
Age	-.12 (.43)				.78
Race/Ethnicity	-.01 (.33)				.99
SES	4.33 (.51)				<.001
Step 2		.29	.27	.08	<.001
Economic Constraints	-.53 (.10)				<.001
Step 3		.35	.34	.06	<.001
Psychological Flexibility	.78 (.15)				<.001
Step 4		.37	.35	.02	.01
Interaction	0.04 (.01)				.01

Table 9

Hierarchical Regression Analyses Exploring Marginalization and Psychological Flexibility as a Moderator in Relation to Work Volition (n = 283)

	b ***(SE)***	**R-sq**	**Adj Rsq**	**Delta Rsq**	***p* value**
Step 1: Demographics		.21	.20	.21	<.001
Step 2		.22	.21	.01	.07
Marginalization	-.31 (.17)				<.001
Step 3		.28	.27	.06	<.001
Psychological Flexibility	.77 (.16)				<.001
Step 4		.28	.27	.00	.40
Interaction	-.02 (.01)				.40

Table 10

Hierarchical Regression Analyses Exploring Marginalization and Psychological Flexibility as a Moderator in Relation to Career Adaptability (n = 283)

	b ***(SE)***	**R-sq**	**Adj Rsq**	**Delta Rsq**	***p* value**
Step 1: Demographics		.03	.02	.03	.06
Gender	1.99 (1.07)				.06
Age	-.18 (.30)				.54
Race/Ethnicity	-.09 (.24)				.69
SES	.70 (.36)				.05
Step 2		.04	.02	.01	.25
Marginalization	.14 (.12)				.25
Step 3		.38	.37	.35	<.001
Psychological Flexibility	1.16 (.09)				<.001
Step 4		.38	.37	.00	.49
Interaction	-.01 (.02)				.49

Table 11

Hierarchical Regression Analyses Exploring Economic Constraints and Psychological Flexibility as a Moderator in Relation to Career Adaptability (n = 283)

	***b* (SE)**	**R-sq**	**Adj Rsq**	**Delta Rsq**	***p* value**
Step 1: Demographics		.03	.02	.03	.06
Step 2		.03	.01	.00	.94
Economic Constraints	-.01 (.07)				.94
Step 3		.38	.37	.35	<.001
Psychological Flexibility	1.16 (.09)				<.001
Step 4		.38	.36	.00	.78
Interaction	.00 (.01)				.78

Alternative Mediation Model Results

Among the six mediation analyses conducted, only two were marginally significant. This indicates no strong evidence of mediation within this alternative mode. However, as it pertains to the two significant mediation analyses, work volition appears to function as a suppressor variable (See Figures 5 and 6). As discussed in MacKinnon et al. (2000), suppression occurs when the predictive ability of an independent variable increases or decreases with the addition of another variable into the regression equation (Tzelgov & Henik, 1991). In this analysis, the predictive capacity of economic constraints and marginalization on vocational identity strengthened when work volition was added to each equation. This observed suppression effect is consistent with other related research. For example, in a study on workplace climate, England et al. (2020) that found the relationship between economic constraints and career adaptability became significant only after including work volition.

Q_1: To what extent does psychological flexibility mediate the relationship between economic constraints predict vocational identity?

Result: Psychological flexibility did mediate the relationship between economic constraints and vocational identity.

Q_2: To what extent does career adaptability mediate the relationship between economic constraints predict vocational identity?

Result: Career adaptability did mediate the relationship between economic constraints and vocational identity.

Q_3: To what extent does work volition mediate the relationship between economic constraints predict vocational identity?

Result: Work volition significantly mediated the relationship between economic constraints and career adaptability.

Q_4: To what extent does psychological flexibility mediate the relationship between marginalization predict vocational identity?

Result: Psychological flexibility did not mediate the relationship between marginalization and vocational identity.

Q_5: To what extent does career adaptability mediate the relationship between marginalization predict vocational identity?

Result: Career adaptability did not mediate the relationship between marginalization and vocational identity.

Q_6: To what extent does work volition mediate the relationship between marginalization predict vocational identity?

Result: Work volition significantly mediated the relationship between marginalization and career adaptability.

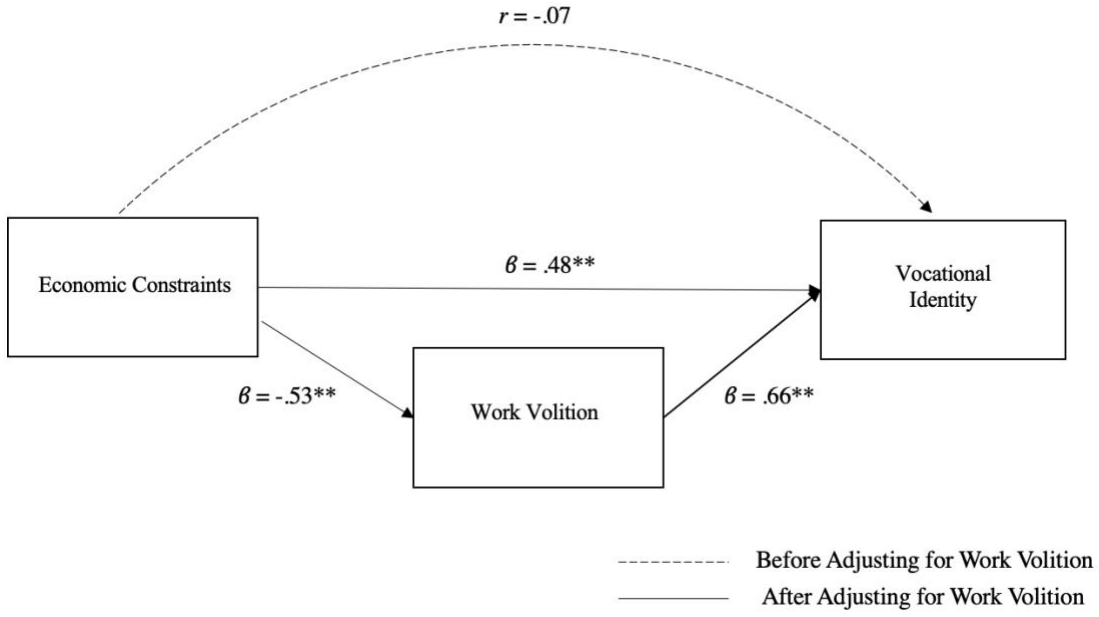

Figure 5. Work Volition Suppression Effect. Note: * p <.05; ** p < .000.

