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The Transition from School to Work and its Relationship with Psychological Well-being: A Systematic Literature Review

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Abstract

The school-to-work transition is a major challenge for young individuals (Schoon & Silbereisen, 2009). The present paper offers a simplistic view through a systematic literature review of the personal resources that determine psychological well-being during the school-to-work transition as well as the environmental resources that moderate this relationship. The review was conducted using the theoretical background of the Demands-Resources model (Baker & Demerouti, 2017), the Person-Environment fit (Eccles et al., 1993; Eccles & Roeser, 2009; Swanson & Fouad, 1999), and the Conservation of Resources theory (Hobfoll, 2001). In the review, 14 articles were included for the analysis. In this study, evidence was found for several personal resources determining well-being as well as several environmental resources that moderate this relationship. It is concluded that during the school-to-work transition, individuals need several personal resources such as psychological and career resources to master their environment during their transition. Support from family, friends, and institutions improves the chances of a better adjustment and a better P-E fit following a school-to-work transition. A lack of resources is detrimental to an individual's well-being. Several other implications and future implications are discussed in the paper.

Keywords: school-to-work transition, personal resources, environmental resources, psychological well-being

The Transition from School to Work and its Relationship with Psychological Well-Being: A

Systematic Literature Review

In modern societies, the transition from school-to-work is a major challenge for young

individuals (Schoon & Silbereisen, 2009). The school-to-work transition is a step in which

graduate students formulate their 'career identity' (Krumboltz & Worthington, 1999). The

transition from school-to-work begins when individuals form a career identity at school

(Krumboltz & Worthington, 1999) and the transition ends when the individual has entered the

job market or assumed a work role or identity (Salmela-Aro, 2012). According to Ng and

Feldman (2007), a successful school-to-work transition requires individuals to change their core

life role from the student to employee. According to Ibarra (2004), a transition is a process where

an individual is in between leaving one role (for example, a job role), while simultaneously

entering another role without entirely being a part of it (Levinson, 1978). Career transitions can

be defined as the period during which an individual is changing roles or changing their

orientation toward a previously held role (Louis, 1980). Transitions are both a process of change

and the period during which the transition occurs. Several theorists (e.g., Adler & Castro, 2019;

Bliese et al., 2017) describes the process of a school-to-work transition as, one with a beginning,

the transition period itself, and an end.

The school-to-work transition is either turbulent, involving various attempts to establish

oneself in the labor market or it can be smooth (Schoon & Silbereisen, 2009). Transitional

demands can be defined as individual-level representations of challenges that concern the

assumption of new social roles such as education, work, and family formation on a structural

level while facing rapid social changes (Schoon & Silbereisen, 2009). Several demands can

potentially impact an individual's psychological well-being (PWB) and decrease their level of

engagement (Upadyaya & Salmela-Aro, 2013a) during the transition from school-to-work. For example, career uncertainty and the need for new knowledge regarding personal and career development (Schoon & Silbereisen, 2009). To summarize, this stage of life involves several demands and can be difficult, yet some individuals deal with this situation better than others. A successful work transition depends "largely on the individual's capacity to manage the different demands relating to the transition and particularly on their psychological resources" (Fernandez et al., 2008, p. 385).

According to Schlossberg et al. (1995), personal resources as well as social support and interpersonal relationships are some factors that affect a person's adjustment during the school-to-work transition. This highlights the role of personal and environmental resources during school-to-work transitions. Resources can be defined as non-directional physical, psychological, social, or organizational characteristics that reduce demands and help achieve work or study-related goals (Bakker & Demerouti, 2008). Environmental resources are the external or environmental factors that support a person in successfully coping with demands, attaining goals, and achieving personal growth and development (Demerouti et al., 2001; Lee et al., 2020). On the other hand, personal resources can be defined as "positive self-evaluations that are linked to resilience, and refer to an individual's sense of ability to successfully control and impact on his or her environment" (Airila et al., 2014; p.90).

The current study aims to systematically review the relevant literature to identify the relationship between the school-to-work transition and PWB during the transition from school-to-work. The primary goal of this study is to review the several personal and environmental resources that impact PWB during the transition from school-to-work. The main focus of this review is to identify the environmental resources that moderate the relationship between personal

resources and PWB, and not the main effects of environmental resources on PWB. The

Demands-Resources model (Baker & Demerouti, 2017), the Person-Environment fit (Eccles et

al., 1993; Eccles & Roeser, 2009; Swanson & Fouad, 1999), and the Conservation of Resources

theory (Hobfoll, 2001) form the backbone of the theoretical framework of the present study.

