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ABSTRACT (150 words)

Young people navigate an increasingly uncertain and precarious employment market. They have to mobilise and use psychosocial resources necessary to adapt to a changing career landscape and employment opportunities. Guided by career development theories, this study asks if school-based career preparation activities can support the development of career adaptability and career-related cognitions of young people in the aftermath of the Covid-19 pandemic. The research draws on a nationally representative sample of 16 to 25 year-olds who participated in the Youth Economic Activity and Health (YEAH) online survey conducted in the UK between May 2021 and May 2022 (n=4040). The findings highlight the malleability of career adaptability and the importance of school-based career preparation activities in supporting adaptive career-related cognitions as well as life satisfaction among young people in times of economic uncertainty and upheaval.

KEYWORDS

Career adaptability, uncertainty, life satisfaction, school-based career preparation activity, young people, Youth Economic and Health Monitor (YEAH), United Kingdom

Introduction

Can education institutions help young people to adjust to a changing career landscape? Preparing for the transition from education to employment is a key developmental task for young people (Marciniak et al., 2022; Savickas et al., 2009; Schoon & Heckhausen, 2019), a task that has been critically affected by the Covid-19 pandemic and the associated economic downturn. Already before the pandemic young people had to steer their way towards an increasingly uncertain future, characterised by a changing and volatile labour market and increasing precarity (Schoon & Bynner, 2019). During the pandemic they were disproportionately affected by recruitment freezes, lost working hours or by layoffs, and lack

of opportunities for job skill learning (Engzell et al., 2021; Green et al., 2022; Henehen, 2021). These contextual developments are posing new demands on how individuals manage their career development (Akkermans et al., 2020; Rudolph et al., 2021). More generally, adapting to change and uncertainty is a central challenge of one's life course (Hartung & Caderet, 2017; Schoon & Heckhausen, 2019). For young people the transition into the labour market requires preparations and planning already during their studies. They need to acquire relevant psychosocial resources for managing uncertain transitions, explore possible career paths, form more specific vocational goals, and plan how to act to implement those goals (Lent & Brown, 2013). In short, young people have to develop adaptability resources that enable them to navigate changing circumstances and uncertainty (Hirschi et al., 2015; Saviackas, 2005, 2012).

The aim of this study is to assess if schools can help young people to prepare for the step into the world of work during times of economic uncertainty. We focus on the role of school-based career preparation activities as predictors of career adaptability, i.e., people's capacity to adapt to change in a fast-moving world of work, and their responses to changing conditions, such as uncertainty regarding future job chances or worries about one's career due to the Covid-19 pandemic and associated economic turmoil.

The importance of career information and guidance in the preparation for the school-to-work transition is increasingly recognised (Mann et al., 2020) and international organisations including the OECD, the European Commission, the European Training Foundation, the International Labor Organisation and UNESCO are emphasising its relevance and benefits for inclusive development and a fairer society (Cedefop, 2021). There is however still little empirical evidence regarding the role of school-based career preparation activities in supporting career development, or more generally the contextual antecedents (such as gender, ethnicity, parental background or region) of career adaptability among young people (Hirschi & Koen, 2021). Considering both the antecedents of career adaptability and associated behaviours and adaptation results, the study is guided by career development theories (Lent & Brown, 2019; Savickas, 1997; Super, 1980) taking into account the skills and competences as well as the contextual constraints and opportunities that shape career development. In addition, we assess to what extent school-based career preparation activities, perceived career adaptability, career worries and uncertainty relate to life satisfaction.

Career adaptability a crucial resource for navigating an uncertain future

Navigating an uncertain future

Career development theories have long recognised that careers are changing toward increasing uncertainty and instability. To effectively navigate career transitions in the face of an uncertain future and adverse conditions, individuals need to draw on a range of psychosocial resources for tackling and solving unfamiliar, complex and ill-defined problems (Hirschi et al., 2015; Lent & Brown, 2019; Savickas, 1997; Super, 1980). Despite agreeing on the importance of self-regulatory, transactional and malleable competencies, or psychosocial resources, for adaptive career behaviour, different terms and approaches are used to conceptualise these resources.

