THE ROLE OF CHILDHOOD TRAUMA HISTORY IN RELATION TO DECENT WORK

by

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ABSTRACT

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This study used structural equation modeling to examine the impact of childhood trauma on decent work. Childhood trauma was added as an exogenous variable in the Psychology of Working Theory (PWT) model and hypothesized to have direct and indirect effects on decent work. An online sample of 643 working adults completed PWT measures and a measure on childhood trauma. Additionally, participants completed a single Likert-type item measure assessing negative impact of COVID-19 on work so that model invariance could examined among two high and low impact groups. Group invariance was satisfied at the configural, metric, and scalar levels, and the sample as a whole was examined. The fit of the measurement model of the sample satisfactory, and the structural model both demonstrated a good fit to the data. Childhood trauma was shown to have a significant direct effect on decent work. Additionally, a bootstrap procedure used to examine indirect effects showed that childhood trauma had an indirect effect on decent work through work volition, but not through career adaptability. All together, adding childhood trauma to the PWT model as an exogenous contextual factor accounted for an additional 3.4% of variance in decent work. Implications of the findings are discussed both as they relate to future research and clinical practice of vocational psychology. Findings suggest that incorporating a trauma-informed approach into career counseling is warranted.

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Chapter 1

Childhood trauma experiences have been shown to negatively impact an individual's capacity for self-regulation (Cloitre et al., 2009; Ehring & Quack, 2010; Ford, 2005), and one's perceived sense of control (Bolger & Patterson, 2001; Luszczynska et al., 2009). Indeed, a diagnostic feature of diagnosis of Posttraumatic Stress Disorder (PTSD) is lack of control over the intrusive symptoms of the diagnosis (American Psychiatric Association [APA], 2013). Though there is an extensive body of research on the relation of trauma and PTSD to mental and physical health, the impact of trauma on the field of work and career is relatively underexplored (Matthews, 2005; Smith et al., 2005). However, the extant literature exploring this relationship suggests trauma has a significant negative impact on work attainment (Kunst, 2011; Lee & Tolman, 2006; Liu et al., 2013) and a significant yet mixed impact on process of career development and exploration (Prescod & Zeligman, 2018; Strauser, Lustig et al., 2006).

Perhaps one reason that a trauma-informed approach has yet to be integrated in research on vocation and career development is because research on trauma and PTSD is tremendously vast and complex. Indeed, within the large body of trauma literature exist more specific subfields which focus on certain elements such as specific populations (i.e., women, ethnic minorities, veterans) and specific types of trauma (sexual abuse, war experience, intimate partner violence, etc.). Furthermore, though these areas of study find shared ground under the umbrella of PTSD, the variance of symptom presentation across group demographics (notably age) have spurred the development of models capable of capturing how trauma unfolds over the lifespan (e.g., Layne et al., 2008; Pynoos et al., 1999), and have prompted some leaders in the field to suggest the adaptations of diagnoses (i.e., Disorders of Extreme Distress Not Otherwise Specified, van der Kolk et al., 2005) or the creation of new trauma related diagnoses such as Developmental trauma

disorder (van der Kolk, 2005). One consistent finding is that the age of onset for a traumatic experience can significantly impact the complexity and severity of symptomology (Briere et al., 2008; Cloitre et al., 2009) as well as comorbidity with other mental health diagnoses (Koenen et al., 2008). The experience of a single traumatic stressor in childhood does not automatically set in motion the development of PTSD (Pratchett & Yehuda, 2011). Rather, the presence of multiple co-occurring traumatic events strongly predicts subsequent PTSD and symptom complexity in adults, even after controlling for trauma exposure in adulthood (Cloitre et al., 2009). Previous epidemiological research on adolescents suggests 62-68% of adolescents have experienced a traumatic stressor (McLaughlin et al., 2013, Copeland et al., 2007; Costello et al., 2002), and of this group approximately half (33% of adolescents) have been exposed to two or more traumatic events (McLaughlin et al., 2013). Accordingly, given the prevalence and potential impact of trauma before adulthood, an examination of the effect of trauma on work and career would require an approach that is comprehensive and developmental in nature.

The Psychology of Working Theory (PWT), described more fully below, is a developmental theory of vocational psychology and well-being, central to which is the concept of Decent work (Duffy et al., 2016). The theory posits that Work Volition and Career Adaptability mediate other predictor variables, and in the hypothesized model of PWT both constructs significantly figure into an individual's ability to secure Decent Work. Career Adaptability is a person's ability to navigate current and future career obstacles (Savickas & Porfeli, 2012), whereas Work Volition is one's perceived ability to make work and occupation choices despite constraints (Duffy et al., 2012). To date, studies testing the full predictor portion of the model have failed to find support for several of the proposed pathways including: a direct effect of economic constraints on decent work (Duffy et al., 2018; Duffy, Gensmer et al., 2019)

and most notably Career Adaptability as a mediator variable (Duffy, Gensmer et al., 2019; Douglass et al., 2017; Duffy et al., 2018). Given the body of research suggesting the impact of trauma on regulatory capacity and locus of control, it would stand to reason that trauma may also impact the similar yet more domain-specific constructs of Work Volition and Career Adaptability, and ultimately Decent Work.

Trauma

The vast majority of adults at some point will be exposed to a traumatic event. Large-scale epidemiological studies have consistently found that more than half of adults are exposed to one or more traumatic events in their lifetime (Kessler et al., 1995). Though prevalence rates vary across regions and countries, anywhere from 50-89% of individuals will be exposed to a potentially traumatic event by the time they reach adulthood (Creamer et al., 2001; Breslau, 2009; de Vries & Olff, 2009). Despite this, the majority of individuals exposed to a traumatic life experience do not go on to develop PTSD. Lifetime prevalence rates for PTSD in the United States range from 6.4-7.8% with the rate for women consistently twice that of men (Kessler et al., 1995; Pietrzak et al., 2011). Across the lifespan, individuals are most likely to be exposed to a traumatic event between the ages of 16 and 25 years old (Ford et al., 2015). This period of time happens to correspond with a period in life when many individuals first enter the work force and/or engage in career exploration (Arnett, 2015). Despite these findings, there exists a relatively small body of research examining trauma and work in conjunction, and currently there is no vocational theory which fully incorporates trauma as a potentially important factor contributing to the attainment or choice of work. Arguably, contextual factors central to the Psychology of Working Theory (i.e., economic constraints and marginalization) may overlap with traumatic experiences to some degree. But this has yet to be tested, and as such it is unclear

just how trauma history may add to or attenuate the effects of contextual factors, or independently contribute to attainment of decent work.

Psychology of Working Theory

The Psychology of Working Theory (PWT) is one of the more recent theories of work and career development which offers broader application to marginalized populations and people who identify with a non-traditional or underrepresented identity along the lines of: race, ethnicity, social class, gender, sexual identity, sexual orientation, and other important markers of identity (Duffy et al., 2016). Central to the creation of PWT is the premise that choice of work is a privilege, and that existing theories of career development are providing a disservice when they do not acknowledge this. Initially, PWT was a perspective which developed out of critique of contemporary career counseling theory. Over the course of the last decade, however PWT has expanded to an aspirational model, and more recently to a fully developed theory with a defined nomological network amenable to empirical research. Specifically, measurements have been developed for constructs central to PWT including work volition (Duffy et al., 2012), decent work (Duffy et al., 2017), marginalization and economic constraints (Duffy, Gensmer et al., 2019), and the theory's primary developers have reached greater consensus as to the measurement of career adaptability (Duffy, Gensmer et al., 2019).

The centerpiece of the full PWT model, decent work, is characterized as a basic human right (Autin et al., 2019). In defining what constitutes decent work, Duffy et al. (2016) refered to standards devised by the International Labor Organization (2013). As operationalized in PWT, decent work includes five components: (a) physically and interpersonally safe working conditions; (b) access to health care; (c) adequate compensation; (d) hours that allow for free time and rest; and (e) organizational values that complement family and social values. PWT

predicts that securing decent work provides an avenue through which people can secure certain needs and thus work fulfillment and well-being. As such PWT is unique because it is not only a theory of work, but also a theory of well-being.

With the development of scales for mediating variables (i.e., work volition and career adaptability), and the central outcome variable (decent work) certain propositions hypothesized by PWT may be better examined. Decent work has been examined among sexual minority samples (Douglass et al., 2017), and workers with Chiari malformation (Tokar & Kaut, 2018). Indeed, the creation of PWT specific measures has allowed greater psychometric consistency across studies, which in turn has fostered more focused and coherent theory development. Despite this, until recently there have not been measures for the two predictor constructs—marginalization and economic constraints—and across studies an assortment of measures and indices were used as stand in measures.

Only more recently, Duffy, Gensmer et al. (2019) developed scales to assess predictors in the model, specifically marginalization and economic constraints. Developing such scales, the authors reasoned, would ensure that these constructs more appropriately align with the theory's conceptualizations of economic constraints and marginalization. This would facilitate a degree of standardization for future PWT research examining these constructs, and likewise should elicit data which may better fit the overall model. Specifically, previous measures of marginalization and economic constraints were deemed insufficient because they were too narrow in scope: participants rated their economic constraints and degree of marginalization within a small window of time (e.g., the past year, past month, etc.); other variables (i.e., annual income) were used as proxy variables; or specific domains of marginalization (i.e., race, sexual orientation) were examined, to the neglect of more global marginalization or compounded marginalization

which might result through intersecting marginalized identities. The new scales—Life Experiences of Marginalization Scale and the Economic Constraints Scale—assess the cumulative effect of marginalization and economic constraints which people experience over the course of their lifetimes.

In the initial conceptualization of marginalization, Duffy et al. (2016) defined the construct as: "the relegation of people or groups to less powerful positions within a society" (p. 132). In efforts to avoid subsequent quantifications and comparisons of specific forms of marginalization (e.g., race, sex, sexual orientation, etc.), the authors were intentionally "nonprescriptive" and thus ambiguous in exactly how this construct might be measured. This approach was in line with research on intersectionality (e.g., Purdie-Vaughns & Eibach, 2008) which sought to move the field past ongoing debate as to which identities and identity combinations result in the most discrimination and suffering. While the current measure of marginalization is cumulative in nature, it is questionable whether it is capable of adequately capturing previous lifetime experiences (e.g., trauma) which may as well affect work volition, career adaptability, and ultimately securing decent work.

The accumulation of trauma experiences over the course of one's lifetime has been shown to negatively affect emotional regulation and also sense of control. Furthermore, the age at which a person experiences a trauma event has been shown to sometimes result in unique psychological profiles discrete from those of individuals at a different developmental stage experiencing the same traumatic event (McDermott & Palmer, 2002). The subsequent impact of trauma has found to negatively affect more distal outcomes such as physical health in adulthood (Pacella et al., 2013), and mental health in adulthood (Koenen et al., 2008). However, the impact of trauma and PTSD on work has been examined far less extensively. Given that for most

people, work comprises a significant portion of their day and lives, it would make sense that the impact of trauma would also transfer over to the domain of work and at the very least compromise the psychological processes necessary to attain and maintain decent work.

The Psychology of Working Theory provides a suitable model through which this can be examined. As will be demonstrated in subsequent sections, emotional regulation and control/agency might find their vocational counterparts in the constructs of career adaptability and work volition respectively. Whereas the constructs of economic constraints and marginalization capture and measure the impact of such barriers at a more macro level, work volition and career adaptability capture the more subjective and psychological impact of those barriers. Accordingly, even if certain barriers can be relegated to a person's past, work volition and career adaptability capture how such experiences may continue on into the present and affect a person's perception of control, overall outlook, and flexibility in response to work demands. Indeed, in some, if not many, instances, individuals are able to overcome certain constraints and barriers in certain domains such that their sense of work volition is relatively unscathed. In comparison, trauma experiences also pose barriers, and indeed after some passage of time the majority of individuals are able to regain a sense of equilibrium and attain their previous level of functioning. However, such resilient trajectories are not always observed; and this holds both for trauma and work outcomes. A developmental approach to trauma (Pynoos et al., 1999) would suggest that the unfolding of outcomes can be best understood or predicted by examining pre-trauma, peri-trauma, and post-trauma factors across development. In a similar vein, the Psychology of Working Theory would suggest that the attainment of decent work can be best understood by examining the role of contextual factors across development and how they impact current work volition and career adaptability.

Trauma and Work

Compared to the extant literature examining PTSD and mental and physical health, the available literature examining the relation of trauma to work and vocation is less developed. In general, trauma history and PTSD have been examined in relation to attaining work (Lee & Tolman, 2006), career development (Strauser et al., 2006; Prescod & Zeligman, 2018), and expectations of career counseling (Coursel et al., 2001). Lee & Tolman (2006) explored the direct effects of childhood sexual abuse (CSA) on employment, and indirect effects of CSA on employment through mental health and physical health. They drew their sample from a large-scale longitudinal study examining welfare recipient's return to work after the passage of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996. The authors found that for women currently or formerly on welfare, past childhood sexual abuse history significantly affected likelihood of being employed and number of months worked within a given time frame. The authors reported that childhood sexual abuse—primarily through its strong association with negative mental and physical health outcomes—has a direct but weak effect on employment and an indirect effect on work. Although this study sheds some light on the relation of trauma to work, because work was measured as a dichotomous variable in this study (i.e., employed or unemployed) we do not know the characteristics of this "work" or whether participants would report their employment as decent work. Strauser et al. (2006) found that trauma history negatively impacts career development and exploration. Specifically, Strauser et al. (2006) found medium to large effect sizes (d = .58 to d =.88) between students with high-trauma ($\geq$ 11on the Los Angeles Symptom Checklist) and low trauma (< 11) histories, with the latter assessing themselves significantly higher on measures of interpersonal demands of the work environment, vocational identity, and making effective career decisions. The authors

concluded that trauma symptoms account for 13-20% of variance in career thoughts and concluded that as trauma symptoms increase so does the level of dysfunctional career thoughts.

Other research suggests that exposure to traumatic experiences may positively impact career development. Prescod and Zeligman (2018) investigated posttraumatic growth and career adaptability among students endorsing PTSD and those not endorsing PTSD. The authors found trauma to positively predict career adaptability when mediated by posttraumatic growth. Given these strong *and* disparate findings, it is clear that the topic of trauma history merits greater attention in the context of work and career development. One way to better understand the impact and unique function of trauma history on work is to approach it from a perspective grounded in vocational theory, and include alongside measures of trauma theoretically derived measures of vocational constructs.

The Present Study

The aim of the present study is to incorporate a trauma-informed approach to work attainment—specifically attainment of decent work. Using the Psychology of Working Theory, I intend to examine traumatic experiences as an independent predictor variable alongside the contextual factors of economic constraints and marginalization. Theory (i.e., Pynoos et al., 1999) and research (see Foy et al., 1996) suggest that the ecological context of the individual may predict greater exposure to traumatic events. In a study of trauma among urban youth, Breslau et al. (2004) found both socioeconomic status and ethnic minority identity to predict greater trauma exposure. While the relationship between these factors has been examined in a large body of epidemiological studies (e.g., Breslau et al., 1998; Davidson et al., 19991; Kessler et al., 1995; Kilpatrick et al., 2003) few studies exist examining the relationship and impact of these factors on work, and even fewer studies examine the unique variance in work explained by each

variable. My first hypothesis is that traumatic childhood events will have a direct negative effect on decent work scores. My second hypothesis is that trauma before the age of 18 will negatively impact work volition and career adaptability, and through these constructs childhood trauma will indirectly effect decent work. Lastly, my third hypothesis is that including traumatic childhood events in the model will significantly add to the amount of variance explained in decent work, over and above that explained by the predicting and mediating variables in the present Psychology of Working structural model.

In selecting a measure for childhood traumatic experiences, it will be important that it not only adequately capture and measure traumatic exposure and symptom presentation, but that it also captures the developmental time period at which trauma(s) occurred. Research examining trauma exposure across the lifespan suggests that the effects of trauma are cumulative in nature (Cloitre et al., 2009; Briere et al., 2008), and the age of 18 years old has been used as a cutoff point separating childhood and adolescent traumatic experiences from those in adulthood. While it is arguable that this approach complicates the ability to explain the relation between symptom presentation and specific trauma event, anchoring trauma symptoms to a composite of traumatic events is now the formally recognized approach to PTSD diagnosis as outlined in the *DSM-5* (APA, 2013). This cumulative approach to trauma better captures the breadth of trauma impact over time. In the following chapter, I will provide an in-depth overview of trauma and vocational studies relevant to the present study. In so doing I will also more fully detail the theoretical models grounding my study, and include visual reprints of the models to assist the reader in conceptualizing the two separately, and the two in tandem. After so doing, my hope is that readers better see the existing gap between the fields of trauma and vocation, and how

investigating the above stated hypotheses is not only warranted, but may serve as a step to bridge this gap.

Chapter 2

As previously mentioned, though the bodies of research on trauma and vocational psychology are vast and mature, they are largely independent of each other and the research base linking the two is less developed and arguably underdeveloped (Matthews, 2005; Smith et al., 2005). This section will provide a review of the extant literature examining trauma within the context of vocational psychology. Before examining the two fields in tandem, however, a review of trauma and vocational psychology separately will help provide context. In regard to trauma, I will focus on the development of the Posttraumatic Stress Disorder diagnosis, its prevalence, and associated risk and protective factors. In addition, I will examine trauma and PTSD with a developmental perspective, and provide a review of current theory and research relating to a developmental approach to trauma. In regard to vocational psychology, I will focus largely on the vocational theory central to this study, the Psychology of Working Theory.

Trauma

A major portion of the extant literature on trauma examines it under the diagnostic lens of Posttraumatic Stress Disorder (PTSD). As defined by the *Diagnostic and Statistical Manual of Mental Disorders* 5th edition (APA, 2013) the diagnosis of PTSD is classified under the Trauma and Stressor-Related disorders. The diagnosis of PTSD is unique in that unlike other disorders (e.g., depression or anxiety disorders), it requires that symptoms are causally related to a previous traumatic event. Accordingly, in its most basic form, diagnosis of PTSD is twofold: it entails assessment of qualifying traumatic events, and second it requires assessment of symptoms. A diagnosis of PTSD using the *DSM-5* criteria requires: direct exposure to a traumatic event such as threatened death, serious injury, or sexual violence (Criteria A); intrusive symptoms related to the event such as distressing memories, dreams, or dissociative reactions

(Criteria B); avoidance of physical and psychological stimuli associated with the event (Criteria C); negative alterations in cognition and affect associated with the event (Criteria D); marked alteration in arousal and reactivity associated with traumatic event(s) (Criteria E); persistence of symptoms for more than 1 month (Criteria F); and clinical impairment or distress caused by the above constellation of symptoms (Criteria G). The diagnosis of PTSD first formally appeared in the publication of the *DSM-III* (APA, 1980), largely in part through advocacy efforts of groups such as Vietnam war veterans, and women who were victims of rape (Ford, 2015). Prior to this formal diagnosis, stress related responses which caused clinical impairment were subsumed under the diagnosis of Gross Stress Reaction in the first edition of the *DSM* (APA, 1952), and in later editions of the *DSM* under Adjustment reactions (APA, 1968). The *DSM-III* introduced a phenomenological approach to diagnosis with specific criteria domains, thus facilitating greater validity and reliability in diagnosis (Ford, 2015). This was especially helpful in regard to research as it afforded greater specificity of predictors (e.g., trauma types) and outcome variables (i.e., symptoms) for treatment studies. However, as the field of PTSD research matured, prominent leaders in the field (e.g., Herman et al., 1989; Spinazzola et al., 2005; Van der Kolk, 2005) began to voice concern as to whether symptom criteria accurately captured the full range of symptom presentation across important variables such as demographics, trauma type, etc.

A study by Spinazzola et al. (2005) is particularly noteworthy. In this study, the authors reviewed 34 treatment outcome studies classified by the U.S. Agency for Health Care and Policy Research as meeting Level A criteria for treatment of adult PTSD, a classification level designated by the International Society for Traumatic Stress Studies to be the gold standard for PTSD treatment outcome research. The authors found that the majority of PTSD outcome studies were comprised of adult participants who reporting experiencing a traumatic event from a

relatively limited set of traumatic events which included motor vehicle accidents, rape, and combat. The authors found inconsistencies across studies regarding inclusion and exclusion criteria and the reporting of demographic variables (e.g., gender, age, socioeconomic status, education, and minority identity). Furthermore, the authors reported that the majority of the studies included as exclusion criteria certain comorbidities (e.g., alcohol/substance use-related issues) and symptom presentation (e.g., psychosis, severe psychopathology) quite common among populations in community settings seeking treatment for PTSD. Additionally, the majority of the studies neglected to assess or report the presence of childhood onset trauma. The authors concluded that while we may know "what" works when it comes to treatment of PTSD, we do not know exactly "for whom" it works.

Inconsistent or inadequate assessment of either trauma event or symptoms associated with trauma presents difficulty when trying to adequately capture the prevalence of PTSD, and warrants concern for under or overestimation of prevalence. Currently, prevalence rates in the US for lifetime PTSD (i.e., PTSD at any point throughout a person's life) range from 5.6-8.7% (Kessler et al.,1995; Kessler et al., 2005; Pietrzak et al., 2011; APA, 2013). A closer look at epidemiological studies, however, reveals variation in prevalence rates may mirror changes in diagnostic criteria. Kessler et al. (1995) found lifetime prevalence rates of PTSD to be 7.4%, which is 2 to 7 times larger than prevalence rates found in other studies (e.g., Helzer et al., 1987; Davidson et al., 1987). The authors speculated that differences in diagnostic criteria, sampling frames, years of administration, or administrative procedures might contribute to the dramatic difference in prevalence rates. Indeed, the revisions in diagnostic criteria of PTSD throughout editions of the *DSM* may explain some variance in prevalence rates. With the publication of the *DSM-IV* (APA,1994), criteria were amended to attend more to subjective appraisal of the

traumatic event, and the list of events deemed potentially "traumatic" was expanded to include serious, illnesses, natural disasters, and exposure to community violence. In the most recent edition, the *DSM-5* (APA, 2013), further revisions to diagnostic criteria included criteria for active avoidance and the assessment of symptoms as they relate to lifetime traumatic events, rather than a single traumatic event.

Of the changes to PTSD criteria in the *DSM-5*, the one that has received substantial praise, as well as substantial criticism, has been the overhaul of Criteria A, which included the removal of Criterion A2 (i.e., subjective terror, fear, in response to traumatic event) and the switch from assessing trauma as narrowly defined by an index trauma to a more broadly assessing trauma as a composite of multiple traumatic experiences. This switch affects the way in which clinicians assess the first diagnostic criteria (Criteria A): the exposure to a traumatic experience. Prior to the *DSM-5*, PTSD symptoms were assessed using an index trauma as an anchor: individuals being assessed were asked to recall their traumatic experiences and consider only the "worst event" when responding to subsequent diagnostic questions regarding symptoms and responses. In this way, PTSD symptoms were indexed in reference to a single traumatic event. In contrast, the broader composite event approach asks people to recall their lifetime traumatic experiences and consider any of these experiences when responding to subsequent diagnostic questions. This approach to assessment has benefits and drawbacks. A benefit of viewing and assessing symptoms as a composite of past events is that such an approach to assessment is more in line with a contemporary understanding that trauma is cumulative, and that previous traumatic experiences may impact response to later traumatic experiences (e.g., Breslau et al., 2007; Walsh et al., 2012; Ozer et al., 2003). However, a drawback is that assessing trauma in this way may hamper the field's understanding of the conditional probability of certain

traumatic events subsequently resulting in a PTSD diagnosis (Kilpatrick et al., 2013). When all past traumatic events form a reference point for symptoms, it is more challenging to determine which trauma type or trauma event caused the greatest negative impact, and thus which specific trauma types and events increase a person's likelihood of developing PTSD. Furthermore, some (e.g., Calhoun et al., 2012) have expressed concerns that the changes to PTSD diagnosis in the *DSM-5* would substantially inflate prevalence rates of PTSD well above true population estimates based on *DSM-IV* criteria.