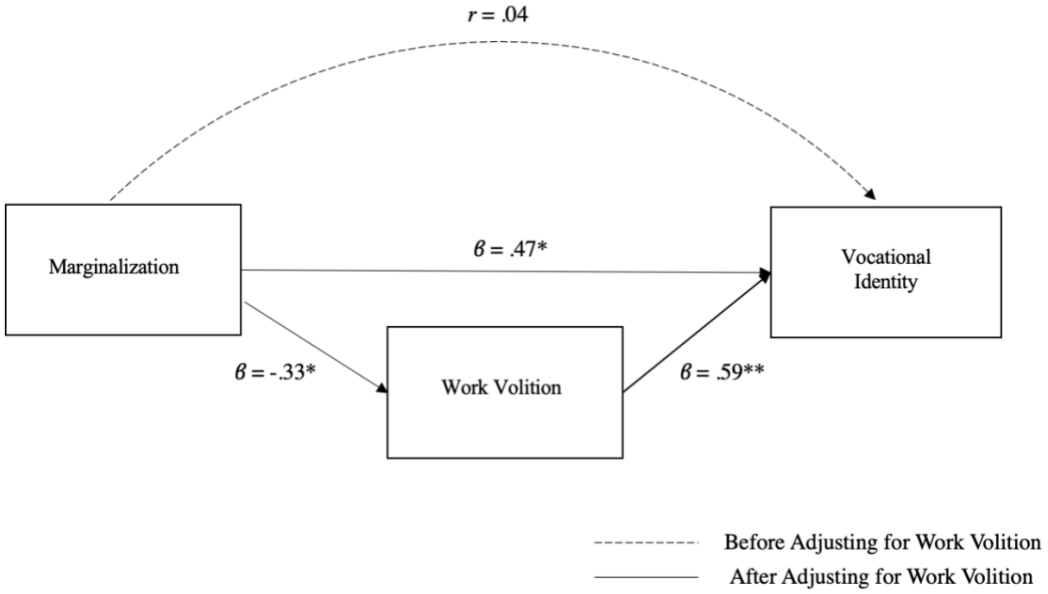

Figure 6. Work Volition Suppression Effect. Note: * p <.05; ** p < .000.

Summary of Analyses

In sum, vocational identity development is impacted by several variables included in the primary hypothesized model of this dissertation. More specifically, both career adaptability and

work volition positively impact vocational identity development. While psychological flexibility does not moderate the negative impact that low work volition and career adaptability can have on vocational identity development, it does appear to be a consistent predictor of vocational identity development. Additionally, work volition functions as a suppressor variable, strengthening the relationship between marginalization, economic constraints, and vocational identity. In Chapter 5, I dive into an in-depth discussion of these findings, how they relate to previous research, and their implications for the field of vocational psychology broadly.

Chapter 5

Discussion

The current study aimed to enhance the scope of PWT by incorporating important psychological variables and applying it to emerging adulthood (18-25), which is an age range that is critical for identity development (Erikson, 1959) and understudied in PWT research (Kim & Na, 2017; Kim et al., 2019). More specifically, the dissertation examined the impact of work volition and career adaptability on vocational identity, and assessed the moderating and mediating role of psychological flexibility within these relations. In addition, this study sought to examine additional exploratory moderation and mediation models of vocational identity. Quantitative data collected via Prolific informed these predictions of vocational identity in several different hierarchical linear regressions and bootstrapping mediation analyses. Overall, the results support the notion that work volition, career adaptability, and psychological flexibility are important psychological mechanisms predicting vocational identity development. This final chapter summarizes and discusses the primary findings and additional discoveries of this study. It also explores the theoretical, practical, and policy implications, and presents the study limitations and future research directions.

Work Volition and Vocational Identity Development

The data indicate that an emerging adult's sense of choice to make occupational decisions, despite constraints, significantly predicts higher levels of vocational identity development. As an emerging adult feels more able to make decisions connected to their career journey, their understanding of themselves, their interests, and capacity to set and embark on their career-development goals increases. With a paucity of previous empirical research on this relationship, HLR results support this novel finding and indicate that work volition contributes a significant amount of unique variance to vocational identity, independent of other study variables of interest. This result offers empirical support for the theoretical propositions advanced by Kim et al. (2018), who argued that when individuals have a higher degree of freedom over their occupational choices, they are less likely to be hindered by potential obstacles. This dynamic bolsters their "ability to choose careers that suit their needs, interests, and values" (Kim et al., 2018, p 287.) Furthermore, in line with proposals by Kim et al. (2018), interventions that target work volition may be effective in helping an individual engage in their career development broadly, and in this context, in their overall vocational identity development.

Additionally, results indicate that work volition functions as a suppressor variable within the dynamic between an individual's experience of marginalization and economic constraints and their vocational identity development. More specifically, it was only after adjusting for work volition that both experiences of marginalization and economic constraints significantly predicted positive vocational identity development (See Figures 5 and 6). This result runs counter to research on the impacts of marginalization and economic constraints, with researchers concluding that they have the power to disrupt development across a variety of domains like work, physical health, and mental health (Duffy et al., 2019; Myers et al., 2015; Williams, 2018).

So, this begs the question, “How could an individual who has experienced such hardships advance their vocational identity forward?” Especially with vocational identity being among the most challenging aspects of identity development to procure (Erikson, 1959). One potential explanation lies in the intersection between an individual and vocational identity theory.

At its core, vocational identity theory encompasses the dichotomized (i.e., high and low) constructs of exploration and commitment. Through this lens, this model creates four broad identity statuses that can be used to conceptualize where an individual is in their vocational identity journey (Marcia 1966, 1993). This theory posits that people generally begin in a state of diffusion and move into a state of moratorium, foreclosure, and achievement over time (Gupta et al., 2015). Results from HLRs suggest that individuals who experience higher levels of economic constraints and marginalization experience decreases in their sense of career choice, and as a result, they advance their vocational identity forward.

While this finding may appear counterintuitive, this study argues that one possibility is that individuals may move into a state of identity foreclosure. It is difficult to identify each participant’s specific identity status based on the selected measure of vocational identity used in this dissertation. However, based on identity foreclosure’s conceptual foundation, which involves lower career exploration and higher levels of commitment (Marcia 1966, 1993), individuals may not be exploring different work possibilities and instead commit to a specific job or career within their immediate realm of possibility because they perceive themselves as having less choice in what they do for work, which fosters a state of foreclosure.