The concept of career adaptability originated from Super's career development theory (Super et al., 1996). Moving beyond a positivist trait-factor conception of career, Super (1957, 1980) advanced constructivist and social constructionist perspectives, conceptualising career as an ongoing, unfolding, evolving process of growth and change requiring individual adaptability. Super's theory is a combination of stage development and social role theory (Super et. al, 1996), which posits that people progress through five stages during the career development process, including growth, exploration, establishment, maintenance, and disengagement. Super introduced the term career maturity to denote the readiness of an individual to adjust to the demands of social roles, including the role of worker (Super, 1980). The model assumes that adolescents develop career relevant attitudes and cognitions, such as active career exploration and planning of how to reach one's goals. In the cognitive domain, this also implies that adolescents acquire and use relevant knowledge about the content and process of career decision making and about the world of work (Hartung et al., 2017). This process of career preparations involving planning, exploration and decisions about possible careers is also referred to as career readiness (Marciniak et al., 2022; Phillips & Blustein, 1994).

Emphasising the psychosocial aspects of the career construction processes, i.e., the person environment interactions instead of biological maturation processes, the notion of career maturity was replaced by the career adaptability construct (Super, Savickas, & Super, 1996). Rooted within life-span theory, the notion of career adaptability acknowledged that individuals must continuously adapt throughout their life course to respond effectively to changing personal needs and changing contextual demands and opportunities (Savickas et al., 2009). Within the life design paradigm career adaptability is conceptualised as the readiness to deal with current and anticipated vocational developmental tasks, occupational transitions and the unpredictable adjustments prompted by changes in work and working conditions (Savickas, 1997, p. 254). Effectively dealing with developmental tasks at one life stage is

understood to be crucial for tackling the tasks in the next life phase and changes encountered during occupational transitions over the life span (Savickas et al., 2009).

The concept of career adaptability is understood as a psychosocial resource residing at the intersection of person-in-environment interactions, supporting individuals to plan for uncertain futures, face adverse conditions, adapt to changes in life conditions, and increase their well-being. More specifically, career adaptability is conceptualised as a multi-dimensional construct, comprising four dimensions: concern (career planning), control (decision making and self-regulation), curiosity (career exploration), and career self-confidence (Savickas & Porfeli, 2012). Concern refers to the inclination of future orientation and planning ahead. Control involves increasing self-regulation through career decision making and taking responsibility for the future. Curiosity reflects the degree to which individuals explore the world and try to acquire information about different career options. Confidence refers to problem-solving ability and perceived self-efficacy. Having higher levels of career adaptability means to have relevant psychosocial resources that enable the effective adaptation to a changing social environment while also finding ways to increase the chances of achieving one's expectations (Savickas, 2005).

Career adaptability is understood as a malleable construct, that is dynamic and learnable, as for example through career education and vocational guidance (Savickas, 2012). Building on these assumptions Lent (2013) advanced the term career preparedness, creating a bridge to social-cognitive career theories and highlighting the role of individual agency, the importance of 'a healthy state of vigilance regarding threats to one's career wellbeing as well as alertness to resources and opportunities on which to capitalize' (Lent, 2013, p.7).

Career adaptability, adaptive responses and life satisfaction

The career construction model postulates that the four adaptability resources discussed above help individuals to develop adaptive behaviours or cognitions to address changing conditions (the adaptive response) - which in turn lead to desired outcomes, such as satisfaction or success that reflect a good fit between the person and the environment (Savickas & Porfeli, 2012; Rudolph et al., 2017).

There is now persistent evidence to show that career adaptability resources are associated with adaptive response, i.e., cognitions and behaviours that address changing conditions, such as career beliefs, career planning and career exploration, as well as

adaptation results, i.e., outcomes such as career commitment, employability, income, or subjective wellbeing (Johnston, 2018; Rudolph et al., 2017), even across different cultural contexts (Chen et al., 2020). For example, individuals with greater adaptability resources reported more effective career planning and proactive skill development (Taber & Blankemeyer, 2015) as well as employability (Khalid & Ahmad, 2021; Pajic et al., 2018).

In this study we will focus on career related cognitions, such as career uncertainty and career worries, during a time of major upheaval. It is assumed that higher levels of career adaptability resources are associated with lower levels of uncertainty regarding future job chances or worries about one's career due to the Covid-19 pandemic and associated economic turmoil. Moreover, we assume that career related cognitions in addition to career adaptability resources shape the evaluation of one's life overall.

Within the career construction theory subjective wellbeing (SWB) is recognised as a significant outcome (Hartung & Taber, 2008; Rudolph et al., 2017; Savickas, 2005, 2012), indicating a good fit, or alignment between personal needs and contextual circumstances. Previous research has shown that individuals who report higher levels of career adaptability also feel more satisfied with their career and life overall (Fiori et al., 2015; Rudolph et al., 2017; Santilli et al., 2020; Santilli et al., 2017; Zacher, 2014), and report better mental health (Akkermans et al., 2018; Xu et al., 2022). It is argued that career construction processes facilitate a process of self-understanding and a personally meaningful frame of reference that gives their lives direction, which in turn, is associated with greater levels of SWB (Blustein, 1987; Super, 1993).