One study which directly examined this concern that prevalence rates may change across *DSM* editions actually found a slight decrease in PTSD prevalence rate when participants were assessed using criteria from the *DSM-5* (the most recent edition), compared to the *DSM-IV*. Kilpatrick et al. (2013) surveyed a panel of 2,953 adults ages 18-65 or older. Stratified sampling procedures were used so that the final sample was representative of the most recent U.S. Census figures broken down by sex and age. To assess exposure to traumatic events, participants completed online surveys comprised of 25 closed-ended questions which measured exposure to *DSM-IV* and *DSM-5* traumatic events (i.e., Criteria A1 and Criteria A respectively). Participants then responded to three additional questions pertaining to any other events not yet included, which were considered extraordinarily stressful, resulted in physical injuries, or produced fear of being seriously injured or killed. For each traumatic experience endorsed, participants then responded to follow up questions concerning the frequency of the event, sequence in relation to other events, and worst occurrence of the event in cases where they experienced multiple times. Lastly, participants were presented with 14 event type traumas, and were asked to endorse any they believe they have experienced. Of the 14 event type traumas, nine events met criteria as defined by *DSM-IV* and *DSM-5*, one event met criteria for only *DSM-5*, and one event only met

criteria for *DSM-IV*. Including these last series of questions allowed the authors to evaluate shared and unique features of both criteria and how these alterations would impact prevalence rates in the US. Symptoms and functional impairment were assessed by 25 Likert-type questions wherein participants rated on a 5-point scale the degree to which they were bothered (20 items) by a symptom or felt distressed to the point of impairment (5 items) within the last month. For symptoms that referenced traumatic events, participants identified the specific trauma type(s) to which they were related. The authors found that using the *DSM-5* criteria of trauma exposure resulted in a 4% drop in number of participants who reported experiencing a traumatic event: 93.7% of individuals reported a traumatic event by *DSM-IV* standards, compared to 89.7% by *DSM-5* standards. Regarding prevalence rate of PTSD, the *DSM-5* consistently produced lower prevalence rate compared to the *DSM-IV*, however the differences were statistically significant for only prevalence of lifetime PTSD (composite event) and past 12 month (same event). When using a single event as the basis for symptoms and impairment and using *DSM-5* criteria, prevalence rates of PTSD over a person's lifetime, the past 12-month, and the past 6-months were 8.3%, 4.7%, and 3.8% respectively.

Though Kilpatrick et al. (2013) found statistically significant differences when comparing the *DSM-IV* and *DSM-5* using composite and single event criteria, these differences are in ways misleading. To more accurately compare prevalence rates, one should use the diagnostic criteria found in clinical practice, which would mean comparing the *DSM-IV* single event to the *DSM-5* composite event. Using these criteria, the authors calculated that lifetime prevalence for PTSD using the *DSM*-5 composite approach was 9.4% compared to 9.8% when using the single event approach of the *DSM*-IV. The authors did not report whether this 0.4% drop in prevalence across *DSM* editions was statistically or clinically significant. Accordingly,

this study, while reassuring, may not provide an accurate or clinically meaningful appraisal of the effect of diagnostic criteria on PTSD prevalence rates.

Protective and Risk factors

Given that the vast majority of people experience a traumatic event at some point in their life (Ford, 2015), yet approximately 8% develop PTSD, it is clear that other factors influence individuals' trajectory following a traumatic event. Factors which may increase the likelihood of PTSD following a traumatic event are referred to as risk or vulnerability factors, whereas factors which decrease the likelihood of subsequent PTSD are referred to as protective factors. Risk and protective factors are usually categorized chronologically in reference to the traumatic event and include factors before the trauma (pre-trauma), during the time of the trauma (peri-trauma), and after the trauma (post-trauma).

It is common practice for epidemiological studies to assess for such factors; doing so provides information as to vulnerable populations and helps generate the development of theory and focused preventative and restorative interventions. Notable and consistent risk factors from the past three decades of trauma research include: gender and peri-traumatic response. While meta-analyses have yielded mixed findings regarding gender as a predictor (e.g., Brewin et al., 2000), a large body of epidemiological data suggests otherwise. The prevalence rate of PTSD in woman is consistently found to be twice that of men: 10.4% for women vs 5% lifetime rate for men (Kessler et al., 1995). These findings have also held for adolescent samples: 6.3% for girls vs 3.7% for boys ages 12-17 (Kilpatrick et al., 2003). Regarding the relationship of peri-traumatic responses to PTSD, meta-analyses have found large effect sizes for peri-traumatic dissociation, perceived life threat, and peri-traumatic emotion (Ozer et al., 2003), and subjective experience of event (Trickey et al., 2012). On the other end, social support has been found to be

a strong protective factor following a traumatic event (Ozer et al., 2003; Trickey et al., 2012). While many protective/risk factors have been examined within the last few decades, those salient to the present study include: trauma event type, number of traumatic events, age at trauma, and marginalized identity. The following section will focus on these specific factors, and particularly draw attention to relevant findings which underscore the importance of applying a developmental perspective in both PTSD research and diagnosis.

Trauma type

Since the formal designation of PTSD, the distinction of what constitutes an event as traumatic has been a source of controversy. Because the development of the PTSD diagnosis was catalyzed through the efforts of Veterans groups, early PTSD research and treatment development largely focused on combat as a trauma type. As a result, there was a much slower development of research that focused on other types of trauma which were perhaps more pervasive in the general population and across the lifespan (Salmon & Bryant, 2002). As it relates to the *DSM*, since the publication of the *DSM-III*, the definition of what constitutes a trauma has expanded to include subjective experience (i.e., Criterion A2 *DSM-IV*), as well as a list of potentially traumatic events (Criterion A1). Some (i.e., McNally, 2003) have expressed concern that broadening the definition of traumatic event might lead to "conceptual bracket creep": concern that removing requirements that the event be life-threatening and directly experienced will lead to a watering down of the diagnosis and a pathologizing of appropriate stress and affective responses to common situations. On the other hand, large-scale surveys have suggested that retaining a narrow definition of traumatic event would belie the true heterogeneity of significant traumatic events. In 1996, Breslau and colleagues conducted the 1996 Detroit Area Survey of Trauma: a large-scale survey of 2,181 adults ages 18-45 randomly sampled from

Detroit area and weighted by age, gender, race/ethnicity, education, and income to be representative of the city's demographics (Breslau et al., 1998). In the survey, participants were presented with 19 different traumatic events and for each event participants reported whether they experienced it, the number of times it occurred, and the age(s) at which it occurred. Participants were then assessed for PTSD in relation to 1) their reported worst event, 2) a traumatic event they reported selected at random, and 3) their earliest experienced traumatic event. Consistent with prevailing understandings of PTSD at the time of the study, the authors found that traumatic events involving assaultive violence conferred the greatest conditional risk (20.9%) of PTSD following exposure. However, the authors highlighted that the most common traumatic event reported was sudden death of a loved one: an event reported by 60% of the sample, and occurring in 31% of participants meeting criteria for PTSD. Moreover, the conditional risk of PTSD following the sudden death of a loved one was surprisingly high (14.3%). The authors concluded that it was essential for the field to expand the focus of Criteria A1 to traumatic events other than combat and rape. In a separate study of urban youth *(n* = 1,698) followed from first grade to approximately 21 years of age, Breslau et al. (2004) again found sudden death of a loved one to be the most common reported traumatic event and identified worst event. More surprisingly, they found it to confer a conditional risk for PTSD slightly less than that of being shot or stabbed (9.0% for sudden death of loved one vs 9.4% for shot or stabbed). Subsequent studies have expanded understanding of events conventionally understood to be traumatic, and also have highlighted the impact of trauma types which may have gone overlooked. Regarding the former, it is now generally understood that victims of interpersonal violence include *both* those who are the targets of abuse *and* those who witness the abuse (McLaughlin et al., 2013). Regarding the latter, Steinberg et al. (2014) analyzed data of

14,088 from the National Child Traumatic Stress Network Core Dataset and found psychological maltreatment as likely as physical abuse to be associated with PTSD.

With the exception of psychological maltreatment, the current edition of the *DSM-5* has incorporated many of the above findings into its exposure criteria (Criteria A). Research studies on PTSD commonly include traumatic event screeners, and there now exist screeners which are combat specific Posttraumatic Checklist (PCL), applicable to the general population Posttraumatic Checklist-5 (PCL-5), and ones that are developmentally appropriate (e.g., Impact of Events Scale [IES]). And concerning "conceptual bracket creep," the *DSM-5* has not been found to produce a statistically significant increase PTSD prevalence compared to the previous edition, but rather a slight decrease in lifetime prevalence (Kilpatrick et al., 2013). Furthermore, longitudinal studies suggest that while traumatic events of both high and low magnitude are fairly common, the majority of individuals do not report PTSD symptoms or meet diagnostic criteria for the diagnosis (Copeland et al., 2007).

Number of Traumatic Events

There is a large body of research suggesting that the majority of people report multiple traumatic events across their lifetimes and that it is not uncommon for different events or trauma types to co-occur. This finding applies for both adult populations (i.e., de Vries & Olff, 2009; Stein et al., 2014) and child and adolescent populations (e.g., Finkelhor et al., 2005; Briggs et al., 2013). In a large-scale study which included 23,936 adults across 13 different countries, Stein et al. (2014) found that 67.1% of participants reported one or more event over the course of their lifetime. Of those reporting a traumatic event, 75.4% reported more than one event, and for this group the mean number of traumatic events reported was six. Insofar as children and adolescents, Briggs et al. (2013) investigated the co-occurrence of trauma types and analyzed a dataset from

the National Child Traumatic Stress Network consisting of 11,104 children ages 0-18 seeking trauma related services at a hospital or community mental health center. Because the sample only represents treatment-seeking individuals, the prevalence rate of trauma in this sample (i.e., 100%) cannot be generalized to the population. However, descriptive statistics can shed light on characteristics of trauma exposed children and adolescents. The authors reported that 77% of the sample reported more than one traumatic type, 27% had experienced three to four types of trauma, and 31% experienced five or more types. Because the authors focused only on types of trauma, it is likely that these figures—despite being large—underestimate the frequency and total count of trauma events.

Because it is common for people reporting trauma exposure to report more than one event, many epidemiological studies often assess for history of prior traumatic events and the frequencies at which they occurred. In doing so, researchers are able to examine the degree to which previous trauma impacts a person's response to more recent trauma exposure. Studies examining the impact of prior trauma have produced mixed results. In a meta-analysis of 77 articles focused on risk factors for PTSD in adults, Brewin et al. (2000) reported a statistically significant yet modest effect size (r = .12) of previous trauma on PTSD. It should be noted however, that the authors reported separately effect sizes of childhood abuse (r = .14) and other adverse childhood experiences (r = .19)—both risk factors which in most cases would be combined and included within the broader category of prior traumatic experiences. The authors noted as well that the majority of effect sizes varied across studies, and reported the range of effect sizes for previous trauma (r = -.05 to .36), other adverse childhood experience (r = .09 to .60), and childhood abuse (r = .07 to .30). Despite this, a later meta-analysis has found similar effect sizes for prior trauma. Ozer et al. (2003) conducted a meta-analysis of 68 studies and

found prior trauma to be a statistically significant predictor of PTSD symptoms, with an effect size of (r = .17).

A notable exception to this trend for multiple traumas is a multi-wave longitudinal study by Costello et al. (2002), wherein the authors reported that 25% of children age 9-17 surveyed reported an extreme stressor in their life. Among this group the vast majority (72%) reported only one such event. An explanation for this deviation can be attributed to the design of the study: at the time of their publication Costello et al. (2002) were reporting on a multi-wave longitudinal study which hadn't yet fully concluded. The study, titled the Great Smoky Mountain Study, followed three cohorts of children (ages 9, 11, and 13 years at time of intake) annually until participants reached 17 years of age. This design allowed the authors to control for cohort effects, however made it such that they could only report on partial data until all participants aged out of the study. In later publication on the same longitudinal data set (Copeland et al., 2007) the authors reported that by the time all cohorts reached age 16, 67.8% of participants reported a traumatic event, with 54.6% of those reporting more than one trauma event.

Studies that examine the impact of prior trauma can be revealing, but they are limited in this capacity when they assess prior trauma history as a global construct, irrespective of the time period(s) in a person's life in which they occurred. Just as trauma types have been found to vary in conditional risk for PTSD, both research and theory suggest that symptom severity and also symptom expression vary depending upon the age at which a person experienced a traumatic event.

Age

There are several ways to investigate the age of onset of a traumatic event including surveys of particular age groups (e.g., adolescents), surveys of adults which allow retrospective

reporting of events, and longitudinal studies which span significant developmental periods for participants. Furthermore, the focus of such studies can be broad in scope and examine all traumatic events (e.g., Copeland et al., 2007) or focus on specific trauma types such as sexually revictimized adolescents (Walsh et al., 2012), accidental trauma (Cox et al., 2008), or natural disasters (McDermott & Palmer, 2002). The focus of the present study approaches trauma broadly with respect to age; this section will note studies of specific trauma type when applicable, but will primarily focus on studies examining age as it relates to traumatic events in a broader sense.

Studies examining trauma in children and adolescents suggest potentially traumatic events are fairly common (Copeland et al., 2007). In a large national survey examining comorbidity of mental health disorders among 6,483 adolescents ages 13-17, McLaughlin, et al. (2013) found that by age 17, the prevalence of lifetime exposure to traumatic events was 61.8%, and among those surveyed 4.7% met lifetime criteria for PTSD. This study is unique in that traumatic events and PTSD were assessed through self-reports completed by adolescents and their parents/caregivers separately. Conditional risk for PTSD was highest among trauma types involving interpersonal violence. However, given that reporting domestic violence often also entails legal ramifications especially when a child is involved, it is questionable whether the conditional risk for interpersonal violence might not be higher. Furthermore, given the ethical complications of conducting research with children under 18, it may not be surprising that many studies examining trauma and age of occurrence rely on retrospective reporting.

The Detroit Area Survey of Trauma (detailed previously) is an example of a large-scale survey employing retrospective self-reports. In this study, Breslau et al. (1998) found that participants reported the greatest frequency of all trauma types between the age of 16 and 25. In

a follow up study of the same sample, Breslau et al. (1999) reported that history of previous childhood trauma was significantly associated with a greater risk of adulthood PTSD, but this association became nonsignificant when adulthood traumatic events were also included. Other cross-sectional studies have reached similar conclusions. Cloitre et al. (2009) surveyed 582 women presenting for treatment of trauma related symptoms resulting from child abuse and found that cumulative childhood trauma strongly predicted trauma symptom complexity, yet this relationship was nonsignificant for adult trauma, or lifetime trauma (i.e., childhood and adulthood trauma). Brier et al. (2008) surveyed 2,453 female students and found that the number of trauma types before age 18 significantly predicted trauma symptom complexity. These three studies underscore the potentially greater impact of childhood trauma on subsequent symptomology and suggest a sensitization effect: previous trauma exposure sensitizes or increases risk for PTSD in response to later traumatic events (Breslau et al., 1999).

Despite these findings, meta-analyses which have included age at trauma as a predictor have found it to have a significant yet heterogenous effect (Brewin et al., 2000) or have found it to be a non-significant predictor all together (Trickey et al., 2012; Alisic et al., 2011). One possible explanation for these findings is that such overviews of the field isolate age from other risk factors (i.e., trauma type, frequency, etc.) which, if included, would provide greater context. For example, decontextualizing age in this way, the effect size of age on PTSD would represent a heterogenous assortment of early age trauma types from single event motor vehicle accidents to multiple events of interpersonal violence. Given that multiple and repeated trauma exposure has been found to predict symptom complexity (Cloitre et al., 2009), as has trauma type (i.e., interpersonal violence, McLaughlin et al., 2013), it is understandable that meta-analyses which

do not take these into account would find non-significant effect sizes for age, or report wide effect size ranges which include zero.

In exploring this issue, it may be helpful to stop and examine not only distal effects of traumatic events on PTSD (e.g., increased risk for adulthood PTSD), but to also the proximal effects of childhood trauma. As detailed previously, large-scale surveys of children and adolescents have estimated lifetime prevalence rates of PTSD in children to be 4.7-8.1% (Kilpatrick et al., 2003; Kilpatrick et al., 2009; McLaughlin et al., 2013). This figure is comparable to the prevalence rates of adults. An exception to this is a study from the Great Smoky Mountain longitudinal data set. Copeland et al. (2007) found that by age 16, 68% of children in the study (n = 1,420) were exposed to a potentially traumatic event, yet less than 0.5% meet criteria for PTSD, and only 9.1 % report painful recall of traumatic events. One possible explanation for this finding is that compared to adults, PTS symptoms often have different avenues of expression in children and adolescents, and diagnostic criteria developed for adult populations may fail to adequately capture this. Indeed, Copeland et al. (2007) found that of children reporting exposure to a traumatic event, the rate of reported impairment was more than double that of painful recall (21.9% vs 9.1%). Impairment included school problems, physical problems, worsening of emotional problems, and/or disruption of important relationships. Furthermore, the rates of impairments increased with the number of traumatic events experienced. These findings suggest that cumulative traumatic events may have a negative impact on children adolescents, and there is a danger that this may be overlooked when employing PTSD criteria which may not adequately capture symptom expression for individuals in this age group. These findings suggest, rather, that behavioral impairment may be a more important avenue of expression of PTSD symptoms in children. A body of similar findings has

resulted in the revision of PTSD assessment in children: the *DSM-5* now includes a separate section for assessment of PTSD in children, which is more behaviorally based (APA, 2013).

In summary, traumatic events occurring before the age of 18 have been found to significantly predict symptom complexity in adult populations, and this relationship has been found to be significant even when controlling for adulthood trauma (Cloitre et al.,2009; Breslau et al., 1999). Meta-analyses which have examined the impact of age on PTSD (e.g., Brewin et al., 2000; Trickey et al., 2012; Alisic et al., 2011) fail to report significant relationships, and a possible explanation for this is that important trauma variables (e.g., frequency, trauma type) are not controlled for in analyses. Lastly, there is evidence that trauma symptoms may manifest differently in children compared to adults, and the diagnostic criteria of the *DSM-5* (APA, 2013) now includes more developmentally appropriate criteria to better capture symptoms which may manifest behaviorally.

Marginalization

Studies reporting on the relationship of marginalization to PTSD or trauma prevalence have produced mixed results. However, in a review of the relationship of marginalization to trauma, it is important to note that while many studies reported on marginalized identity status (e.g., race, gender, socioeconomic status, and in some cases sexual orientation), this does not mean that marginalization was a focal construct under investigation. To illustrate, the National Comorbidity Survey (Kessler et al., 1995) is one of the most often cited surveys in regard to the prevalence of PTSD and traumatic events. The national survey was comprised of 5,877 individuals ages 15-54 selected using a stratified, multi-stage probability method to accurately represent the population of the US. The authors collected trauma specific information (i.e., trauma type, age of occurrence, frequency, and most upsetting trauma) and demographic

information including sex, age, race, marital status, education level, US region, and urbanicity of residence based on available statistics of the metropolitan area. Despite collecting information regarding race, the authors did not report on any analysis examining this variable. Rather, in their section examining demographic correlates of PTSD, they focused exclusively on sex, age, and marital status. Other examples of neglect to this area include exploring race as a binary construct (e.g., Trickey et al., 2012), or generalizing findings regarding race without respect to important moderating variables such as religion or socioeconomic status, or mediating variables such as cultural values, beliefs, and practices (Pole et al., 2008).

In a review of existing PTSD research which included information on ethnoracial minorities in the US, Pole et al. (2008) examined prevalence rate and treatment interventions and outcomes for African Americans, Latino Americans, Asian and Pacific Islander Americans, and American Indians. The authors reported that, compared to European Americans, Latinos were most consistently found to have higher prevalence rates of PTSD. The authors noted that difference in prevalence rates were also found for the remaining ethnoracial groups, however these differences were largely explained by specific trauma exposure type. Perhaps more important than these findings, however, was the authors' critique of existing literature which they organized according to pre-trauma, peri-trauma, and post-trauma variables. Regarding the first, the authors reported that several large-scale studies (e.g., Breslau et al., 1998) lumped together different ethnic groups into a single category. They recommended that future research allow participants to select multiple categories, and include more specific demographic variables which allow participants to indicate subgroup membership (e.g., Caribbean Latino as opposed to Latino). Regarding peri-trauma variables, the authors noted different cultural groups may ascribe different meanings to certain traumas, and conversely certain events not included in assessment

might have significant cultural valence which falls outside of a largely white and Eurocentric understanding of trauma. The authors specifically highlight the possible role played by racial discrimination and socioeconomic disadvantage. Lastly, regarding post-trauma variables, the authors note some variations in post-trauma response across ethnoracial groups, namely somatization, and suggested that trauma instrument include items which capture "culture-bound expressions of distress" (Pole et al., 2008, p. 53). Although these recommendations have been echoed by other prominent trauma researchers (e.g., Ford, 2008; Ford et al., 2015), there is still much progress to be made in these matters, especially as they relate to large-scale studies.

Moving away from large-scale surveys of the general public, studies examining distress and trauma among specific marginalized groups may detail a richer understanding of this relationship. D'Augelli and Grossman (2001) examined mental health and lifetime experience of victimization among 416 adults over 59 who identified as lesbian, gay, or bisexual (LGB). The authors reported 63% of the sample experienced verbal abuse, 16% experienced physical attack, and that such experiences significantly and negatively impacted mental health (i.e., suicide ideation, homonegativity, loneliness, self-esteem, and overall mental health). In a longitudinal study of trauma events and symptoms in LGB youth (n = 528) ages 15-19, D'Augelli et al. (2006) found 9% of the sample to meet criteria for PTSD, and found that factors conferring greater risk for PTSD included the accumulation of sexual orientation violence as well as victims' appraisal of these experiences. Perhaps more importantly, in both studies the authors incorporated a sexual orientation development perspective and asked participants to report the ages at which they experienced nine important sexual orientation milestones including feeling different than others, being noticed by others as different, and age of first disclosure. In the older adult study the average age of awareness of LGB sexual orientation was 14, with those endorsing

a history of physical victimization reporting a significantly younger age—12.2 years old (D'Augelli & Grossman, 2001). In the sample of LGB youth, the average age at which participants reported feeling different was 8 years old (D'Augelli, Grossman, & Starks, 2006). It is notable that in the sample of LGB youth, ages of first victimization, physical attack, and verbal attack coincide with sexual orientation development milestones. This suggests that time at which participants began to evolve in their awareness of their sexual orientation and the marginalization it brings coincided with the onset of harmful and potentially traumatic events. For the present study, these findings are especially relevant because they suggest a strong link between marginalization and trauma which is particularly salient during important developmental periods (i.e., childhood and adolescence).

Few studies have directly examined the impact of discrimination or marginalization within the context of a traumatic stressor. Pole et al. (2005) surveyed police officers who identified as Hispanic (n = 189), Non-Hispanic white (n = 317), and African American (n = 162) and found that self-reported experiences of racial discrimination increased the risk for PTSD among Hispanic and African American officers. Wiking et al. (2004) examined self-reported health among Polish, Turkish, and Iranian immigrants living in Sweden. Compared to the control group of Sweden born participants, there was a threefold increase of poor health among men from Turkey and Iran, and a fivefold increase among women from Turkey and Iran. However, when controlling for SES and low acculturation, high risk for poor health decreased to non-significance for men from Iran and Turkey. For women, this high risk decreased to non-significance when controlling for SES, low acculturation, and discrimination. The authors recommended that future research examining health among marginalized populations use measures which operationalize discrimination as a form of distress (Wiking et al., 2004).

In contrast to general epidemiological studies which report on race and ethnicity as a demographic variable, the studies examining specific marginalized populations, outlined above, point to a need for the field to incorporate marginalized status and other cultural variables into the current understanding of trauma. Furthermore, increased awareness and exploration of marginalized identity begin in childhood and adolescence (D'Augelli et al., 2006; Quintana, 2007). Longitudinal and retrospective studies also suggest that individuals report the greatest incidence of traumatic exposures occurring between 16-25 years of age, often peaking in frequency between ages 16-19 (Breslau et al., 1998; Breslau et al., 2004; Ford et al., 2015). Given these findings, it follows that a more comprehensive approach to understanding trauma entails an approach which incorporates both a developmental and cultural perspective.

