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## **Contemporary Career Orientations and Career Self-Management: A Review and Integration**

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### **Abstract**

Successful career development requires increased career self-management and contemporary career orientations accordingly stress the importance of being self-directed, values-driven, and flexible. This paper provides an overview of key perspectives on contemporary career orientations in relation to career self-management (CSM), as well as a systematic review of these two streams of literatures. With a focus on highly influential classic and recent papers as well as on all papers published in the *Journal of Vocational Behavior* on these topics, we aim to integrate the literatures on career orientations and CSM and advance future research. To this purpose, we present an integrative framework of career self-regulation which views CSM as a dynamic process consisting of goal setting and development, information seeking, planning and execution of behaviors, and monitoring and feedback processing. This process is influenced by, and subsequently affects, individual career orientations. We finish the paper by providing several directions for future research in terms of examining more dynamic and self-regulatory processes, unpacking the role of context, integrating the larger proactivity literature, applying a work-nonwork perspective, and developing and testing interventions.

*Keywords:* career orientations; career self-management; self-regulation; protean career; boundaryless career; proactive career behavior

## **Contemporary Career Orientations and Career Self-Management: A Review and Integration**

Technological developments are changing the labor market: old jobs and occupations are being eliminated, new jobs and occupations are being created, and the core tasks and required skills in most jobs and occupations will fundamentally change over the coming decades (International Labour Organization, 2018). As such, there is a constant need for re- or up-skilling for many workers worldwide (World Economic Forum, 2018). It also means that workers need to be able to deal with unpredictable and dynamic career environments which call for more self-directedness in career development (Hirschi, 2018).

In accordance with the increasingly dynamic career environment, there has been extensive research on career self-management (CSM) and people's preferences towards such self-management, i.e., their career orientations (Lee et al., 2014). CSM can be defined as "a process by which individuals develop, implement, and monitor career goals and strategies" (Greenhaus et al., 2010, p. 12). This can entail a variety of specific behaviors, such as career exploration, learning, or networking (Lent & Brown, 2013). Career orientations refer to the way in which people view and approach their career, which is assumed to be an essential driving force behind their career choices and career self-management behavior (Briscoe & Hall, 2006; Sullivan & Arthur, 2006; Tschopp et al., 2014). In essence, contemporary career orientations encompass a variety of attitudes and preferences that help people to become more self-directed and flexible in managing their careers in today's dynamic world of work (Gubler et al., 2014b, 2014a; Wiernik & Kostal, 2019). Thus, career orientations and CSM represent two closely intertwined concepts that are pivotal to address the challenges and opportunities in contemporary career development (Hirschi, 2018).

Although the link between career orientations and CSM is apparent, there are surprisingly few systematic reviews that include— let alone integrate— career orientations and CSM. Career scholars agree that these two constructs are closely related, yet a clear theoretical underpinning of their exact interplay is lacking. One reason for this situation is that research on career orientations comes from a management perspective on careers (Hall, 1976). CSM, however, has strong foundations in vocational psychology, for example in concepts such as career decision making, planning, and career exploration as part of career choice readiness (Phillips & Blustein, 1994). Yet, CSM also has footing in management careers research, for example in concepts such as career strategies (Gould & Penley, 1984) or networking (Wolff & Moser, 2009), which in that literature are predominantly examined as predictors of career success.

To address these issues, the core aim of the current paper is to advance our understanding of the nature and relation between career orientations and CSM and to bridge these two literature streams. We provide a systematic review of both concepts which builds a foundation to integrate the literatures on career orientations and CSM. Additionally, we highlight the role of the *Journal of Vocational Behavior (JVB)* in these two streams of literature. We will (1) provide a systematic review of the most influential papers on career orientations and CSM to date; and (2) systematically review all papers on these topics published in the *JVB* so far. Then we will go beyond the existing literature and (3) provide an integration of the literature on career orientations and career self-management by proposing a framework of career self-regulation. Specifically, we argue that career orientations affect CSM in different stages and, in turn, are shaped by the feedback that people receive from their career actions. We propose that career orientations and CSM are linked in a reciprocal, dynamic, and ongoing process of career self-regulation, in which career orientations can strengthen career self-management behaviors and vice versa. Finally, we (4) propose several lines of future research that could help to address unexplored areas and current shortcomings in the literature.

### **Career Orientations: A General Overview**

In the past few decades, individual's career orientations have taken a central position in careers research. Career orientations are often described in terms of traditional and organization-centered versus new and self-centered, in line with the key distinction in the literature between 'traditional' and 'new' forms of the career (Gerber et al., 2009; Grote & Hall, 2013). In this distinction, the traditional career is characterized by upward steps in the organizational hierarchy, in which the employer is responsible for career management and for providing job security for employees. In contrast, the new career is characterized by frequent changes in jobs, organizations and/or occupations, in which employees are responsible for their own career management. Thus, people who prefer job security and hierarchical progress within one organization can be described as having a traditional career orientation, while people who prefer frequent changes of organizations and taking charge of their own career can be described as having a new career orientation. Because the modern career is characterized by multiple transitions between jobs, organizations and/or occupations, 'new' career orientations are assumed to be pivotal to career success in the modern career.

### **Different Forms of Career Orientations**

The most influential 'new' career orientations in the literature are rooted in the 'protean career' (Hall, 2004) and the 'boundaryless career' (Arthur & Rousseau, 2001). These

orientations represent forms of the modern career, where a protean career stresses self-management and the importance of pursuing individual career goals and values, whilst a boundaryless career refers to a career that transcends different kinds of boundaries, including organizational, occupational, and geographical (Arthur & Rousseau, 2001; Briscoe & Hall, 2006). Therefore, protean and boundaryless career orientations reflect people's preferences for careers that are relatively independent from the organization or employer (Gerber et al., 2009). Specifically, the protean career orientation emphasizes that a career is driven by the person rather than the organization, and comprises two components (Briscoe & Hall, 2006; Hall, 2004): the preference for being responsible for and in control of one's own career (*self-directedness*) and the preference for making career choices and evaluating career success based on one's personal values (*values-driven*). The boundaryless career orientation emphasizes that a career represents infinite opportunities beyond organizational boundaries, and also comprises two components (Gubler et al., 2014a; Sullivan & Arthur, 2006): the desire and self-confidence to transition between work contexts (*psychological mobility*) and the preference to frequently move between employers, occupations, or locations (*physical mobility*).