In this study we assess associations between career adaptability resources, adaptive responses and overall life satisfaction, a widely used indicator of SWB. Overall life satisfaction is understood to reflect a person's cognitive evaluation of their life as a whole based on the standards they have for a 'good life' (Diener et al., 2018).

Promoting the development of career adaptability resources through vocational guidance and information

Although career adaptability has been conceptualised as a malleable construct, there is still little evidence on how career adaptability resources can be promoted through interventions (Koen et al., 2012) or contextual influences. Most previous research on the predictors of

career adaptability have focused on the role of individual characteristics, such as the big five personality traits or cognitive ability (Johnston, 2018; Rudolph et al., 2017) which has led some scholars to question whether career adaptability is indeed learnable or a fairly stable personality trait (Griffin & Hesketh, 2003; Verbruggen & Sels, 2008). There is however some evidence on the effectiveness of targeted career adaptability interventions (Camussi et al., 2023; Green et al., 2020; Perdrix et al., 2012; Spur et al., 2015), including interventions targeted at school-aged children (Hirschi & Lage, 2008; Perdrix et al., 2012).

Career construction theory offers both a theoretical model of career construction and a practical model of career guidance (Savickas et al., 2009). Interventions based on the life design paradigm (Savickas, 2012) aim to foster peoples' planning, problem-solving, exploration and decision making. The current study focuses on the role of school-based career education and guidance offered in collaboration with employers or local business people. These career preparation activities are part of the general curriculum and are not specifically designed to promote career adaptability. Yet, it has been argued that career education and guidance offered in secondary education can provide crucial support to help young people explore and confirm their career ambitions, increase occupational information, and develop the skills and competences required to manage their career pathways (Mann et al., 2020; Robertson, 2013). This argument has to some extent been supported by evidence from international longitudinal studies on the role of school-based career guidance and its association with later employment outcomes, earnings and career satisfaction (Covacevich et al., 2021). In this study we ask if career guidance provided during secondary education helps young people to develop career adaptability resources, adaptive responses for tackling changing labour market conditions in the aftermath of the Covid-19 pandemic and contribute to their life satisfaction.

Present study and hypotheses

This study is guided by assumptions formulated within career construction theories (Savickas, 2012; Savickas et al., 2009; Super et al., 1996). We test a sequential mediating model of career construction (Figure 1) linking school-based career preparation activities offered in schools and colleges to manifestation of career adaptability, career related cognitions (career uncertainty and career worries), as well as life satisfaction. Based on the assumption that career adaptability is a malleable construct we expect a direct and positive effect of school-based career preparation activities on career adaptability (H1). Following the

assumption that school-based career preparation activities also directly improve career-related cognitions we expect a direct negative association between school-based career preparation activities and career worries and uncertainty (H2). Based on the assumption that career adaptability supports the development of effective career-related cognitions (adaptive response) we expect that there is a negative association between career adaptability and Covid-19 related career worries and career uncertainty (H3). Assuming a potential mediating role of career adaptability we expect that the effect of career preparation activities on career-related cognitions (career worries and uncertainty) is mediated via career adaptability (H4). In addition, in line with career construction theories we assume that life satisfaction can be promoted by school-based career preparation activities (H5); that life satisfaction is positively associated with career adaptability (H6); and negatively with career worries and uncertainty (H7).

As indicated in Figure 1 we thus test for possible a) direct effects of career preparation activities on career adaptability, career worries and uncertainty as well as life satisfaction without mediation; b) mediation via career adaptability; c) mediation (including sequential mediation) via career worries and uncertainty; and d) independent effects via career worries and uncertainty.

The model will control for a range of socio-demographic indicators which could have an effect on career construction processes and life satisfaction. In particular, we take into account the role of gender, age, ethnic minority status, past free school meal eligibility (an indicator of family socio-economic status), and region. Although the evidence regarding these factors and the development of career adaptability is inconclusive, general assumptions are that there is a negative association between career adaptability and male gender, being younger, ethnic minority and socially disadvantaged background (Hirschi, 2009; Patton & Creed, 2001). There is also evidence to suggest that there are regional differences in career preparedness (Hutchins & Akos, 2013).

Method

Participants and data collection

The study draws on longitudinal data from the first six waves of the Youth Economic Health Monitor (YEAH) survey, which were fielded between February 2021 and October 2022

Navigating an uncertain future

(February-21, May-21, July-21, October-21, February-22, May-22). The YEAH survey is a quarterly quota panel study of 16–25-year-old UK residents recruited from web access panels managed by Ipsos Mori and partners. The survey collects information on mental health including life satisfaction alongside data on education, work, career readiness, skills development, and the perceived effects of Covid-19 on their lives. Given the lockdown-restrictions and resource-constraints, computer-assisted web interviewing (CAWI) was the only feasible data collection mode.