A Developmental Approach to Trauma

Compared to the field of research on adult trauma, there has been much less attention to developing and testing a framework or model of trauma presentation which can be applied to children and adolescents (Salmon & Bryant, 2002). A recent meta-analysis of 40 longitudinal studies exploring trauma among child populations found that the majority of studies did not employ a clearly stated developmental framework (Alisic et al., 2011). The authors reported that the majority of studies borrowed more from general trauma theory than from theory or research specific to children or adolescents (e.g., developmental theories). These findings substantiate decades old critiques from prominent figures in this area of research calling for the creation of a developmentally informed theory of trauma (e.g., Salmon & Bryant, 2002; Meiser-Stedman, 2002).

The field of developmental psychopathology (Cicchetti & Valentino, 2006) can help inform an approach to this subject. However, since the first authoritative publication of this

approach in the 1990s (Cicchetti, 1995), developmental psychopathology has expanded tremendously such that it can no longer be considered a theory per se, but rather a wide field of study unto itself which focuses on the trajectory of mental health across the lifespan. In regard to trauma, Cicchetti and Valentino (2006) focus solely on child maltreatment which includes: sexual abuse, physical abuse, emotional maltreat, and neglect. While these areas have been found to confer greater risk insofar as development of childhood PTSD (Kilpatrick et al., 2003; Kilpatrick et al., 2009; McLaughlin et al., 2013), the focus on such traumatic events excludes other types of traumatic events including those which may occur outside of the home and do not involve the relationship between the parent/caregiver and child (e.g., assaultive violence). With the exception of a model of neurophysiological response to trauma (Bremner, 2015) there is no current developmental model of trauma in the most recent publication of the now four-volume set, *Developmental Psychopathology* (Eds. Cicchetti & Cohen, 2015). Thus, while research in this field can indeed inform the present study, employing a model focused on child maltreatment or neurophysiological response would prove to be too restrictive or outside the scope of the present study.

Layne et al. (2008) outlined seven possible pathways of distress or adaptation that follow a traumatic event in childhood. The authors called for a greater examination of moderators and mediators which can better explain the "mechanisms, processes, and pathways of influence through which they operate over time" (Layne et al., 2008, p. 30). Comprehensive studies informed by such an approach could better identify important factors and provide more nuanced understanding of the interplay and relationships between symptom severity, symptom profile, and clinical course. While not explicating a clear model of developmental trauma, the authors did provide suggestions both for research and intervention from a public health perspective. Indeed,

Layne et al.'s (2008) critiques and remarks have clinical utility, yet their many points are not presented in an organized framework amenable to research. In the following section, I will examine a model of traumatic stress in children which is comprehensive, articulated, and laid out in such a way that the mechanisms and impact trajectories of traumatic events (especially those in childhood) can be mapped across a person's lifespan.

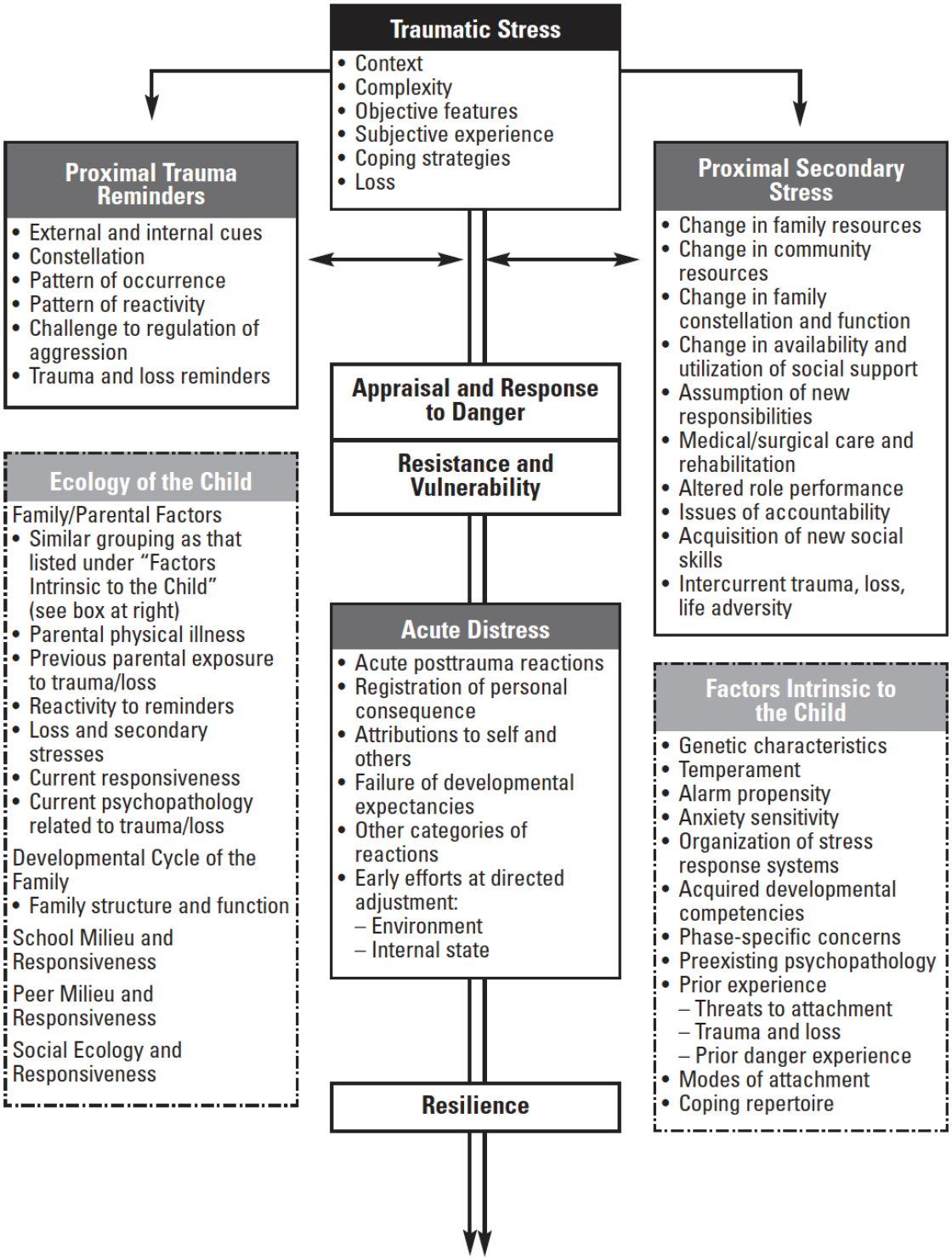
Developmental Psychopathology Model of Childhood Traumatic Stress

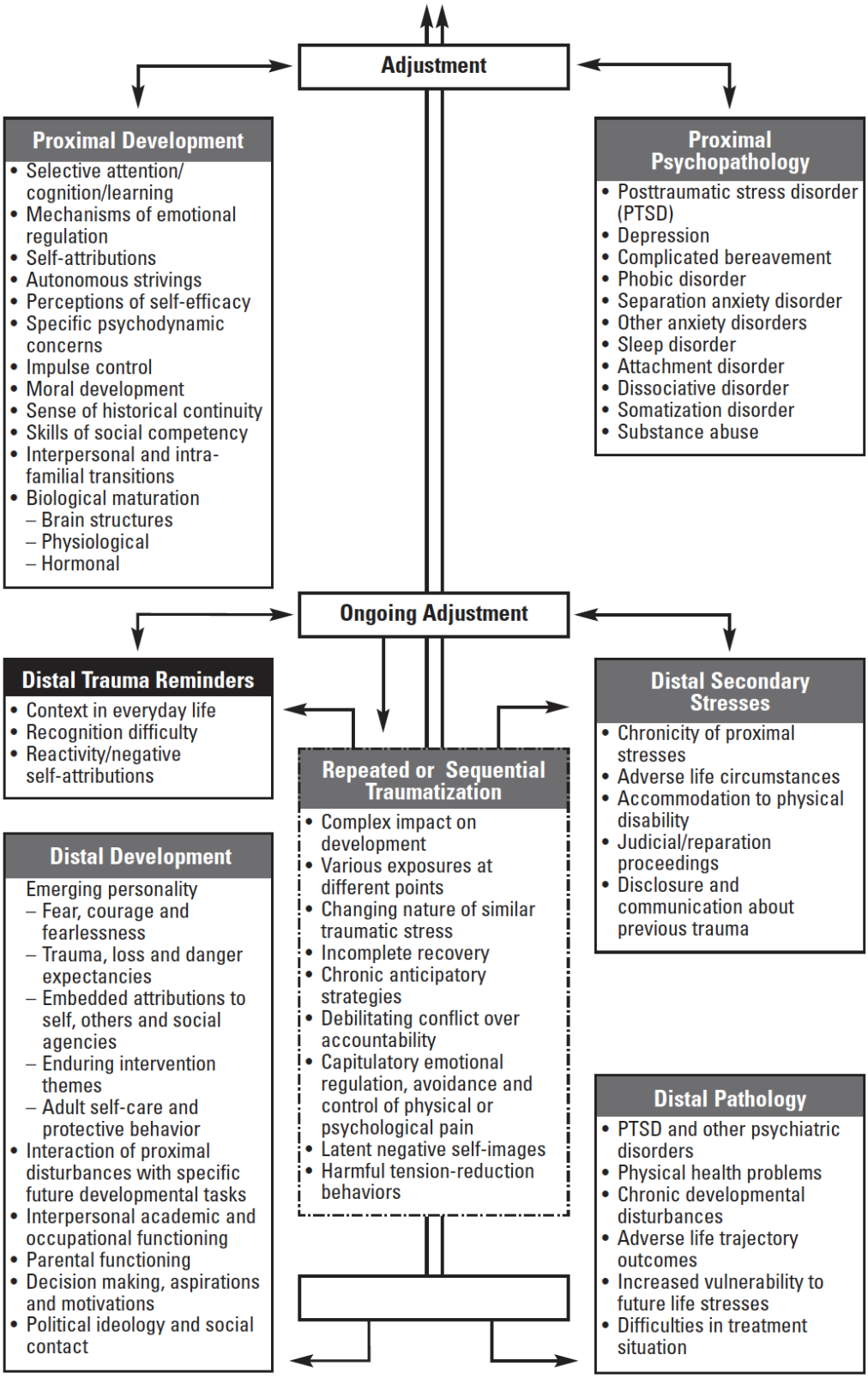
For the present study, an ideal model of developmental trauma would incorporate a trajectory perspective as outlined by Layne et al. (2008), yet would also specifically touch upon the distal effects of trauma as they relate to specific life domains—particularly the vocational domain. The Developmental Psychopathology Model of Childhood Traumatic Stress (Pynoos et al., 1995; Pynoos et al., 1999) employs a developmental ecological framework (Pynoos & Steinberg, 2006) which attends to many of the variables of focus in this study. Firstly, the model posits that traumatic stress occurs within a larger context of co-existing pre-trauma and peri-trauma factors which may dynamically interact with the traumatic event to attenuate or amplify the initial impact of the event. The authors group these factors into proximal trauma reminders and proximal secondary stresses. Proximal trauma reminders can include external and internal cues which remind the individual of the current traumatic event, past traumatic events, or ongoing events of trauma or loss. This is important to consider given that the majority of adults and adolescents report multiple traumatic events over the course of their lifetime (Briggs et al., 2013; Stein et al., 2014), and such history has been found to influence later response to traumatic stress (Cloitre et al., 2009; Breslau et al., 1999). Proximal secondary stress includes stressors which may be less directly related to the traumatic event such as family access to resources, change in family constellation and function, and intercurrent life adversity. Within the

Psychology of Working Theory (which will be examined shortly), marginalization and economic constraints would fall into the category of proximal secondary stressors.

Figure 1

Developmental Psychopathology Model of Childhood Traumatic Stress





From: "A developmental psychopathology model of childhood traumatic stress and intersection with anxiety disorders," by R. S. Pynoos, A. M. Steinberg, and J. C. Piacentini, 1999, *Biological Psychiatry*, *46*(11), pp. 1544-1545. Copyright 1999 by the Society of Biological Psychiatry.

The authors suggest that the acute stress response to a traumatic event is mediated by peri-trauma factors which include the child's appraisal of the event. The primary methods of appraisal and response, however, are largely influenced by the developmental stage of the individual at the time of the traumatic event. For example, preschool children are reliant on their parents/caregivers and look and turn to them for appraisal of and response to the traumatic event. School-age children typically have a more developed appreciation of danger and understanding of safety, and may tend to experience guilt or loss of efficacy when a response to an event does not secure safety or protection. Adolescents predominantly rely on themselves and/or their peers to appraise threat and determine a response (Pynoos et al., 1999). In addition to these points, the authors suggest that appraisal, response, and the degree of distress that follow are influenced by both child-intrinsic factors and the ecology of the child. Child-intrinsic factors are qualities unique to the child such as temperament, alarm propensity, pre-existing psychopathology and prior experiences, and genetics. The ecology of the child is comprised of child-extrinsic factors which include the school, peer, community, and family relationships. The model places special emphasis on the family unit, important elements of which include parent relationship to child, parent stress and response to trauma, family structure, and the developmental cycle of the family.

The period following the acute distress response is referred to as adjustment. Depending upon the interaction of the aforementioned elements, the authors suggest that adjustment can proceed along a combination of two routes: proximal psychopathology or proximal development. Proximal psychopathology refers specifically to the development of psychiatric disorders such as PTSD, depression, substance abuse, dissociation, sleep disorders, somatization, and complicated bereavement. Proximal development primarily refers to the successful acquisition of developmentally important skills such as selective attention, impulse control, emotion regulation,

and social skills. It also refers to the development of less concrete qualities such as autonomy, self-efficacy, and self-attributions. Lastly, proximal development includes biological maturation of brain structures, and healthy physical and physiological functioning. Central to this period of adjustment, is how an individual navigates transitions and attends to developmental tasks while coping with proximal psychopathology. The authors again note that effect of trauma on psychopathology and development may play out differently depending upon the developmental stage of the individual. For example, the authors note that early childhood confrontations with violence can compromise the achievement of narrative coherence in preschool children (Osofsky, 1993). Whereas, in adolescence, trauma-related negative self-appraisals and painful emotions can lead to an increased concern about social evaluation, and result in social avoidance (Pynoos et al., 1999).

Following the more proximal period of adjustment is the final phase referred to as "Ongoing Adjustment" which focuses on the continued unfolding of adjustment in relation to trauma reminders and secondary stresses, and how this impacts more distal development and pathology. This period of ongoing adjustment encompasses a person's lifespan, and underscores the potential lifelong impact of childhood trauma. Distal trauma reminders refer to any stimulus (person, place, phrase, etc.) which may remind a person of a past trauma. Their degree of impact depends on their frequency, timing, and the extent to which they exist in a person's everyday life. The more deeply embedded or commonplace they are in a person's life, the more difficult they may be to recognize and identify as sources of arousal, anxiety, or avoidance. An example of their impact specific to a developmental milestone might be increased avoidance or authoritarian behavior when one becomes a parent. Distal secondary stresses can include chronic stresses connected to the traumatic event which remain and carry on into adulthood. Distal

secondary stresses may also include current adverse life circumstances such as need for medical treatment. Distal Pathology includes new psychiatric and physical health problems, as well as more chronic impairment in important domains such as interpersonal relationships and daily functioning. Distal development concerns the successful functioning in regard to developmental tasks such as parenting, and academic and occupational functioning. Additionally, this includes less concrete markers such as the development of a political ideology, the ability to plan and prepare for the future, and the ability to make decisions aware of one's motivations and aspirations. Lastly, distal development includes psychological components, namely the emerging of a coherent personality, and developmentally appropriate and functional understandings of fear, courage, fearlessness, safety, and self-care (Pynoos et al., 1999).

Importantly, Pynoos et al. (1999) recognize that individuals in later life may again experience a separate traumatic event, and that the resulting response and adjustment period will be shaped by not only distal elements, but also earlier (proximal) elements which shaped the outcome to an earlier traumatic event. As such, this model suggests a complex approach to understanding trauma and its impact throughout the lifespan. It incorporates important person-intrinsic and person-extrinsic components in the pre-trauma, peri-trauma, and post-trauma periods. Most importantly for the present study, this model predicts a complex relationship of childhood trauma to more distal outcomes, namely vocational and occupational functioning.

For the present study, I intend to primarily explore the impact of traumatic events experienced in childhood, and their direct effects on more distal outcomes—namely decent work. Secondly, I intend to explore the direct effect of childhood traumatic events on developmentally rooted skills (emotion regulation, and locus of control) as indicated by career adaptability and work volition, and the indirect effect of childhood traumatic experiences on decent work through

these variables as mediators. In a later section, I will focus on empirical studies which help connect trauma-related variables (i.e., emotion dysregulation and locus of control) to vocation related variables (i.e., work volition and career adaptability). But as Pynoos et al.'s (1999) model hopefully clarifies, there is a theory-informed rationale to examine from a trauma perspective constructs which also happen to be examined in vocational psychology literature, albeit in slightly different forms. Pynoos et al.'s (1999) model identifies a plethora of markers by which these factors can be assessed or measured. In most cases, however, these markers are very general and lack specificity (e.g., decision making, aspirations, and motivations; occupational functioning; impulse control; etc.). Accordingly, operationalizing such components, let alone even larger constructs, would prove challenging, and including in any study all components of the model might prove untenable. The Psychology of Working Theory however, examines constructs quite similar to those in the Developmental Psychopathology Model of Traumatic Stress including: volition (compared to autonomous strivings, self-attributions), adaptability (compared to emotion regulation), and early developmental ecology (compared to family resource, community) and experience (compared to loss, and life adversity). The primary difference is that the Psychology of Working Theory explores these constructs as they relate to the domain of work. The next section will provide an overview of the Psychology of Working Theory which will include the development of the theory, its primary constructs and hypotheses, and the way variables of focus are operationalized.

Psychology of Working Theory

The Psychology of Working Theory is a relatively new model in the field of vocational psychology. In comparison to more longstanding vocational theories such as the Holland's Theory of Vocational Choice (Holland, 1997) or the Life-Span, Life-Space theory of careers

(Super, 1957, 1980), the Psychology of Working Theory developed primarily in the 21st century. This section provides an overview of the history and development of the Psychology of Working Theory, an examination of constructs and variables central to the theory, and a review of existing studies which have employed the Psychology of Working Theoretical Model (Duffy et al., 2016) to examine the role of work among specific populations.

History and Development

Over the course of the past 15 years, the Psychology of Working Theory has grown from first being a perspective (Blustein, 2006), to a testable theory of work (Duffy et al., 2016), and more recently to an approach to counseling (Blustein et al., 2019). This section traces the evolution of the Psychology of Working Theory from its beginnings to the present day.

The Psychology of Working perspective has its roots in critical social lens/perspectives that have emerged over the past 50 years (e.g., feminism, and multiculturalism), which have focused on the role of power, race, and discrimination and how they are maintained in larger systems and societal practices (e.g., housing, employment, education, etc.). While the Psychology of Working perspective indeed extends to many such domains, its chief focus is the domain of work. Traditional vocational theories were primarily focused on choice of vocation, in many instances employing a person-environment assessment of fit approach to assist individuals in their career decisions. The Psychology of Working perspective developed from critiques of the field informed by feminist and multicultural perspectives, which noted that the concept of "choice" and even the notion of "career" were largely circumscribed to individuals in positions of privilege—namely European American, middle class, heteronormative, male (Blustein, 2008). Furthermore, prominent figures in the field of vocational psychology (i.e., Blustein, 2001; Fouad, 2007; Richardson, 1993) were calling for the field to shift from focusing on primarily volitional

careers to instead work and working. Missing from the field of vocational psychology was a framework capable of more in-depth exploration of work as a means for survival, rather than an extension of personality or interest (Blustein et al., 2008). The Psychology of Working perspective was not offered as a replacement for other frameworks and theories (e.g., Holland, 1997, Super, 1980, Lent et al., 2002), but rather as a complementary meta-perspective designed to challenge and promote thoughtful expansion and development of vocational theory (Blustein et al., 2008).

In conjunction with the above points, the Psychology of Working perspective also called for a greater recognition for the role work plays in people's lives namely in regard to mental health, physical health, and overall functioning. The Psychology of Working perspective notes that work constitutes a large portion of an individual's waking life, and for this reason is inherently connected to human functioning and well-being, or the lack thereof. For example, un- or underemployment has been found to be detrimental to overall mental health (Mallinckrodt & Bennett, 1992), and the loss of work has been connected to specific mental health problems including low self-esteem, depression, substance abuse, and relational conflict (Blustein, 2006; Stearns, 1995). This connection of work to overall health can be examined both at the individual level, and at a more macrolevel (e.g., how systemic un- or underemployment affects marginalized communities in such ways that they remain marginalized and without power compared to the majority of society). Accordingly, the primary proponents of the Psychology of Working perspective (e.g., Blustein) were calling for a more in-depth psychological examination of work which would pull from other specialized fields of psychology (e.g., industrial organizational, clinical, school, etc.) and from fields outside of psychology (e.g., sociology, public health, economics, etc.) (Blustein et al., 2008).

Outcomes of Work

In addition to these points, the central premise of the Psychology of Working perspective was that work allowed people to meet important needs which were critical to well-being and health. More specifically, work functioned as a principle pathway and served as a primary means for attaining and fulfilling human needs. Blustein et al. (2008) identified three categories of needs which work provided: the need for survival and power, the need for social connection, and the need for self-determination.

The need for survival and power borrows, in part, from Maslow's (1968) theory of human motivation, which positions basic survival needs (e.g., food, shelter, etc.) as fundamental for the development and attainment of higher-level needs (e.g., belongingness, self-actualization, etc.). When these survival needs are absent or not met, a person's sole motivation is to secure these needs so that they can continue to survive. The striving for higher level needs is suspended as they become secondary to ensuring one continues to exist. Closely tied to survival needs is the need to acquire psychological, economic, and social power (Blustein, 2006). Power refers to a sense of security in one's ability to maintain basic and more intermediate needs. Work provides access to economic power via money, and to social and psychological power through the social resources made available, and status conferred through a particular work position.

The need for social connection borrows from research on healthy attachment (Bowlby, 1982) and belonginess (Baumeister & Leary, 1995) which underscores the central importance of interpersonal relationships to mental health and well-being. Work can provide a venue for cultivating such connections, which in turn can help people understand who they are in reference to people in their immediate environment, and in reference to broader society. Accordingly, the formation of social connections is helpful in the development and maturation of one's identity.

Not all work affords the same possibility of social connection; certain work positions can be inherently isolating and certain work environments might prove alienating, and such experiences can have a detrimental impact on a person's mental health (Blustein, 2008). This however is a point on which the Psychology of Working would later focus, and something which will be explored in later sections.

The concept of Self-determination is based on the work of Deci and Ryan (2000). The Self-Determination Theory (Deci & Ryan, 2000) posits that people are inclined to pursue and engage in activities that are intrinsically rewarding and interesting. Unfortunately, many jobs are not inherently interesting and many people are motivated to complete work-related responsibilities for their extrinsic rewards—primarily income and security. Deci and Ryan (2000) suggest that the inclusion of certain elements and opportunities in a line of work can help transform it so that work is more a function of intrinsic motivation than extrinsic motivation. Specifically, work that affords individuals opportunities for autonomy, relatedness, and competence subsequently allows for a shift in motivation to work from extrinsic to intrinsic. Blustein (2006) suggested that, in addition to these factors, self-determination may also be fostered when there is an overall congruence in values between a worker and the work they do, or who they work for. Blustein (2006) also highlighted that workplaces can foster self-determination in employees by providing access to opportunity structure—making available and accessible resources, training opportunities, and additional supports. Accordingly, as a whole then self-determination needs refer to elements of work which provide motivation and to some degree meaning. These elements which comprise self-determination include: autonomy, relatedness, competence, value congruence, and access to opportunity structure.