The protean and boundaryless career orientations are, by far, the most prominent and influential forms of career orientations examined in the literature to date. However, the relation between both is not without critique: some researchers regard protean and boundaryless career orientations as distinct constructs, while others treat them as new forms of career orientations that are essentially interchangeable (Wiernik & Kostal, 2019). Additionally, there has been little empirical evidence of the theoretical assumption that these two new career orientations have replaced traditional career orientations (Gerber et al., 2009). In fact, Gerber et al. (2009) showed that traditional organization-bounded career orientations, which reflect preferences for long tenure with an employer and organizational support for career management, were surprisingly more common than often assumed: almost two thirds of their sample reported a traditional career orientation. As such, there have been several recent attempts to reassess protean and boundaryless career orientations and to introduce other, more parsimonious, forms of new career orientations that better encompass the variety of career orientations among today's workers (e.g., Briscoe et al., 2006; Gerber et al., 2009; Guest & Conway, 2004; Kostal & Wiernik, 2017; Wiernik & Kostal, 2019).

Two important forms of new career orientations that have resulted from an empirical reassessment of the protean and boundaryless career orientations are the 'independent career orientation' (Gerber et al., 2009) and the 'proactive career orientation' (Wiernik & Kostal,

2019). The 'independent career orientation' reflects elements from both the protean and boundaryless career orientation and is characterized by a positive attitude towards frequent changes of organizations and commitment to oneself rather than the employer (Gerber et al., 2009; Tschopp et al., 2014). Gerber et al. showed that people with such an independent career orientation had the highest levels of employability while those with a traditional career orientation had the lowest levels of employability. The alternative 'proactive career orientation', which was introduced after a systematic review of the validity of the four protean and boundaryless components (Kostal & Wiernik, 2017; Wiernik & Kostal, 2019), is characterized by a focus on self-driven, goal-directed work behavior and incorporates the components self-directedness and values-driven from the protean career orientation and psychological mobility from the boundaryless orientation. Wiernik and Kostal (2019) showed in their meta-analytical review that these components were substantially intercorrelated and all loaded onto one single general factor. In other words, they did not find support for the validity of distinguishing between protean and boundaryless career orientations. Importantly, the overarching construct 'proactive career orientation' showed predictive power for career self-management behavior, above and beyond personality traits and self-efficacy. As such, Wiernik and Kostal argued that new career orientations should be replaced by the broader proactive career orientation construct.

Whilst the independent career orientation (Gerber et al., 2009) and the proactive career orientation (Wiernik & Kostal, 2019) seem to represent more parsimonious versions of the protean and boundaryless career orientations, some authors have argued for an expansion rather than a reduction of the constructs. For example, in their reassessment of the protean career concept, Gubler et al. (2014b) proposed that the meta-competencies of adaptability and identity should be incorporated in addition to the self-directed and values-driven components. Recently, Hall et al. (2018) argued that the protean component *values-driven* should be replaced by 'intrinsic work values'. Likewise, in their reassessment of the boundaryless career concept, Gubler et al. (2014a) proposed that the boundaryless career orientation should reflect five rather than two mobility components: organizational mobility, geographical mobility, occupational mobility, working beyond organizational boundaries, and rejection of career opportunities. They found evidence of this five-factor structure in two survey studies. Perhaps more importantly, they showed that these mobility components were all related, albeit in different ways, to career self-management behavior.

Taken together, it is apparent that there are different forms of career orientations, with the protean and boundaryless career orientations being the most influential. Despite their

prominence in the literature, there is no real consensus yet about the content validity and distinctiveness of these career orientations. There is, however, conceptual and empirical consensus about their predictive validity, namely, that career orientations form the attitudinal foundations of individuals' engagement in career self-management behaviors. Yet, the theoretical underpinning of this relation remains unclear. Although recent studies have started to examine the psychological mechanisms by which career orientations influence career self-management behaviors (e.g., Hall, et al., 2018), most of these mechanisms are limited to process variables (e.g., adaptability) that fail to incorporate the dynamic and potentially reciprocal relation to career self-management.

### **Career Self-Management: A General Overview**

#### **Defining Career Self-Management**

Despite the burgeoning literature on CSM over the last decades, there is no clear consensus on how CSM should be defined. Indeed, CSM should be considered as an umbrella term that includes various cognitive and behavioral activities that shape an individual's career development and career transitions, and that determine how individuals deal with expected and unexpected career events, challenges, and career transitions (Wang & Wanberg, 2017). One frequent approach used to conceptualize CSM is to highlight its behavioral nature. For example, King (2004, p. 119) defined CSM as "...a dynamic process, involving execution of a set of co-occurring behaviors [...] that is intended to prevail upon the decisions made by those gatekeepers who are in a position to influence [...] desired career outcomes". Similarly, in the social cognitive model of CSM Lent and Brown (2013) focuses on "adaptive career behaviors" which they define as "behaviors that people employ to help direct their own career (and educational) development" (p. 559). A commonality across behavioral conceptualizations of CSM is the notion that CSM focuses on proactive behaviors, which involve aspiring and striving to initiate change in oneself and/or the environment and behaviors that are self-starting (vs. reactive), change oriented (vs. aiming at preserving the status quo), and future focused (vs. focused on current circumstances) (Parker et al., 2010). In addition to this behavioral focus, it is also well established that CSM encompasses cognitive components, such as goal development, planning, or devising career strategies (Lent & Brown, 2013). To incorporate the cognitive as well as behavioral components of CSM and acknowledge its dynamic nature, we herein adopt the definition of CSM proposed by Greenhaus et al. (2010, p. 12) and define CSM as "a process by which individuals develop, implement, and monitor career goals and strategies".

#### **Models of Career Self-Management**

In contrast to the large literature on CSM, there are relatively few specific theoretical models that aim to postulate the key cognitive and behavioral components of CSM and clearly conceptualize how these components are related. On a general level, we can distinguish between (1) models of CSM which focus on the process of CSM and outline how different attitudinal and behavioral aspects of CSM are linked to promote CSM; and (2) models which focus more on the content of CSM by outlining which key attitudinal and/or behavioral components are important for successful CSM.