A quota sampling approach was chosen to recruit a balanced sample of a usually difficult to reach demographic during the second wave of the pandemic in the winter of 2021. For the initial sample, quotas were set according to age within gender, working status and region. In conjunction with supplied survey weights, the sample was designed to be nationally representative. The survey sampled 1000 young people in each wave. Follow-up samples were recruited among previous participants when possible and refreshed according to the quotas described above to make up for attrition when necessary. The longitudinal response rate was 62%.

Previous analysis showed that the YEAH sample was overall well balanced compared with other major data collections during the pandemic, such as the UK Household Longitudinal Study (UK-HLS) COVID-19 surveys and the Quarterly Labour Force Survey, the largest regular random probability household survey in the UK (Henseke, Green, & Schoon, 2022). Table A1 in the appendix compares key descriptive statistics from the YEAH study sample in comparison to UK-HLS and the Labour Force Survey. The study has received full ethical approval by the UCL IOE Research Ethics Committee and is registered with the UCL Data Protection Office (Z6364106/2020/10/90).

For the analysis we restricted our sample to those with full information who participated in waves 2 to 6 (May 2021 to May 2022) during each of which all core measures such as career adaptability or career worries were assessed. The analytic sample comprises $n=4040$ observations from $N=2673$ young people (52% female with an average age of $M_{\text{age}}=20.95$ ($SD_{\text{age}}=2.73$), of which 44.5% were in education, 47% were in work and 8.5% were not in education, employment or training (NEET)). For more information on the sample see Table A1 and A2 in the appendix.

Measures

Participation in Career Preparation activities was assessed with questions about a range of activities offered within schools and colleges: “Some schools and colleges arrange for their students to participate in activities with employers or local business people. Have you done any of the following activities arranged by your school or college since you turned 14: internship or work experience; being mentored; enterprise competitions and challenges; careers advice; CV or interview workshops/ practice; workplace visits or job shadowing; taking part in classroom discussions about job prospects or employment. Answers were coded as: (1) Yes, once; (2) Yes, more than once; (0) No, never, Don’t know, Prefer not to say. Given the age range of our sample and their different activity states we conducted robustness checks with a subsample of those who were aged 19+ or those below 19 and not in education (n=2998) to ensure the models estimate the relationship of past rather than concurrent school-based career preparation activities with career adaptability and the other measures.

Career Adaptability was measured with the 12 item Career Adapt-Abilities Scale–Short Form (CAAS-SF) (Maggiori et al., 2017) which is strongly correlated with the widely used 24-item CAAS (Savickas & Porfeli, 2012). For the analysis we focus on composite career adaptability aggregated across the four dimensions of concern (e.g., “thinking about what my future will be like”), control (e.g., “taking responsibility for my actions”), curiosity (e.g., “observing different ways of doing things”) and confidence (e.g., “solving problems”), which is a more reliable indicator and stronger predictor of relevant outcomes than individual components (Rudolph, Lavigne, & Zacher, 2017).

Career Uncertainty was measured with two items, asking students about the likelihood that they will have a job that pays well or a job that they enjoy doing (“Thinking about how you see your future, what are the chances that ...?”). These two questions were adopted from the 10-item Perceived Life Chances Scale (Jessor, Donovan, & Costa, 1988) which has been established as a valid predictor of psycho-social adjustment of young adults (Hitlin & Johnson, 2015).

Career Worries were assessed with two questions: “To what extent, if at all, do you think your career prospects have been affected by the coronavirus pandemic? and “Overall, to what extent do you think your progress in learning job skills has been affected by the coronavirus pandemic?”. Both questions were coded on the same response scale ranging from “Worsened

Navigating an uncertain future

a lot”/ “worsened a little”/ “Remained the same as it would have done if there were no coronavirus pandemic”/ “Improved a little”/ “Improved a lot“.

Life satisfaction, the cognitive evaluation of one’s life as a whole was assessed using a single item: “Overall, how satisfied are you with your life nowadays?” with responses options from 0 “Not at all satisfied” to 10 “Completely satisfied”. The single-item question is used in many social surveys in the UK (ONS, 2018) and beyond (VanderWeele et al., 2020) and performs similarly to multi-item life satisfaction measures across various contexts (Cheung & Lucas, 2014).