Up to this point, much of the focus of the Psychology of Working perspective was on what could be considered ideal outcomes of work: survival needs, social connectedness needs, and self-determination needs. On the other end of the continuum, researchers (i.e., Duffy et al., 2012) were using the Psychology of Working framework to better understand person specific factors which could predict the attainment of work that was characterized by these attributes. One construct under examination was Work Volition and the role this played in attainment of work. Work volition is defined as the perceived capacity to make occupational choices despite constraints (Duffy et al., 2012). The concept of work choice has long been a central construct of vocational psychology (e.g., Holland, 1997; Super, 1957, 1980). Though never explicitly mentioned as part of the Psychology of Working, an underlying assumption of the perspective is that certain forms of oppression exist—both at the individual and societal level—such that the choice of work for marginalized individuals and communities is severely compromised or in some cases non-existent. This is especially the case when labor markets are characterized by a loss of control or the ability to choose, except for perhaps the select privileged few. Accordingly, Duffy et al. (2012) recast this concept of volition in such a way that it is contextualized against a backdrop of constraining factors. In this way, volition in the context of work is no longer something taken for granted, but is rather a continuous construct of which people may possess more or less.

In some ways, the construct of work volition is not entirely new. There is a history of vocational research on related constructs which function to restrict a person's ability to attain work, or exert control once in a specific job environment. The former is often referred to as career barriers, can include economic, family, and person factors, and also external barriers such as racism, sexism, and/or homophobia (Duffy et al., 2012). Duffy et al. (2012) note that career

barriers precede and co-exist alongside the construct of work volition. However, the authors differentiate the two and explain that career barriers pertain to specific constraints on an individual which many times may be external, whereas work volition pertains to one's subjective beliefs in their ability to make work choices (Duffy et al., 2012). A second related construct is work locus of control—which concerns one's perceived ability to influence and exert control within the work environment. People with an internal work locus of control report a greater sense of agency and control within the work environment, whereas people with an external work locus of control report feeling that their actions are largely restricted within and dictated by their work environment. Both work volition and work locus of control are similar in that they refer to subjective beliefs. However, whereas work locus of control concerns a person's beliefs within the work setting, work volition concerns beliefs regarding access to work, and ability to make decisions regarding work (Duffy et al., 2012).

Through a series of three separate studies, the authors created a 13-item Work Volition Scale which consisted of 3 factors: volition, financial constraints, and structural constraints (Duffy et al., 2012). They found that when administered alongside scales of similar constructs (e.g., work locus of control) and well-established predictors of work satisfaction (e.g., personality, core self-evaluations) the work volition scale accounted for a 12 % (R^2 Δ = .12) increase in explained variance of job satisfaction, bringing the total variance explained by all predictors to 38% (R^2 = .38). In a separate study to develop a student version of the scale, Duffy, Diemer, and Jadidian (2012) found work volition to significantly, yet weakly correlate with career barriers. Furthermore, Duffy, Autin et al. (2015) found work volition to moderately correlate with income and two indicators of social class among samples of employed adults. Taken together, these findings suggest that work volition overlaps with, but is unique from

related constructs (i.e., career barriers) and contextual factors (e.g., social class). Though three factors constitute the construct of Work volition, subsequent Psychology of Working studies which have employed the measure have primarily relied upon the 4-item volition subscale (e.g., Douglass et al., 2017; Duffy, Gensmer et al., 2019; Tokar & Kaut, 2018). This is not because work volition became any less central to the Psychology of Working perspective, but rather because the framework was later to develop into a full-fledged vocational theory which was able to be tested empirically.

Decent Work and Full Model

The next stage in the development of the Psychology of Working perspective was marked by a shift from identifying the needs that work provides, and the person and environment factors which contribute to work attainment, to a closer examination and identification of the qualities that constitute work capable of allowing and sustaining health and well-being. In their foundational theoretical article, Duffy et al. (2016) identified work of this nature as "Decent Work" and specified where and how it connects to work volition, needs, and newly identified constructs. Below is the Psychology of Working Theoretical Model as published in Duffy et al. (2016). Included in the model are predictor, moderator, and mediator variables of decent work, and the proposed outcome variables of decent work as mediated through the needs variables. Because the focus of my study concerns the predictor variables with decent work as an outcome, in this section I will focus on the left side of the model containing these variables.

Figure 2

Psychology of Working Theory Structural Model

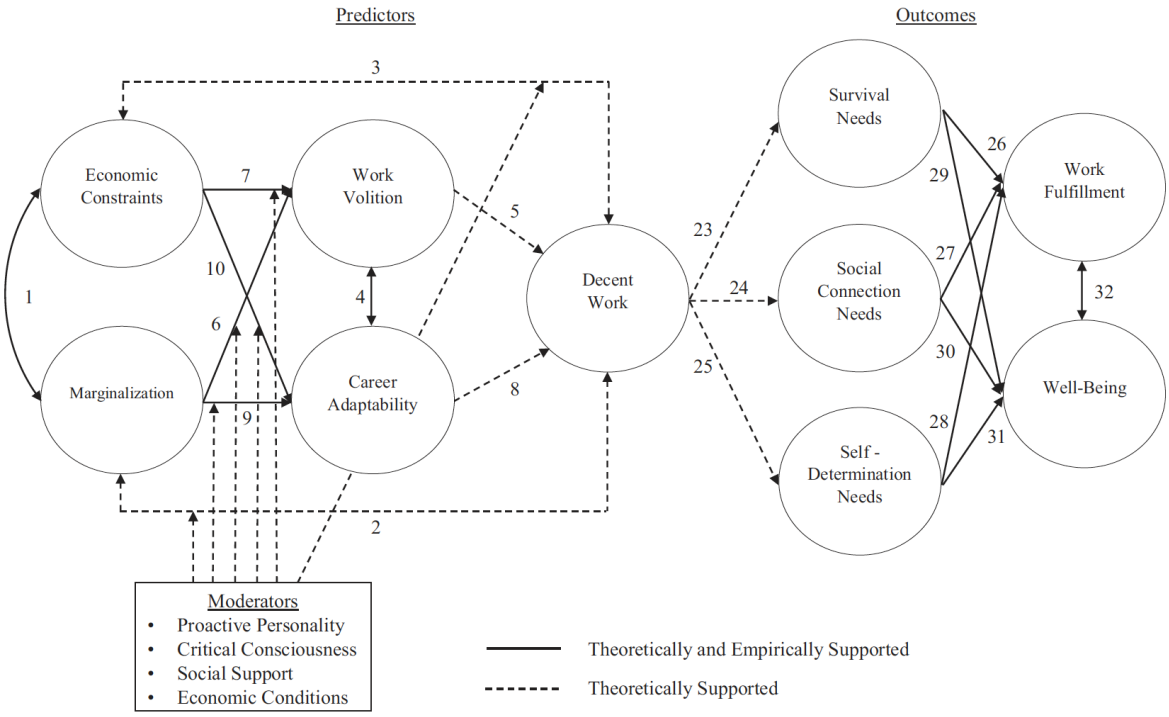


Figure 1. Theoretical Model. Proactive personality, critical consciousness, social support, and economic conditions are proposed to moderate the paths from economic constraints and marginalization to work volition, career adaptability, and decent work, respectively: proactive personality (*Propositions 11–13*), critical consciousness (*Propositions 14–16*), social support (*Propositions 17–19*), and economic conditions (*Propositions 20–22*).

From "The psychology of working theory," by R. D. Duffy, D. L. Blustein, M. A. Diemer, and K. L. Autin, 2016, *Journal of Counseling Psychology, 63*(2), p. 129 (http://dx.doi.org/10.1037/cou0000140). Copyright 2016 by the American Psychological Association.

The centerpiece of the above model is decent work, a concept dating back to the United Nations Declaration of Human Rights in 1948 in which work was characterized as integral aspect of human rights (Blustein et al., 2016). This concept of decent work was later formally defined and explicated by the International Labor Organization (ILO) in several different publications and manuals (i.e., ILO, 2008, 2012, 2013). The attributes of decent work as defined by the ILO (2008) can be summarized as follows: promoting employment; defining and developing social

protection for workers; promoting dialog via connections among government, work organizations and employees; and advancing and maintaining the fundamental rights necessary for a dignified and just workplace. For the most part, the concept of decent work was a focus of research in fields other than psychology (e.g., economics, sociology, etc.). As such, it was defined via macro-level economic factors and measured primarily using global indices of the labor market such as unemployment rates, availability of social security, union density, and other indices (Blustein et al., 2016). Missing from these formulations and indices, however, was the perspective of working people themselves. An aim of the Psychology of Working Theory was to integrate such existing definitions into the psychological research of work, and conversely develop a more subjective and psychological understanding of decent work which could in turn inform research in other fields. For example, a person could be employed in a given position which happens to satisfy several of the basic attributes of decent work (e.g. employment, benefits, etc.) and this would be reflected in the corresponding indices. These indices, however, do not provide information regarding the sense of safety and support the person feels in the work environment, nor do they provide any indicator as to this person's beliefs regarding their job security. Thus, the decent work variable as put forth by Duffy et al. (2016) integrates the individual's subjective evaluations as to whether such conditions are present. Furthermore, Duffy et al., propose that decent work exists only when *all* such components are present. The components the authors identify include:

> "(a) physical and interpersonally safe working conditions (e.g., absent of physical, mental, or emotional abuse), (b) hours that allow for free time and adequate rest, (c) organizational values that complement family and social values, (d) adequate compensation, and (e) access to adequate health care." (Duffy et al., 2016, p. 130)

These components of decent work would later be used to develop a scale to assess the construct. Duffy et al. (2017) conducted a set of scale development studies in which they pared down an initial list of 53 items to a 15-item Decent Work Scale consisting of five separate factors reflecting distinct subscales of the above five components. When administered alongside measures of predicted outcomes of decent work, the five subscales of decent work accounted for significant variance in prediction of work meaning, job satisfaction, and withdrawal intentions (Duffy et al., 2017). Because this is a measure used in the present study, more detailed psychometric information will be presented later in the methods section. For now, it is important to highlight that the scale has been found to be a reliable and valid instrument for the subjective appraisal of heretofore more objective criteria of decent work.

Turning to the variables immediately left of Decent work, Duffy et al. (2016) propose that Work Volition and Career Adaptability affect decent work and that they mediate the relationship between decent work and contextual factors which include marginalization and economic constraints. Because work volition was covered in a previous section, I will first focus on the other mediator variable: Career Adaptability. This construct concerns a person's capacity to attend to current and unanticipated work tasks (Savickas, 2002). Similar to work volition, career adaptability is a psychological construct that concerns a person's subjective appraisals of themselves in these areas. Adaptability is comprised of four subcomponents: concern about one's future work, perceived control over one's life and circumstances, curiosity about oneself and opportunities for work, and confidence in one's abilities to complete tasks and successfully navigate challenges (Porfeli & Savickas, 2012). The Psychology of Working Theory proposes that individuals who report higher levels of career adaptability will be more likely to engage in decent work. In studies that have tested the theoretical model, Savickas and Porfeli's (2012)

Career Adapt-Ability Scales has been used to measure this construct. This scale consists of 24 items, and four factors reflecting distinct subscales for the above four subcomponents. There also exist a 12-item short form of the scale and more recently a 14-item short form translated into Turkish (Kozan et al., 2019). Other studies (i.e., Duffy, Gensmer et al., 2019) investigating this measure have used the career adaptability subscale from the 45-item Career Futures Inventory by Rottinghaus et al. (2005). The rationale for this alternative scale selection will be examined in the subsequent section on model testing. In addition to mediating the relationship of contextual factors (i.e., predictor variables) to decent work, career adaptability is proposed to correlate with work volition, and studies testing the model among specific populations include in their analyses the relationship between these two variables. Lastly, it is important to note that while both career adaptability and work volition are proposed to be affected by contextual factors which are more static and speak to a person's past, the authors suggest that both work volition and career adaptability are perceptions which are more malleable (Duffy et al., 2016). From a clinical standpoint then, both of these constructs can be targets for intervention.

Contextual factors—economic constraints and marginalization—are proposed as predictor variables which precede work volition and career adaptability. Prior to examining each individually, it is important to note that the conceptualization of both of these constructs is grounded in a perspective informed by intersectionality theory (Cole, 2009). This approach calls for researchers to ask important questions about the individuals in a given study, and the way they may be grouped into specific demographic categories such as gender, race, and social class. Cole (2009) implores researchers to ask the following three questions: "Who is included within this category? What role does inequality play? Where are there similarities?" (p. 170). This approach is born out of criticisms—similar to those previously highlighted in regard to trauma

and marginalized populations—which warn of the many misrepresentations and false findings generated when groups are determined along a single variable without regard to other important variables. This is especially problematic with demographic variables: all too often findings are reported on demographic group differences, when the very reason for such differences isn't membership in a particular demographic (e.g., race, gender, social class) but rather the function of complex and multi-layered power structures. Weber and Parra-Medina (2003) refer to this error in research as focusing on "downstream" (i.e., group membership) for causal explanations, when certain behaviors are better explained by looking "upstream" to systems which foster and maintain social inequality (p. 190). Cole (2009) notes that stepping back in this manner provides greater clarity as to the heterogeneity within groups, and to similarities between groups which have been historically examined in contrast to one another. This approach offers a more thorough, albeit more complex, explanation for particular behaviors. However, if the pursuit of social research is to explain particular observations and make related predictions, it is important to examine and include variables which provide a fuller picture.

Accordingly, marginalization, as conceptualized by the Psychology of Working Theory, is the relegation of people or groups of people to less powerful positions in society (Duffy et al., 2016). This construct focuses on marginalized identities which include but are not limited to race, gender, sexual orientation, social class, immigration status, and ability. The premise of this construct is that social forces are maintained in such a way that people endorsing marginalized identities experience discrimination within the workplace, and also threat to securing decent work. This proposition is based on a robust body of literature linking marginalization to negative workplace outcomes and career development (see Duffy et al., 2016). The Psychology of Working Theory, to some extent however, parcels out of this definition marginalization based on

social class. Indeed, social class is considered a part of a person's identity and classism does occur. But given that social class also encompasses access to resources, within the theoretical model it is conceptualized to be located within the variable economic constraints. Psychology of Working studies have examined the relationship of marginalization to decent work among specific groups including sexual minority populations (Allan, Tebbe et al., 2018; Douglass et al., 2017), and working adults with chronic health conditions (Tokar & Kaut, 2018). In these studies, marginalization was measured via scales designed to assess specific forms of marginalization and discrimination (i.e., heterosexism and discrimination based upon chronic illness). Recently, the Lifetime Experience of Marginalization Scale was developed to measure this construct (Duffy, Gensmer et al., 2019). This instrument assesses marginalization more globally and conceptualizes the impact of marginalization as cumulative and occurring over one's lifetime. Since it is an instrument included in the present study, psychometric information on the instrument will be presented in the later methods section. Lastly, the Psychology of Working theoretical model proposes that marginalization functions in the following ways: the relationship between marginalization and decent work is bidirectional such that both exert direct effects on each other; marginalization indirectly effects decent work through work volition and career adaptability; and that marginalization correlates with economic constraints (Duffy et al., 2016).

The remaining predictor variable—economic constraints—refers to an individual's access (or lack thereof) to both economic resources and social capital (Duffy et al., 2016). Economic resources may include household income and/or family wealth. When present in sufficient quantity, economic resources facilitate access to other resources important to career development (e.g., rigorous academic settings, occupational opportunities, and extracurricular activities important to social and cognitive development). Social or cultural capital refers to more social

resources (e.g., one's social and extended family network), which may also contribute to securing work and/or furthering one's career. This dynamic conceptualization of economic constraints draws from family economic stress models (e.g., Conger et al., 1992; Yeung et al., 2002) which propose that economic stress can reorient family system dynamics and give way to deleterious effects including diminished quality of parental relationship, diminished parental warmth towards children, and less engagement between family members. Psychology of Working studies have examined the relationship of economic constraints to decent work among specific groups mentioned in the preceding paragraph. In these studies, the construct economic constraints was measured by instruments designed to assess social class, namely the MacArthur Scale of Subjective Social Status (Adler et al., 2000). Recently, the Economic Constraints Scale was developed to measure this construct (Duffy, Gensmer et al., 2019). This instrument assesses the degree to which an individual perceives themselves to have or have had access to economic resources. The scale conceptualizes the impact of economic constraints as cumulative and occurring over one's lifetime. This instrument will be used in the present study; specific psychometric details will be provided in a later section. The Psychology of Working theoretical model proposes that economic constraints function in the following ways: the relationship between economic constraints and decent work is bidirectional such that both exert direct effects on each other; economic constraints indirectly effect decent work through work volition and career adaptability; and that economic constraints correlate with marginalization (Duffy et al., 2016).

Lastly, the Psychology of Working Theory proposes several variables which may moderate the relationships among the predictor, mediating, and outcome variables. These proposed moderators include: proactive personality, critical consciousness, social support, and

economic conditions. To date, studies examining the theoretical model have not fully examined the potential role of these moderating variables. One reason for this is that the theory is relatively young and there are yet agreed upon scales for these variables. Furthermore, given the many parameters of the model, it is understandable that the more fundamental proposed relationships in the model be examined first. Given the lack of consensus regarding how to measure the moderator constructs, and the already broad scope required to examine aspects of development, trauma, and work, the present study will not examine the moderating variables in this model. This decision also reflects an effort to strike a balance between rich data and parsimony relevant to the research questions of focus.

Model Testing

Because the Psychology of Working theoretical model will be used to investigate the research questions of the present study, it will be helpful to review other studies which have also the predictor side of the model in its entirety. In this section I will provide a brief overview of the means through which the model is tested, and also highlight the extent to which the findings of model-testing studies support proposed paths in the model.

Given the many variables and proposed parameters in the model, the primary statistical analysis used by model testing is structural equation modeling (SEM). This analysis utilizes confirmatory factor analysis to test the extent to which indicator variables (e.g., items) load onto latent variables (or factors) of constructs of interest. This analysis is typically the first step in a two-step approach of model analysis using SEM (Kline, 2011), and is generally referred to as the test of the measurement model. The second step is the structural regression of the proposed model, which allows researchers to examine path coefficients of hypothesized direct and indirect effects between variables. Path analysis is a simpler form of SEM which does not compute or

factor in measurement error, and rather assumes that instruments generate true scores (i.e., error free) of the construct(s) they propose to measure. Because SEM is capable of generating path coefficients with measurement error statistically removed, it can typically reveal stronger relationships between variables than can path analysis (Keith, 2019). Structural equation modeling and path analysis can both be used to examine the correlation among variables that are predicted to have a relationship in a specified direction. In some instances the direction of the relationship is hypothesized based on longitudinal studies which have measured the relationship between variables over a span of time, however in many instances the direction of relationship between variables is guided by relevant theory and studies using other research designs (e.g., cross-sectional studies). Studies investigating models like the Psychology of Working model, examine the direct effect of one variable on another; the indirect effect of a variable on outcome variable mediated through one or more variables; and correlations between variables with no specified directionality. In addition to the examination of individual paths, it is common practice to also assess the overall fit of the model both with all variables and proposed parameters included, and also with nonsignificant paths or parameters removed. Common statistical tests of fit include Chi-Square and change in Chi-square (non-significance supports model with larger degrees of freedom), Root Mean Square Error of Approximation (RMSEA, $\leq .05 =$ good fit), Standardized Root Mean Square Residual (SRMR, $\leq .08 =$ good fit), and the Comparative Fit Index (CFI, $\geq .95 =$ good fit) (Keith, 2019). Analyses of effects and fit have been the primary focus of studies examining the Psychology of Working theoretical model. As such, they will be the focus of the following section.

Studies using the theoretical model to examine decent work have focused on the outcomes side (e.g., Duffy, Kim, et al., 2019), portions of the predictor side (e.g., Kim et al.,

2019), and both predictor and outcomes sides (e.g., Allan et al., 2019; Kozan et al., 2019). Three studies examined the predictor side in its entirety; these studies will be the primary focus of this section. Douglass et al. (2017) examined the proposed predictor pathways among a sample of 218 adults who identified as a sexual minority and were currently employed. To measure the outcome and mediator variables, the authors used the DWS, the 24-item long form of CAAS, and the WVS. Because at the time this study, measures for predictor variables had yet to be developed, the authors used the MacArthur Scale of Subjective Social Status and a one item subjective indicator of social class to measure economic constraints, and the Heterosexist, Harassment, Rejection, and Discrimination Scale to measure marginalization. Douglass et al. (2017) found significant direct effects on decent work for Marginalization ($\beta = -.23, p = .002$) and social class $\beta = .24, p = .008$), and significant indirect effects on decent work through work volition for marginalization (*B* = -.29, 95% CI [-.054, -.0.09]) and social class (*B* = .15, 95% CI [0.09, 0.23]). The authors did not find support for career adaptability as a mediator for either predictors, but did find career adaptability to significantly correlate with work volition ($r = .31$, $p < .05$). Regarding fit of the model, the authors ran analyses examining the full model, and the model with only the mediators predicting decent work. Douglass et al. (2017) found a significant decline in fit when only using the mediating variables ($\Delta\chi^2(2) = 14.40$, $p < .001$) and retained the hypothesized full model which demonstrated good fit to the data ($\chi^2(329) = 536.44$, $p < .001$, CFI = .95, and RMSEA = .05, 90% CI [.05, .06], $p = .22$). The model explained 66% of the variance in decent work. Taken together, the authors found support for six of the 14 hypothesized paths for the predictor portion of the model, and found the model to provide a good fit for this particular population.

Tokar and Kaut (2018) examined the theoretical model using a sample of 320 adult workers with Chiari malformation, a chronic health condition. The authors measured the mediator and outcome variables using the DWS, 4-item Volition subscale of the WVS, and the 14-item short version of the CAAS. However, the authors measured marginalization using the 11-item Chronic Illness Rejection and Discrimination Scale (Brewster & Esposito, 2017), and economic constraints using the 2-item subjective social class used by Douglass et al. (2017) and the 4-item Financial Strain Scale (Creed & Macintyre, 2001). Tokar and Kaut (2018) found significant direct effects on decent work for Marginalization ($\beta = -.40, p < .01$) and economic constraints $\beta = -.29, p = .008$), and significant indirect effects on decent work through career adaptability for economic constraints (*B* = -.29, 95% CI [-.054, -.0.09]). The relationship between work volition and career adaptability did not prove significant, and the direct path from work volition to decent work was not supported. These results are quite different from Douglass et al. (2017). The authors suggested that for the population under study, economic constraints perhaps figured more prominently than marginalization, and that the career adaptability measure was not as applicable for the sample of workers, the majority of whom had held their occupational position for several years. In regard to overall fit of the mode, in line with Douglass et al. (2017), the authors examined fit of the full model, and the model with only the mediators predicting decent work. Similar to the previous study, Tokar and Kaut (2018) found a significant decline in fit when only using the mediating variables ($\Delta\chi^2(2, N = 320) = 41.29$, $p < .001$) and retained the hypothesized full model which demonstrated good fit to the data ($\chi^2(352, N = 320) = 573.97$, $p < .001$, CFI = .96, SRMR = 0.063, and RMSEA = .044, 90% CI [.038, .051], $p = .921$. The model explained 60% of the variance in decent work, 38% of the variance in work volition, and 4 % of the variance in career adaptability.

Lastly, in a scale development study, Duffy, Gensmer et al. (2019) examined the predictor side of the model among a sample of 287 adults who identified as racial or ethnic minorities. The authors measured decent work and work volition using the same scales as the previous two studies. However, due to the continued lack of support for pathways found when using the CAAS, the authors used 9 items from the career adaptability subscale of the Career Futures Inventory (Rottinghaus, Day, & Borgen, 2005). For marginalization, the authors used the 3-item Lifetime Experience of Marginalization Scale (LEMS) developed for the study, and for economic constraints, the 5-item Economic Constraints Scale (ECS) also developed for the study. Duffy, Gensmer et al. (2019) found support for 7 of the 14 hypothesized paths which include: significant direct effects ($p < .05$) of Marginalization ($\beta = -0.24$), work volition ($\beta = 0.51$), and career adaptability ($\beta = 0.20$) on decent work. The authors reported an indirect effect of economic constraints on decent work through work volition ($B = -.18$, 95% CI [−0.26, −0.11]), and an indirect effect of work volition on decent work through career adaptability ($B = .10$, 95% CI [0.02, 0.17]). Lastly, the correlation between economic constraints and marginalization was found to be significant ($r = 0.39$, $p < .05$). Regarding the fit of the model, the authors reported a better fit when using a simplified five construct model compared to the model generated using a bifactor approach (AIC = 22,670.43 compared to AIC = 28,001.03). Fit indices of the full structural model were: χ^2 (286) = 301.89, $p < .001$; CFI = 0.96; SRMR = 0.05; and RMSEA = 0.06, $p < .001$. Because of the nature of this study, the authors first concluded that the newly developed scales for marginalization and economic constraints were more consistent with the constructs as conceptualized by the theory, and that they could be adapted for future studies examining different marginalized populations. The authors also remarked that, while

research related to the theory is still in its infancy, consistent nonsignificant findings for paths to career adaptability suggests that the model needs further clarification and perhaps revision.