Psychological Well-being in the Transition from School to Work

The term well-being is a "broad and multifaceted construct" (Tov, 2018; p.1). In this

study, psychological well-being (PWB) is inspired by a combination of hedonic and eudemonic

lines of thought. PWB is dependent on the fulfillment of certain needs or qualities that are

essential for one's psychological growth and enables an individual to reach their full potentials

(Ryan & Deci, 2001) such as an individual's ability for self-acceptance, positive relationships

with others, autonomy, environmental mastery, purpose in life, and personal growth (Ryff,

1995). Van de Weijer et al. (2018), suggests that "self-actualization" referring to the realization

or fulfillment of one's potential is a term that is used to describe PWB. Subjective well-being,

quality of life, mentality, mood, and affect are also used for describing PWB (Diener et al.,

1999). Inspired by both hedonic and eudemonic lines of thought, Seligman (2013) presented a

model of PERMA: positive emotion, engagement (flow), (positive) relationships, meaning, and

achievement (Tov, 2018). Positive PWB is not only important for an individual's ability to feel

happy but also draws a positive impact on a person's personal, academic, and life achievements

(Mehmood & Shaukat, 2014). In this paper, indications of adjustment, growth, fulfillment of

one's needs, life satisfaction, and mental health during the school-to-work transition are included

in the definition of PWB.

In the school-to-work transition, personal and environmental resources have significant

effects on well-being. According to Lee et al. (2020), resources were identified as 'valuable

assets' that enhanced well-being (Sulea et al., 2012). Individuals strive to obtain, retain and protect resources as a means to increase well-being and prevent future losses (Hobfoll, 1989). Resources are important in predicting PWB in the transition from school-to-work. According to the demands and resources model, high engagement in studies/work promotes one's subsequent well-being, personal growth, and learning, and decreases ill-being (Salmela-Aro & Upadyaya, 2014). Following the same framework, resources are an antecedent of engagement (Lee et al., 2020), which helps reduce the ill effects of demands on well-being (Upadyaya et al., 2021).

Several theories describe the interplay between (personal and environmental) demands and resources in the transition from school-to-work. Firstly, research using the Job Demands-Resources model (Baker & Demerouti, 2017), shows that resources can predict young adults' study and work engagement. The role of resources becomes prominent during the transition from school-to-work, as young adults make salient decisions regarding further education and career paths (Upadyaya et al., 2021). Personal psychological resources (e.g., self-efficacy, self-esteem, resilience, and optimism) positively predict study and work engagement (Bakker & Demerouti, 2008). Environmental resources (e.g., social support and opportunities for autonomy) lead to higher study and work engagement (Mäkikangas et al., 2010), and help with an adaptive transition to work (Upadyaya & Salmela-Aro, 2013). Secondly, the conservation of resources (COR) theory suggests that (Hobfoll, 2001), individuals have finite resources and are motivated to acquire and protect their resources. Job transitions are some of the significant stressors that have the potential to strip away valuable resources (Feldman & Ng, 2012). The COR theory also makes an important contribution to our understanding of the nature of resources; it suggests that resources are not isolated and independent. Instead, they exist in caravans (Hobfoll, 2011). Resource caravans can exist in terms of personal resources that group together to form a caravan.

For example, an individual might use several resources such as self-efficacy, optimism, and energy together to form a resource caravan. The COR theory also identifies the presence of 'caravan passageways' (Hobfoll, 2011). Caravan passageways are conditions in an individual's environment that foster, support, enrich and protect the caravan of resources that individuals possess. This goes hand in hand with the person-environment (P-E) fit theory that refers to a person's adjustment to their new environment (Feldman & Ng, 2012). According to Swanson and Fouad (1999), a successful school-to-work transition includes a 'fit' between the person and the environment post-transition. Changes in engagement and well-being during the transition from school-to-work, due to alterations in person and school/work-related resources, can affect the person-environment fit (Eccles et al., 1993; Eccles & Roeser, 2009). When an environment provides resources that are in alignment with an individual's needs, it results in positive outcomes such as an increase in eudaimonia and well-being. Conversely, an environment that is unsuitable for an individual's needs, leads to negative consequences such as an increase in anxiety due to a mismatch between the person and the environment, resulting in a poor person-environment fit (Salmela-Aro, 2012; Swanson & Fouad, 1999; Upadyaya et al., 2021).

In this review, resources are defined according to the aforementioned theories such as the Job Demands-Resources model, the Conservation of resources theory, and the P-E fit theory, as well as, a taxonomy proposed for differentiating resources for employee engagement by Lee et al. (2020). For this study, resources are distinguished into personal and environmental resources. Lee et. al (2020), differentiates personal resources into several subcategories: cognitive (e.g., human capital, knowledge), psychological (e.g., optimism, self-efficacy, hope, self-esteem), physical (e.g., energy, time), and career (e.g., career identity) resources. Environmental resources can be differentiated into the following subcategories: social resources (e.g., social relationships,

social support) and home resources (e.g., family support), school resources (e.g., mentor support, teacher support), financial resources (e.g., money, wealth, scholarship), job resources (e.g., vocational training, traineeship), societal resources (e.g., opportunities to study/work). In several studies (e.g., Schoon & Lyons-Amos, 2017), the term personal resources are often interchangeably used as agentic resources while environmental resources are often defined as structural resources. Based on the subcategorization of personal and environmental resources, it is evident that personal resources are internal resources that an individual might possess or can develop to master their environment, while environmental resources are external resources from an individual's environment that can foster support for an individual while tackling demands.