One early influential process model was presented by King (2004), which proposed that CSM contains three key types of behaviors: positioning behaviors (e.g., human capital and network development), influence behaviors (e.g., self-promotion), and boundary management (e.g., boundary maintenance between work and nonwork). These behaviors are affected by self-efficacy beliefs, a desire for control over career outcomes, and career anchors (i.e., relatively enduring higher-order career goals, such as security and stability or challenge; Schein, 1996). The model further proposes that the different career behaviors lead to the attainment of desired career outcomes, which in turn positively affect life and career satisfaction or, if desired career outcomes are not attained, can lead to experienced helplessness. An important feature of the model is that it addresses the dynamic nature of CSM by proposing that attainment of career outcomes can have a feedback effect on self-efficacy beliefs and future career self-management behaviors, which implies that CSM is a dynamic process.

The process focus on CSM is also prevalent in Lent and Brown (2013)'s social cognitive model of CSM, which is based on the social cognitive career theory (SCCT) framework of career choice and development (Lent et al., 1994). In contrast to the CSM framework of King (2004), the SCCT CSM model does not focus on a specific set of CSM behaviors but instead proposes a more general model that can be applied to a range of different career behaviors, which include exploring different career paths, managing work-family-life conflicts, or preparing for retirement (Lent & Brown, 2013). The SCCT CSM model posits that various career actions (i.e., CSM behaviors) are determined by the goals individuals set for their careers, which are predicted by cognitive-person factors (i.e., the self-efficacy beliefs and outcome expectations held in relation to these goals). The model also acknowledges that contextual and personality factors play an important role as these are proposed to directly and indirectly (i.e., as moderators) affect self-efficacy beliefs, goals, actions, and outcomes. Similar to King's (2004) CSM framework, there is a feedback process included in Lent and Brown's model that proposes that outcomes of career actions lead to



learning experiences, that in turn shape self-efficacy and outcome expectations for future CSM goals and actions.

Other CSM process-frameworks that focus on actions and the dynamic nature of CSM were proposed by Raabe et al. (2007) on the basis of action regulation theory (Frese & Zapf, 1994; Zacher & Frese, 2018) and by Greenhaus et al. (2010). Action regulation theory is a meta-framework of self-regulation which describes how people manage goals by setting or developing goals, mapping the environment for goal-relevant information, developing plans to attain goals, monitoring goal enactment and progress, and processing feedback regarding the results of one's actions. Raabe et al. (2007) proposed and tested a model of CSM based on this general framework which posits that self-knowledge and goal commitment lead to higher-quality career planning and in turn more career actions. Moreover, they proposed that CSM behaviors lead to feedback in terms of environmental/organizational responses (e.g., pay increase) as well as direct consequences from career plan implementation (e.g., speed in job transition). The processing of this feedback in turn leads to career outcomes (e.g., changes in career satisfaction). The underlying action regulation theory of this framework links cognitive (i.e., goal setting, planning, monitoring and feedback processing) with behavioral aspects in CSM (i.e., personal initiative in various CSM behaviors), making it a promising comprehensive framework to understand CSM as a goal-directed and dynamic self-regulation process across the lifespan (Zacher et al., 2016). Similarly, the model by Greenhaus et al. (2010) posits that individuals identify a need to make a career decision based on environmental information, opportunities, and supports. This then leads to career exploration, goal setting, strategy development, and strategy implementation behaviors. These behaviors lead to feedback from work and nonwork sources and on the degree of achieved progress towards goals, and this feedback causes career appraisals that inform future needs of career exploration. Among these frameworks, the SCCT CSM model has received the most research attention. Studies (e.g., Lent et al., 2019; Pérez-López et al., 2019) showed, for example, that career exploration and decision-making self-efficacy and outcome expectations predicted more engagement in these CSM behaviors (for an overview, see Brown & Lent, 2019).

In addition to the process models of CSM, there are a series of content-models that aim to identify key cognitive and behavioral factors important to successfully self-manage a career. These models typically incorporate different forms of *career capitals* that are deemed critical for career success in the current world of work (Inkson & Arthur, 2001; Parker et al., 2009), such as knowing how (i.e., skills, knowledge), knowing why (i.e., goals, motivations), and knowing whom (i.e., networks, social supports). One such approach focuses on *career*

*competencies*, (Akkermans et al., 2013; Kuijpers & Scheerens, 2006) which are defined as “knowledge, skills, and abilities central to career development, which can be influenced and developed by the individual” (Akkermans et al., 2013, p. 246). Career competencies cover a range of cognitive and behavioral aspects such as career reflection, career planning and goal-setting, and self-presentation. Hirschi et al. (Hirschi, 2012; Hirschi et al., 2018) take a similar perspective by introducing the concept of *career resources* to represent personal and environmental factors that enable individuals to attain career goals. These career resources (e.g., occupational expertise, career clarity, organizational career support) can be developed and maintained through the career behaviors of networking, career exploration, and learning. From all of these perspectives (also Spurk et al., 2019; Wilhelm & Hirschi, 2019), CSM represents a process of resource management where individuals need to build, maintain, and use a range of personal and environmental resources through engagement in various proactive career behaviors (Strauss et al., 2012). Different recent studies (e.g., Blokker et al., 2019; Haenggli & Hirschi, 2020) have built on these models and generally found support for the importance of various career competencies and resources for predicting different forms of career success.

In summary, there are a range of theoretical models with different perspectives on CSM. A commonality across these models is that CSM is seen as a dynamic, self-directed, and proactive process which consists of several cognitive/attitudinal and behavioral factors. The factors included in the models have some notable overlap: several models stress the importance of self-efficacy beliefs, goal setting, career exploration, and networking. Yet, some key elements of CSM (e.g., boundary management, self-profiling, or career opportunities) are explicitly represented in some models but not in others. More importantly, different models of CSM differ meaningfully in the type of framework that is proposed. On the one side of the spectrum are models which focus on the *process* of CSM and provide more general frameworks to understand the emergence and effects of various CSM behaviors (Lent & Brown, 2013) or present more general self-regulation processes involved in CSM (Greenhaus et al., 2010; Raabe et al., 2007) – but without specifying the more specific cognitive factors and career behaviors that the most critical in CSM. On the other side are models which focus more on *content* factors of CSM (i.e., models of career competencies and career resources) that identify specific cognitive and behavioral key factors in CSM but do not provide much theorizing on the process of CSM. Some models (King, 2004) lie somewhat in the middle of this spectrum and link specific CSM behaviors to predictors and outcomes of these behaviors. Clearly, each of these theoretical approaches has strengths and limitations. In

a later part of this paper, we will aim to integrate the literature on CSM by presenting a model of CSM that incorporates both content as well as process components. However, first, we will provide a more systematic review of the literatures on career orientations and CSM.