In summary, the Psychology of Working perspective was developed out of a multi-cultural and feminist perspective which highlighted the lack of fit of current vocational theories and research to people endorsing marginalized identities. Central to this perspective was a social justice approach which underscored the various positive outcomes of decent work, and at the same time the disproportionate availability of decent work to marginalized individuals and communities. Over the past 20 years, this perspective has evolved into a fully empirically testable theory, and with this being the case, the body of research on the Psychology of Working Theory has grown substantially. Much of this research examines the propositions laid out in the foundational theoretical article (i.e., Duffy et al., 2016), and many studies employ path analysis or structural equation modeling to assess the degree to which the theoretical model can be used to explain outcomes such as decent work, and outcomes predicted to flow from decent work such as work fulfillment and well-being.

Exploring the Impact of Trauma via PWT: Rationale

Previous sections have focused on traumatic events and how it is important when investigating trauma sequelae to examine the variables of age, trauma type, frequency of trauma(s), and marginalization. Similarly, in the Psychology of Working Theory model, pre-work factors such as marginalization and economic constraints are proposed to both directly and indirectly effect (through work volition and career adaptability) the degree to which individuals report their work as decent. The similar nature of pre-work and pre-trauma factors is one link which suggests compatibility of a developmental approach to trauma (i.e., Pynoos et al., 1999) with the Psychology of Working Theory (Duffy et al., 2016). Another and perhaps stronger link,

however, appears when the proposed mediating variables of PWT (i.e., work volition and career adaptability) are more closely examined alongside mediating and outcome variables of trauma—specifically emotional dysregulation and locus of control.

Locus of control concerns the degree to which individuals believe events and circumstances in their life are within their control and influenced by them, or conversely outside of their control and determined by external factors (Rotter, 1954). Locus of control has been adapted to vocational and industrial/organization research, in which it is typically examined as work locus of control: an individual's beliefs regarding their degree of control in the work setting (Spector, 1988; Wang et al., 2010). This construct is similar to, yet different from work volition: whereas work locus of control focuses more generally on one's control in work settings, work volition refers to a person's capacity to make job decisions (Duffy et al., 2012). Nonetheless, the two are related constructs, and in the scale development study for the Work Volition Scale, Spector's (1988) Work Locus of Control Scale was used as a convergent measure to assess construct validity (Duffy et al., 2012). The two measures demonstrated a moderate correlation ($r = .43$, $p < .05$), suggesting that work volition is similar to yet also unique from work locus of control.

As highlighted in previous sections, in the Psychology of Working Theory, work volition is hypothesized to mediate the effects of the predictor variables on decent work, and in studies testing the full model this is examined by analyzing indirect effects. In comparison, within the literature on developmental trauma, locus of control has been examined both as an outcome of traumatic experiences (e.g., Moran & Eckenrode, 1992; Roazzi et al., 2016), and as a mediator of the effect of traumatic experiences on subsequent psychopathology (Bolger & Patterson, 2001)

In a prospective longitudinal study examining perception of control as a mediator for subsequent internalizing problems, Bolger and Patterson (2001) tracked 785 children over the course of 4 years (i.e., 3rd grad through 7th grade) collecting data from multiple sources including participant self-reports, and case reports from local social services departments, and statewide registries of substantiated child maltreatment cases. Through the use of such databases, the authors identified 59 children who met criteria for maltreatment, and from case reports categorized maltreatment type (e.g., neglect, sexual abuse, etc.) and rated them for severity using the Maltreatment Classification System (Barnett et al., 1993). The authors found child maltreatment was associated with more internalizing problems (neglect $r = .11$, $p < .01$; sexual abuse $r = .09$, $p < .05$; harsh parenting $r = .08$, $p < .05$). Child maltreatment type was found to have significant or near-significant direct effects on internalizing problems: sexual abuse ($B = 4.18$, $\beta = .07$, $p < .05$); neglect ($B = 3.20$, $\beta = .07$, $p < .06$, but not $p < .05$); and neglect X sexual abuse interaction ($B = 6.96$, $\beta = .06.$, $p < .05$). However, the authors also investigated perceived external control: the degree to which individuals perceive their situations and decisions as determined by influences outside of themselves. When the authors included in the model perceived external control as a mediator between maltreatment and internalizing problems, these direct effects were attenuated, and in some instances became nonsignificant (sexual abuse X neglect, $B = 2.50$, $\beta = .02$, $p < .50$; neglect, $B = 1.68$, $\beta = .04$, $p < .40$). The authors reported that for the 59 maltreated children, perceived external control mediated 23% of the variance in internalizing problems explained by neglect, and 21% of the variance accounted for by the sexual abuse X neglect interaction. Because of the nature of longitudinal designs, this study provides strong support for not only the effect of child maltreatment on locus of control, but also

for the role of locus of control as a partial mediator of the effect of child maltreatment on internalizing problems.

However, because the aim of the present study is to examine more distal outcomes of trauma in an adult population, while Bolger and Patterson's (2001) findings are insightful, it cannot be assumed that similar findings would be replicated in an adult sample. In a study on more distal outcomes of childhood trauma, Allen and Lauterbach (2007) analyzed the data of 4,351 adult respondents in the National Comorbidity Survey (Kessler, 2002). The sample was comprised of three groups: 1,372 participants who reported a single incident trauma; 417 who reported prolonged or repeated trauma exposure; and a control group of 2,562 participants reporting no childhood trauma experiences. Allen and Lauterbach examined within and between group differences on personality characteristics, which included locus of control, self-determination, self-responsibility, interpersonal dependency, extroversion, neuroticism, and openness. In contrast to Bolger and Patterson's (2001) findings, the authors did not find the groups to score significantly different on the measure of locus of control. However, the authors did find that, compared to participants reporting no childhood trauma, participants with prolonged or repeated trauma scored significantly higher on the measure of interpersonal dependency. The authors concluded that childhood trauma is related to personality traits present in adults, and that, compared to adults reporting no childhood traumatic experiences, adults reporting prolonged or repeated childhood trauma exposure may experience greater difficulty being independent or making decisions (Allen & Lauterbach, 2007). For the present study, this is a particularly relevant and interesting finding primarily because intrinsic to the construct of work volition is the ability to make decisions. In fact, Duffy et al. (2012) identified this ability to make decisions as a feature of work volition which distinguishes it as separate from work locus of

control. Thus, while the findings of Allen and Lauterbach (2007) do not lend support for the relation of childhood trauma to one aspect of work volition (i.e., locus of control), they do lend support for the relation of childhood trauma to a separate aspect of work volition (i.e., ability to make decisions).

As examined in a previous section, career adaptability refers to a "tendency affecting the way an individual views his or her capacity to plan and adjust to changing career plans and work responsibilities, especially in the face of unforeseen events" (Rottinghaus et al., 2005, p. 5). The construct of career adaptability is grounded in the career construction theoretical model of self-regulation as it relates to developmental and social tasks (Savickas & Porfeli, 2012). A similar yet domain general construct is emotional regulation which is conceptualized as "processes through which individuals modulate their emotions consciously and nonconsciously to appropriately respond to environmental demands" (Aldao et al., 2010, p. 218). Just as career adaptability is proposed by the Psychology of Working Theory to mediate the relationship between predictor variables and decent work, both developmental trauma theory (i.e., Toth and Briere, 2002; Cicchetti & Toth, 1995; Pynoos et al., 1999) and empirical studies suggest that emotion regulation mediates the outcomes of childhood trauma such as psychopathology (Jennisen et al., 2016), symptom complexity (Choi et al., 2014; Lilly et al., 2014), functional impairment (Cloitre et al., 2005), and peer relations (Kim & Cicchetti, 2010).

In a prospective longitudinal study, Kim & Cicchetti (2010) followed 215 maltreated and 206 non-maltreated children attending a summer camp over the course of a year to examine how maltreatment and deficits in emotion regulation at time 1 were predictive of internalizing and externalizing problems and peer relations a year later (time 2). The authors identified maltreated children through a county database, and coded for maltreatment type, severity, and onset using

Barnett et al.'s (1993) maltreatment classification system. Emotion regulation and internalizing and externalizing symptoms of participants were rated by camp counselors. Peer relations were determined using a peer nomination measure in which participants nominated other participants to best represent a particular description (e.g., cooperative, disruptive, liked least, and liked most). The authors hypothesized that maltreatment would directly effect behavioral problems at time 2, and indirectly effect behavioral problems at time 2 via emotion regulation and peer relationships as mediating variables. The authors examined three separate structural models to estimate direct and indirect effects of maltreatment by type, age of onset, and severity. Dummy variables were used in the separate models to compare maltreatment type (sexual abuse, physical abuse, neglect, emotional maltreatment, and non-maltreated); severity (1-2 different maltreatment subtypes, 3-4 maltreatment subtypes, and non-maltreated); and onset of maltreatment (early onset, late onset, non-maltreated). With the exception of the later onset maltreatment and emotional maltreatment subgroups, path coefficients for maltreatment to emotional regulation were negative and significant for all other subgroups at the $p < .05$ level with standardized regression coefficients ranging from $\beta = -.1$ to $\beta = -.24$. Across the three models, emotion regulation significantly predicted peer acceptance at time 2 ($\beta = .16 \sim .17$, $p < .05$). Emotion regulation was predictive of externalizing problems when examining subgroups by severity ($\beta = .09$, $p < .05$), and predictive of internalizing problems for participants who reported early onset of maltreatment ($\beta = .16$, $p < .05$). For subgroups in which emotion regulation did not significantly mediate the impact of maltreatment on outcomes, the authors found evidence instead for three and four-path mediation in which other indicators such as internalizing and externalizing problems at time 1 also functioned as mediators to produce significant indirect effects. This study is noteworthy as it suggests that the mediating role of emotion regulation

varies in significance and complexity depending upon features of child maltreatment. More generally, the study supports the proposition that emotion regulation can act as either a protective or risk factor for subsequent adjustment, and that emotion regulation can become compromised for individuals who have experienced childhood maltreatment.

In a study on emotion regulation with an adult sample (N = 701), Jennissen et al. (2016) examined the direct effect of childhood maltreatment on subsequent pathology, and the indirect effect on psychopathology via emotion dysregulation as a mediator. To measure emotion dysregulation, the authors used the Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004): a 36-item self-report measure with six subscales corresponding to six first order factors of the construct: (a) nonacceptance of emotional responses, (b) difficulty engaging in goal-directed behavior when distressed, (c) impulse control difficulties when distressed, (d) lack of awareness of emotions, (e) limited access to strategies for regulation, and (f) lack of emotional clarity. The scale includes items similar to those in career adaptability measures (e.g., Rottinghaus et al., 2005; Savickas & Porfeli, 2012), namely items which assess re-adjustment (e.g., "when I'm upset, it takes me a long time to feel better"), curiosity (". . . I take time to figure out what I'm feeling"), and control (". . . I have difficulty getting work done" and ". . . I can still get things done") (Gratz & Roemer, 2004).

To measure childhood maltreatment, the authors used the Childhood Trauma Questionnaire Short Form (CTQ-SF, Bernstein et al., 2003), a 28-item self-report instrument which assesses both the frequency and severity of trauma before 18 years using 5-point Likert-type scales. Additionally, to control for the effect of general negative affect on psychopathology, the authors also included a measure of this variable as a covariate in their structural model. Using structural equation modeling, the authors found significant direct effects of child maltreatment

on psychopathology (β = .28, $p < .05$) and emotion dysregulation (β = .27, $p < .05$), and a significant direct effect of emotion dysregulation on psychopathology (β = .52, $p < .05$). Specifying emotion dysregulation as a full mediator produced a model of acceptable fit, $\chi^2(181, N=701) = 1068.48$, $p < .05$, CFI = .94, SRMR = .06, RMSEA [90% CI] = .08 [.08-.09]. However, a model with emotion dysregulation as a partial mediator produced a significantly better fitting model, $\Delta\chi^2(1, N=701) = 110.57$, $p < .05$, which was more representative of the sample, $\chi^2(180, N=701) = 955.91$, $p < .05$, CFI = .95, SRMR = .05, RMSEA [90% CI] = .08 [.07-.08]. Although inferences of causality cannot be made because of the cross-sectional nature of this study, these findings provide support for the impact of childhood maltreatment on psychopathology in adulthood both directly and indirectly via emotion dysregulation. Although work was not the focus of this study, the scale used to measure emotion dysregulation included items related to work, and the ability to adapt to tasks at hand in one's environment—both central to the construct of career adaptability. Furthermore, because the sample was heterogenous, non-clinical, and drawn from the community, these results may be generalizable to the adult population, and replicated in subsequent studies with non-clinical samples. For these reasons, it is worth examining in a separate adult sample how childhood maltreatment and emotion regulation impact outcomes other than psychopathology—namely work.

In summary, childhood trauma has been found to have direct negative effects on locus of control and a person's capacity for emotional regulation, both of which in turn mediate the impact of trauma on subsequent adjustment as indicated by internalizing problems (Bolger & Patterson, 2007), peer rejection (Kim & Cicchetti, 2010), and psychopathology (Jennissen et al., 2016). With the exception of a few studies (to be reviewed in the subsequent section) the impact of childhood trauma on vocational constructs has received little attention. Given the shared

features between locus of control and work volition, and between emotion regulation and career adaptability, there is theoretical and empirically supported rationale to suppose that these vocation specific constructs will be impacted by childhood trauma. Furthermore, similar to the specification of emotion regulation and locus of control as mediating variables in trauma outcome, the Psychology of Working structural model specifies career adaptability and work volition as mediating variables. For these reasons, an aim of the present study is to explore the impact of childhood trauma on work volition and career adaptability and test the hypothesis that childhood trauma indirectly effects decent work through these mediating variables.

Trauma and Work

Compared to research on trauma and vocation, the existing research base examining the two in conjunction is quite small. This section will provide an overview of studies whose focus was trauma and work.

Several studies have focused on interpersonal violence as it relates to unemployment (Kimerling et al., 2009), career development (Albaugh & Nauta, 2005; Brown et al., 2000), ethnic differences in career development among victims of interpersonal violence (Chronister & McWhirter, 2004), and career counseling (Gianoakos, 1999). The samples in these studies were comprised of all women, some of whom were employed. Brown et al. (2000) investigated the career decision-making self-efficacy among 71 women residing at domestic violence shelters and found that women in the sample who were unemployed scored significantly lower on the measure for career decision-making self-efficacy. Furthermore, the authors found the greatest reported career barriers to be racial discrimination, inadequate preparation, dissatisfaction with career (Brown et al., 2000). This finding suggests that the impact trauma history on career is a product of a more complex interaction of trauma with contextual factors. Chronister &

McWhirter (2004) examined the interaction of ethnicity on trauma and subsequent career development among 74 battered women, 31 of whom identified as racial or ethnic minorities. The authors did not find that racial and ethnic minority status accounted for differences in perceived ability to overcome barriers, anticipate future support needs, or career-related self-efficacy and outcome expectations. However, the authors found that for racial and ethnic minority women, socioeconomic status significantly related to abuse history and perceptions of future barriers. Albaugh and Nauta (2005) examined the relation of intimate partner violence to career self-efficacy among 129 female college students. The authors found that psychological aggression to be the most common form of relation abuse (52% of the sample), and found that, even after controlling for depression, sexual coercion was negatively associated with career-decision self-efficacy (Albaugh & Nauta, 2005). These studies indeed highlight the negative effects of intimate partner violence and more importantly reveal a more complex picture of how abuse history of this nature interacts with contextual variables. Despite this, the majority of the studies examined abuse only within the past year, and no study assessed lifetime experience of abuse or trauma.

Other studies have examined the relation of trauma to employment outcomes (Kunst, 2011; Lee & Tolman, 2006; Liu et al., 2013; Smith et al., 2005) and occupational functioning (Matthews et al., 2009; Matthews, 2005). Taken as a whole, research examining the relationship of trauma to employment suggests that trauma history negatively impacts likelihood of employment. Kunst (2011) examined the relationship of PTSD and level of worker's compensation to employment status among 226 victims of violence. Kunst (2011) found that both PTSD diagnosis and symptom severity increased the likelihood of unemployment, even after controlling for level of worker's compensation. In a longitudinal study of 632 single

mothers, Lee and Tollman (2006) found that over a 33-month period, participants who reported a history of childhood sexual abuse (36.1%) reported on average 1 fewer month of employment compared to the rest of the sample. Lee and Tollman (2006) found that childhood sexual abuse functioned primarily through indirect effects on employment through mental health barriers (r = .262) and physical health barriers (r = .095). Liu et al. (2013) examined the relationship of adverse childhood experiences (ACE) on employment among 17,489 adults ages 18-64. They found approximately two thirds of respondents to endorse at least one ACE, and that history of any ACEs significantly increased the likelihood of unemployment. However, the authors noted that this relationship was largely mediated by educational attainment, marital status, and social support. Insofar as occupational functioning, Matthews (2005) found that that among 41 survivors of motor vehicle accidents, those with a PTSD diagnosis (n = 12) scored significantly lower on a measure of work potential and functioning. Matthews et al. (2009) found that among 69 patients admitted to a hospital for accidental injury, those with a PTSD diagnosis (n = 13) reported more negative appraisals of self and the world and poorer work outcomes. Taken as a whole, these suggest a significant negative impact of trauma on employment, work functioning, and variables hypothesized as important to work (e.g., mental health and physical health).

The issue of trauma as it relates to choice of vocation is complex, and in this regard qualitative studies may prove illuminating. In one such study, Arndt & Davis (2011) used an extended case method to examine among 12 American Indian non-Tribal law officers the role that vocation played as an adaptive form of coping with historical trauma, or *Soul Wound* (Duran & Duran, 1995). *Soul wound* refers to the "individual and collective injury inflicted upon American Indians as a result of colonization and oppression that manifests multi-, intra-, and intergenerationally" (Arndt & Davis, 2011, p. 528). This accumulation of unresolved historical

grief can manifest in PTSD symptoms such as intrusive images, anxiety, guilt, and withdrawal. Historical trauma is not a new concept; the intergenerational transmission has been examined in children and grandchildren of Holocaust survivors. Yehuda et al. (2012) found that offspring of Holocaust survivors with PTSD, were more likely to experience PTSD themselves as adults, compared to offspring of Holocaust survivors without PTSD. Unlike other studies which approach and examine trauma as an impediments to career development, Arndt & Davis (2011) found that for their sample of American Indian law officers, work offered a means through which to heal from and cope with historical trauma. Specifically, participants expressed that their chosen vocation of law enforcement provided them a position through which they could engage with others and their communities in a matter consistent with the American Indian warrior role. Interestingly, however, the participants stressed that less-martial warrior qualities (ministering, mentoring, and serving as role models) were more important in healing both individually and collectively (Arndt & Davis, 2011).

Lastly other studies have examined the impact of trauma on career development (Coursol et al., 2001; Prescod & Zeligman, 2018; Strauser et al., 2006). Coursol et al. (2001) examined career maturity and counseling expectations among people seeking employment at a social service agency. The sample consisted of 48 participants with trauma histories and 48 with no trauma history. The authors found that while trauma history was positively related to openness to counseling, it did not impact career maturity. One shortcoming of this study was that the authors did not use any instrument to determine inclusion into the trauma vs no trauma group, rather participants were included in the trauma history group if they sought unspecified additional services at the agency. As such, it is questionable whether these findings do indeed reflect group differences. Given that these findings contrast with previous research on trauma and variables

thought to aid in career development (e.g., career decision making self-efficacy, mental health), this concern seems warranted. Prescod and Zeligman (2018) examined PTSD symptom severity as it relates to posttraumatic growth and career adaptability among 215 college students. The authors found a positive weak relationship of trauma to career adaptability (r = .14) and found that career adaptability was better explained by including posttraumatic growth as a moderator. Because the authors examined career adaptability using the CAAS, the results of this study can be used to inform predictions in the present study. One shortcoming of the study however was that when conducting the hierarchical regression analysis, the authors included both trauma and posttraumatic growth in the same step. This obscures interpretation of any added variance in career adaptability when including trauma in the regression analysis. Lastly Strauser et al. (2006) examined the relationship of post-trauma symptom severity with vocational identity, career thoughts, and work personality among 131 college students. This study is particularly noteworthy because it included a scale of work personality, the Developmental Work Personality Scale (Strauser & Keim, 2002), a 27-item self-report designed to measure the extent to which an individual has successfully completed developmental tasks, which are critical in shaping the development of a healthy work personality. well as a well-established measure trauma measure—the Los Angeles Symptom Checklist (King et al., 1995). The authors reported significant and large correlations between PTSD and work personality (r = -.47), vocational identity (r = -.40), and career thoughts (r = .45) which was comprised of decision making confusion (r = .41), commitment anxiety (r = .42), and external conflict (r = .41). These findings strongly support the negative impact of trauma on career development and more importantly suggest trauma strongly and negatively impacts more subjective psychological mechanisms (e.g., cognitions, beliefs, affect) thought to play key roles in career development.

The Present Study

Building upon theory and research in both the areas of vocation and trauma, the present study seeks to expand the scant literature base on the relation of trauma to work by examining the relationship of lifetime trauma to decent work. Specifically, the present study intends to use the Psychology of Working Theoretical model to examine the suspected negative impact of childhood trauma on decent work. Since its inception, a primary aspiration central to the Psychology of Working was the extension of vocational research into other specialized domains of psychology (Blustein, 2006). The present study seeks to do just that and bridge the exploration of career development into the research fields of trauma and human development. While the present study is primarily exploratory in nature, several hypotheses can be made based on theory and research of trauma and development. The central hypothesis of the present study is that childhood trauma has a direct negative effect on the extent to which a person reports having decent work. The second hypothesis of the present study is that traumatic childhood experiences have a negative indirect effect on decent work through career adaptability and work volition. Lastly, the third hypothesis of the present study is that including traumatic childhood experiences as a predictor variable in the Psychology of Working Model will significantly add to the amount of variance explained in decent work, and will also produce a model of good fit. Specific details of the analyses, sample, and instruments are provided in the following chapter.

Chapter 3 – Methods

In this section I will first restate the three hypotheses of the present study and also specify the paths and correlations to be included in analysis. Following, I will describe how participants for the study were recruited and outline the inclusion and exclusion criteria for eligibility. I will then provide an overview of the scales used to measure the constructs of interest, and in so doing include information as to item questions and responses, and the psychometrics of the instrument. Lastly, in the analysis section, I will outline the analyses performed which allow examination of the three hypotheses of my study.

Hypotheses of the Present Study

Hypothesis 1 – Traumatic childhood events will have a direct negative effect on decent work scores.

Hypothesis 2 – Traumatic childhood events will have indirect negative effects on decent work through career adaptability and work volition.

Hypothesis 3 – Including traumatic childhood events in the model will significantly add to the amount of variance explained in decent work. Statistically, including traumatic childhood experiences in the model will increase R_{smc}^2, and the change in variance explained (ΔR^2) will be significant.

PWT Hypotheses

Consistent with other studies examining the predictor side of the Psychology of Working Model, the 14 hypothesized pathways of the model were analyzed to see whether they are supported in the present sample. These specific pathways are reprinted below in Table 1 using model diagram symbols to help clarify relationship and directionality between variables. Figures

of the path model, measurement model, and structural regression model are presented in Appendix A. The 14 pathways as hypothesized by the PWT model include 2 correlations, 8 direct effects, and 4 indirect effects.

Including traumatic childhood experiences into the model added six additional parameters, and seven paths which were examined: two correlations; three direct effects; and two indirect effects. These pathways are reprinted below in the righthand column in Table 1.