Personal Resources

Cognitive resources include intellectual or mental assets (knowledge, skills, and ability) that are accumulated through learning and personal development. Mental and emotional competence- the ability to perform mental and emotional tasks can influence engagement. Psychological resources are mental and emotional assets that foster positive outcomes (e.g., psychological capital, psychological empowerment, emotional intelligence, pride, compassion, self-efficacy, optimism, resilience, hope, conscientiousness, competitiveness, self-esteem, and appreciation). Physical resources are the physical or functional ability to perform work (e.g., energy, health, sleep hygiene, recovery in the morning). Career resources are an individual's work experience outcomes (Gunz et al., 2007) and ability to cope with challenging work environments (Venter et al., 2013). Seniority, psychological career resources, career progression and planning, career adaptability, and career identity are all examples of career resources.

Ryan and Deci (2001) identified several personal resources as antecedents of well-being such as perceived competence, self-efficacy, autonomy, and goal integration. They highlighted

the importance of these factors in the development of an individual's sense of competence. In a longitudinal study by Ouweneel et al. (2011), personal resources such as hope, optimism, and self-efficacy were reciprocally related to engagement in students. In another longitudinal study with 300 Finnish university students (Salmela-Aro et al., 2011), personal resources such as optimism and self-efficacy were identified as essential in helping students master their social environment. Optimism can cushion occupational stress and has the potential to weaken the harmful effects of work-related stress (Mäkikangas et al., 2004). Similarly, dysfunctional social strategies such as social avoidance and withdrawal could weaken self-efficacy beliefs that could lead to difficulties in facing social obstacles at work (Baumeister et al., 2003). Given the importance of personal resources in predicting engagement and PWB in the transition from school-to-work, the first research question in this review is:

What are the various personal resources that determine psychological well-being in the transition from education to work?

Environmental Resources

Social resources can be social support and interpersonal networks that are a source of emotional support and influence engagement. According to Hakanen et al. (2011; p.10), home resources can be defined as "the aspects of the home situation that help reduce home demands and foster growth, development, and well-being in the home domain". Home resources refer to the support from home that helps an individual's development and well-being (Lee et al., 2020). Home resources are often paid little attention to in research, but can be an important resource for young adults during the transition from school-to-work.

Environmental resources have the potential to strengthen personal resources in individuals. Environmental resources can help conserve personal resources when demands are

high (Edwards et al., 1998). Referring back to the COR theory, 'resource passageways' (Hobfoll, 2011) can be identified as environmental resources that help conserve and protect the caravans of psychological resources. Touching upon the P-E fit theory, an environment where an individual can develop new personal resources and strengthen old resources suggests a better fit between the person and the environment (Edwards et al., 1998). From a developmental perspective, interpersonal social supportive relationships are potential resources that aid in overcoming challenges and promoting adaptive educational and career development (Salmela-Aro, 2012). This can be in the form of emotional support offered by close relationships that contribute as a buffer against the negative effects of contextual risks (Matsen & Coatsworth, 1998). Individual support from family, teachers, close friends, and relationships can contribute significantly to career adaptability (Salmela-Aro, 2012). Based on the aforementioned literature the second research question for this review is:

What are the environmental resources that strengthen (moderate) the effects of personal resources on psychological well-being?

Methods

Literature Search

The current research draws its literature from a larger ongoing project on occupational transitions and well-being at the University of Groningen. In the larger project, relevant papers were searched through the following databases: PsycInfo, ERIC, SocIndex, MEDLINE, Business Source Premier, and Web of Science. The records were searched until November 2020. The search was conducted using the operators 'AND/OR'. Several keywords as well as variations of keywords were searched for: *work transitions, school to work, career change, retirement, reemployment, well-being, health, employee, and longitudinal.* As seen in Figure 1, the search