To further clarify this point, Erikson (1968) suggested that much of identity formation occurs during one’s adolescent years and is primarily facilitated through an epigenetic process, whereby changes in one’s social environment correspond to changes in individual growth

(Marcia & Josselson, 2013). Based on these ideas, it is plausible to infer that if an individual settles on a particular career choice without engaging in much exploration, moving into a state of identity foreclosure may be partly due to a lack of environmental stimulation or opportunity.

While advancing from a state of diffusion is associated with positive psychological adjustment (Chen et al., 2005; Marcia, 1993), a foreclosed identity status is less desirable, as it increases the likelihood that the prematurely selected job or career will not suit one's identity (Gupta et al., 2015). As an alternative to this individualistic perspective, it is critical to account for the environment in which the individual is nested within. This study offers a systemic-based explanation for how individuals who experience such devastating hardships can advance their vocational identity.

While several factors within one's environment can impact their identity development, Luyckx et al. (2006) argue that social support can have a significant influence. Consistent with propositions made by theoretical perspectives like PWT (Duffy et al., 2016) and Social Cognitive Career Theory (SCCT; Lent et al., 2000), social support from one's environment stemming from a familial relationship, peer, or other members of the community, can build an individual's sense of self-efficacy related to their career development (Kenny & Medvide, 2013). This study did not assess perceptions of social support. However, based on the well-documented benefits of social support in career development (Kenny & Medvide, 2013), it is reasonable to presume that individuals who experienced pervasive social and economic hardships may have been able to rely on their community for support, and thus, advance their vocational identity forward.

As Para (2008) described, Bosma and Kunnen (2001) suggested that strong family ties expose an individual to certain belief systems. These belief systems can bolster one's identity,

leading to higher levels of academic competence (Kenny et al., 2002) and in turn, enhancing one's career preparation (Para, 2008). Alternatively, some belief systems can shelter an individual, narrowing their perspective as is characteristic of a foreclosed identity status (Para, 2008). This study argues that this complex and evolving dynamic between individuals and their community may have played a role in supporting those who experienced economic and social adversity, allowing them to more effectively engage in the vocational identity development process. These assertions support calls for comprehensive research focused on the interplay between individuals and their community (Kenny et al., 2022). They also support interventions to bolster one's identity formation within the individual and at the community resource level.

Career Adaptability and Vocational Identity Development

Results indicate that an emerging adult's sense of personal readiness and ability to utilize effective management strategies for present and future career-related issues significantly predicts higher levels of vocational identity development. More specifically, an emerging adult's career adaptability increases as they develop a future-oriented perspective with an understanding that their present decisions have significant implications for their future, along with a degree of self-discipline, curiosity, and confidence that they have the psychosocial resources to cope with career developmental tasks. As these adapt-abilities evolve, emerging adults are also likely to engage in the exploratory tasks necessary to advance and commit to a vocational identity. Similar to work volition, HLR analysis supports this notion, as career adaptability contributes a significant amount of unique variance to vocational identity, independent of every other study variable of interest.

These takeaways are in line with theoretical arguments that posit these two constructs are not only related but function as two vital meta-competencies that serve as an index of when "it is

time to change" and strengthen an individual's "capacity to change" (Porfeli & Savickas, 2012, p. 749). Furthermore, several other studies support these findings as they suggest a strong positive correlation between each dimension of career adaptability and both dimensions of vocational identity (Haibo et al., 2018; Kirchknopf, 2020; Porfeli & Savickas, 2012; Savickas, 2011.) Therefore, consistent with Kirchknopf (2020), this study argues that these findings support the notion that career adaptability should be a focus of intervention as it directly impacts positive vocational identity development.

Psychological Flexibility's Moderation and Mediation Capacity within PWT

Based on the HLR analyses conducted on all three proposed conceptual models, psychological flexibility does not appear to be a significant moderator or mediator between the study variables of interest. More specifically, psychological flexibility failed to moderate the deleterious impacts of low work volition and low career adaptability on vocational identity development. It also failed to moderate the negative impacts of marginalization on work volition and career adaptability and the harsh impacts of economic constraints on career adaptability. Furthermore, it did not mediate the relationships between marginalization, economic constraints, and vocational identity. While this was a consistent theme throughout the study, psychological flexibility did moderate one set of relationships, namely the negative impacts of economic constraints on work volition.

While these findings are surprising given the strong evidence for psychological flexibility's capacity to moderate the negative impacts of distressing physical and psychological phenomena in a variety of settings (e.g., Bond & Flaxman, 2006; Chang et al., 2018; Jeffords et al., 2020; Kashdan & Rottenberg, 2010; Leonidou et al., 2019; Pakenham et al., 2020; Pienaar et al., 2018), this study offers two potential explanations. The first lies within the statistical

techniques used in this dissertation. For example, given that the product term itself includes psychological flexibility, the inclusion of this variable produced a higher level of multicollinearity. This dynamic may have resulted in a diluted ability to detect interaction effects. As outlined in Chapter 4, this dissertation utilized a common approach to troubleshoot this issue via mean-centering; however, as Jie et al. (2015) described, this may have only impacted the main effect coefficients and interpretability of the results. Thus, it is reasonable to assume that psychological flexibility may still have a capacity for moderation and mediation within PWT, but a cross-sectional design analyzed via HLR increased the difficulty of detecting a moderating or mediating effect.

Another potential explanation for why psychological flexibility failed to significantly moderate or mediate relationships between PWT variables is that it may not be sufficiently related to career or macro-level variables. For example, as examined in the primary model of this dissertation (See Figure. 2), psychological flexibility was hypothesized to moderate the impacts of low work volition on vocational identity development. Taking a closer look at how these constructs are conceptualized, psychological flexibility represents the cognitive capacity to adaptively regulate one's behavior when *negative thoughts or feelings* arise from challenging environmental triggers (Hayes et al., 2006). In contrast, work volition characterizes the *perceived capacity* to make career development decisions despite constraints (Duffy et al., 2012). While both of these processes occur within the psyche, it is clear that work volition's affective components (i.e., anxiety, stress, depression) are ancillary in its conceptual definition and how it is measured. Therefore, this study argues that psychological flexibility may be one step removed from work volition and could be better positioned to moderate the resultant adverse psychological effects of lower work volition like neuroticism, poor core self-evaluations, and

negative-affect (Duffy et al., 2012; Duffy et al., 2013; Duffy et al., 2015). This consistent theme of separation between career-oriented variables, macro-level barriers, and psychological factors is discussed at greater length in this chapter's subsequent "Additional Findings" section.