### **Systematic Literature Review on Career Orientations and Career Self-Management Procedure**

We used the *Scopus* database to identify papers published on career orientations and CSM with a series of specific search-terms (e.g., “career orientation\*”; “career behavior\*”; as of May 18<sup>th</sup>, 2020; see Appendix for details on the procedure). To manage the large number of potential studies, we focused on three main criteria: First, following other reviews (Parker et al., 2017), we aimed to identify the most influential “classic” papers, as indicated by at least 100 citations in Scopus. Second, to sample recently highly cited papers, we identified papers published within the last 10 years that received similar number of average yearly citations as those identified in the previous step. Third, we focused on all papers published in the *JVB* to attain a comprehensive overview of research published in this journal (details and full lists of reviewed papers are presented in the Appendix).

### **Systematic Review Results for Career Orientations**

**Most influential articles.** From the 33 highly cited articles on career orientations that were included in our systematic review, (i.e., those with more than 100 citations), the most cited article was published in the *Academy of Management Executive* (Hall, 1996). The other articles were published in the *Journal of Organizational Behavior* (7 articles), in *Journal of Management* (3 articles), *Academy of Management Executive* (2 articles, including the aforementioned), one each in *Academy of Management*, *Academy of Management Review*, *Human Relations*, *International Journal of Management Reviews*, *Journal of International Business Studies*, *Journal of Occupational and Organizational Psychology*, *Journal of World Business*, and *Work, Employment*. Amongst the highly cited articles, 10 were published in the *JVB*. Thus, the *JVB* and the *Journal of Organizational Behavior* are amongst the most influential outlets for research on career orientations (see Appendix-Table 1 for details).

A striking shared characteristic of the highly cited articles included in our systematic review was their theoretical focus. That is, the majority of the highly cited articles were theory papers and/or literature reviews. These articles focused on conceptual and operational refinement of protean and boundaryless career orientations. The other highly cited articles were quantitative empirical papers that examined career orientations in a broader careers perspective. For example, both Eby et al. (2003) and De Vos and Soens (2008) focused on boundaryless and protean career orientations as predictors of career success. All quantitative

papers focused exclusively on protean and/or boundaryless career orientations, with the exception of Gerber et al.'s (2009) article in which the authors focused on independent and traditional career orientations. Interestingly, the highly cited articles on protean career orientations were predominantly published in the *JVB*, while the articles on boundaryless career orientations were predominately published in other outlets.

In contrast to the “classic” highly cited papers, the more recent ones were predominately quantitative studies, followed by qualitative reviews. No theory paper or qualitative study was among this set of papers. As was the case for the >100 citation papers, the dominant outlets were the *JVB* and *Journal of Organizational Behavior*, which together published two-thirds of all papers in this list.

**JVB articles on career orientations. *Type of articles and study design.*** The reviewed studies on career orientations that were published in the *JVB* consisted of 27 articles, from which approximately half were cross-sectional quantitative studies. Notably, the much rarer multi-wave quantitative studies were all published in the past six years, reflecting the general trend in organizational research to approach research questions with more sophisticated methods. The majority of samples consisted of working adults or university students, were predominantly Western, and were skewed towards Europe. Only one recent empirical study had used a cross-cultural sample with participants from North America and Asia (Li et al., 2019). This distribution of samples signals that the research on career orientations published in the *JVB* is heavily based on Western samples (see Appendix-Table 5 for details), which is true for careers research more generally (Akkermans & Kubasch, 2017).

***Research topics.*** The majority of the empirical studies published in the *JVB* focused on outcomes of career orientations, while only a minority focused solely on antecedents of career orientations. This shows that research on the antecedents of career orientations has been lagging behind, which has also been noted by Hall et al. (2018). One explanation might be that until recently, researchers have assumed career orientations to be relatively stable. Yet, this assumption has been challenged by more recent studies showing that career orientations are malleable (e.g., Waters et al., 2014). Another plausible explanation might be that career orientations are often viewed as the starting point of the career self-management process, that is, career orientations are most often examined as antecedents of career self-management behaviors and career outcomes.

***Antecedents of career orientations.*** Antecedents of career orientations can roughly be classified into three clusters: demographic, dispositional, and self-efficacy related. The first cluster includes factors such as education, gender, and age. For example, highly educated

workers and female workers tend to have stronger protean career orientations (Segers et al., 2008), and older and more tenured workers tend to have traditional career orientations (Gerber et al., 2009). However, such demographic differences are generally negligible to small (Kostal & Wiernik, 2017). Interestingly, age showed a curvilinear relation with ‘new’ career orientations: younger workers are increasingly more willing to be mobile and self-directed as their career progresses, while older workers are increasingly more embedded and less flexible in their non-work situations (Kostal & Wiernik, 2017). The second cluster of dispositional antecedents includes factors such as proactive personality and big-five personality dimensions. For instance, openness to experience and proactive personality tend to be positively related to the psychological components of both protean and boundaryless career orientations (Briscoe et al., 2006; Uy et al., 2015; Wiernik & Kostal, 2019). The third cluster of self-efficacy-related antecedents includes factors such as self-efficacy, core self-evaluations, or self-esteem, which all tend to be positively related to ‘new’ career orientations (e.g., Herrmann et al., 2015; Steiner et al., 2019). Notably, self-efficacy related variables have also been conceptualized as an outcome of career orientations (e.g., Waters et al., 2014).

***Outcomes of career orientations.*** The outcomes of career orientations can roughly be classified into three clusters: career self-management behavioral outcomes, career-related outcomes, and performance-related outcomes. The first cluster includes engagement in different types of career self-management behaviors, which is generally assumed to be the most proximal outcome of career orientations. For example, workers with a stronger a protean career orientation are more likely to engage in networking, career planning and exploration (De Vos & Soens, 2008; Herrmann et al., 2015), and workers with a boundaryless career orientation are more likely to seek variety in their work experiences, and engage in networking and self-development behaviors (Sullivan & Arthur, 2006). Thus, contemporary career orientations seem to foster career self-management behaviors.