identified 7831 papers. After screening and the removal of duplicates, the search yielded a total of 4985 papers.
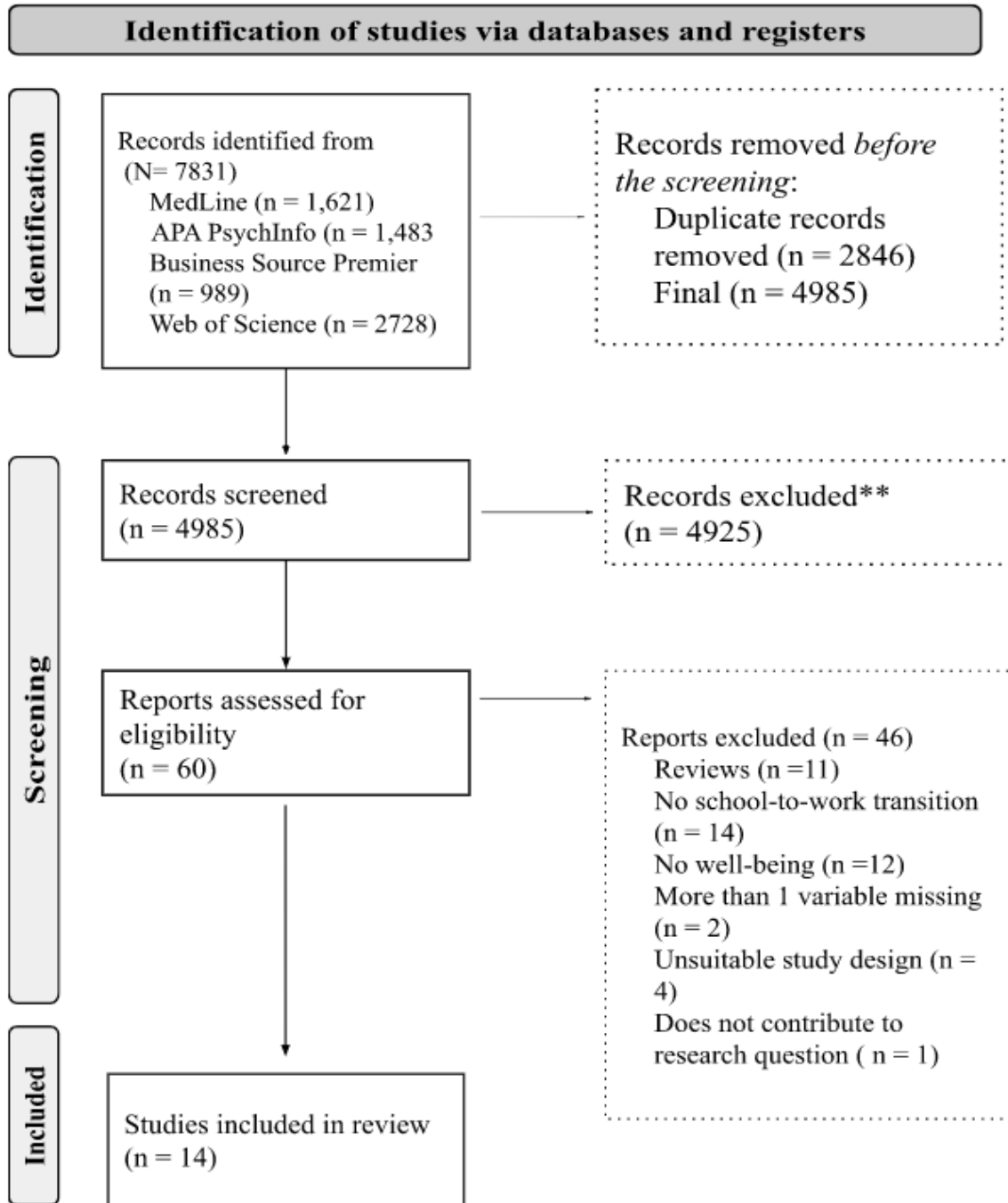
Inclusion and Exclusion Criteria

The 4985 articles were included in an excel sheet for coding and screening purposes. In the larger project, the articles were included according to the following guidelines. The inclusion criteria stated that the studies had to be quantitative and longitudinal, had to investigate well-being/health, had to include actual transitions, and articles had to measure well-being at more than one-time point. The study excluded non-human related papers, studies that were not written in German, English, or French, and variables such as voluntary work and mortality. Case studies, qualitative studies, and book chapters were also excluded.

For the current study, the general inclusion criteria were the same as for the larger project. Based on the research questions as stated above, the following criteria were specific to this research paper: The study had to include school-to-work transitions (or variations thereof), well-being, and personal and environmental resources. Only the studies in English were included in the present paper. Papers that did not have all three prerequisites namely a school-to-work transition, well-being, and resources were excluded. Additionally, papers that were not relevant to the research questions were also excluded. For example, if a study measured resources and well-being but did not provide evidence that could be analyzed for the review were excluded. An initial search was conducted within the excel sheet of the broader project using the following keywords: school-to-work, education, employment, career, young adults, and emerging adult. As seen in the PRISMA flow chart (Figure 1), the initial search yielded 60 papers. Based on the exclusion criteria 46 papers were removed during the screening procedure. A final total of 14 papers were included in the present study.

After the inclusion criteria were met, the studies were further analyzed according to a study quality matrix for longitudinal research. This was done according to the criteria (see Appendix A) modified by de Lange et al. (2003). This includes assessments for study design, number, and interval of measurements, psychometric quality of measures, method of analysis, and nonresponse analysis. The criteria ranged from insufficient to very good for all the criteria. The criteria ensured that the study design includes the possibility of examining causal assumptions. These assumptions were only valid if there was a significant relationship between the predictor and the outcome variable, there was temporal precedence over time, the relationship was not due to a third variable, and the relationship should be plausible and can be backed by a theoretical explanation. Cross-lagged effects can also be interpreted as causal (Shadish et al., 2002). All the studies in this review were rated as either sufficient, good, or very good, indicating that studies reviewed in this review are of good quality based on the recommendations for assessing the quality of longitudinal research.