Additional Findings

In addition to these central themes of the study, several other significant findings emerged from this study. These findings discussed below pertain to the relationship between age and vocational identity development, how psychological flexibility and career adaptability may function in similar ways, and how some PWT variables do not perform as theoretically asserted by the authors of PWT.

Age and Vocational Identity

Correlational analyses indicated a significant inverse relationship between age and vocational identity. This result suggests that as participants aged, their vocational identity waivered. This finding is counterintuitive through the lens of historical vocational identity theory, which predicts an established vocational identity by the early to mid-20s (i.e., Super et al., 1963). However, this period, coined by Erik Erikson (1968) as a “psychosocial moratorium” and characterized by an exploration of work, educational opportunities, and delayed brain development (Arnett, 2000; Taber-Thomas & Perez, 2014), has been increasingly extended over the past few decades. While there are many possible explanations worth discussing that could help elucidate why we see this delay in establishing a vocational identity, for example, significant advancements in technological innovation, globalization, and higher education (Mortimer et al., 2002; Lent, 2018), it is vital to account for the global context during which this study took place.

The COVID-19 pandemic introduced fear and uncertainty into everyday life and "fundamentally shattered the illusion of security at work" (Blustein & Gaurino, 2020, p. 703). This global event that persists at the time of this writing pushed the United States and other countries worldwide to rethink what they value and how they understand and structure work. This historical moment likely added a layer of uncertainty that directly impacted all participants within this study, especially those in the later stages of emerging adulthood. This assertion stands in part on new research highlighting how the COVID-19 pandemic and the resultant shutdown procedures functioned as a major threat to established vocational identities (Hennekam et al., 2021). More specifically, these researchers found that as individuals were subjected to significant disruptions in their employment and work-life balance, they experienced a significant threat to and reconstruction of their work identities (Hennekam et al., 2021). In line with these findings, this study posits that as individuals advanced along their vocational identity journey, unexpected, disrupting events like the COVID-19 pandemic may have added even more complexity to an already uncertain development period and potentially created conditions ripe for ongoing identity exploration or crisis. As described in Skorikov and Vondracek (2007), this state of crisis arises with an influx of ambiguity in one's occupational future and delays engaging in career exploration and making occupational commitments (Erikson, 1968).

While the COVID-19 pandemic likely disrupted various aspects of vocational identity development within this sample, fluctuations in identity status are not unheard of. For example, in a study on adolescent and young adult vocational identity development, Porfeli et al. (2011) found a cluster of participants that reported high levels of career exploration and commitment, in addition to the "highest levels of career self-doubt and flexibility," among other clusters, resulting in elevated levels of career reconsideration (Porfeli et al., 2011, p. 866). With this

cluster in mind, Porfeli and their research team titled this set of behaviors as “searching moratorium” (Porfeli et al., 2011, p. 864) and compared it to the moratorium-achievement-moratorium-achievement (MAMA) cycle identified by Marcia (1993). Consistent with these empirical and theoretical arguments, this study argues that participants within this sample may have been oscillating between achieved and moratorium identity statuses as they progressed through emerging adulthood. Given our understanding of the uncertainty that can accompany the transition from adolescents to adulthood, individuals may have been engaging in a well-documented set of behaviors consistent with a rapidly changing environment.

Conversely, analogous to how a person will cling to a raft when caught in an ocean storm, younger people within this emerging adult sample may have preemptively committed to a particular career or career path to have a sense of stability and clear direction. While it is difficult to identify the specific identity status accurately for any one participant in this study due to the selected vocational identity measure (Gupta et al., 2015), conceptually, this type of behavior is characteristic of identity foreclosure (Marcia, 1993) and may have contributed to the overall inverse relationship between age and vocational identity development.

However, it is worth noting that the correlation between age and vocational identity in this sample was weak. Although there were no outliers or abnormal response patterns among participants, this result could be due to a statistical anomaly. Nonetheless, more research accounting for macrostructural conditions should take place to clarify and further refine our understanding of the relationship between age and vocational identity.

Psychological Flexibility and Career Adaptability: A Synergistic Relationship

In HLR analyses predicting vocational identity, for example, career adaptability accounted for a substantial amount of variance, so much so that psychological flexibility

appeared to have no significant predictive capacity. Additionally, correlational analyses indicated a moderate correlation between these two variables, similar to other related research on the relationship between adaptability and psychological flexibility as overarching regulation strategies (i.e., Waldeck et al., 2021). The visible overlap between these constructs is unsurprising through a theoretical lens and has important implications for future research and career intervention.

There is a solid theoretical argument that adaptability and psychological flexibility tap into similar psychological pathways, although they are still understood to be distinct processes (Waldeck., 2021). In the broadest sense, adaptability refers to one's cognitive, behavioral, and emotional capacity to adapt to changing environments and uncertainty (Martin et al., 2013). Translated to a career context, Savickas (2013) posits that career adaptability involves a set of adaptive internal coping strategies that help one manage career development tasks, transitions, and potential challenges. With these conceptions in mind, their connection to psychological flexibility, which encompasses one's ability to flexibly adapt their thoughts, feelings, and emotions to the demands of a given situation (Morris & Mansell, 2018), is clear. While this led to some insignificant findings within this study, this finding presents a silver lining in support of future research, which is elaborated on next.

With the goal of improving the efficacy of career interventions in mind (Brown, 2015), intervention studies have successfully showcased that career adaptability is a malleable process and associated with several improvements in well-being and career outcomes (Green et al., 2020; Janeiro et al., 2014; Koen et al., 2012). Given the similarities between career adaptability and psychological flexibility, creating or applying established interventions to improve psychological

flexibility (i.e., ACT therapy) within a career context could prove beneficial, as they would likely tap into similar psychological mechanisms.

Re-Thinking Marginalization and Economic Constraints as PWT Predictors

This study revealed findings contrary to the original PWT model (Duffy et al., 2016). Marginalization did not significantly predict work volition or career adaptability, and economic constraints were only a significant predictor of work volition and not career adaptability. In their review of research on these four primary predictors of decent work, Blustein and Duffy (2020) highlighted how some researchers found predictive relationships between marginalization, economic constraints, and work volition (Douglas et al., 2017; Duffy et al., 2018; Duffy et al., 2019); however, those same studies failed to find any significant predictive relationship between marginalization, economic constraints, and career adaptability. Blustein and Duffy (2020) concluded that the relevant literature provided, at best, "mixed support for model propositions" (p. 219) and suggested that more research is needed to clarify these interrelationships.