Table 1

Paths to be Examined in Present Study

Hypothesized Paths of PWT Structural Model	Additional Paths of Present Study
1. Economic constraints ↔ Marginalization	1. Childhood Trauma ↔ Marginalization
2. Economic constraints → Decent Work	2. Childhood Trauma ↔ Economic Constraints
3. Marginalization → Decent Work	3. Childhood Trauma → Decent Work
4. Work Volition ↔ Career Adaptability	4. Childhood Trauma → Work Volition
5. Economic constraint → Work Volition	5. Childhood Trauma → Career Adaptability
6. Economic constraints → Career Adaptability	6. Childhood Trauma → Work Volition → Decent Work
7. Marginalization → Work Volition	7. Childhood Trauma → Career Adaptability → Decent Work
8. Marginalization → Career Adaptability	
9. Work Volition → Decent Work	
10. Career adaptability → Decent Work	
11. Economic constraints → Work Volition → Decent Work	
12. Marginalization → Work Volition → Decent Work	
13. Economic constraints → Career Adaptability → Decent Work	
14. Marginalization → Career Adaptability → Decent Work	

Procedure and Participants

The study was approved through the University of Wisconsin-Milwaukee institutional review board. The study was conducted according to ethical guidelines outlined by the university institution review board, the dissertation committee, and the American Psychological Association. Participants were recruited through the Prolific online research platform services. This method of recruiting is consistent with past studies examining PWT variables and specifically model fit (e.g., Autin et al., 2019; Duffy, Gensmer et al., 2019). Furthermore as it relates to trauma, online self-report measures assessing PTSD and traumatic experiences have been found to have similar psychometric properties to traditional paper and pencil forms (Fortson et al., 2006). Compared to more in-depth diagnostic interviews common to trauma research, computer-based assessment has been found to produce similar response rates and criterion validity (Wolford et al., 2008). While conducting online surveys via online platforms has been found to yield valid data sets (Buhrmester et al., 2011; Crump et al., 2013), different online platforms have been found to yield data sets of varying quality (Peer et al., 2021). Compared to other platforms, Prolific uses more stringent identity validation measures to ensure members are who they say they are, and the platform requires that participants are paid a livable wage for their time completing surveys. Likely for these reasons, Prolific has been found to yield higher quality data sets compared to other platforms (Peer et al., 2021).

The online study was launched on Prolific's platform under the following title: "The Role of Childhood Trauma History in Relation to Decent Work." This title was chosen so that it would be clear to participants the nature and subject matter of the study (i.e., childhood traumatic experience) so that potential participants could self-select for inclusion. The informed consent provided greater detail about the study (e.g., nature, risks, benefits, and compensation), and made

clear three inclusion criteria: participants need be over 18 years old, able to read and write in English, and be currently employed. Participants responded to three separate questions corresponding to these inclusion criteria, and then indicated whether they agreed to provide consent. Participants who provided responses indicating they were not presently employed or over 18 were routed to the end of the study.

The prerequisite that an individual need be employed to complete the Decent Work Scale (DWS; Duffy et al., 2017) is one limitation of the measure, and thus of any study using the scale to investigate decent work (including the present study). This limitation is especially challenging given the increase in unemployment during the COVID-19 pandemic. It is unclear how the current rate of unemployment may potentially result in a restricted sample in the present study or any study on work carried out during this time. Furthermore, as it concerns people who have maintained employment throughout the pandemic, it is unclear the extent to which any measure of decent work or similar constructs (e.g., work satisfaction) will be representative and valid. In other words, it is quite possible that scores on the DWS might not reflect the latent variable decent work, but rather an individual's experiences throughout the COVID-19 pandemic.

These two concerns pose a significant historical confound to the present study. Regarding the former, because there is not yet a measure of decent work with items pertaining to something other than current employment, this is a limitation which must be simply accepted and acknowledged by any researcher(s) investigating the Psychology of Working structural model. Regarding the latter concern, a potential solution to at least test the impact of the pandemic would be to conduct group invariance analyses between individuals who report that their work has been negatively and significantly impacted by the COVID-19 pandemic and individuals who report no negative impact of COVID-19 on their work. In this way, the effect of COVID-19 as a

moderator can be examined within the structural model. This approach to controlling for COVID-19 was implemented in the study by presenting all participants the standalone item: "To what extent is your current work life negatively affected by the COVID-19 pandemic?" Participants were able to respond on a 4-point Likert-type scale containing the following responses: 1 – *not at* all, 2 – *slightly*, 3 – *somewhat,* and 4 – *a lot*. Differences were examined statistically to determine whether there were differences between groups, and if so the magnitude of the differences. More details on this analysis can be found in the "Analysis" section.

Sample Size

There are various suggested practices for determining sample size in SEM, and generally no single agreed upon approach (Quintana & Maxwell, 1999; Weston & Gore, 2006; Wolf et al., 2015). A common rule of thumb to determine adequate sample size for path analysis and structural equation modeling is known as the *N*:q which suggests that sample sizes can be determined by multiplying the number of parameters by 20 (Jackson, 2003). Examining the constructs as manifest variables (which is the approach in path analysis), the proposed structural model (see appendix A) contains 18 parameters to be estimated which, using the 20:1 ratio, would require 360 participants. Examining the constructs as latent variables (which is the approach in structural equation modeling) the proposed structural regression model contains 65 parameters, which would require 1,300 participants to achieve statistical power. This is a large sample size requirement; the majority of PWT model testing studies, even with fewer parameters, rarely achieve this 20:1 ratio. Through a series of Monte Carlo simulations, Wolf et al. (2013) determined that many of these rules of thumb were outdated, and suggested that depending on the complexity of a model, a satisfactory sample size may range anywhere from 30 to 460 cases. The determination of sample size involves consideration of several elements (e.g.,

number of factors, number of indicators, factor loadings, and missing data). However, Wolf et al. (2013) reported satisfactory power (1- β = .81) of a large model with 24 indicators, 51 parameters, and factor loadings of .50 with a sample size of only 160. These findings do not support the *N*:*q* rule of thumb, and suggest that a much smaller sample size is necessary for the present study. The majority of PWT studies examining the models typically include about 200-500 participants. In consideration of these points, and the fact that two separate groups will be compared, the aspirational sample size for the present study was 650 participants, which should be sufficient for a structural regression model. Indeed, the online SEM power analysis calculator on Webpower (Zhang & Yuan, 2018) which uses the Satorra and Saris (1985) method of analyzing statistical power via Chi-squared test, estimates that with 650 participants and 260 *df* the model achieves a power level of .8262, whereby a statistically significant ($\alpha = .05$) effect size of $d = .1$ would be detected.

Sample.

A total of 659 Prolific users opened and began the study. Eight participants were routed to the end of the study because they failed a validity check (i.e., they indicated in a standalone question that they were currently unemployed). Two participants indicated they would not give their consent to the study, and they were also routed to the end of the study. Lastly, six participants failed attention checks: two failed a simple attention check where they were instructed to respond in a specific way; and four failed a nonsensical item attention check. Thus, the final sample comprised 643 participants, of whom 373 (58%) identified as female, 258 (40.1%) as male, 4 (0.6%) as transgender, and 8 (1.2%) as 'other.' The average age of the sample was 34.32 (SD=10.44), and 455 (70.8%) were employed full-time and 188 (29.2%) part-time. In descending order, the breakdown of race was as follows: 496 (77%) participants identified as

white, 50 (7.8%) identified more than one race, 34 (5.3%) Asian American, 30 (4.7%) Latino/a/x, 38 (4.4%) Black or African American, 3 (.5%) identified as American Indian/Alaskan Native, and 3 participants (.5%) selected 'other.' Fifty-nine (9.2%) participants identified as Hispanic and 584 (90.8%) as Non-Hispanic. Per sexual orientation, 498 (77.4%) identified as heterosexual, 92 (14.3%) bisexual, 37 (5.8%) gay or lesbian, and 16 (2.5%) as other. Insofar as highest completed level of education, 253 (39.3%) participants reported completing a 4-year degree, 140 (21.8%) reported some college but no degree, 97 (15.1%) reported earning a Master's degree, 69 (10.7%) a 2 year degree, 56 (8.7%) a high school degree, 26 (4%) a doctorate or professional degree, and 2 (.3%) reported less than a high school degree. Insofar as socioeconomic status, 323 (50.2%) of participants identified as middle class, 249 (38.7%) working class, 50 (7.8%) poor, and 19 (3%) as affluent. Lastly, regarding the negative impact of COVID-19, 486 (75.6%) of participants reported no or slight negative impact on their work life, and 157 (24.4%) reported moderate or significant negative impact on their work life.

Instruments

Psychology of Working Theory Measures

Economic Constraints.

Economic constraints was measured by the 5-item Economic Constraints Scale (ECS, Duffy, Gensmer et al., 2019). This measure is designed to assess economic constraints across an individual's entire life. In this way it is different from other measures of financial strain or economic well-being which focus primarily on economic constraints/resources at the present

time. Participants provided responses to items on seven-point Likert type scale ranging from 1 = *strongly disagree* to 7 = *strongly agree*.

Example items include: The six items were as follows: “Throughout most of my life I have struggled financially”, “For as long as I can remember I have had difficulties making ends meet”, and “I have considered myself poor or very close to poor for most of my life.” The ECS has been found to have convergent validity with validated measures of similar construct including financial deprivation (r = .74) and povery wage employment (r = .74). Duffy, Gensmer et al. (2019) reported estimated internal consistency of the instrument to be $\alpha = 0.95$. For the present study, internal consistency of the instrument was $\alpha = 0.965$. A copy of this instrument is provided in Appendix B.

Marginalization.

Marginalization was measured by the 3-item Lifetime Experiences of Marginalization Scale (LEMS, Duffy, Gensmer et al., 2019). This measure asks participants to describe their feelings of marginalization as it applies to an endorsed marginalized identity. In the present study, the original prompt used in the measure development study was modified to the following:

> “We are interested in the degree to which you consider yourself to be marginalized in the United States. By marginalized, we mean being in a less powerful position in society, being socially excluded, and/or 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. Whether or not you believe this applies to you, with this definition in mind, please provide a brief description

of respond to the following items below considering the experiences you have had throughout your entire life.

After being given the prompt, participants responded to each item on a seven-point Likert type scale ranging from 1 = *strongly disagree* to 7 = *strongly agree*. The three items were as follows: “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”, and “I have felt marginalized within various community settings for as long as I can remember.” The LEMS has been found to have convergent validity with validated measures of similar construct including discrimination (r = .67) and discrimination experiences (r = .63). Duffy, Gensmer et al. (2019) reported estimated internal consistency of the instrument to be $\alpha = 0.94$. For the present study, internal consistency of the instrument was $\alpha = 0.968$. A copy of this instrument is provided in Appendix B.

Work Volition.

The degree to which participants perceive choice in their career decision making was measured by the volition subscale of the Work Volition Scale (WVS, Duffy et al., 2012). The entire WVS scale consists of 13 items and three subscales: Volition (four items), Financial Constraints (five items), and Structural Constraints (four items). Example items from the volition subscale include “I feel able to change jobs if I want to,” and “I can do the kind of work I want despite external barriers.” Participants responded to items on a seven-point Likert type scale ranging from 1 = *strongly disagree* to 7 = *strongly agree*. In the instrument development study with a sample of employed adults, Duffy et al. (2012) found total scale scores to demonstrate good internal consistency reliability and correlate in expected directions with related constructs including: core self-evaluations, work locus of control, career barriers, and job satisfaction. Other

studies by Douglass et al. (2017) and Kozan et al. (2019) have used only the volition subscale to explore relations with other PWT constructs, and reported internal consistencies to be α = .76 (Kozan et al., 2019) and α = .85 (Douglass et al., 2017). A study which used the same five measures of PWT constructs that will be used in the present study (i.e., Duffy, Gensmer et al., 2019), estimated internal consistency for the volition subscale was found to be α = .83. For the present study, internal consistency of the instrument was $\alpha = 0.913$. A copy of this instrument is provided in Appendix B.

Career Adaptability.

The degree to which participants feel adaptable in their career was measured by the career adaptability subscale of the Career Futures Inventory (Rottinghaus et al., 2005). Selection of this scale is consistent with a recent measure in a development study (Duffy, Gensmer et al., 2019) wherein the authors used this in place of the CAAS (Savickas & Porfeli, 2012). The original scale comprised 11 items, examples of which include: "I am good at adapting to new work setting" and "I can adapt to change in my career plans." Participants responded to these items using a seven-point Likert-type scale ranging from 1 = *strongly disagree* to 7 = *strongly agree*.. The subscales have demonstrated strong internal consistency reliability and have been found to correlate in the expected directions with career confidence, problem solving confidence, and dispositional optimism (Rottinghaus et al., 2005). Because two of the items are reverse coded and loaded poorly in the instrument development study, consistent with Duffy, Gensmer et al. (2019), the present study only included 9 of the 11 items. The items left out of the scale included: 'I am rarely in control of my career success" and "I am not in control of my career success." Using only these 9 items, Duffy, Gensmer et al. (2019) estimated internal consistency of scale scores to be α = 0.90. Additionally, to use this 9-item scale in a structural model,

Duffy, Gensmer et al. (2019) conducted an exploratory factor analysis to create three parcels containing 3 items each. The estimated internal consistency of scale scores for each of the three parcels was as follows: parcel 1 (α = 0.73), parcel 2 (α = 0.74), and parcel 3 (α = 0.77). For the present study, internal consistency of the instrument was $\alpha = 0.926$. A copy of this instrument is provided in Appendix B.

Decent Work.

The degree to which participants were able to secure decent work was measured by the Decent Work Scale (DWS; Duffy et al., 2017). The DWS is a 15-item scale with five 3-item factors/subscales which correspond to the 5 components of decent work. The five subscales along with their estimated internal reliability are as follows: Safe Working Conditions (α = .79); Access to Health care (α = .97), Adequate Compensation (α = .87), Free Time and Rest (α = .87), and Complementary Values (α = .95). Participants selected responses to items using a seven point Likert type scale which ranges from 1 = *strongly disagree* to 7 = *strongly agree*. Example items from the scale include: "my employer provides acceptable options for healthcare"; "I feel emotionally safe interacting with people at work"; "I am not properly paid for my work" (reverse scored); "I have free time during the work week"; and "the values of my organixation match the values within my community." Duffy, Allan, et al. (2017) found the subscales to have good convergent validity with existing subscales of related constructs, yet also found the scales to be unique constructs distinct from existing measures. The estimated internal consistency of the scale score was found to be α = .89 (Duffy, Allan, et al., 2017). For the present study, internal consistency of the instrument was $\alpha = 0.897$. A copy of this instrument is provided in Appendix B.

Trauma Measure

Traumatic Experiences.

Traumatic experiences were assessed using the Childhood Trauma Questionnaire Short form (CTQ-SF; Bernstein et al., 2003). The CTQ-SF is a 28-item self-report measure which assesses both the frequency and severity of trauma before 18 years of age. The CTQ-SF contains five subscales each developed to measure different types of childhood abuse or neglect: sexual abuse (SA), physical abuse (PA), emotional abuse (EA), physical neglect (PN) and emotional neglect (EN). Each subscale has five statements of its own, and separate from the subscales three additional validity items are included to detect respondents' tendency to minimize abuse (Minimal/Denial subscale). Respondents indicated whether they have experienced different acts of abuse and/or neglect in childhood. Response options for this measure are on a 5-point Likert-type scale: 1 - *never true,* 2 - *rarely true,* 3 - *sometimes true,* 4 - *often true,* 5 - *very often true*. Total scores range from 25–125. Lowest cutoff scores were established to detect a maximum number of low-severity abuse cases (at least 80% of cases reported in the criterion interview), while keeping the rate of false positives at less than 20%. American cutoffs for low severity abuse were emotional neglect: ≥ 10; emotional abuse: ≥ 9; sexual abuse: ≥6; physical abuse: ≥ 8; and physical neglect: ≥8 (Bernstein & Fink, 1998). Internal consistency for the subscales ranged from .80 to .97 in the original sample and scores significantly predicted analogous observational scores by therapists of adolescents (Bernstein et al., 2003). The five-factor model of CTQ-SF provided a good fit for and was found to be invariant across all four groups in the measurement development study: adult substance abusing patients in New York City, adolescent psychiatric inpatients, adult substance abusers in the Southwest, and normative community sample members. (Bernstein et al, 2003). Additionally, the measure has been used in

international studies: a Korean translation of the instrument have been found to demonstrate high test–retest reliability (Spearman ρ=0.75) and internal consistency (Cronbach α=0.89) in a Korean sample (Kim et al., 2013); and in an adult sample from the Netherlands, the five-factor structure was found to be invariant across disordered—control comparison groups (Spinhoven et al., 2014).

While the items on the 3-item validity scale were included in the survey, they were excluded from analysis. Although these items were included in the original scale as a way to detect underreporting, there has been no publications to date attesting their utility or outlining their interpretation. Furthermore, other studies which use the scale (e.g., Bernstein et al., 1994; Bernstein et al., 2003; and Spinhoven et al., 2014) exclude the 3-item validity scale from analysis. For the present study, internal consistency for the full scale was $\alpha = 0.947$, and for the subscales was as follows: emotional abuse $\alpha = 0.905$; physical abuse $\alpha = 0.868$; sexual abuse $\alpha = 0.958$; emotional neglect $\alpha = 0.936$; and physical neglect $\alpha = 0.803$. A copy of this instrument is provided in Appendix B.

Chapter 4 - Results

Preliminary Analyses

A total of 649 participants provided basic demographic information and completed measures on the variables of interest. However, six cases were removed for failing attention check items, thus leaving the final sample size as 643 participants. An initial review of the data set, and specifically the items to be included in the structural model, revealed 39 missing item responses. Given that this missing data represents less than 5% of the entire data set (39 missing item responses/41,795 possible item responses), the impact of these missing item responses is inconsequential (Schafer, 1999). Further analysis on missingness was not carried out and missing values were coded so that they would be treated as missing in later analyses.

To examine univariate and multivariate normality, the data set was uploaded to the Kurtosis and Skewness online tool on WebPower (Zhang & Yuan, 2018). Mardia's test of multivariate skewness was significant (b = 890.844, z = 90569.1359, p = 0), as was the test for multivariate kurtosis (b = 5 253.695, z = 118.9154. p = 0), both indicating the data was not normally distributed at the multivariate level. A recommended approach for data sets which do not meet these criteria for normality is to use robust estimation in subsequent analyses (Cain et al., 2017). The maximum likelihood robust (MLR) estimation in Mplus (Muthén & Muthén, 2017) uses sandwich-type standard errors and rescaled test statistics to effectively address concerns presented by non-normal data sets.

Since the aspirational sample size of N = 650 was not achieved, a power analysis was again run using the SEM power analysis calculator on WebPower (Zhang & Yuan, 2018). A sample size of 643 produced an adequate power level of .82 capable of detecting an effect size of d = .1 at an alpha level of .05.

Parceling

To reduce the complexity of the model so that the proposed analyses could be carried out with the achieved sample size, the means of subscales (first-order factors) were calculated and used as item-level scores. Following the same approach used by Duffy et al. (2019), for the Decent Work Scale, the three items corresponding to one of the five subscales were averaged to produce a mean score for the subscale. These subscale scores were then used as observed indicators loading onto the latent Decent Work construct. For the Childhood Trauma Questionnaire, the five items corresponding to one of the five subscales were averaged to produce a mean score for the subscale. The three items comprising the validity scale in the CTQ were excluded from analysis. While these items were included in the original scale as a proposed way to detect invalid responses, there has been no publications to date attesting their utility or outlining their interpretation. Furthermore, other studies which use the scale (e.g., Bernstein et al., 1994; Bernstein et al., 2003; and Spinhoven et al., 2014) exclude the three-item validity scale from analysis.

To reduce the Career Futures Inventory to fewer items, three parcel indicators were creating using following the recommendations outlined by Weston and Gore (2006) and applied by Velez and Moradi (2012). Specifically, the 9 items of the scale were subjected to an exploratory factor analysis using geomin rotation in Mplus. The factor loadings and their significance level were examined across a three-factor structure. Items were then rank ordered according to the magnitude of their factor loadings on the three scales, and then assigned to one of the three parcels in countervailing order. Doing this helps to maximize the equality of average factor loadings across the parcels. The 3 item subscales for each of the parcels all demonstrated

good internal consistency scores (CFI_P1 α = .892; CFI_P2 α = .819; CFI_P3 α = .811), and the means of these parcels were then calculated to produce scores of the three observed variables.

Using subscale means as observed variables and creating three parcels for the Career Futures Inventory effectively simplified the model, reducing the number of free parameters from 208 to 90, and the degrees of freedom from 1744 to 260.

Table 2

Descriptive Statistics and Latent Correlations of Study Variables

Measure	1	2	3	4	5	6	*M*	*SD*
1. Economic Constraints	—						3.63	2.03
2. Marginalization	.518**	—					3.34	1.81
3. Childhood Trauma	.55**	.52**	—				1.87	0.74
4. Career Adapability	-.169**	-.127**	-.249**	—			5.32	1.02
5. Work Volition	-.411**	-.351**	-.362**	.544**	—		4.66	1.48
6. Decent Work	-.435**	-.413**	-.493**	.399**	.652**	—	4.70	1.17

Note. **. Correlation is significant at the $p < 0.01$ level (2-tailed).

** $p < 0.01$ level (2-tailed).

Model Testing

As detailed in preceding chapters, models were evaluated using the following fit indices: chi-square (χ^2), root-mean-square error of approximation (RMSEA), the standardized root-mean-square residual (SRMR), and comparative fit index (CFI). Given that the present sample is greater than n = 500, the following thresholds for adequate fit are as follows: CFI ≥ .95, RMSEA ≤ .06, and SRMR ≤ .08 (Weston & Gore, 2006). While chi-square (χ^2) and the difference in this value across models will be reported, because the sample is greater than n = 500, significant and non-significant chi-square tests will not be examined as indices of absolute fit. Larger samples result in increased power and this often leads to significant findings even with small effects

(Weston & Gore, 2006). For this reason, while it remains standard practice to report chi-square and difference tests, studies with large samples often do not use these indices to form conclusions of model fit.

Measurement Model

Using Mplus (Version 8.8, Muthén & Muthén, 2017), the measurement model was first constructed for the entire sample (N = 643) to examine correlations among the observed and latent variables and to examine goodness of fit. This measurement model was χ^2 (260) = 783.324 (Scaling correction factor for MLR= 1.1617), $p < .001$, CFI = .951, TLI = .943, SRMR = .054, and RMSEA = .056, 90% CI [0.051, 0.06], $p < .05$ and all indicators loaded significantly onto their respective factors at standardized values of .449 to .975.

Invariance Testing

To determine if the model was invariant with regard to COVID-19 impact, measurement invariance testing was conducted across those who reported high negative impact of COVID-19 on work life to those who reported low negative impact. To create these two groups, responses to the 4-point Likert-type COVID item were examined. Because this is a forced choice item, participants responding this ≤ 2 (i.e., 1 – *not at* all and 2 – *slightly*) were included in the Low negative impact group, and participants responding >2 (3 – *somewhat* and 4 – *a lot*) were included in the High negative impact group. Splitting the sample in such a way resulted in a Low negative impact of COVD-19 group of n = 486 and a High negative impact group of n = 157.

Model parameters were then successively constrained across groups in configural, metric, and scalar models. These models provide a means for testing group invariance, with each respectively, using an increasingly rigorous set of criteria for invariance. In the configural model,

the model structure is held constant across groups. Poor fit suggests the organization of indicator variables is different between groups. In metric models, the structure and the configuration of all variables and factor loadings are constrained to be the same for both groups. A reduction in fit between the metric and configural models suggests that factor loadings vary in size between the two groups. Last, in scalar models, the model structure (configural), variable and factor loadings (metric), and indicator intercepts are constrained to be the same for both groups. A reduction in fit between the scalar and metric models suggests that indicators have different intercepts in both groups (Little, 1997).