Figure 1

PRISMA flow diagram

Identification of studies via databases and registers

Identification

Records identified from
(N= 7831)
    MedLine (n = 1,621)
    APA PsychInfo (n = 1,483
    Business Source Premier
    (n = 989)
    Web of Science (n = 2728)

Records removed *before the screening*:
    Duplicate records
    removed (n = 2846)
    Final (n = 4985)

Screening

Records screened
(n = 4985)

Records excluded**
(n = 4925)

Reports assessed for
eligibility
(n = 60)

Reports excluded (n = 46)
    Reviews (n =11)
    No school-to-work transition
    (n = 14)
    No well-being (n =12)
    More than 1 variable missing
    (n = 2)
    Unsuitable study design (n = 4)
    Does not contribute to
    research question (n = 1)

Included

Studies included in review
(n = 14)

Note: PRISMA flow diagram. Adapted from (Page et al., 2021)

Coding

    After the initial extraction of the articles, the papers were further coded to identify the

various variables in the articles by following a concrete codebook. A brief harvest plot as seen in

Table 1, lists an overview of the articles that were coded and included in the analysis, alongside the type of resources and the well-being indicator. The articles were coded to extract language, source, publication status, study design (e.g., quantitative, qualitative), research design (e.g., panel study, two-wave), observation period, and waves of the study, whether it had a school-to-work transition, demographic information (country, mean age, % female, sample size), variables and control variables, whether it included resources and the type of resources (coded in Table 1 as 1 = personal resources, 2 = environmental resources, 3 = both types of resources), definition and operationalization of well-being (indicated in Table 1), measurement type (e.g., self-report, archival data), theoretical background, reliability, type of statistical analysis, key results, dropout analysis and retention rate, the inclusion of paper according to the inclusion criteria (0 = yes, 1 = no). The articles summarized in the harvest plot are the articles that were coded with a (0 = yes) in the inclusion of the paper.

Descriptive Analysis

The 14 articles that were selected to be analyzed and summarized in the present systematic review are presented in Table 1. Table 1 also includes a general overview of the type of resources and the type of well-being measured in the articles. In the articles, the study samples were collected from the following countries: Finland (n = 4), the United Kingdom (n = 2), the United States of America (n = 1), Sweden (n = 1), Germany (n = 3), Korea (n = 2) and Australia (n =1). Some of the articles were published in non-psychological journals such as the *Economic Record* and the *Journal of Clinical Nursing*. The selected articles have more than two waves of data collection, except for one study with only two waves. There was one article with a mixed-method study design (Rainbow & Steege, 2019), and only the quantitative data was considered

for the analysis. One article reported more than one transition (Roberson et al., 2017), but only

the school-to-work transition was included in the analysis.

Analysis

The literature was analyzed in the following categories: 1) The relationship between

personal resources and well-being during the school-to-work transition, 2) The relationship

between environmental resources and well-being during the school-to-work transition and 3) The

environmental resources that moderate the relationship between personal resources and well-

being during the school-to-work transition. Eight articles only measured personal resources, two

articles mention only environmental resources and four articles reported findings relevant to both

personal and environmental resources. A wide variety of resources were reported in the selected

literature and will be discussed in detail in the results section.

Table 1
Literature Matrix

Title	References	Resources	Well-being indicator
A socio-ecological model of agency: The role of structure and agency in shaping education and employment transitions in England	(Schoon & Lyons-Amos, 2017)	3	Life satisfaction
Cross-lagged associations between study and work engagement dimensions during young adulthood	(Upadyaya & Salmela-Aro, 2015a)	1	study/work and life satisfaction, depressive symptoms
Development of early vocational behavior: Parallel associations between career engagement and satisfaction	(Upadyaya & Salmela-Aro, 2015b)	1	career satisfaction and engagement
Developmental dynamics between young adults' life satisfaction and engagement with studies and work	(Upadyaya & Salmela-Aro, 2017)	1	Life satisfaction
Developmental Trajectories and Health Outcomes Among Emerging Adult Women and Men	(Roberson et al., 2017)	2	health and psychological distress
Goal Engagement During the School-Work Transition: Beneficial for All, Particularly for Girls	(Haase et al., 2008)	1	positive affect - subjective well being
How Does Life Satisfaction Change During the Transition from School to Work? A Study of Ninth and Tenth-Grade School-Leavers in Germany	(Siembab & Stawarz, 2019)	3	life satisfaction
Longitudinal Relationships Between Planned Happenstance Skills and Life Adjustment and the Moderating Role of Career Barriers	(Kim et al., 2018)	1	psychological well-being
Mental Health Improves After Transition From Comprehensive School to Vocational Education or Employment in England: A National Cohort Study	(Symonds et al., 2016)	3	mental health: anxiety, depression
Self-efficacy and successful school-to-work transition: A longitudinal study	(Pinquart et al., 2003)	1	Job satisfaction (subjective career outcome)
The happiness of young Australians: Empirical evidence on the role of labor market experience	(Dockery, 2005)	3	levels of happiness /SWB
The Role of the Quality of College-Based Relationship on Social Media in College-to-Work Transition of Korean College Students: The Longitudinal Examination of Intimacy on Social Media, Social Capital, and Loneliness	(Sohn et al., 2019)	2	Loneliness
Transition to practice experiences of first- and second-career nurses: A mixed-methods study	(Rainbow & Steege, 2019)	1	stress, coping, burnout, and presenteeism
Work-related goal appraisals and stress during the transition from education to work	(Dietrich et al., 2012)	1	stress

Results

In the current section, a summary of the main findings of the articles is presented. The main effects of personal resources on PWB are summarized alongside the environmental resources that moderate this relationship. Two additional papers that only covered the main effects of environmental resources have been included in this analysis, as they might be considered possible moderators.