Control variables

The estimation models include a range of time-invariant socio-demographic control variables. These comprise age; gender; region of residence in the UK; parental level of education (differentiating parents with (1) secondary education or below, (2) upper-secondary level attainment as measured by A-levels or equivalent, and (3) those who achieved tertiary qualifications); receipt of free school meal during school years (a widely used indicator of childhood poverty (Day et al., 2016)); as well as wave to control for variations in the measures over time.

Analytical strategy

We use linear Structural Equation Modelling (SEM) as implemented in STATA 17 in the pooled sample. SEM enables us to simultaneously estimate the structural relationships of school-based career preparation activities, career adaptation, career worries and uncertainty and life satisfaction. Pooling the sample treats the dataset as a cross-section to gain statistical power. This is appropriate because the hypotheses aim to establish longer-term relationships between school-based career preparation and later life outcomes. However, the sample includes repeated observations within individuals and is thus unlikely to meet the joint normality assumption of standard SEM. To adjust for potential autocorrelation within individuals over time in hypothesis tests, we compute standard errors clustered by panel members using the generalized Huber/White/sandwich estimator as implemented in STATA 17. Estimates use the supplied survey weights to correct potential sampling bias. Overall model fit is assessed using the coefficient of determination (R^2) and standardized root mean squared residual (SRMSR). Other commonly reported goodness of fit metrics such as the root mean square of approximation or the comparative fit index rely on the assumption of joint

normality of the observed variables, which will be violated due to repeated observations for individuals in the pooled sample. This is an observational study and makes no causal assertions. Terms such as ‘effect’ are used in a purely statistical sense.

Results

Table 1 shows the measurement models for the latent variables. All correlations coefficients between the predicted latent variable and the observed indicators were $>.43$ suggesting appropriate assessment. Figure 1 shows the structural model linking the focal variables providing standardised (β) path coefficients. The model has a good model fit ($R^2 = 0.2$, SRMR=.023: within the limit of 0.08).

The findings show that school-based career preparations are significantly and positively associated with career adaptability and life satisfaction, and negatively with career uncertainty (see Figure 1). Career adaptability in turn is negatively associated with career worries and uncertainty and is positively associated with life satisfaction. In addition, we find negative associations between career worries and uncertainty and life satisfaction. The findings suggest sequential mediating processes, where the effect of school-based career preparation activities on career uncertainty and life satisfaction is partly mediated via career adaptability. In addition, we find a direct association between career adaptability and life satisfaction as well as mediation via career worries and uncertainties. Interestingly there is no direct association between school-based career preparation and COVID-19- related career worries. Overall, the estimated direct effects between the endogenous variables tended to be small using common thresholds (small effect size = 0.1 - 0.29).

Inspecting the correlations between the endogenous and the control variables (Table 2) shows evidence of small socio-demographic variations in the endogenous variables. Older study members reported higher levels of career adaptability ($\beta=0.07$), fewer career worries ($\beta=-.19$) but lower levels of life satisfaction all else equal ($\beta=-.09$) than their younger peers. Women reported slightly lower levels of career preparations ($\beta=-0.1$), and marginally greater career worries ($b=.06$), and lower levels of life satisfaction ($\beta=-0.1$) than men. Ethnic minority youth reported minimally lower levels of life satisfaction ($\beta=-0.06$) compared to white study members. Young people with higher educated parents tended to report higher levels of career preparation ($\beta=.14$), slightly greater career adaptability ($\beta=.07$) and life satisfaction ($\beta=.06$) as well as slightly elevated career worries ($\beta=.08$) than those with

parents educated to upper-secondary levels. Those who were eligible for free school meals reported higher levels of career preparation activities ($\beta = .15$) and fewer career worries ($\beta = .08$) than those from better-off backgrounds. Regarding regional variations we find that young people in London report higher levels of career adaptability than those in other regions.

There are also differences over time, with average career preparation increasing since February-22, career worries declining since May 2021 and life satisfaction increasing since July 2021, reflecting less stringent lockdown restrictions and economic recovery after the COVID-19 shock.

Running the models only for those age 19 years plus or those younger than 19 but no longer in education showed the same central results (i.e., similar effect sizes and patterns of statistical significance) as the ones reported in Figure 1, suggesting robustness of findings within different age-subsamples.