Examining this dynamic further, one possible explanation for these inconclusive findings could lie in the conceptual differences between macro-level barriers and psychological processes. For example, in its most conventional sense, career adaptability encompasses one's level of career exploration, career planning, career self-efficacy, and overall capacity to manage present and future career problems (Savickas, 2013). Similar to psychological flexibility, career adaptability broadly centers around one's ability to prepare, cope with, and adjust to changing work environments, especially at the cognitive level. This study posits that PWT's mission to explore the interplay between structural barriers and career constructs may have left little room for more distally related psychological variables like career adaptability or psychological flexibility.

Similar to the overarching takeaways presented by Blustein and Duffy (2020) on these relationships, the results of this study add to the ambiguous literature base that makes it challenging to have well-defined insights from these relationships. Marginalization and economic constraints can function as predictors of an individual's likelihood of having decent work, access to healthcare benefits, and the likelihood of being subjected to vulnerable and unsafe work environments (Blustein et al., 2022). However, in other contexts, these predictive relationships breakdown (Duffy et al., 2018; Duffy et al., 2019). This project asserts that the field would benefit from more research into how these constructs are conceptualized and measured and delineate the contexts where these relationships may be more prominent (i.e., college or university, during major life transitions, or life shocks).

Practice and Policy Implications

Psychological Flexibility: A Tool to Impact Mental Health and Career Development

Despite psychological flexibility not being a moderating or mediating force within this study, results indicate that it does have a significant direct effect on an emerging adult's work volition, career adaptability, and vocational identity development. In short, the better an emerging adult can embrace their affective experience, acknowledge it, and respond behaviorally in ways that connect to their values or goals (Kashdan & Rottenberg, 2010), the more likely they are to develop the skills necessary to cope with mental health concerns, career-related issues, grow in their sense of power to make occupational choices, and advance their vocational identity. Multiple regression results support this notion, as psychological flexibility contributes a significant amount of unique variance to each of these constructs, independent of other study variables.

These positive results attest to the work of previous researchers highlighting links between psychological flexibility and positive improvements in career-related variables like procrastination, mental health, job performance, burnout, absence rates, and the likelihood of using work environment resources (Bond et al., 2008; Bond & Flaxman, 2006; Hayes et al., 2004; Sutcliffe et al., 2019). Furthermore, this dissertation and these findings represent an important integration between mental health and career development and support recommendations made by career counselors that ACT therapy, the primary intervention aimed at enhancing psychological flexibility, could serve as an effective complement to career counseling (Hoare et al., 2012; Luken & De Folter, 2019). With the understanding that work plays a significant role in mental health and vice versa (Redekopp & Huston, 2019), ACT therapy and the clinicians who employ these interventions should focus on the interplay between psychological flexibility and career development processes.

For example, as discussed in Luken and De Folter (2019), a work-oriented set of ACT interventions could involve activities centered around acceptance, which is one of the six core facets of psychological flexibility. By enhancing an individual's ability to open themselves up to uncomfortable feelings of uncertainty or doubt concerning their vocational identity or future career plans, career counselors and health practitioners could shift an individual's relationship with their emotions away from an avoidant coping style, which tends to increase the frequency and intensity of unpleasant thoughts and emotions (Hayes et al., 2006), presumably further complicating their career development and deteriorating one's mental health. Another example of an ACT work-oriented intervention is within the realm of values (Luken & De Folter, 2019). Values encompass what is important to someone and reflect the kind of person they aspire to be. By helping someone clarify and refine their values, an ACT work-oriented intervention would

elucidate a meaningful direction for that person to head towards in their work journey. For example, if a person values relationships, examining potential work or career opportunities that involve social connection and teamwork could be a helpful perspective that would bring them closer to what is important to them. This kind of perspective could expand the realm of opportunities for someone, as the goal would be to connect with their underlying values, which can happen in various different ways across a number of different jobs or careers, as opposed to only pursuing prestige or money. By promoting a shift in focus from, for example, money to an underlying and more meaningful value system, I argue clinicians could tackle specific mental health and career development concerns more effectively.

In sum, these data support the integration between mental health and career development, and the proposition that psychological flexibility should be a focus of career intervention as it is associated with significant improvements in career adaptability, work volition, and vocational identity. By tailoring the processes that underlie psychological flexibility to a work context, an ACT work-oriented intervention could improve people's ability to manage the common, yet jarring psychological ups and downs accompanying complex career development processes.

Policy Interventions to Address Structural Marginalization

Experiences of marginalization based on group membership (i.e., race, gender, sex, age) are a devastating source of human pain (Masuda et al., 2012). As such, over the past 20 years, there has been a plethora of research conducted on the effectiveness of interventions promoting psychological flexibility to modulate these impacts (as discussed in Masuda et al., 2012). For example, in a study of sexual minorities, Yadavaia and Hayes (2012) found that following an ACT intervention, participants reported significant decreases in their depression, anxiety, and self-stigma. Lillis and Hayes (2007) found improvements in behavioral intentions towards people

of color in a group of college students following an ACT training intervention. Other studies have highlighted a similar promise of psychological flexibility interventions for racial and ethnic minority populations (i.e., Bhambhani et al., 2020; Leleuz-Labarge Hatton et al., 2015; Masuda et al., 2014; & Skinta et al., 2015). While these studies and interventions are vital to promoting a fair and just world, society and psychology should also continue developing research and intervention to challenge structural racism and oppression.

As Blustein (2019) discussed, work can function as a major source of marginalization for people and remains an environment where racism and prejudice can rear their ugly heads. With a well-documented history of hiring bias, microaggressions, job instability, and determent from decent work (i.e., for a review, see Erby et al., 2021), interventions promoting individual-level mechanisms of change (i.e., psychological flexibility) can only go so far. We must continue to conduct and promote research that supports policy changes to challenge oppressive systems of power from the top-down. From anti-racist interventions (Deepak & Biggs, 2011; Hamilton-Mason & Schneider, 2018) to restorative justice initiatives (Opie et al., 2017), structural work interventions must be studied to identify the most effective complement to intervention work done at the individual level.