A chi-square difference test can be used to determine reduction in fit between models. A nonsignificant p-value (i.e., $p > .05$) would indicate the models do not significantly differ and that the more parsimonious model would be preferred. However, changes in chi-square are sensitive to sample size, and an alternative approach is to observe the change in CFI between the models to determine if change in fit is practically significant (Cheung & Rensvold, 2002). A change of -.01 in CFI is a common criterion used to determine if change between models is substantial (Cheung & Rensvold, 2002). However, in a review of invariance conventions Putnick and Bornstein (2016) recommended also examining and reporting changes in RMSEA and SRMR. In examining these fit indices, changes in RMSEA of .015 and SRMR of .030 (for metric invariance) or .015 (for scalar or residual invariance) can be used as specific cutoffs (Chen, 2007). Accordingly, changes in all three of these indices were examined for the present study with the above recommended cutoffs used as guides. A summary of these figures and their use in guiding decision making is reproduced in Table 3.

Table 3

Multigroup Analysis: Measurement invariance Testing

Model	χ2	(df)	CFI	RMSEA	(90% CI)	SRMR	Model compared	Δχ2*	(Δdf)	ΔCFI	ΔRMSEA	ΔSRMR	Decision
Config.	1137.148	520	0.945	0.061	(0.056 ,0.066)	0.06	--	--	--	--	--	--	--
Metric	1167.414*	545	0.944	0.06	(0.055 ,0.064)	0.069	Config.	31.023	25	0.001	-0.001	0.009	Accept
Scalar	1213.444*	570	0.942	0.059	(0.055 ,0.064)	0.07	Metric	45.539**	25	0.002	-0.001	0.001	Accept

Note: N=643; Small negative impact of Covid n = 486; Large negative impact n = 157

*Satorra-Bentler scaled chi-square difference test

**$p \leq .01$

The configural model for Covid impact had an acceptable to good fit χ^2 (df = 520) = 1137.148, p < .001, CFI = 0.945, TLI = 0.936, RMSEA = 0.061, 90% CI [0.056, 0.066], and SRMR= 0.06.

The metric model had a good fit, χ^2(df = 545) = 1167.414, p < .001, CFI = 0.944, TLI = 0.939, RMSEA = 0.06, 90% CI [0.055, 0.064], SRMR = 0.069. The fit did not differ significantly from the configural model, $\Delta\chi^2$ (20) = 31.0227. p = .19, ΔCFI < .01, ΔRMSEA < .015, ΔSRMR = .009.

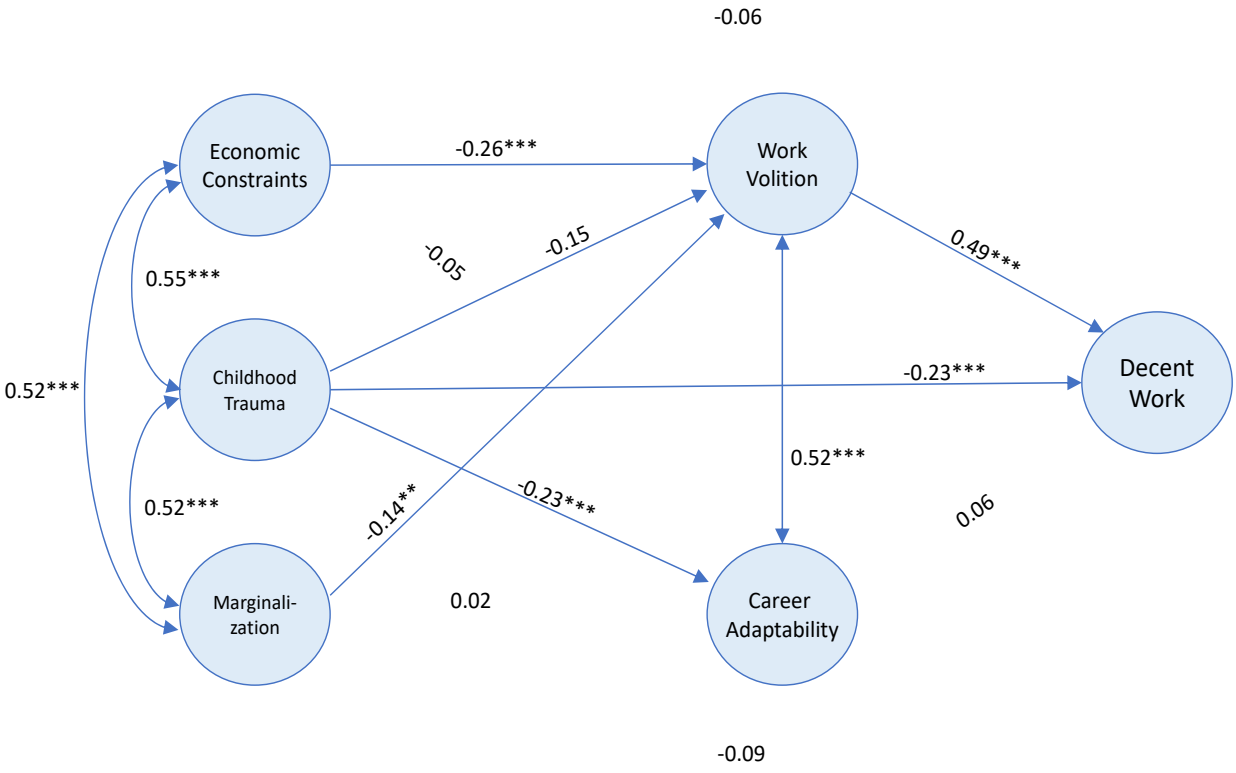
The scalar model for Covid Impact had a good fit, χ^2 (df = 570) = 1213.444, p < 0.001, CFI = 0.942, TLI = 0.939, RMSEA = 0.059, 90% CI [0.055, 0.064], SRMR = 0.07. The scalar and metric models had a significantly different chi-square, $\Delta\chi^2$ (20) = 45.5386, p < .01, however change in comparative fit indices was not substantial, ΔCFI < .01, ΔRMSEA < .015, ΔSRMR < .030. Based on these comparisons, measurement invariance is supported at the configural, metric, and scalar levels. Subsequent examination of parameter significance and direct, indirect, and total effects were conducted using the entire sample.

Structural Regression Model

The structural model demonstrated a good fit to the data: χ^2 (*df* = 260) = 783.324, *p* < 0.001, CFI = 0.951, TLI = 0.943, RMSEA = 0.056, 90% CI [0.051, 0.06], SRMR = 0.054. Figure 3 displays the standardized regression coefficients for each path, with significant paths distinguished from those non-significant. The structural model explained 20.8% of the variance in Work Volition, 6.4% in Career Adaptability, and 51.2% in Decent Work.

Figure 3

Structural Model With Standardized Path Estimates



Note. Dotted paths indicate nonsignificant paths.

** *p* < .01. *** *p* < .001

As detailed in Table 4, exactly half of the pathways hypothesized by PWT were significant ($p < .05$). Neither of paths from endogenous variables to decent work were significant: economic constrains (β = -0.056, *SE* = 0.053, p = 0.289) and marginalization (β = -0.089, *SE* = 0.049, p = 0.067). More notably, when only considering PWT variables there were not any significant paths to or from career adaptability. The direct path from economic constraints to work volition was significant (β = -0.256, *SE* = 0.052, $p < .001$), as was the path from marginalization to work volition (β = -0.142, *SE* = 0.049, p = .004). The direct path from work volition to decent work was significant (β = 0.485, *SE* = 0.054, $p < .001$). Both correlations predicted by the model were significant: economic constraints and marginalization (r = 0.518, *SE* = 0.033, $p < .001$) and career adaptability and work volition (r = 0.518, *SE* = 0.046, $p < .001$).

All hypothesized direct effects and correlations of childhood trauma were supported and found to be significant. Specifically, Childhood trauma had significant negative direct effects on Work Volition (β = -0.148, *SE* = 0.059, p = 0.013), Career Adaptability (β = -0.231, *SE* = 0.063, $p < 0.001$), and Decent Work (β = -0.225, *SE* = 0.053, $p < 0.001$). Significant direct effects on the endogenous variables are necessary to continue investigating indirect effects, whereas the direct effect of childhood trauma on decent work specifically demonstrated support for Hypothesis 1.

Indirect Effects

Hypothesis 2 was that childhood trauma would have negative indirect effects on decent work through both career adaptability and work volition. As recommended by Shrout and Bolger (2002), to test this the indirect effects of the structural model were examined using 1,000 bootstrapping samples. The total indirect effect of childhood trauma on decent work was significant (β = -0.085, *SE* = 0.031, p = 0.006, 95% CI [-0.136, -0.034]). Examining specific

indirect effects, childhood trauma had a significant negative effect on decent work via work volition (β = -0.072, *SE* = 0.029, p = 0.014, 95% CI [-0.12, -0.024]), but not via career adaptability (β = -0.013, *SE* = 0.013, p = 0.307, 95% CI [-0.035, 0.008]).

Table 4

Hypothesis Testing from Structural Model

	Hypothesized Paths of PWT Structural Model	Support?
1.	Economic constraints ↔ Marginalization	Supported
2.	Economic constraints → Decent Work	Unsupported
3.	Marginalization → Decent Work	Unsupported
4.	Work Volition ↔ Career Adaptability	Supported
5.	Economic constraint → Work Volition	Supported
6.	Economic constraints → Career Adaptability	Unsupported
7.	Marginalization → Work Volition	Supported
8.	Marginalization → Career Adaptability	Unsupported
9.	Work Volition → Decent Work	Supported
10.	Career adaptability → Decent Work	Unsupported
11.	Economic constraints → Work Volition → Decent Work	Supported
12.	Marginalization → Work Volition → Decent Work	Supported
13.	Economic constraints → Career Adaptability → Decent Work	Unsupported
14.	Marginalization → Career Adaptability → Decent Work	Unsupported
	Additional Paths of Present Study	
15.	Childhood Trauma ↔ Marginalization	Supported
16.	Childhood Trauma ↔ Economic Constraints	Supported
17.	Childhood Trauma → Decent Work	Supported
18.	Childhood Trauma → Work Volition	Supported
19.	Childhood Trauma → Career Adaptability	Supported
20.	Childhood Trauma → Work Volition → Decent Work	Supported
21.	Childhood Trauma → Career Adaptability → Decent Work	Unsupported

Change in R square

Hypothesis 3 predicted that adding childhood trauma to the PWT model would increase the model's ability to explain variance in decent work, and that this incremental increase would be significant. Change in R square was calculated by running the full structural model in Mplus and then running the model again with the childhood trauma latent variable removed. This is one of 4 such approaches to calculating R square change in SEM as outlined in Hayes (2021). In the full model with Childhood trauma included, 51.2% of variance in decent work was explained; excluding CTQ from the model reduced variance in decent work explained to 47.8%. Thus, including childhood trauma in the model explained an additional 3.4% of the variance in decent work.

Chapter 5 - Discussion

Rationale

The purpose of this dissertation was to examine childhood trauma as an additional predictor of decent work and investigate whether doing so would add utility to the PWT model. The three hypotheses of the present study were that childhood trauma would have negative effects on decent work both (1) directly and (2) indirectly, and (3) that including childhood trauma in the model would significantly increase the model's ability to explain decent work. In the process of testing these hypotheses, the hypothesized pathways inherent in the PWT model were also examined (see Table 4 for all hypothesized paths).

One rationale for this study was that childhood trauma has been linked to different distal outcomes across domains. With regard to mental health, childhood trauma has been found to negatively impact one's capacity for self-regulation (Cloitre et al., 2009; Ehring & Quack, 2010; Ford, 2005) and perceived sense of control (Bolger & Patterson, 2001; Lusczynska et al, 2009). In the domain of physical health, childhood trauma has been linked to greater chronic pain, gastrointestinal problems, and poorer health in later life (Pacella et al., 2013). There is a smaller body of literature examining the relationship of trauma to adult work, and an even smaller body of literature examining the relationship of childhood trauma to adult work. The present study is an attempt to draw from these extant bodies of research to inform hypotheses and help fill this gap in the literature.

A second rationale for this study was to further contribute to the Psychology of Working Theory. PWT is a newer vocational theory with a rapidly growing literature base. A primary motivation in developing the theory was to create a vocational theory which was more inclusive and capable of incorporating contextual factors largely ignored to that point within vocational

psychology. Specifically, including economic constraints and marginalization as the principle exogenous variables in the model allows better examination and quantification of the uneven playing field that vocational psychology has long overlooked. Furthermore, these variables are conceptualized not as snapshots in time but rather products of a person's life to date, spanning across important developmental timeframes up to the present. Accordingly, PWT is a vocational theory with a strong developmental component. As it has developed, various studies have applied its framework across a range of populations in efforts to examine the utility and explanatory power of the model. Despite being a developmental model of work, to date no study has sought to examine how childhood trauma, a well-established variable of considerable impact, might function within the model.

Thus, the current study seeks expand investigation of the impact of contextual factors by adding to economic constraints and marginalization a third exogenous variable: childhood trauma. Through structural equation modeling, the overall impact of childhood trauma on decent work can be examined statistically, and the previously stated hypotheses can be tested.

Childhood Trauma Direct Effects

The first hypothesis predicted that childhood trauma would have a direct negative impact on decent work. This was investigated in the SEM model by examining the path directly from childhood trauma to decent work. Indeed, this path was found to be significant, (β = -0.225, *SE* = 0.053, $p < 0.001$). This suggests childhood trauma negatively impacts decent work even when controlling for the impact first of childhood trauma on work volition and career adaptability as mediators. Stated differently, work volition and career adaptability do not capture and explain all the negative impact of childhood trauma on decent work. It is possible that there is an unexplored indirect effect (e.g., another endogenous variable) through which childhood trauma

impacts decent work. One unexamined possibility may involve the impact on physical health that childhood trauma has been connected to such as chronic fatigue syndrome (Kempke et al., 2013), chronic pain (Davis et al., 2005), and general health symptoms (Pacella et al., 2013). Because the endogenous variables included in the PWT model concern primarily psychological phenomena, it is arguable that aspects of physical ability and disability are not fully captured.

There is at least one example where the PWT model was examined using a sample of individuals endorsing a chronic health condition. Tokar & Kaut (2018) examined individuals with Chiari malformation and the PWT model was found to be adequate (in terms of fit) and applicable to the sample. However, because the researchers did not include any scale measuring the impact of the condition, any direct or indirect effects of the condition on decent work were left unexamined. This is unfortunate especially given that the condition, Chiari malformation, is heterogenous in symptom presentation and severity. Individuals endorsing childhood trauma, likewise, comprise a heterogenous group with regard to trauma exposure and severity. In the present study, examining the direct effect of childhood trauma on decent work allowed comparison to its indirect effects and examination of how strongly the model and its intervening variables can explain just how childhood trauma impacts decent work. The model does not provide support for full mediation of childhood trauma on decent work, thus leaving open the possibility of other mechanisms through which childhood trauma may impact decent work. However, the identification of such mechanisms is beyond the scope of this study, and all that can be said conclusively is that there is a direct negative effect of childhood trauma on decent work.

Childhood Trauma Indirect Effects

The second hypothesis predicted that childhood trauma would have negative indirect effects on decent work. This hypothesis was partially supported. Individuals with histories of childhood trauma were less likely to report work volition (β = -0.148, *SE* = 0.059, p = 0.013) and career adaptability (β = -0.231, *SE* = 0.063, $p < 0.001$). The negative impact of childhood trauma on work volition is consistent with other studies which have demonstrated a negative impact of childhood trauma on related constructs such as locus of control (Bolger & Patterson, 2001), and decision making (Allen & Lauterbach, 2007). Similarly, the negative impact of childhood trauma on career adaptability is consistent with other studies which have demonstrated a negative impact of childhood trauma on emotion regulation (Kim & Cicchetti, 2010; Jennissen et al., 2016). However, whereas the direct path from work volition to decent work was significant (β = 0.485, *SE* = 0.054, $p < .001$), the direct path from career adaptability to decent work was not (β = 0.058, *SE* = 0.053, p = 0.276).

The nonsignificant specific indirect effects of childhood trauma, economic constraints, and marginalization on decent work through career adaptability is consistent with recent studies testing the PWT structural model which also failed to find career adaptability as a significant mediator (i.e., Douglass et al., 2017; Autin et al., 2022). These findings suggest either that the construct of career adaptability proposed in the foundational article elaborating PWT (i.e., Duffy et al., 2016) is not adequately captured by the subscale in the Career Futures Inventory, or that career adaptability does not function in the structural model as originally proposed. It is important to note however that career adaptability significantly correlated with work volition (r = 0.518, *SE* = 0.046, $p < .001$). One possibility not examined in this study is that career adaptability may partially mediate the relationship between childhood trauma and work volition.

In examining the mediating role of a similar construct—emotion regulation—Kim & Cicchetti (2010) found evidence for emotion regulation as a significant mediator in more complex models involving three and four-path mediation. At least with regard to childhood trauma, the findings of the present study support examining more complex paths from childhood trauma to decent work. However, given the non-significant relationship of career adaptability to core constructs of the model (e.g., decent work, marginalization, and economic constraints), the findings of the present study lend support for revising or overhauling the role and function of career adaptability in the PWT model.

Taken together, the findings that childhood trauma negatively impacts adult work both directly (hypothesis 1) and indirectly (hypothesis 2) is consistent with the Developmental Psychopathology Model of Childhood Traumatic Stress (Pynoos et al., 1995; Pynoos et al., 1999) and previous studies examining these variables (e.g., Lee & Tolman, 2006; Liu et al., 2013). Moreover, the significant indirect effect of childhood trauma on decent work via work volition suggests that the ability to feel in control and make choices in one's work life is an important link which helps explain impact of childhood trauma on attaining decent work. Less clear is the role career adaptability plays in explaining the impact of childhood trauma on decent work. The current study lends support for retaining career adaptability in the model when childhood trauma is included, but also supports examining mediation pathways outside of those hypothesized originally by PWT.

Incremental Validity to PWT model

The final hypothesis was that including childhood trauma as a contextual factor in the model would provide incremental validity to the model's ability to explain decent work as an outcome. This was examined by comparing the decent work variance explained (R^2) by the

reduced model to that of the full model with childhood trauma included as an exogenous variable. Indeed, including childhood trauma within the model explained an additional 3.4% of the variance in decent work: R^2 = .512 with childhood trauma included in the model compared to R^2 = .478 within the PWT baseline model. More importantly, the model with childhood trauma included had a good fit to the data when considering indices of fit: χ^2 (df = 260) = 783.324, p < 0.001, CFI = 0.951, TLI = 0.943, RMSEA = 0.056, 90% CI [0.051, 0.06], SRMR = 0.054.

While the change in R^2 is notable, it is less clear the extent to which the increase in R^2 is practically significant. The majority of PWT studies focus on examining the core PWT variables across different groups. And while there exists many studies which include additional variables, such variables are usually of PWT adjacent constructs (e.g., occupational engagement in Kim et al., 2019) or interaction terms (e.g., sexism x racism in Autin et al., 2022). Fewer studies incorporate into the model an entirely new variable as in the current study, and there exist few if any examples of assessing the magnitude of change in R^2 when doing so.

Furthermore, the mixed use across studies of different scales for variables presents an additional challenge when trying to make sense of how well the model explains decent work. For example, variance explained in decent work has been found to be: 58% (Allan et al., 2018) and 66% (Douglass et al., 2017) across a samples of sexual minority individuals; 42% (Duffy et al., 2018) and 55% (Duffy et al., 2019) for a sample of racial and ethnic minority individuals; 78% in an international sample with low income (Kozan et al., 2019); and 60% for a sample of individuals with a chronic health condition (Tokar & Kaut, 2018). At face value, attaining these figures across different populations represents an advance and development of the model and lends strong support for the PWT framework. However, a deeper level of review of these studies reveals that no two of them used the same set of instruments (even those investigating the same

population). As such, the differences in metrics across studies could be attributed to the uniqueness of the sample, use of different instruments, or a combination of the two.

What constitutes a significant R^2 and change in R^2 varies across disciplines (Hair et al., 2011), and while significance in change in R^2 can be computed, interpretation of its practical significance is less developed and precise. This variability in instrumentation across PWT studies with different populations adds an additional layer of complication for comparisons of this metric. The lack of uniformity in instrumentation is understandable for a new and developing framework. And perhaps because PWT is new and developing there are few if any interpretations of change in R^2 in the extant literature. Thus, while hypothesis 3 was supported in this study, it is difficult and beyond the scope of this study to interpret the change in variance explained in comparison to other PWT studies.

Findings relevant to PWT Model

In addition to the three hypotheses, all the hypothesized pathways predicted in the PWT model were examined. A summary of all these paths is provided in Table 4. The significant correlations between childhood trauma and both economic constraints and marginalization suggest a shared environment among these predictors, or overlap in comorbidity. While this was not a direct hypothesis of the present study, a correlation between these variables was thought likely given the literature base which has examined environmental factors associated with trauma exposure (Foy et al., 1996; Breslau et al., 2004; Davidson et al., 1991; Kilpatrick et al., 2003)

It is noteworthy that the contextual factors in the model (i.e., economic constraints and marginalization) had significant direct effects on decent work in the baseline model, and when childhood trauma was added to the model both direct effects became non-significant. These results parallel those of England et al. (2020) which found a significant direct effect for

marginalization on decent work when examining the baseline structural PWT model, but found the direct effect become nonsignificant when another contextual variable (climate) was added to the model. Given the strong correlation of economic constraints and marginalization to childhood trauma, it is possible that adding it to the model took into account whatever uniquely allowed economic constraints and marginalization to directly predict decent work.

Regarding economic constraints in the full model, the nonsignificant direct effect on decent work is consistent with findings from previous studies (e.g., Autin et al., 2022; Douglass et al., 2020; Duffy et al., 2019). The nonsignificant direct effect of marginalization in the full model (as measured by the LEMS) is also consistent with findings from England et al. (2020), but in contrast to findings from Duffy et al. (2019). However, given the variance across PWT studies in measures and model specification (i.e., by including additional variables), it is difficult to draw direct comparisons without making qualifying remarks. What appears to be an emerging pattern is that many studies which have made non-significant the direct effects on decent work of economic constraints and marginalization appear to accomplish this by altering or adding to the contextual variables. For example, Autin et al. (2022) defined marginalization using two variables sexism and racism (and their interaction); England et al. (2020) added climate as a contextual variable; and Douglass et al. (2020) examined proactive personality as a moderator. These studies and the current study provide exceptions to the hypothesized direct effects of the contextual factors. Further investigation into why and how such findings occur may add a degree of clarity to the role of economic constraints and marginalization.

Impact of COVID-19

This study was conducted in the middle of the COVID-19 pandemic during which the concept of work let alone decent work was upended. During this time, the impact of COVID-19

on people's lives and work lives was not spread evenly, but rather certain marginalized groups felt greater negative impact both on their work and livelihood (ILO, 2020). For this reason, an item was included to allow respondents to rate the negative impact of the pandemic on their current work life. Including this item would provide insight as to whether the impact of COVID-19 might account for some of the variance in scores on outcome measures and help determine whether it would be better to approach the sample as one entire group or two (i.e., people whose work has not been negatively affected by COVID-19 vs those whose work has been negatively affected). Using the mean score on this item, the sample was split into two groups and structural models for these two groups were then examined to determine if they were significantly different (variant) or not (invariant). Despite very real possibilities for group variance, the configural, metric, and scalar models all supported group invariance. Though examining the impact of COVID-19 on work was not the focal aim of this study, the findings of group invariance are intriguing both in regard to what they may imply about some of the focal PWT constructs and especially in light of recent research into these matters.

Even prior to the pandemic, it was increasingly common for people to have secondary jobs and participate in the "gig economy." Often such lines of work, while readily available, did not include certain components of decent work such as healthcare, reliability, or stability. In some instances, individuals can put in as much time into these secondary jobs as they would like, thus weakening some of the boundaries which help individuals maintain a work/life balance and separation. As it relates to the present study, a requirement for inclusion was working a full time or part time position. Depending upon a person's employer, full-time and—to a lesser degree—part-time positions often qualify workers to enroll in healthcare plans and receive other forms of benefits and protection. However, with regard to the gig economy, individuals can readily turn

their work into full-time positions without these added benefits. It is important to keep in mind that now more than ever quantity of work does not correlate with quality of work. Rather work can be simultaneously more available and more precarious (see Allan et al., 2021). As it relates to decent work then, those reporting gig work as a primary or even secondary line of work may miss out on certain components of decent work (e.g., healthcare) while satisfying other components of decent work (e.g., safety). And even despite certain omissions of such aspects, they may still report their work as decent.