Psychological and cognitive personal resources

Three articles reported a positive relationship between study/work engagement in terms of energy, dedication, and absorption, and well-being in terms of life and career satisfaction. Upadyaya and Salmela-Aro (2015a), reported that energy, dedication, and satisfaction predicted each other during different phases of the school-to-work transition. Energy predicted dedication and absorption before and after the transition from school-to-work. Dedication consistently predicted well-being in terms of high satisfaction in life, studies, and work. During the transition period, feelings of absorption predicted high energy and dedication. Moreover, high academic performance predicted high energy, dedication, absorption, and consequently life satisfaction. This article provides evidence for cognitive resources such as academic performance can influence psychological resources such as energy, dedication, and absorption.

Upadyaya and Salmela-Aro (2015b) reported that during the transition period career satisfaction decreased but career engagement (energy, dedication, and absorption) increased. However, after the transition both engagement and satisfaction leveled off. The study showed trends where engagement and satisfaction developed parallel to each other. Similar findings were shown by Upadyaya and Salmela-Aro (2017), who reported a reciprocal relationship between study/work engagement (energy, dedication, and absorption) and life satisfaction. A spillover effect was seen between the two variables during the transition from school-to-work.

The paper by Rainbow and Steege (2019) measured self-compassion as a personal psychological resource. They measured self-compassion and well-being at two-time points: before and after graduation among nurses. They noted a decrease in self-compassion and an increase in depressive symptoms, burnout, and presenteeism post-graduation; suggesting that a lack of self-compassion can cause poorer mental health. A decrease in resources goes hand in hand with a decrease in PWB.

Personal Career Resources

Haase et al. (2008) reported that goal engagement predicted a positive effect during the school-to-work transition in both men and women. Interestingly, higher goal engagement led to better transitional outcomes for women, but not for men. This difference was accounted for by structural constraints that women face while looking for an apprenticeship in comparison to men. Women tend to benefit from goal engagement when structural constraints are high. The findings reported by Dietrich et al. (2012) indicated that high goal importance and progress lead to reduced stress. However, they also indicated that life situations and stress reciprocally shape goal-setting and appraisals.

Another career resource that was reported as significant in predicting well-being during the school-to-work transition is planned happenstance skills. These skills refer to curiosity, persistence, flexibility, optimism, and risk-taking. Planned happenstance skills were reported as key career resources in a study by Kim et al. (2018). In this paper, planned happenstance skills were predictors of life adjustment only when career barriers were high. Suggesting that planned happenstance skills facilitate life adjustment while facing career barriers. This might suggest a moderating effect of demands such as career barriers in the utilization of career-related resources.

Personal and Environmental Resources

Schoon and Lyons-Amos (2017), reported that for 1 in 10 participants, a lack of socioeconomic and psycho-social resources leads to long-term experience with NEET (Not in Education, Employment or Training). High academic self-efficacy was reported to have negative effects such as entering NEET amongst individuals with a lack of family and financial resources. It was discussed that high academic self-efficacy might result in unrealistically high optimism among individuals with a lack of socioeconomic resources. This indicates that socioeconomic resources and family capital strongly moderate academic self-efficacy. Additionally, a lack of family resources can force an individual to quit education earlier. After controlling for socioeconomic factors, Goal certainty and high school engagement predicted getting a job after education. This indicates that socioeconomic resources have a weak moderation over personal resources such as goal certainty and high school engagement. In terms of PWB, there are no significant differences in levels of life satisfaction between those in higher education, vocational training, and employment after some further education, while those who experienced NEET, early work orientation, and unemployment after some further education reported lower levels of life satisfaction than those in higher education.

Symonds et al. (2016), inferred that the type of environment (education, employment, apprenticeship, or NEET) is associated with a gain or loss in social, financial, and job resources that strengthen or weaken positive functioning. Before the transition, individuals who were planning to directly work after high school and NEET adolescents reported low personal resources such as positive functioning and poorer mental health. After the school-to-work transition, apprentices, vocational and full-time workers had an increase in positive functioning and mental health. This finding suggests that apprentices receiving mentorship and personalized training strengthened their positive functioning. Similarly, individuals who were working seemed to gain several job and social resources that in turn strengthened their

positive functioning. Individuals who continued studying in vocational schools had a decrease in depression and stable positive functioning. In comparison, individuals in academia had an increase in anxiety and loss of positive functioning. This might suggest that students have lower academic self-concept than their peers in vocational schools. Individuals in NEET reported the lowest positive functioning and high depression. Additionally, having a higher SES corresponded weakly with high positive functioning and continuity in schooling, and was negatively associated with becoming NEET.

Siembab and Stawarz (2019) reported findings for German individuals in the school-to-work transition that entered the German vocational and educational training system (VET) in either dual vocational training or vocational preparation. They reported an overall increase in job satisfaction and positive functioning following this transition. They found a strong positive interaction between transitioning into the vocational system and academic self-concept. Students with a lower academic self-concept (bad fit with school) have a higher increase in life satisfaction while transitioning out of school and entering the VET system. Personal resources such as self-esteem and educational aspirations had only a minor influence on job satisfaction. Additionally, satisfaction with standards of living mediates the effect of entering the VET system on job satisfaction. This suggests that a gain in the standard of living partially explains why individuals in the VET system report high life satisfaction. As discussed in the article, the transition into the VET system for German adolescents is accompanied by a gain in several resources such as an increase in the standards of living, a change of role such as the autonomy to make their own decisions and receive guidance and support to find an apprenticeship that strengthens their academic self-concept and improves their well-being.