Discussion

This study suggests that participation in school-based career preparation activities is directly associated with higher levels of career adaptability, lower career related uncertainty, and higher life satisfaction. Using data from a survey of young people (YEAH survey) conducted in the aftermath of the initial COVID-19 shock, this is one of the first studies to assess the relevance of school-based career preparation activities in supporting career construction processes in the face of uncertainty and a changing education and employment landscape. We derived seven hypotheses within a sequential mediating model of career construction. The findings add to the debate regarding the malleability of career adaptability as postulated in career construction theories (Koen et al., 2012), and confirm key assumptions regarding the role of career adaptability resources in supporting effective career-related cognitions as well as life satisfaction (Savickas et al., 2009; Super et al., 1996). In addition, the findings provide new insights into the processes linking school-based career preparation activities to the career construction process and of young people.

The findings confirm the relationship of career adaptability with school-based career preparation activities (H1). Moreover, career adaptability resources are associated with effective career-related cognitions (reduced career worries and uncertainty) even in the face

of a major economic upheaval (H2) and with higher levels of life satisfaction in young people (H6).

In addition, the findings provide support for the assumption that school-based career preparation activities can promote young people's career construction processes. We find that school-based career preparation activities are associated with more career adaptability resources (H1), lower career uncertainty (H2) and higher life satisfaction (H5). Notably, school-based career preparation activities are not significantly associated with COVID-19-related career worries, confirming assumption H2 only partially. Both career worries and uncertainty are however significantly associated with career adaptability (H3). The potential effect of school-based career preparation activities on career worries appears to be mediated via career adaptability (H4), while for career uncertainty this mediation is only partial. Potentially, school-based career preparation activities directly enable young people to develop specific longer-term career ambitions and a firm view about their future employment, but they cannot fully prepare young people to handle the short-term interruptions of changing education and employment opportunities due to the COVID-19 pandemic, unless through relevant career adaptability resources. Both career uncertainty and in particular career worries show a negative association with life satisfaction (H7), highlighting the relevant role of career-related cognitions in young people's lives. Notably, life satisfaction appears to be more affected by current career worries than longer-term career expectations, supporting assumptions that life satisfaction is strongly influenced by one's immediate situational context (Diener et al. 2018). For a comprehensive understanding of career construction processes it is thus important to consider how individuals adjust to the challenges of a changing social context and to differentiate between short- and longer-term strategies.

The findings confirm assumptions postulated within career construction theory, in particular regarding the role of career adaptability as a relevant and learnable resource to support career relevant attitudes and cognitions as well as life satisfaction (Savickas et al., 2009). In addition, the study provides new insights into the processes linking school-based career preparation activities with career-relevant attitudes and cognitions (Cedefop, 2021; Mann et al., 2020) as well as life satisfaction. In particular, the study tested sequential mediation processes linking school-based career preparation activities to career adaptability, career-related cognitions and to life satisfaction. We find that school-based career preparation activities have a direct effect on career adaptability, career uncertainty and life satisfaction, as

described above. The direct effect of school-based career preparation activities on career uncertainty suggests that these activities address longer-term career decision making processes (Hirschi & Laege, 2007; Perdrix et al., 2012), but there is no direct association with concurrent COVID-19 related career worries. Moreover, career adaptability partially mediates the influence of school-based career preparation activities on subsequent career-related cognitions and life satisfaction. Career uncertainty and career worries, in turn, independently mediate the association between career adaptability and life satisfaction. The findings thus indicate that school-based career preparation activities partly operate through career adaptability and career-related cognitions to influence life satisfaction.

The findings also suggest a direct association between school-based career preparation activities and life satisfaction. Taking into account the direct effect of school-based career preparation activities on career adaptability and career uncertainty, it can be assumed that the school-based career preparations contribute to subjective wellbeing by supporting the development of career adaptability (i.e., career planning and exploration, decision making and self-confidence), future career expectations and potentially also by establishing connections to employers and exposure to the labour market.

Regarding the influence of the control variables, the findings suggest that some facets of relative disadvantage (free school meal receipt, ethnic minority) predicted greater engagement in school-based career preparation activities. Future studies will have to show if these groups benefitted especially from the school-based career preparation activities regarding later employment outcomes. Interestingly fewer women than men participated in school-based career preparation activities, potentially suggesting that the activities were more attractive to males. It could also be the case, given that females are generally more academically oriented (Schoon & Heckhausen, 2019). They also show slightly higher levels of career adaptability than males. The career preparation activities on offer might have been more targeted at skilled rather than professional jobs, or jobs that women were less interested in. The findings also suggest that all things considered, those who are older expressed more COVID-19 related career worries, despite having higher levels of career adaptability than their younger peers. This finding thus only partly confirms the assumption that career decision making difficulties decrease with age (Perdrix et al., 2012), highlighting the importance of contextual influences. Career adaptability might be higher but COVID-19-related career worries are also high for those who are on the cusp of establishing themselves in the labour market compared to those who are still in education in the aftermath of a global

pandemic. Future research needs to study these contextual influences in more detail. Interestingly, the study also found that those in Greater London show higher levels of career adaptability than those in other regions, possibly pointing to the importance of greater employment opportunities and exposure to different employment contexts in the capital city.