The second cluster includes career-related outcomes, such as employability, mobility intentions and -behavior, and career success. Several studies included in our review reported positive relations between new career orientations and job search behavior and/or reemployment (e.g., Briscoe et al., 2012; Waters et al., 2014), yet negative relations between traditional career orientations and employability and mobility intentions (Gerber et al., 2009). Strikingly, however, both new and traditional career orientations were related to higher career success (e.g., Briscoe et al., 2012; De Vos & Soens, 2008; Gerber et al., 2009; Herrmann et al., 2015; Waters et al., 2014). The latter finding may signal that not the career orientation in

itself determines people's perceptions of career success, but rather the fit between their career orientation and the reality of their career.

The third and final cluster includes performance-related outcomes, such as task performance, contextual performance, or promotions. Results of our systematic review indicate that results on the effects of career orientations on performance-related outcomes are mixed. That is, independent career orientations tend to be associated with higher earnings, higher status, and more promotions (Guan et al., 2019) and, in insecure employment contexts specifically, with higher performance (Briscoe et al., 2012). However, in traditional professional contexts, traditional career orientations tend to be associated with higher performance (Chan et al., 2012). This shows that we need more research to better understand how career orientations influence performance-related outcomes in different working environments that may value these career orientations differently (Guan et al., 2019).

### **Systematic Review Results for Career Self-Management**

**Most influential articles:** Our results showed that four articles on CSM with over 100 citations were published in the *Journal of Organizational Behavior*, three each in *JVB* and *Journal of Management*, 2 each in *Journal of Applied Psychology*, *Journal of Counseling Psychology*, *Journal of World Business* and *Career Development International*. This shows that the *JVB* is among the most influential outlets in this research domain and that highly influential papers on CSM have been published in some of the leading organizational behavior and applied psychology journals (see Appendix, Table 3 for details).

In terms of content, one notable result was that the highly cited papers contained a relatively high percentage of theory papers. This suggests that empirical research has built upon some prominent theoretical perspectives to investigate CSM. These highly influential theoretical frameworks include two papers based on the social cognitive career model which focus on the role of contextual supports and barriers in career development (Lent et al., 2000) and on career self-management (Lent & Brown, 2013); Bridgstock (2009) who presents a framework which stresses self-management and career building skills as a foundation for enhanced employability among university graduates; Feldman and Ng (2007) who focus on how different types of career mobility and embeddedness lead to objective and subjective career success; King's (2004) model of career self-management which outlines core components, predictors and outcomes of career self-management; and Brousseau et al. (1996) who focus on how organizations can adapt a pluralistic approach in their career management to better align with the increase in personal control over career development among employees.

Apart from theoretical contributions, many highly cited papers were empirical, and mostly quantitative (see Appendix, Table 2 for details). Examples include the paper by Strauss et al. (2012) which presented several studies on how the future work self can be a motivating factor to engage in proactive career behaviors; Judge and Bretz (1994) who showed that political influence behaviors can impact the attainment of career success; or Forret and Dougherty (2004) who showed that networking behaviors are important predictors for career success, and that this effect might differ for men and women.

Similar to the finding on papers on career orientations, recent highly cited papers on CSM were in a majority quantitative studies, followed by qualitative reviews. However, there were also two theory papers and one qualitative study in this list. The *JVB* published the largest share of these papers, and the other papers were distributed across different journals (see Appendix-Table 4 for full list).

**JVB articles on CSM. *Type of articles and study design.*** Among the 50 reviewed papers including a focus on CSM published in the *JVB*, a clear majority were quantitative, only few were qualitative or qualitative reviews, and six were conceptual papers (see Appendix, Table 6 for details). This reflects the main focus of the journal on quantitative studies but also shows that qualitative works, qualitative reviews, and conceptual papers on the topic have sporadically been published. Notably rare were meta-analyses on CSM, as only one published paper on CSM in the *JVB* was a meta-analysis, which looked at predictors and outcomes of job search self-efficacy from a social-cognitive lens (Kim et al., 2019). The lack of meta-analytic studies on CSM more generally presumably stems from to the complexity of the subject in terms of the many ways how CSM has been operationalized in quantitative papers (as also indicated by our review results below).

In terms of study design, a majority of papers included predictors and outcomes of CSM while less than a third included only predictors or only outcomes. Notably, only three interventions studies were published (Ogbuanya & Chukwuedo, 2017; Raabe et al., 2007; Vuori et al., 2019). For example, Vuori et al. conducted a randomized field study to evaluate the effectiveness of a resource-based group intervention among older employees. The results showed that engaging participants in exercises focusing on career management self-efficacy, skills, work ability, and employability significantly improved their career management preparedness. Among the quantitative papers, a bit more than half was cross sectional, and the others had between 2 and 4 waves of data collection. There was a trend in newer studies being more likely to have multiple waves of data. Yet, truly longitudinal studies with three or more waves were still underrepresented. In fact, only four papers, focused on the more dynamic

processes that link CSM with outcomes, including feedback mechanism on CSM (e.g., Guan et al., 2017).

The samples examined in the papers were mostly working adults followed by university students. Only one paper each investigated adolescents or unemployed adults. Most papers examined samples from North America or Europe with only a small minority having participants from Oceania, Asia, or Africa. Only one paper had an explicit cross-cultural focus and sample (Claes & Ruiz-Quintanilla, 1998). This shows that CSM research published in *JVB* is still heavily dependent on Western samples and calls for more studies that examine the nature, causes, and consequences of CSM in other cultural contexts.

***Operationalization of CSM.*** The majority of papers focused on behavioral aspects of CSM, only about one quarter of the papers focused only on attitudinal aspects of CSM, or investigated both behavioral and attitudinal components. This shows that research has clearly taken a behavioral focus on CSM, which is consistent with most conceptualizations of the construct. In terms of CSM behaviors, CSM was most frequently examined as a composite consisting of specific CSM behaviors, such as feedback seeking or planning (e.g., career engagement; Herrmann et al., 2015; career strategies, Weng & McElroy, 2010). Other frequently examined behaviors were career planning, career exploration, networking, seeking social support, skill development, and job search. In terms of CSM attitudes, a large majority of studies examined goal-related constructs, such as exploration goals, career insight, or goal clarity. Most studies also measured CSM with some type of self-efficacy, for examples towards career exploration or decision-making. Finally, a considerable minority of studies assessed CSM with some sort of outcome expectations, for example regarding career exploration or job search.