For example, in a systematic review of over 70 peer-reviewed articles, empirical studies, and theoretical papers, Hassen et al. (2021) examined anti-racism interventions within healthcare settings. Many of these interventions took place at the community level and focused on building positive and healthy relationships between healthcare organizations and the racialized communities they worked with (i.e., Aboriginal et al., 2013). Others involved unconscious bias training (i.e., Steed, 2010) and amending human resource policies (i.e., Shultz & Skorcz, 2012). The review concluded that anti-racism interventions are most effective when implemented across

all levels of the organization instead of just at the individual level. They also concluded that interventions function best when tailored to the specific populations the organization works with instead of a one-size-fits-all policy (Hassen et al., 2021). Research like this has the potential to inform other anti-racism interventions aimed at reducing the harm that prejudice and hate have on people of color and is a critical counterpart to individual intervention.

Theoretical and Future Research Implications

Vocational Identity in Modern Career Theory

Vocational identity development is among the most arduous processes of identity development as it involves a matured sense of self-awareness of one's skills and interests, capacity for setting appropriate goals, and an ability to make decisions geared toward achieving those goals (Erikson, 1959; Holland et al., 1980). Historically, vocational identity development was understood to unfold during the transition from adolescence to adulthood (Super et al., 1963); however, results from this study and several others suggest this form of development extends into the late stages of emerging adulthood beyond. Macro-level changes in contexts, like advances in technology, AI, and higher education (Mortimer et al., 2002; Schwab, 2016), have created an environment with endless possibilities, especially for those with a degree of privilege, with some even suggesting that a majority of future professions in the next decade have not even been created yet (IFTF, 2019). Given the vital nature of vocational identity development and this high degree of uncertainty during this period of time, this research argues that vocational identity should be re-introduced and examined within modern career theory and research.

Having observed fluctuations in vocational identity over time in this study, future research could extend their analysis past emerging adulthood, allowing for a broader level assessment of vocational identity. Additionally, this dissertation’s model of vocational identity

accounts for experiences of marginalization and economic constraints that many people face regularly. Building on this, future research could utilize measures that assess the impact of technological advancement and uncertainty like those encompassed in what some call the fourth industrial revolution (Schwab, 2017). This examination would provide a more precise estimate of these macro-level technological changes' impact on vocational identity development. Furthermore, researchers could evaluate the vocational identity development process through longitudinal and qualitative approaches, using measures of vocational identity that offer an accurate assessment of a participant's respective identity status. These forms of analysis could elucidate how this type of development ebbs and flows across time and could highlight the essence of this experience in a way that cross-sectional empirical research cannot.

Overall, vocational identity development is a complex process. Much like identity development in general, our understanding of it and its application in different contexts must evolve. Researchers and practitioners will be better equipped to handle and help emerging adults manage their own specific identity development journey with an updated formulation of vocational identity.

Psychological Flexibility in Vocational Psychology & PWT Research

Psychological flexibility has been a major facet of clinical psychological research over the past two decades. This research has discovered several important connections between psychological flexibility and positive health and behavioral-health indices (i.e., for a review, see Gloster et al., 2017). Furthermore, as previously discussed, this research has informed interventions aimed at bolstering an individual's level of psychological flexibility (i.e., for a review, see Masuda et al., 2012) in clinical and educational settings. However, there have only

been a handful of studies within vocational psychology, I/O psychology, and career development that have examined this fundamental marker of behavioral health (Bond et al., 2013).

This study was one of, if not the first, to examine how it functions within the complex dynamic of PWT. Moreover, given psychological flexibility's strong predictive capacity of original PWT variables and vocational identity development within this sample, this study could inspire future research. For example, while this study highlighted how well psychological flexibility predicts career adaptability, work volition, and vocational identity, independent of each other, this analysis was cross-sectional. This approach limits the ability to make causal inferences (this issue is further discussed in this chapter's "Limitations" section.) Future research could better assess this interrelationship through an experimental design. This type of design could offer clear indications of how improving one's level of psychological flexibility through targeted intervention may improve one's feelings of empowerment to make career decisions, be better able to adapt to ever-changing career development circumstances, and advance a vocational identity.

Future research could also expand to the latter half of the PWT model and investigate how psychological flexibility functions within the interrelationship of survival, social connection, self-determination, work fulfillment, and well-being within a career context. This work would provide a comprehensive assessment of these relationships and could offer support for career-development intervention aimed at helping people better adapt and achieve other central psychological needs.

Psychology of Working Theory

The authors of PWT posited a new model that addressed major limitations of traditional career theory, with a primary goal of foregrounding structural barriers to decent work that people

who want and need to work regularly experience (Blustein, 2017). In that same spirit, vocational identity and psychological flexibility were added to the model and then applied to an emerging adult population in this study. These adaptations addressed two major limitations of PWT and its' literature base, expanding the model's scope and applicability. Future research could continue this endeavor by including other psychological variables with implications for career development like Grit (Danner et al., 2019; Duckworth et al., 2007) or Big five personality factors (Semeijn et al., 2020) as potential moderators. These types of adaptions would allow for a model that better encompasses the interplay between sociocultural and psychological aspects of career development in a more parsimonious fashion.

Connected to the idea of future research focusing on the interplay between different factors, PWT, and other psychological researchers could implement an intersectional approach to their data collection and analytic strategies to capture the role of "simultaneous membership in multiple social categories" (Else-Quest & Hyde, 2016, p. 319). This intention, primarily employed in qualitative research (Else-Quest & Hyde, 2016), would provide a more nuanced understanding of how different combinations of social categories (i.e., age and gender) impact the experience and development of psychological- and career-related processes.

Related to being intentional with variable selection and analytic strategy, as more studies highlight how initially postulated factors do not function as theoretically proposed (Douglas et al., 2017; Duffy et al., 2018; Duffy et al., 2019), researchers could refine PWT variables or select new ones to enhance the model's ability to reflect modern-day career development. For example, in this study, marginalization and economic constraints were examined using three- and five-item scales assessing lifetime experiences of each phenomenon respectively (Duffy et al., 2019). Future research could tease apart these constructs, examining which specific aspects of

marginalization and economic constraints (i.e., racism, sexism, ageism, poverty, social class) contribute to certain PWT variables.

Alternatively, seeing how marginalization and economic constraints did not function as theoretically proposed in this study, future research could replace or add a new systemic barrier centered around a different construct altogether. For example, one such contextual construct could be employability skills. As previously discussed, many workers in the United States continue to be pushed out of their current employment due to advances in technology (Lent, 2018). Presuming this trend continues, this study argues that employability skills, or a lack thereof, are likely to function as a significant barrier to decent work, especially for those from disadvantaged backgrounds. Modifying PWT to encompass this evolving aspect of work could directly improve the field's understanding of contemporary career development and barriers to decent work.