Strengths & Limitations

In interpreting the findings, a number of limitations have to be considered. The online study is largely based on self-reports not observed data. The sample is based only on those young people with access to the internet, limiting the generalisation of findings to this group. Family SES was assessed based on reports of young people, which can introduce potential reporting bias. The relatively small sample limits the scope for subgroup analysis to test if the estimated relationships hold across different demographic groups. It would be worthwhile to examine differences in the pathways linking school-based career preparation activities to career construction processes among different subpopulations in more detail. It is conceivable that those from relative disadvantaged background (i.e., ethnic minority groups or those who are eligible for free school meals) benefit relatively more from the participation of these activities. Moreover, the short time dimension of the panel limits the analyses of potential associations between school-based career preparation activities and longer-term career development in the aftermath of the pandemic. We did not make full use of the longitudinal nature of the data and future studies should examine intra-individual variations over time or potential reverse causalities in more detail. Finally, the non-random nature of the sample and focus on the UK hampers generalisability to other contexts. Despite these limitations, this study enables a more comprehensive understanding of the processes linking school-based career preparation activities to career construction processes and life satisfaction of young people during the COVID-19 pandemic. Indeed, a major strength of the study is the assessment of a wide range of school-based career preparation activities offered in collaboration with local employers and business, and the focus on a current cohort of young people coming of age during a major health pandemic. Yet, the survey does not include information on the quality or exact content of the career preparation activities or the qualifications of the instructors and future studies should examine these in more detail.

Conclusion

As suggested by the sequential mediating model of career construction, school-based career preparation activities offered in collaboration with local employers and business can support

Navigating an uncertain future

young people in the development of career adaptability resources and career-relevant cognitions. Career-related activities while studying can also contribute to higher levels of life satisfaction even in times of a major global pandemic. The findings highlight the crucial role of schools in preparing young people for the world of work. Ideally career preparation activities should be done in collaboration with employers, facilitating social networks, exposure to real-life challenges and opportunities, and providing relevant skills of how to manage new social roles. Especially in times of economic upheaval and uncertainty, such as those encountered in the aftermath of the global COVID-19 pandemic, individuals have to increasingly rely on their own resources and networks. Creating the right conditions in the school context to prepare young people for this undertaking should not only be focused on specific tasks such as making career decisions but preparing young people for both predictable and unpredictable transitions and changes in their career paths ahead.

Figure 1: Sequential Mediating Model of Career Construction: Sequential mediating processes linking school-based career preparation activities, career adaptability, adaptive cognitions and life satisfaction.