Dockery (2005) reported that young people in employment are happiest, followed by those in university. They reported that personal psychological resources such as personality

(extraversion and easygoing) improved happiness during the school-to-work transition. The moderating effect of family and financial resources was found. Being from a sole-parent household or household with no working parent had detrimental effects on well-being, while wealth had positive effects on well-being. Similar to the previously mentioned findings regarding NEET, they reported that being unemployed has a large and detrimental effect on happiness. This article suggests that family and financial resources moderate the effects of fixed factors such as personality on well-being.

Environmental resources as possible moderators

Roberson et al. (2017) illustrated the importance of educational opportunities as a valuable resource during emerging adulthood. The lack of educational opportunities for men and women was shown to cause psychological distress. Individuals who received further education during the school-to-work transition were less psychologically distressed in comparison to individuals who received no further education. This article provides indirect evidence that receiving education or having more education opportunities can moderate personal resources such as career or life planning.

Sohn et al. (2019), reported findings regarding the benefits of social resources. They measured the relationship between having intimate relations on social media and loneliness. Having intimate relations on social media helped protect social capital in the college-to-work transition. Social capital was measured as bonding (strong ties and social support) and bridging capital (loose ties, new perspectives, and informational exchange). Intimacy on social media fosters both bonding and bridging capital and decreases loneliness. There is indirect evidence of social capital and intimacy moderating the effects of personal resources on well-being. Talking to friends on social media and an increase in intimacy and social capital can help preserve personal resources such as confidence and social proactivity during the school-to-work transition.

Discussion

A systematic review was conducted to answer two main research questions. The first research question was proposed to identify the personal resources that determine psychological well-being during the school-to-work transition. The second research question was proposed to identify the environmental resources that moderate the relationship between personal resources and psychological well-being during the school-to-work transition.

During the transition to work individuals mostly utilize several personal psychological resources (dedication, absorption, self-compassion, academic self-efficacy, positive functioning, academic self-concept, self-esteem, and extraverted and easy-going personalities), cognitive resources (academic performance), and physical resources (energy). These resources were shown to determine well-being and to influence positive career outcomes and adjustment. Personal career resources (goal engagement, goal importance and progress, planned happenstance skills, and goal certainty) are especially helpful in battling transition-specific demands.

Amongst the main effects of personal resources on PWB during the school-to-work transition, several themes emerged that are worth discussing. Firstly, personal resources are consistent predictors of psychological well-being. The gain of several resources such as planned happenstance skills is linked to life adjustment (Kim et al., 2018), while the loss of several personal resources has consistently been linked to psychological distress (Rainbow & Steege, 2019), negative impacts on PWB, and long durations of NEET. Interestingly, two articles provided evidence that well-being predicts the utilization of personal resources as well, indicating a spillover effect (Upadyaya and Salmela-Aro, 2017). Several resources predict each other. For example, academic performance predicts energy, dedication, and absorption during the school-to-work transition (Upadyaya & Salmela-Aro, 2015a). This is

evidence of the notion that resources often travel in "caravans" as proposed in the conservation of resources theory (Hobfoll, 2011).

In terms of interaction effects, several environmental resources strengthened an individual's ability to preserve, gain or utilize their personal resources. Environmental resources such as family resources (family capital, or stable family composition), socioeconomic resources (wealth, satisfaction with one's standards of living, income), and job and educational resources (vocational training, apprenticeships, autonomy, support from mentors) strongly moderated the impact of personal resources such as positive functioning, academic self-concept, and academic self-efficacy. Additionally, societal resources such as the availability and access to education (Roberson et al., 2017) were associated with better utilization of career resources such as career planning. Social resources such as intimacy with friends on social media and social capital were associated with better utilization of psychological resources such as confidence and social proactivity (Sohn et al., 2019).

Amongst the aforementioned moderation of environmental resources in the relationship between personal resources and PWB during the school-to-work transition, several themes emerged that are worth discussing. Firstly, several personal resources are dependent on the availability of environmental resources to benefit an individual. Academic self-efficacy is dependent on the availability of socioeconomic resources. Individuals with high academic self-efficacy without family capital or wealth might fall into NEET due to faulty optimism (Schoon & Lyons-Amos, 2017). This suggests that socioeconomic resources and family capital is an extremely important environmental resources during the school-to-work transition. The presence of these resources improves happiness (Dockery, 2005), life satisfaction (Schoon & Lyons-Amos, 2017), mental health (Symonds et al., 2016), and job satisfaction (Siembab & Stawarz, 2019). Similarly, personal resources such as self-concept and positive functioning improve when individuals leave school and enter the job

environment or apprenticeships where environments better suited to their needs where they gain environmental resources such as wealth, support, training, and autonomy in comparison to school (Siembab & Stawarz, 2019; Symonds et al., 2016). This trend can be explained by the P-E fit theory and conservation of resources theory. After the transition, most individuals have a better "caravan passageway" where the environmental resources create a passageway for an individual to gain, maintain and better use their personal resources (Hobfoll, 2011), and provide a better P-E "fit" for individuals that previously experienced a misfit. The moderation effect of environmental resources might be low for some resources that are often independent of environmental resources such as goal engagement and goal importance and progress (Schoon & Lyons-Amos, 2017). This suggests that when experiencing a loss of environmental resources, an individual can benefit from the development and adoption of newer strategies and personal resources.