Lastly, longitudinal research is critical to understanding the mediating and moderating role of PWT variables. This type of design can improve a researcher's ability to make directional inferences among variables (Martens et al., 2016). A study design that allows for claims of causality can drastically improve vocational psychology and career counseling's ability to develop meaningful interventions, given the clarity it provides on the chain of events leading up to a given change. Conversely, while there are several cross-sectional studies investigating various aspects of PWT across many different populations (i.e., Duffy et al., 2019; England et al., 2020), much like this study, their results must be interpreted with several design limitations in mind that constrain the types of conclusions that can be made. Longitudinal research could troubleshoot many of these issues.

Limitations

While this study has many critical new takeaways, it is not without limitations. First, this study utilized cross-sectional data. While this methodology allows for the simultaneous comparison of many different variables, it does limit the ability to make any claims of causality. To address this limitation, data from longitudinal or experimental studies are required. Second, while this study utilized several prominent and psychometrically robust measures to assess levels of each study variable, each construct was assessed using a single measure. Future research could utilize several different measures for each variable to assess its presence better (i.e., vocational identity status assessment, vocational identity measure, MVS). Furthermore, while this dissertation focused on incorporating more psychological-level variables into the PWT model, it left out a critical environmental variable, social support. As discussed above, social support from one's environment can enhance one's career development (Kenny & Medvide, 2013). Given that this dissertation did not include a measure of social support, its capacity to infer about the true nature of the interplay between constructs like vocational identity and economic hardship is severely limited. Thus, future research on vocational identity and PWT would benefit from including comprehensive measures of social support.

Additionally, the data of this study resulted from self-report questionnaires taken remotely. This data collection strategy could lead to limitations as participants are often biased when reporting their own experiences (Devaux & Sassi, 2016). Future research could address this by examining how participants' responses correspond to their observed behavior. Furthermore, another important limitation of this study lies in self-selection bias. With the idea that participants who engage in online, psychologically oriented research studies likely differ from people who don't participate, the sample data through which this dissertation relied upon, its interpretations, and implications may be biased and, therefore, less generalizable. Future

researchers could benefit from constructing research designs that better account for self-selection biases.

Conclusions

This study highlights the critical relationships between psychological flexibility, vocational identity, and other career development within emerging adulthood. The conceptual models and hypotheses assessed the mediating and moderating role of traditional and new PWT variables in predicting vocational identity. Overall, the study results suggest that an emerging adult's career adaptability, work volition, and psychological flexibility play a unique and significant role in developing their vocational identity, regardless of race/ethnicity, gender, age, or social class. With this new understanding, researchers, practitioners, and policymakers alike can develop and promote interventions that target these psychological mechanisms, as we aim to bolster emerging adult's ability to manage significant changes in their career development experience and move forward in this critical aspect of identity development.

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Appendix A

Measures

Lifetime Experiences of Marginalization Scale

(LEMS; Duffy et al., 2019)

We are interested in the degree to which you consider yourself marginalized in the United States. By marginalized, we mean being in a less powerful position in society, being socially excluded, and having less access to resources because you are a member of a specific group, have a specific identity, or life history. This often occurs due to one's gender, race/ethnicity, sexual orientation, disability status, religious beliefs, physical appearance, or being a part of other minority groups/identities. With this definition in mind, please respond to the following items below, considering the experiences you have had throughout your entire life due to being part of a marginalized group.

	Strongly Disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
Throughout my life, I have had many experiences that have made me feel marginalized.	○	○	○	○	○	○	○
During my lifetime, I have had many interpersonal interactions that have often left me feeling marginalized	○	○	○	○	○	○	○
I have felt marginalized within various community settings for as long as I can remember	○	○	○	○	○	○	○

Economic Constraints Scale

(ECS; Duffy et al., 2019)

Please answer the following items using the seven-point scale.

	Strongly Disagree	Moderately Disagree	Slightly Disagree	Neutral	Slightly Agree	Moderately Agree	Strongly Agree
For as long as I can remember, I have had very limited economic or financial resources	○	○	○	○	○	○	○
Throughout most of my life, I have struggled financially	○	○	○	○	○	○	○
For as long as I can remember, I have had difficulties making ends meet	○	○	○	○	○	○	○
I have considered myself poor or very close to poor most of my life	○	○	○	○	○	○	○
For most of my life, I have not felt financially stable.	○	○	○	○	○	○	○

Career Adapt-Abilities Scale-Short Form

(CAAS-SF; Maggiori et al., 2017)

Different people use different strengths to build their careers. Please fill in the response that best describes how strongly you developed each of the following abilities.

	Not Strong	Somewhat Strong	Strong	Very Strong	Strongest
Thinking about what my future will be like	○	○	○	○	○
Preparing for the future	○	○	○	○	○
Becoming aware of the educational and vocational choices that I must make	○	○	○	○	○
Making decisions by myself	○	○	○	○	○
Taking responsibility for my actions	○	○	○	○	○
Counting on myself	○	○	○	○	○
Looking for opportunities to grow as a person	○	○	○	○	○
Investigating options before making a choice	○	○	○	○	○
Observing different ways of doing things	○	○	○	○	○
Taking care to do things well	○	○	○	○	○
Learning new skills	○	○	○	○	○
Working up to my ability	○	○	○	○	○

Work Volition Scale

(WVS; Duffy et al., 2012)

Please select one answer to each of the following statements based on this scale:

	Strongly Disagree	Moderately Disagree	Slightly Disagree	Neutral	Slightly Agree	Moderately Agree	Strongly Agree
I've been able to choose the jobs I have wanted.	○	○	○	○	○	○	○
I can do the kind of work I want, despite external barriers.	○	○	○	○	○	○	○
The current state of the economy prevents me from working in the job I want.	○	○	○	○	○	○	○
The jobs I would like to pursue don't exist in my area.	○	○	○	○	○	○	○
Due to my financial situation, I need to take any job I can find.	○	○	○	○	○	○	○
When looking for work, I'll take whatever I can get.	○	○	○	○	○	○	○
In order to provide for my family, I often have to take jobs I do not enjoy.	○	○	○	○	○	○	○
I don't like my job, but it would be impossible for me to find a new one.	○	○	○	○	○	○	○
I feel able to change jobs if I want to.	○	○	○	○	○	○	○
The only thing that matters in choosing a job is to make ends meet.	○	○	○	○	○	○	○
I feel that outside forces have really limited my work and career options.	○	○	○	○	○	○	○
I feel total control over my job choices.	○	○	○	○	○	○	○
Negative factors outside my personal control had a large impact on my current career choice.	○	○	○	○	○	○	○

Multidimensional Psychological Flexibility Inventory

(MPFI-24; Rolffs et al., 2018)

Indicate how closely each statement corresponds to your experience over the past two weeks.