In sum, this shows that the operationalization of CSM varies widely across studies, which makes generalizations across findings difficult. Not only was CSM measured with a range of different behaviors and attitudinal variables, but studies also differed in a more fundamental way, i.e., to what extent attitudes should be considered as part of CSM. This implies that the field of CSM is in need for further conceptual refinement as to which factors should or should not be considered as core components of CSM.

***Predictors and outcomes of CSM.*** Regarding predictors, a majority of the studies that included predictors of CSM examined some type of personality trait as a predictor of CSM, for example, conscientiousness or proactivity. Another major set of examined predictors represented environmental support or barriers, such as social support or perceived career barriers. A notable number of studies also investigated work or career orientations as



predictors, such as protean career orientation or work centrality. Others included career identity or goals, work experiences, future time perspective, career adaptability, or self-efficacy as predictors of CSM.

The studies that examined outcomes of CSM often focused on employment outcomes, for example, job performance, perceived employability, engagement in development behaviors, or receiving organizational career support. Many studies also examined career decision outcomes such as career decidedness or clarity of future work self. Work attitudes, such as work engagement or affective organizational commitment, were also frequently examined. Career success was a major outcome investigated with the majority of respective studies focusing on subjective career success (e.g., career satisfaction) while only minority examined objective career success (e.g., salary, promotions). Finally, a series of studies investigated psychological well-being as an outcome of CSM.

In sum, these results show that investigated predictors and outcomes of CSM represent a broad range of variables which highlights the diverse insights into CSM that this literature has produced. The findings across these studies suggest that CSM is positively or negatively affected by different personal and environmental resources and barriers, in which individual career orientations play a central motivational role. In addition, CSM seems beneficial for a range of outcomes, ranging from employment, over career success, to personal well-being.

Figure 1 shows an overall summary of the findings from the systematic review on career orientations and career self-management. It should be noted, however, that many studies included in the systematic review were cross-sectional or did only include two waves of data. Hence, at this stage caution needs to be applied when labelling factors as “predictors” and “outcomes” as they should more prudently be seen as established correlates of career orientations and different indicators of CSM, rather than true causal predictors or outcomes.

### **Integration and Future Research**

#### **An Integrative Understanding of Career Orientations and Career Self-Management**

Our systematic review shows a strong conceptual overlap between career orientations and CSM, as well as an overlap in their empirically investigated antecedents and outcomes (see Figure 1). As such, we argue for an integrative framework of career orientations and career self-management to further our understanding of the individual attitudes and behaviors that are important for self-directed career development in a dynamic world of work. Important in this regard is that careers do not develop in a vacuum but result from a dynamic interaction between person and environment (Hirschi & Dauwalder, 2015). An integrative understanding of career orientations and CSM thus needs to focus on the often reciprocal nature of personal

attitudes/actions and environmental conditions/reactions. Here, we propose that career orientations and CSM need to be integrated in a more dynamic framework that captures the various cognitive, emotional, motivational, behavioral, and contextual factors identified in the presented systematic reviews of the respective literatures. To derive such a dynamic framework, we conceptualize CSM as a form of self-regulation, which generally refers to processes involved in attaining and maintaining goals, whereby goals are internally represented desired states (Vancouver & Day, 2005). By building on self-regulation theories (Bandura, 2001; Carver & Scheier, 1982; Frese & Zapf, 1994; Karoly, 1993; Lord et al., 2010), we follow other researchers who have used similar self-regulation processes as a promising perspective to understand self-directed career development (Greenhaus et al., 2010; Lent & Brown, 2013; Raabe et al., 2007).

An integrative self-regulatory framework is also useful to more clearly conceptualize the various relations that the literatures on career orientations and CSM imply. First, from a conceptual perspective, our review has shown that both career orientations and CSM are conceptualized as goal-related concepts. A key assumption in various CSM models (Greenhaus et al., 2010; King, 2004; Lent & Brown, 2013; Raabe et al., 2007) is that individuals develop career goals, make career choices and plans, and engage in variety of behaviors to attain individually valued aims. Similarly, the literatures on career orientations (Arthur, 2014; Hall et al., 2018) state that career orientations affect the career choices and actions of individuals. Especially 'new' career orientations (i.e., protean, boundaryless, independent, proactive) have a strong goal-oriented component, in that they induce individuals to proactively engage in managing their careers to attain valued aims (Wiernik & Kostal, 2019). Second, from an empirical perspective, our review showed that there is considerable overlap in the antecedents and outcomes of career orientations and CSM (see also Figure 1). For example, research presumes that both are largely predicted by similar antecedents (e.g., proactive personality and self-efficacy beliefs) and affect very similar outcomes (e.g., career success and well-being). A self-regulatory framework seems particularly suitable to take into account the strong action- and goal-directed conceptualizations of career orientations and CSM, as well as to integrate their diverse and overlapping antecedents and outcomes identified in our review.

Additionally, an integrative self-regulatory framework can help to decipher the heterogenous conceptualizations and measurements of CSM. We have seen in our review that CSM clearly has a behavioral focus in most conceptualizations, but that it also entails attitudinal (i.e., cognitive and motivational) components. It is thus important to clarify the

respective relations of these two key facets within the more general CSM construct. From a self-regulation perspective, attitudes and behaviors are not on the same level and, hence, should not simply represent interchangeable components of CSM. That is, in self-regulation theories (Bandura, 2001; Carver & Scheier, 1982; Frese & Zapf, 1994; Karoly, 1993; Lord et al., 2010), attitudinal cognitive and motivational factors (e.g., decision-making, goal setting) typically proceed behavioral action – but the results of such actions can also lead to changes in attitudinal factors (e.g., a change of goals). This notion corresponds to the social cognitive model of CSM (Lent & Brown, 2013), which conceptualizes attitudinal CSM components (i.e., self-efficacy beliefs, outcome expectations, and goals) as predictors of various CSM behaviors. The outcomes of these behaviors can then in turn affect the attitudinal CSM components. Hence, instead of seeing CSM as simply the sum of different behaviors and attitudes, a self-regulatory framework allows us to draw a more refined theoretical model of the attitudinal and behavioral components of CSM and their interplay.