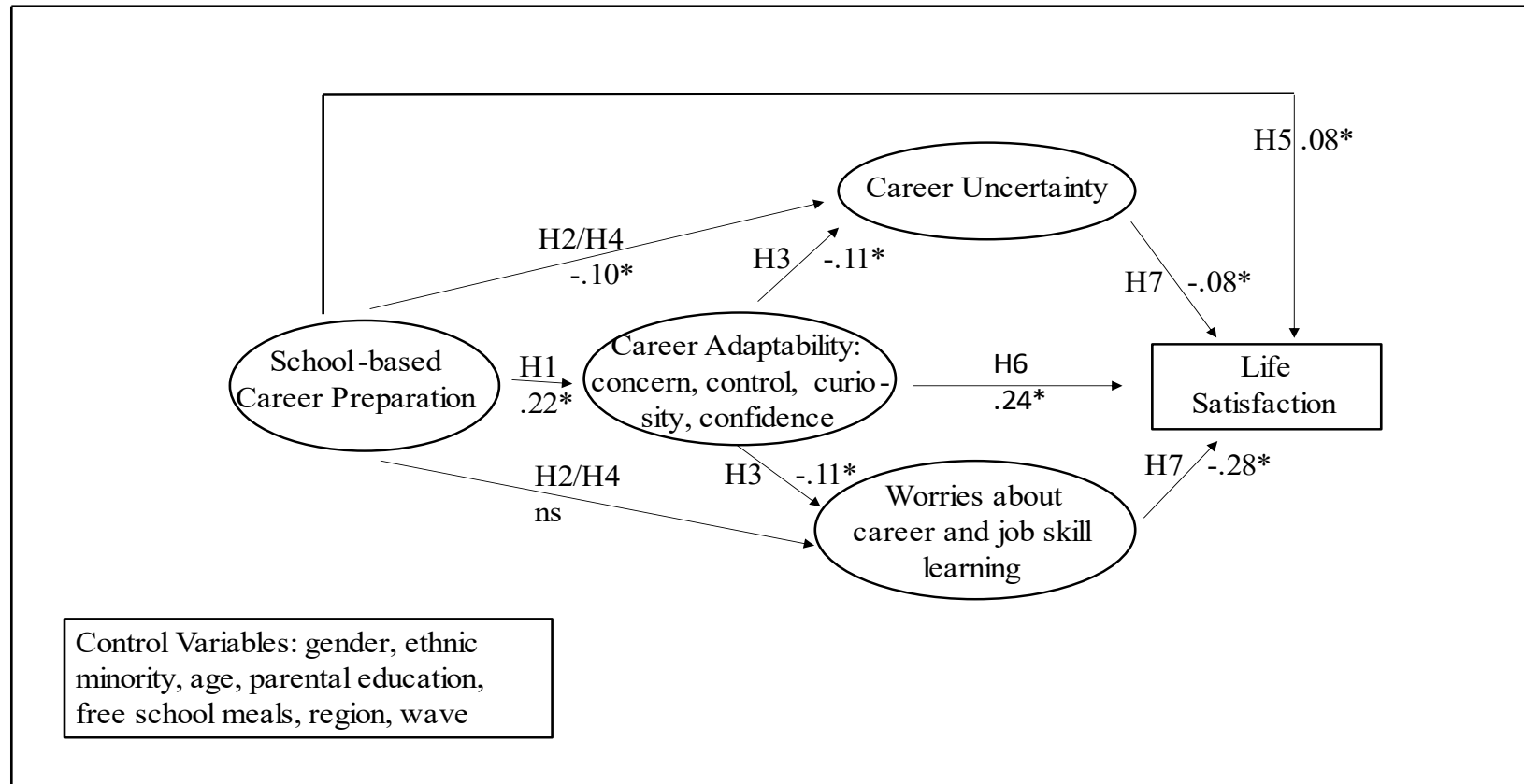


Table 1: Measurement Models: Correlation between observed indicators and the latent variables (N=4,040).

	Correlation	
	Coefficient	R ²
School based Career Preparation		
Internship or work experience	.510	.260
Being mentored	.480	.231
Enterprise competition and challenges	.430	.185
Careers advice	.502	.252
CV or interview workshops/practice	.583	.340
Workplace visits or job shadowing	.547	.299
Taking part in classroom discussion about job prospects/employment	.486	.236
Career Adaptability		
Concern (planning)	.736	.542
Control (self-determination)	.779	.597
Curiosity (career exploration)	.802	.644
Career self-confidence	.771	.594
Career Uncertainty		
Will have a job that pays well (don't know)	.561	.315
Will have a job that you enjoy doing (don't know)	.801	.643
Career Worries		
Job skill learning affected by the coronavirus pandemic	.679	.453

Navigating an uncertain future

Career prospects have been affected by the coronavirus pandemic .685 .469

Table 2: Correlations between the endogenous and control variables (N=4,040).

	Career Preparation	Career Adaptability	Career Uncertainty	Career worries	Life Satisfaction
Controls					
Age	-0.021	0.072**	-0.020	-0.186***	-0.092***
Female	-0.109***	0.035	0.018	0.059*	-0.099***
Ethnic Minority	0.046	-0.024	0.032	0.028	-0.057***
High parental education	0.142***	0.072**	-0.012	0.078**	0.060**
Low parental education	-0.019	0.020	0.023	-0.005	-0.031
Free school meals	0.153***	0.004	0.001	-0.074**	-0.011
Region					
North & Yorkshire (REF)					
North West	-0.036	-0.022	0.017	-0.023	0.026
Midlands	-0.012	-0.001	-0.024	-0.001	-0.026
South West & Wales	0.005	0.035	0.011	0.006	0.000
South East & Anglia	0.000	0.020	-0.012	0.023	-0.020
Greater London	0.041	0.091**	0.011	-0.018	0.011
Scotland	-0.036	0.003	0.020	0.030	0.003
Northern Ireland	0.071	-0.008	0.003	-0.006	0.001
Wave					
3	-0.002	0.005	0.034	-0.004	0.045**

Navigating an uncertain future

4	0.010	0.010	0.012	-0.091***	0.044*
5	0.047*	-0.014	0.000	-0.054*	0.042*
6	0.111***	-0.007	0.002	-0.091***	0.051**

Estimated beta coefficients. Clustered standard errors to adjust for repeated observations within individuals. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

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