	Never True	Rarely True	Occasionally True	Often True	Very Often True	Always True
I was receptive to observing unpleasant thoughts and feelings without interfering with them	○	○	○	○	○	○
I tried to make peace with my negative thoughts and feelings rather than resisting them	○	○	○	○	○	○
I was attentive and aware of my emotions	○	○	○	○	○	○
I was in tune with my thoughts and feelings from moment to moment	○	○	○	○	○	○
Even when I felt hurt or upset, I tried to maintain a broader perspective	○	○	○	○	○	○
I carried myself through tough moments by seeing my life from a larger viewpoint	○	○	○	○	○	○
I was able to let negative feelings come and go without getting caught up in them	○	○	○	○	○	○
When I was upset, I was able to let those negative feelings pass through me without clinging to them	○	○	○	○	○	○
I was very in touch with what is important to me and my life	○	○	○	○	○	○
I stuck to my keeper priorities in life	○	○	○	○	○	○
Even when I stumbled in my efforts, I didn't quit working toward what is important	○	○	○	○	○	○
Even when times got tough, I was still able to take steps toward what I value in life	○	○	○	○	○	○

	Never True	Rarely True	Occasionally True	Often True	Very Often True	Always True
When I had a bad memory, I tried to distract myself to make it go away	○	○	○	○	○	○
I tried to distract myself when I felt unpleasant emotions	○	○	○	○	○	○
I did most things on "automatic" with little awareness of what I was doing	○	○	○	○	○	○
I did most things mindlessly without paying much attention	○	○	○	○	○	○
I thought some of my emotions were bad or inappropriate and I shouldn't feel them	○	○	○	○	○	○
I criticized myself for having irrational or inappropriate emotions	○	○	○	○	○	○
Negative thoughts and feelings tended to stick with me for a long time	○	○	○	○	○	○
Distressing thoughts tended to spin around in my mind like a broken record	○	○	○	○	○	○
My priorities and values often fell by the wayside in my day-to-day life	○	○	○	○	○	○
When life got hectic, I often lost touch with the things I value	○	○	○	○	○	○
Negative feelings often trapped me in inaction	○	○	○	○	○	○
Negative feelings easily stalled out my plans	○	○	○	○	○	○

Vocational Identity Measure

(VIM; Gupta et al., 2015).

Please select one answer to each of the following statements based on this scale:

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
It is clear to me what I want to do for a living and that I have the right abilities to do well in it	○	○	○	○	○
I know what occupational path I want to pursue when I get out of school	○	○	○	○	○
I have a clear sense of my own occupational interests	○	○	○	○	○
I could easily describe my ideal job to a recruiter	○	○	○	○	○
I know what type of work I would like to do for the rest of my life	○	○	○	○	○
I have a strong sense of who I am related to the world of work	○	○	○	○	○
My interests match my vocational goals	○	○	○	○	○
I have no problem deciding what I want to do for a living	○	○	○	○	○
I have a firm sense of what type of work I would like to do for a living	○	○	○	○	○
I am having a difficult time choosing what type of work I would like to do	○	○	○	○	○
I know which type of occupation I would enjoy doing in the future	○	○	○	○	○
I have made a firm decision regarding what I want to do for a living	○	○	○	○	○
I know what kind of work suits me best	○	○	○	○	○
I can readily envision what kind of work I want to be doing when I graduate	○	○	○	○	○
I cannot make a decision about what I want to do for a living	○	○	○	○	○
I have a pretty good sense of what type of work I would like to be doing when I leave school	○	○	○	○	○
I feel that the vocation of my choice will be the best possible fit for me	○	○	○	○	○
I feel like I am on a definite vocational path for the future	○	○	○	○	○
I have certain vocational goals that I would like to pursue when I get out of school	○	○	○	○	○
It is clear to me what I want to do for a living after I graduate	○	○	○	○	○

Demographic Form

Please tell us a little about yourself. This information will be used only to describe the sample as a group.

What is your age?

How would you identify your gender? If your identity is not captured fully with these categories, please feel free to specify further.

- ○ Man
- ○ Woman
- ○ Transgender
- ○ Other

What was your sex assigned at birth?

- ○ Male
- ○ Female

Were you born in the United States?

- ○ Yes
- ○ No

What is your race/ethnicity? (You may select more than one)

- ☐ African/African-American/Black
- ☐ American Indian/Native American/First Nation
- ☐ Arab American/Middle Eastern
- ☐ Asian/Asian American
- ☐ Asian Indian
- ☐ Hispanic/Latina/o American
- ☐ Pacific Islander
- ☐ White/European American/Caucasian
- ☐ Other

Are you a graduate/professional student?

- Yes
- No

Highest degree obtained?

- Less than High School
- Some High School
- High School Graduate
- Trade/Vocational School
- Some College
- College Degree (e.g. B. A., B.S.)
- Professional Degree (e.g., M.B.A., M.S., Ph.D, M.D., etc.)

What is your average yearly household income?

- Less than $25,000 per year
- $25,000-$50,000 per year
- $51,000-$75,000 per year
- $76,000-$100,000 per year
- $101,000-$125,000 per year
- $126,000-$150,000 per year
- $151,000-$175,000 per year
- $176,000-$200,000 per year
- $201,000 + per year
- I don't know

How would you identify your current social class?

- Lower class
- Working class
- Middle class
- Upper middle class
- Upper class

Think of this ladder as representing where people stand in the United States.

At the **top** of the ladder are the people who are the best off – those who have the most money, the most education and the most respected jobs. At the **bottom** are the people who are the worst off – who have the least money, least education, and the least respected jobs or no job. The higher up you are on this ladder, the closer you are to the people at the very top; the lower you are, the closer you are to the people at the very bottom.

Where would you place yourself on this ladder?

Please place a large "**X**" on the rung where you think you stand at this time in your life, relative to other people in the United States.

Please select the rung of the ladder where you think you stand at this time in your life relative to other people in the United States by clicking on 1-10 below. 1 being the bottom rung and 10 being the top rung.

- 1 = bottom rung
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10 = top rung