Theoretical and Practical Implications

This study presents several theoretical and practical implications. Theoretically, this study contributes to the Demands-Resources model (Baker & Demerouti, 2017). Three articles reviewed in the present paper indicate that demands such as career barriers moderate the utilization of certain resources such as goal engagement (Haase et al., 2008) and planned happenstance skills (Kim et al., 2018). Secondly, several articles reviewed in this paper provide theoretical evidence for the conservation of resources theory that states that resources travel in "caravans" and that some environments create "caravan passageways" for the maintenance of a resource ecosystem (Hobfoll, 2011). In addition, a spillover effect between well-being and resources might also indicate that well-being might be important in conserving resources. Positive PWB might play an important role in maintaining a strong ecosystem where "caravans" of resources can be maintained. In turn "caravans" of resources determine positive PWB, suggesting a domino effect between well-being and resources.

In terms of practical implications, by providing sufficient evidence for the main effects of personal resources and PWB and the moderation of environmental resources, important stakeholders such as coaches, career counselors, and psychologists can utilize this knowledge to highlight the importance of personal resources and the importance of support and family during the school-to-work transition. In this study, an important finding is that most individuals are happier after leaving the school system and gain better environmental resources and strengthen their personal resources while working or during apprenticeships, and even in vocational schools. Meanwhile, most individuals in further education have a low academic self-concept relative to their peers in vocational schooling (Symonds et al., 2016). This finding can be utilized to design interventions to change school environments where individuals have better environmental resources such as support and autonomy.

Limitations and Future Directions

One of the first limitations of this review is that the sample for this review is only fourteen articles; a comparatively low sample for a review. There are three reasons for this limitation. First, many studies do not consider the importance of resources during the school-to-work transition. Second, numerous studies do not include psychological well-being. Lastly, many studies do not measure the school-to-work transition longitudinally but instead cross-sectionally. The second limitation of this study is that many operationalized variables are often ill-defined. Often resources such as self-efficacy are defined as a well-being indicator instead of an antecedent. Thirdly, the concept of demands was not included in the research question. Findings suggest that demands and career barriers moderate the utilization of certain resources (Kim et al., 2018). Future reviews and studies can explore the role of demands as moderators of the relationship between personal resources and PWB. Lastly, while several studies in this review mention the negative outcomes for individuals in NEET, it would be interesting to identify the resources that can benefit individuals in long-term NEET.

Many articles included in this review collected their data long before a lot of recent societal developments such as individuals who leave their home countries and study abroad, the formation of newer demands such as covid, or the benefits of technological resources, for example, skype, online school or training, and family and social support through facetime. Future reviews could include more recent longitudinal data on school-to-work transitions. In terms of theory, technology is not considered a resource in most taxonomies and papers. Although talking to friends on social media was considered a social resource in the present paper, the scope of how young individuals use technology as a resource remains untested. This can be researched further in the context of the present review.

Conclusion

The present systematic review offers a simplistic view into the personal resources that determine PWB during the school-to-work transition as well as the environmental resources that moderate this relationship. It can be concluded that an individual can utilize several personal resources to master their environment during their transition. Support from family, friends, and institutions improves the chances of a better adjustment following a school-to-work transition. Individuals function better in environments that are better suited to their needs. Lastly, while the transition from school-to-work itself might be stressful for individuals, several articles in this review suggest that employment and leaving school improves PWB. This should be a silver lining for individuals who are currently facing the demands of transitioning from school-to-work.

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Appendix A

Table 1.

Criteria for evaluating the quality of longitudinal research

Criteria	Insufficient	Sufficient	Good	Very good
Study design	Predictor and outcome measured on different occasions	At least one variable measured on more than one occasion	All variables measured on two occasions (full panel design)	All variables measured on more than two occasions (full panel design with >2 occasions)
Number and interval of measurements	One time lag without argument	One time lag with plausible theoretical/ methodological argument	More than one time lag without argument	More than one time lag with plausible theoretical/ methodological argument
Psychometric quality of the measures	Insufficient/ questionable information	Acceptable reliabilities of the measures (Cronbachs a = .6–.7)	Good reliabilities of the measures (Cronbachs a > .7)	Good reliabilities of the measures (Cronbachs a > .7) and validation with at least one external criteria
Method of analysis	Correlational analysis	Regression analysis considering stability of predictor or outcome	Regression analysis considering stability of predictor and outcome	Structural equation modelling and testing of different models (standard, reversed, reciprocal)
Nonresponse analysis	No check of selectivity of the sample	Check on selectivity referring demographic or focal variables	Check on selectivity referring demographic and focal variables	Check on selectivity referring demographic and focal variables, and response rate over 80%

Note. Modified scheme from de Lange et al. (2003)