In fact, Kim et al. (2020) made this very point in examining different profiles of decent work. The vast majority of studies using the Decent Work Scale use the total scale score, which Kim et al. (2020) note assumes that the five separate dimensions work collectively and fall or rise in conjunction. Examining only the composite score overlooks the possibility that individuals may have the same composite score yet differ significantly in scores along these five dimensions. Kim et al. (2020) used latent profile analysis to identify 5 distinct profiles of decent work, and found that certain identities (i.e., female, less than college education) and PWT predictor variables increased the likelihood someone would fit one of the profiles, and that the profile membership differently predicted well-being and work-related outcomes. Moreover, the authors found that using Duffy et al.'s (2016) criteria that all five dimensions must be present for work to be decent, about 35% of the sample endorsed decent work and about 11% of the sample were categorized as indecent work (where scores on all 5 subscales were below the mean). This leaves a large 54% of the sample in a grey area. Blustein et al. (2020) similarly conducted a latent profile analysis on a sample of individuals endorsing full or part-time employment. However, in addition to exploring the baseline PWT variables the authors posited that combining work precarity with decent work in a bifactor model would provide insight into the different

decent work profiles expected to emerge. The authors also found 5 distinct profiles (similar in nature to those in Kim et al., 2020) and found that work volition as well as other demographic characteristics (i.e., age, education level) significantly predicted membership in certain profiles. Like Kim et al. (2020), the authors concluded that that conditions of work detailed in PWT are not simply additive. Rather, distinct profiles emerge when the subscales are examined and work precarity is integrated into the conceptualization and measurement of decent work.

Indeed, analyses of decent work profiles were outside the scope of the current study. However, it is quite possible that group invariance would not be met were such analyses incorporated into the study. Though Blustein et al. (2020) highlighted the importance of their work in light of the pandemic, their data was collected prior to the pandemic. So there has yet to be any PWT studies examining decent work profiles as workers and the greater workforce respond to and recover from this global event. Given how certain PWT variables predicted profile membership and how in the present study childhood trauma strongly correlated with these variables, it would follow that childhood trauma might also be predictive of profile membership. One caveat to exploring such relationships is that like decent work, the Childhood Trauma Questionnaire is multi-dimensional yet often the composite score is used. Accordingly, for greater clarity to emerge, future investigations into trauma and work should consider in their design the dimensionality of not only outcome variables (i.e., decent work), but predictor variables as well.

Practical Implications

The findings of the present study add to a large and growing body of research showing the negative distal impact of childhood trauma on adult functioning. The study also marks a step towards better connecting the two fields of vocational psychology and trauma. Insofar as

practical implications, the foremost takeaway from this study is for counselors and clinicians to incorporate a trauma-informed approach when working with individuals on career and work matters. Indeed, it is an ethical mandate for counselors to assess present-day risk and this may at times relate to ongoing traumatic events. However, the present study would suggest there is benefit to also assessing for lifetime trauma, particularly events which may have occurred before the age of 18. Given the high correlation of childhood trauma to marginalization and economic constraints, clinicians working with people presenting with vocational concerns should be aware that individuals endorsing such experiences or identities may too endorse childhood traumatic experiences. While a high level of traumatic experiences does not necessarily correspond to a high level of symptom severity, clinicians nonetheless should remain open to incorporating into treatment planning a trauma-informed approach, if not elements of more specific trauma-focused treatments. One particular way of incorporating this would be to include on intake assessments a section which includes items specific to Criterion A of PTSD, as well as items which may not meet the level of a Criterion A traumatic event but nonetheless are demonstrated in the body of work of developmental psychopathology to be detrimental (e.g., neglect).

Such an integrative approach may already find home in the Psychology of Working Counseling (Blustein et al., 2019), a newer approach to career counseling which integrates mental health components. Psychology of Working Counseling is informed by the Psychology of Working Theory and attends to decent work outcomes (i.e., survival, social connection, and self-determination needs) by mobilizing in clients agentic action in the areas of critical reflection and action, proactive engagement, social support, and community engagement. Indeed, these areas correspond to the moderators in the PWT model as originally conceptualized in Duffy et al. (2016). Blustein et al. (2019) couch the Psychology of Working Counseling within a PWT

framework and their clinical examples incorporate considerations of contextual factors (e.g., raising critical consciousness of sexism, racism, and their interaction in work environments). Although the authors appear to be writing for a vocational psychology audience, it is not difficult to imagine how the very approaches they articulate could also be used for individuals negatively impacted by childhood trauma. For example, providing psychoeducation about the effects of trauma can help raise a person's critical consciousness such that they feel less self-blame for vocational (or other) matters outside of their control. This can help generate re-examination and re-appraisal of their own agency and identification of ways in which they might take action accordingly. Surely, such an approach could be used to examine the impact of childhood trauma in isolation. But a more PWT consistent approach would likely be to include a client's traumatic experiences as specific contextual factors which intersect with other identities the client holds. Such an approach needn't call for a change in the direction of counseling away from work to trauma. Indeed, in some instances this might be the case. More likely, however, counselors fluent in PWT language and concepts will find that their ability to focus discussion on agency, power, and critical consciousness well prepare them to also discuss with clients how trauma may impact their work lives.

Limitations and Future Directions

A common limitation for many of the studies examining the Psychology of Working Theory, including the present study, is the use of cross-sectional data. Indeed, the specificity of the model relegates past experiences (e.g., marginalization, economic constraints, childhood trauma) as exogenous variables which precede mediating and outcome variables. Because these variables concern the past, it is likely that they are relatively static. However, work volition, career adaptability, and decent work all pertain to present-day self-report. This is problematic

because while directionality and construct order are assumed by and examined in the model, they are not directly tested. Longitudinal studies with data collection across more than one time point would help confirm the order and directionality of constructs as they are proposed by theory. To date, longitudinal studies of PWT have found mixed support for predicted pathways within an academic setting (see Allan et al., 2019) and when using the full PWT structural model (see Duffy et al., 2020).

Another limitation for nearly all studies employing the PWT model, including the present study, is that individuals without work are excluded from participation. This is a problem endemic to the construct of decent work: people without work are unable to complete the decent work scale and therefore are passed over. Indeed, people who are unemployed would be able to speak to their lifetime experiences of marginalization, economic constraints, childhood trauma, and possibly too work volition and career adaptability. Excluding such participants very likely creates a restricted range and false floor for studies examining work. For example, it is possible that even those scoring the lowest on this decent work scale may not best convey the impact of childhood trauma, let alone any of the contextual factors. Given past findings demonstrating trauma as a predictor for unemployment (Kimerling et al., 2009; Kunst, 2011; Liu et al., 2013), this is especially relevant for future studies using the PWT model to examine trauma. Perhaps a future direction for studies using PWT would be to extend the dimensionality of decent work so that it is capable of capturing unemployment. Researchers looking to creatively address this dilemma may draw inspiration or direction from Bluestein et al. (2020) where the authors expanded decent work to include a dimension of precarious work. Likewise, by revising the Decent Work Scale to pertain to perceptions of future decent work, Kim et al. (2019) were able to include in their sample participants who were not employed.

It could be argued that another limitation of the present study was its use of an online sample. This study used the Prolific platform to recruit participants and administer study items. When compared to other online research platforms such as Amazon MTurk, Prolific samples have been shown to yield valid high quality data sets of diverse samples across race and ethnicity, income, and level of education (Peer et al., 2021). Despite this, there are still drawbacks to Prolific: samples tend to be highly educated and perhaps not representative of the target population. Moreover, for studies on work, it is important to recognize that with their prevalence and availability, all online research platforms now have the capability of serving as an individual's primary means of work, or as secondary source of income. As it pertains to the Prolific platform, Peer et al. (2021) found only 4-8% users reported Prolific as their primary income, and that median spent users spend on site per week is 2 hours. While these numbers are somewhat reassuring and this method of data collection is consistent with other large sample PWT studies, it would be helpful for future studies to employ other means of sample recruitment, and perhaps collect information as to any additional work which provides income or other benefits for participants.

Regarding Childhood trauma, the sample endorsed low but sufficient levels to meet what Bernstein and Fink (1998) determined as the low-severity abuse cutoff, wherein 80% of cases would meet more stringent criteria with a low false positive rate of less than 20%. For the sample in the current study, per item $M = 1.87$, $SD = 0.74$, and total score to $M = 46.82$ $SD = 18.56$. Broken down by subscale, the average score of the sample is above the cutoffs for emotional neglect: ≥ 10 (Current sample = 12.40); emotional abuse: ≥ 9 (current sample= 11.15); sexual abuse: ≥6 (current sample= 7.10); and physical neglect: ≥8 (current sample = 8.36). The average score of the sample on physical abuse is below the cutoff for physical abuse: ≥ 8 (current sample

= 7.81). However, using the sum of the score to produce a total cutoff (CTQ Total = 41), 46% of the sample does not reach this threshold. Indeed, while participants were informed that the study's focus was on childhood trauma, endorsing childhood trauma was not a requirement for inclusion. Future studies examining the impact of childhood trauma may wish to more explicitly include this as a requirement for inclusion in their informed consent.

Last, the Childhood Trauma Questionnaire, while a good index of cumulative trauma, does not include items on specific questions (e.g., age of onset) which have been examined in relation to trauma. Rather the measure specifies the occurrence of events within the relatively broad scope of 0-18 years of age and uses Likert-type questions to approximate frequency and severity of trauma. Indeed, these limitations help make the scale more amenable to analyses such as SEM (as used in the present study). However, this trade-off comes with the loss of more granular and concrete data. Additionally, the use of the composite CTQ score ignores likely heterogeneity across respondents. Future work using this scale may want to more closely examine subscale scores to see if different types of traumas (e.g., sexual abuse vs neglect) more strongly predict certain outcomes.

Conclusion

The present study used the Psychology of Working Theory to examine the impact of Childhood Trauma on Decent Work. Childhood trauma was found to negatively impact decent work directly and indirectly via work volition and career adaptability. This is consistent with the Developmental Psychopathology Model of Childhood Traumatic Stress (Pynoos et al., 1995; Pynoos et al., 1999) and previous studies which found childhood trauma to negatively impact capacity for self-regulation (Cloitre et al., 2009; Ehring & Quack, 2010; Ford, 2005) and perceived sense of control (Bolger & Patterson, 2001; Lusczynska et al, 2009). Moreover, the

addition of childhood trauma to the model resulted in adequate fit and an increase in the model's ability to predict decent work. This study contributes to the gap in the literature linking childhood trauma and adult work outcomes, and provides strong rationale for consideration of childhood trauma as an important contextual factor in decent work.

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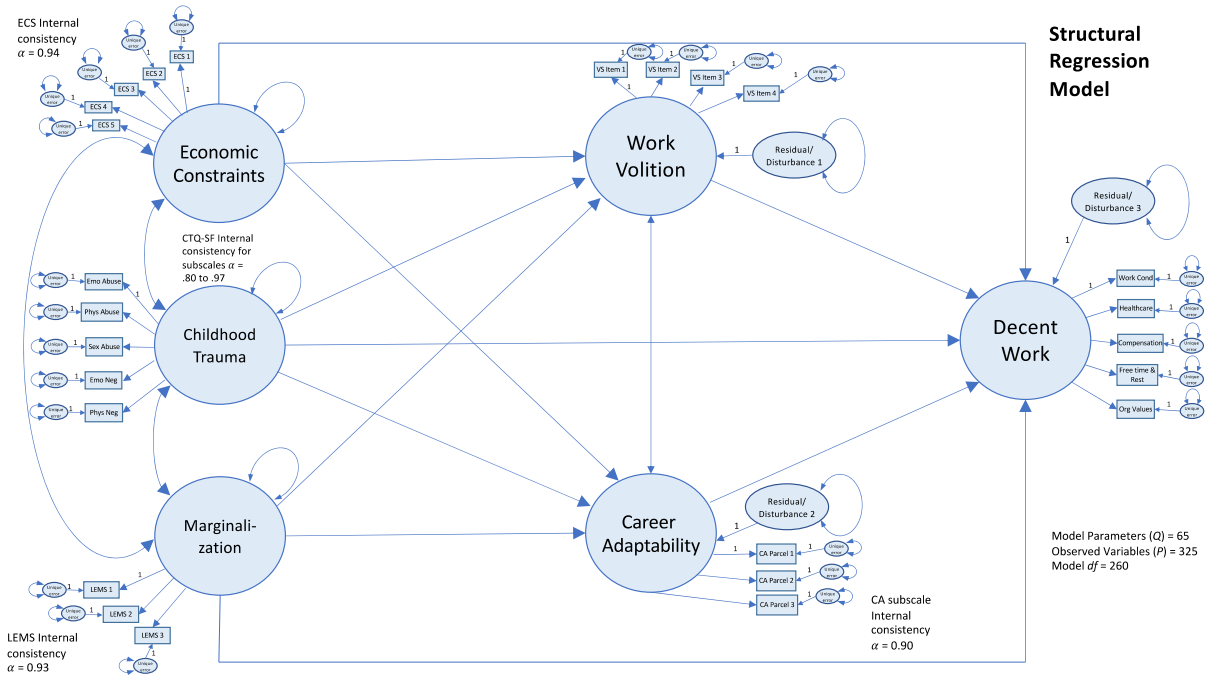
Appendices

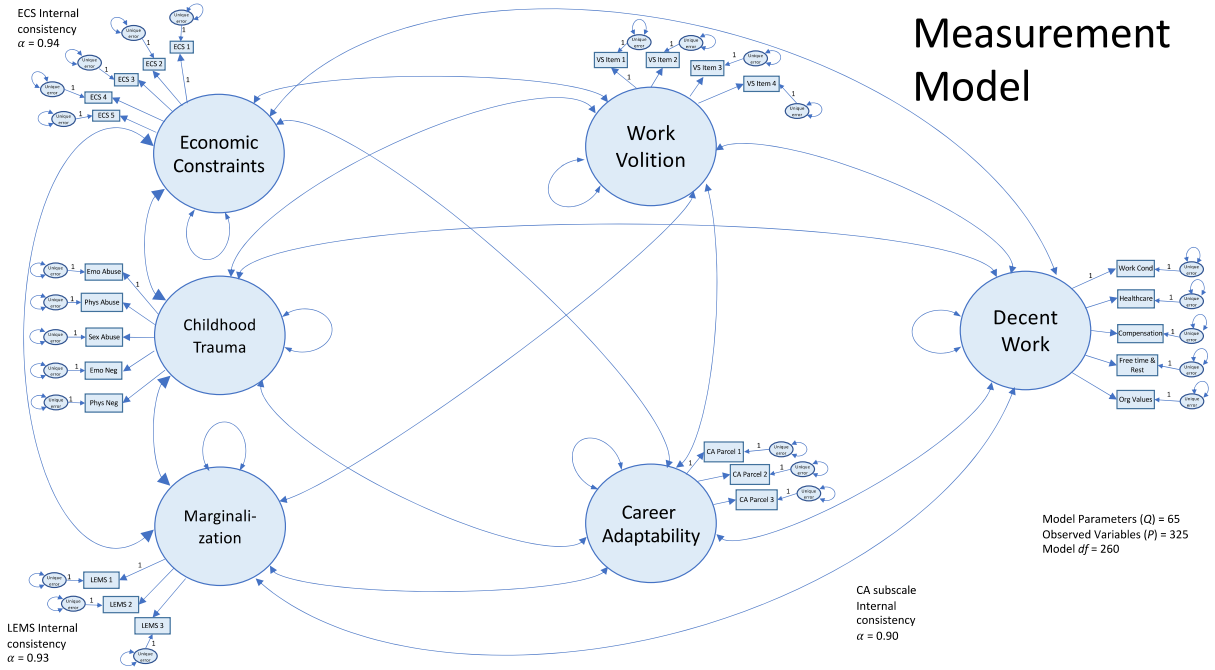
Appendix A1

Structural Regression Model



Appendix A2

Measurement Model



Instruments used in Study

Appendix B1
Decent Work Scale (DWS)

Decent Work Scale (DWS)

1	2	3	4	5	6	7
Strongly Disagree	Moderately Disagree	Slightly Disagree	Neutral	Slightly Agree	Moderately Agree	Strongly Agree

Using the above, please rate the degree to which you agree with the following.

1.	I feel emotionally safe interacting with people at work	1	2	3	4	5	6	7
2.	At work, I feel safe from emotional or verbal abuse of any kind	1	2	3	4	5	6	7
3.	I feel physically safe interacting with people at work.	1	2	3	4	5	6	7
4.	I get good healthcare benefits from my job.	1	2	3	4	5	6	7
5.	I have a good healthcare plan at work.	1	2	3	4	5	6	7
6.	My employer provides acceptable options for healthcare.	1	2	3	4	5	6	7
7.	I am not properly paid for my work. (r)	1	2	3	4	5	6	7
8.	I do not feel I am paid enough based on my qualifications and experience. (r)	1	2	3	4	5	6	7
9.	I am rewarded adequately for my work	1	2	3	4	5	6	7
10.	I do not have enough time for non-work activities. (r)	1	2	3	4	5	6	7
11.	I have no time to rest during the work week. (r)	1	2	3	4	5	6	7
12.	I have free time during the work week	1	2	3	4	5	6	7
13.	The values of my organization match my family values.	1	2	3	4	5	6	7
14.	My organization’s values align with my family values.	1	2	3	4	5	6	7
15.	The values of my organization match the values within my community.	1	2	3	4	5	6	7

Appendix B2

Career Futures Inventory (CFI) – Career Adaptability Subscale

1	2	3	4	5	6	7
Strongly Disagree	Moderately Disagree	Slightly Disagree	Neutral	Slightly Agree	Moderately Agree	Strongly Agree

Using the above, please rate the degree to which you agree with the following

1.	I am good at adapting to new work settings	1	2	3	4	5	6	7
2.	I can adapt to change in my career plans	1	2	3	4	5	6	7
3.	I can overcome potential barriers that may exist in my career	1	2	3	4	5	6	7
4.	I enjoy trying new work-related tasks	1	2	3	4	5	6	7
5.	I can adapt to change in the world of work	1	2	3	4	5	6	7
6.	I will adjust easily to shifting demands at work	1	2	3	4	5	6	7
7.	Others would say that I am adaptable to change in my career plans	1	2	3	4	5	6	7
8.	My career success will be determined by my efforts	1	2	3	4	5	6	7
9.	I tend to bounce back when my career plans don't work out quite right	1	2	3	4	5	6	7

Appendix B3

Work Volition Scale (WVS)

1	2	3	4	5	6	7
Strongly Disagree	Moderately Disagree	Slightly Disagree	Neutral	Slightly Agree	Moderately Agree	Strongly Agree

Using the above, please rate the degree to which you agree with the following

1.	I've been able to choose the jobs I have wanted.	1	2	3	4	5	6	7
2.	I can do the kind of work I want, despite external barriers.	1	2	3	4	5	6	7
3.	The current state of the economy prevents me from working in the job I want (r).	1	2	3	4	5	6	7
4.	The jobs I would like to pursue don't exist in my area (r).	1	2	3	4	5	6	7
5.	Due to my financial situation, I need to take any job I can find (r).	1	2	3	4	5	6	7
6.	When looking for work, I'll take whatever I can get (r).	1	2	3	4	5	6	7
7.	In order to provide for my family, I often have to take jobs I do not enjoy (r).	1	2	3	4	5	6	7
8.	I don't like my job, but it would be impossible for me to find a new one (r).	1	2	3	4	5	6	7
9.	I feel able to change jobs if I want to.	1	2	3	4	5	6	7
10.	The only thing that matters in choosing a job is to make ends meet (r).	1	2	3	4	5	6	7
11.	I feel that outside forces have really limited my work and career options (r).	1	2	3	4	5	6	7
12.	I feel total control over my job choices.	1	2	3	4	5	6	7
13.	Negative factors outside my personal control had a large impact on my current career choice (r).	1	2	3	4	5	6	7

Appendix B4

Childhood Trauma Questionnaire Short Form (CTQ-SF)

Directions: These questions ask about some of your experiences growing up as a child and a teenager. For each question, circle the number that best describes how you feel. Although some of these questions are of a personal nature, please try to answer as honestly as you can. Your answers will be kept confidential.

When I was growing up, . . .	Never True	Rarely True	Some-times true	Often True	Very often true
1. I didn't have enough to eat.	1	2	3	4	5
2. I knew that there was someone to take care of me and protect me. (R)	1	2	3	4	5
3. People in my family called me things like "stupid", "lazy", or "ugly".	1	2	3	4	5
4. My parents were too drunk or high to take care of the family.	1	2	3	4	5
5. There was someone in my family who helped me feel important or special. (R)	1	2	3	4	5
When I was growing up, . . .					
6. I had to wear dirty clothes.	1	2	3	4	5
7. I felt loved. (R)	1	2	3	4	5
8. I thought that my parents wished I had never been born.	1	2	3	4	5
9. I got hit so hard by someone in my family that I had to see a doctor or go to the hospital.	1	2	3	4	5
10. There was nothing I wanted to change about my family.	1	2	3	4	5
When I was growing up, . . .					
11. People in my family hit me so hard that it left me with bruises or marks.	1	2	3	4	5

12.	I was punished with a belt, a board, a cord (or some other hard object).	1	2	3	4	5
13.	People in my family looked out for each other. (R)	1	2	3	4	5
14.	People in my family said hurtful or insulting things to me.	1	2	3	4	5
15.	I believe that I was physically abused.	1	2	3	4	5
When I was growing up, . . .						
16.	I had the perfect childhood.	1	2	3	4	5
17.	I got hit or beaten so badly that it was noticed by someone like a teacher, neighbor, or doctor.	1	2	3	4	5
18.	Someone in my family hated me.	1	2	3	4	5
19.	People in my family felt close to each other. (R)	1	2	3	4	5
20.	Someone tried to touch me in a sexual way or tried to make me touch them.	1	2	3	4	5
When I was growing up, . . .						
21.	Someone threatened to hurt me or tell lies about me unless I did something sexual with them.	1	2	3	4	5
22.	I had the best family in the world.	1	2	3	4	5
23.	Someone tried to make me do sexual things or watch sexual things.	1	2	3	4	5
24.	Someone molested me (took advantage of me sexually).	1	2	3	4	5
25.	I believe that I was emotionally abused.	1	2	3	4	5
		1	2	3	4	5
When I was growing up, . . .						
26.	There was someone to take me to the doctor if I needed it.	1	2	3	4	5
27.	I believe that I was sexually abused.	1	2	3	4	5
28.	My family was a source of strength and support. (R)	1	2	3	4	5

Appendix B5

Lifetime Experience of Marginalization Scale (LEMS)

1	2	3	4	5	6	7
Strongly Disagree	Moderately Disagree	Slightly Disagree	Neutral	Slightly Agree	Moderately Agree	Strongly Agree

Prompt: We are interested in the degree to which you consider yourself to be marginalized in the United States. By marginalized, we mean being in a less powerful position in society, being socially excluded, and/or 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 as a result of being an ethnic or racial minority.

1.	During my lifetime, I have had many interpersonal interactions that have often left me feeling marginalized.	1	2	3	4	5	6	7
2.	Throughout my life, I have had many experiences that have made me feel marginalized.	1	2	3	4	5	6	7
3.	I have felt marginalized within various community settings for as long as I can remember.	1	2	3	4	5	6	7

Appendix B6

Economic Constraints Scale (ECS)

1	2	3	4	5	6	7
Strongly Disagree	Moderately Disagree	Slightly Disagree	Neutral	Slightly Agree	Moderately Agree	Strongly Agree

Using the above, please rate the degree to which you agree with the following

1.	For as long as I can remember, I have had very limited economic or financial resources	1	2	3	4	5	6	7
2.	Throughout most of my life, I have struggled financially	1	2	3	4	5	6	7
3.	For as long as I can remember, I have had difficulties making ends meet	1	2	3	4	5	6	7
4.	I have considered myself poor or very close to poor most of my life	1	2	3	4	5	6	7
5.	For most of my life, I have not felt financially stable.	1	2	3	4	5	6	7