### **Towards a Model of Career Self-Regulation**

**Career self-management as a self-regulatory process.** To address the above mentioned issues, we propose an integrative conceptual model of *career self-regulation* (Figure 2). In this model career progress is the result of a self-regulatory feedback cycle between individuals' attitudes and behavioral actions, and the conditions and reactions of the social and organizational context. Within this model, we advocate the proposition that career orientations may help individuals to engage in career self-management behaviors, while such behaviors can in turn shape and solidify individuals' career orientations (see also Ibarra, 1999; Koen & Sijbom, 2020; Koen et al., 2016).

More precisely, we build on self-regulation frameworks (Bandura, 2001; Carver & Scheier, 1982; Frese & Zapf, 1994; Karoly, 1993; Lord et al., 2010) which typically include four facets of self-regulation: (1) developing and selecting goals; (2) mapping the environment for goal-relevant information; (3) planning and executing goal-directed action; and (4) monitoring and processing of feedback regarding goal progress. Applying this perspective to the results of our systematic review, we propose that career self-management is a dynamic self-regulation process that includes attitudinal and behavioral aspects in four key phases (Figure 2, Table 1): (1) goal setting and development: this includes attitudes that reflect career decidedness, identity clarity, or having clear career plans, as well as career decision-making behaviors, career goal selection and development; (2) information seeking: this includes self- and environmental career exploration behaviors or seeking information, guidance, and advice on career opportunities from others; (3) execution of behaviors: this

encompasses a vast array of (proactive) career behaviors that can be applied to attain career goals (e.g., developing career strategies, networking, skill development, seeking social support, or job search); and (4) monitoring and feedback processing: this includes behaviors that aim to monitor career progress or obtain feedback on career progress. Viewing career self-management as a self-regulatory process with these four phases allows us to integrate the different attitudinal (e.g., goal clarity) and behavioral (e.g., exploration, networking, job search) components of CSM into a coherent process framework.

Our proposed model also provides more clarity regarding the relation of career orientations and CSM. In line with Wiernik and Kostal's (2019) proposition that individuals who are predisposed to adopt a proactive career orientation are more likely to engage in career self-management, our model views career orientations as a motivational factor that drives all facets of career self-management. We base this assumption on the findings in our systematic review that career orientations can affect CSM in a range of ways, from affecting career decisions to predicting engagement in different career behaviors. More precisely, we conceptualize career orientations as a regulatory mechanism, guiding the attention of individuals towards specific aspects in their career self-regulation process (e.g., certain career goals, available resources, actions, or outcomes). From this perspective, career orientations represent a "mindset" or "cognitive compass" that can motivate people to engage in certain career self-management behaviors, enhance or diminish their willingness to engage in CSM, and affect the belief about the value of CSM. Additionally, career orientations act as a standard against which feedback in CSM regarding goal progress and attainment is evaluated, serving to adjust self-regulatory processes if necessary (Karoly, 1993). Depending on this evaluation, people might persist in their CSM goals and actions or change them to attain a better fit with the standard set by their career orientations. Thus, our model conceptualizes career orientations as part of *goal cognition*, the mental model by which goals are specified, evaluated, and organized (Karoly, 1993). As such, career orientations affect CSM because they affect all phases of career self-regulation: goal setting, information seeking, execution of behavior, and feedback processing (Table 1).

Importantly, our model of career self-regulation proposes a cyclical perspective on career self-management, in which career orientations do not only influence CSM but can also be affected by the outcomes of CSM (i.e., feedback). From a self-regulation perspective, feedback processing can lead to a re-evaluation of standards and might lead individuals to pay attention to different goals, actions, or desired outcomes, depending on the extent to which previous actions proved effective in attaining goals (Zacher & Frese, 2018). Translated to

career self-regulation, the feedback that people obtain regarding the effectiveness of their career self-management behaviors –which are directed by certain career orientations– can in turn strengthen or weaken those career orientations, depending on whether the behaviors produce desired effects or not. For example, if behavior motivated by a desire to be self-directed (i.e., a protean orientation) leads to more career success, this could reinforce the protean career orientation because behavior consistent with this orientation has produced desirable results. Conversely, if the same behavior fails to increase career success or even produces negative effects (e.g., exhaustion), this could inhibit the protean career orientation.

On a similar note, career orientations may particularly affect CSM when individuals' social and economic contexts and previous experiences support their career orientations (Wiernik & Kostal, 2019). Our systematic review findings suggested that the effect of career orientations depended on the extent to which the working environment valued these career orientations (cf. Guan et al., 2019). As such, individuals may only develop 'new' career orientations in an organizational context where such orientations are supported. Yet, after an occupational transition, they may find themselves in a context where their 'new' career orientations are constantly challenged, or where their CSM behaviors are undervalued and do not result in the expected career progress. Such feedback and socialization processes may, then, cause a decline in their new career orientations or an increase in their traditional career orientations (see also Gerber et al., 2009). This assumption aligns well with the idea that career orientations are malleable, and might change over time depending on the career experiences of individuals (Hall et al., 2018). Our model helps to more formally conceptualize how and when such changes might happen and how they could be linked to CSM.

**Antecedents in the model of career self-management.** The proposed model of career self-regulation further allows to integrate the various antecedents of career orientations and CSM that we have identified in our review: personal factors, environmental factors, and career interventions. We suggest that these factors affect all self-regulatory phases of CSM, as well as the relation between career orientations and CSM. Based on the reviewed studies, we can categorize the personal factors in terms of socio-demographics (e.g., gender, race, socio-economic status), career history and accumulated career/work experiences, available knowledge, skills, and abilities, dispositions (e.g., proactivity, openness), and career attitudes (e.g., career self-efficacy, outcome expectations, career calling). These personal factors can directly or indirectly provide resources that facilitate CSM, or might pose hindrances that make attainment of career goals and execution of career behaviors more challenging. For example, higher educated workers tend to have stronger 'new' career orientations, partly due

to their skills, abilities and resources to engage in CSM behaviors (Segers et al., 2010). However, a person's career history can also lead to becoming more embedded and less flexible (Guan et al., 2019) and thus exhibiting fewer career development behaviors (Ng & Feldman, 2012). In turn, these resources and hindrances can promote and inhibit the endorsement of certain career orientations through self-regulatory feedback loops, as outlined above (e.g., as when older workers exhibit fewer career development behaviors; Ng & Feldman, 2012).

In addition, we propose in our model that the environmental factors influencing career self-regulation need to be considered from a multilevel perspective. These environmental factors include macro-, meso- and micro-level influences. The macro-level influences – such as the cultural context, public policies, or gender norms – may affect the extent to which individuals develop certain career orientations, and how they engage in the various CSM aspects (e.g., Kim et al., 2018). The meso-level influences – such as organizational culture or HRM practices – may facilitate or inhibit the expression of career orientations and the extent to which employees engage in CSM (e.g., Sturges et al., 2010) as well as the extent to which career orientations and/or CSM may lead to desired career progress (e.g., Guan et al., 2019). The micro-level influences – such as emotional and practical support from family, peers, supervisors, and work colleagues – can meaningfully affect individuals' endorsement and enactment of various career orientations and CSM, as well as personal attitudes towards work and career development (e.g., Feij et al., 1995).

Finally, our framework includes the finding that career interventions can be used to purposefully and systematically change career orientations and CSM goals and behaviors (e.g., Verbruggen & Sels, 2008), for example by helping clients to clarify values, career goals, identify career resources and barriers, developing and implementing career strategies and behaviors, and evaluating and processing feedback regarding their progress towards desired career goals (Hirschi, 2020). Building upon our multilevel view, we argue that interventions should move beyond an individual focus to effectively promote career self-management. Given that we view career self-management as a self-regulatory and cyclical process, we propose that the effectiveness of interventions may also depend on the context in which individuals operate. For example, an intervention aimed at stimulating a 'new' career orientation may prove to be less effective for workers who operate in a traditional professional context, even if the intervention succeeds in increasing that career orientation. That is, the CSM arising from the new career orientation may fail to lead to career success or may even produce negative effects in a traditional professional context, which then inhibits

the new career orientation. Therefore, at the very least, interventions should take the context into account in which people operate. An even better approach, however, would be to fully account for the interplay between individual, social, and organizational context and address all levels in interventions (e.g., by helping participants to leverage and increase family or supervisor support).

Finally, our model also includes the notion that the engagement in CSM can have an effect on the antecedents, that is, on the personal and contextual factors. This view is consistent with a social-cognitive view on CSM (Lent & Brown, 2013), which implies that the social and organizational context can affect behaviors while the outcomes of such behaviors may, in turn, affect personality and contextual factors – to the extent that these factors are malleable. For example, CSM behaviors can affect contextual factors, such as when networking results in increased social support (Baumeler et al., 2018). In addition, even relatively stable personality dispositions can be affected by work experiences (e.g., Roberts et al., 2003), which may result from CSM.

To summarize, the proposed model of career self-regulation views the process of career self-management as a self-regulatory and cyclical process, in which an individual's personal and contextual factors shape their career orientations and CSM behaviors and vice versa. We have therewith presented a dynamic and integrative perspective on career orientations and CSM, which may guide future research to advance the understanding of how people can achieve desirable career outcomes in today's dynamic world or work.

### **Future Research Directions**

Based on the systematic review of the literature on career orientations and CSM and our proposed integrative framework of career self-regulation, we see five important directions for future research: (1) examining career orientations and CSM as a dynamic and self-regulatory process; (2) unpacking the role of context in career self-regulation; (3) integrating the career orientations and CSM literatures with the larger proactivity literature; (4) taking a work-nonwork perspective towards career orientations and CSM; and (5) developing and testing interventions related to career orientations and CSM. Below, we will outline these directions for future research in more detail.

**Career orientations and CSM as a self-regulatory process.** Our review showed that there are relatively few truly longitudinal studies that have looked at dynamics in career orientations and CSM. Yet, studies with more than three waves and experience sampling methods are precisely what is needed in research on career orientations and CSM to further unpack the self-regulatory and dynamic nature of the career self-management process. Such

more dynamic perspectives on CSM could be informed by research on self-regulation. Indeed, CSM can at its core be understood as an action regulation process (Raabe et al., 2007; Zacher et al., 2016), that includes setting goals, exploring the environment, making plans and executing behaviors, and monitoring and revising goals, strategies, and/or behaviors according to feedback. While several theoretical models on CSM at least partially acknowledge such dynamics (Greenhaus et al., 2010; King, 2004; Lent & Brown, 2013), this view has not been incorporated into empirical studies.

By adopting truly longitudinal designs, researchers could investigate if outcomes of CSM lead to changes in career orientations and if such changes in career orientations predict subsequent CSM attitudes and behaviors. For example, research could examine how processing feedback affects career orientations and subsequent CSM. That is, negative feedback on the effects of CSM behaviors might negatively affect self-efficacy and motivation to engage in CSM (including negatively affecting CSM outcome expectations) which could result in a reduction of the quantity and/or quality of CSM (Hu et al., 2018) and reduced self-directed career orientations. Such instances could lead to a self-regulation failure where people prematurely disengage from valuable goals. Alternatively, people might stick with unattainable goals and engage in excessive goal pursuit and preservation, when they would need to adapt goals and/or strategies in their CSM (Karloly, 1993). We would also expect a “Matthew” effect, where individuals with more available resources engage in more CSM, which in turn further increases their resources and promotes subsequent CSM. However, a self-regulation perspective also implies that there might be differences on the between and within-person level. On average, individuals who achieve more success in their careers should be reinforced in their confidence and expected utility of CSM, leading to more CSM in the future. However, on the within-person level, experiencing success may signal that goals are attained and action is no longer necessary (Carver & Scheier, 1990), leading to a reduction in CSM. Examining such dynamics, as well as the personal and environmental conditions under which people adequately process feedback in their CSM, seems an important avenue for future research.

Taking a self-regulation perspective on career orientations and CSM would also be important to address potential downsides of new career orientations and proactive CSM that have largely been overlooked in existing research. From this perspective, the enactment of new career orientations and successful engagement in CSM requires meta-skills for self-regulation, including goal development and goal setting in accordance with available opportunities and existing constraints, planning and execution of goal-directed behavior, and



monitoring and adequate feedback processing. Such processes rely heavily on executive functions as the basis for self-regulation, such as working memory, cognitive flexibility, inhibitory control, relational or logical reasoning (Diamond, 2013). This has at least two major implications. First, it suggests that not all people are equally well equipped to engage in career self-regulation: especially people with less well-developed self-regulation capacities and executive functions would need targeted assistance in this process. Second, it implies that there might be limits and downsides of career self-regulation. As a self-regulatory process that draws heavily on personal resources, engagement in CSM could lead to exhaustion and represent yet another work demand that employees are expected to fulfill in the current work environment (Hirschi, 2018; Kubicek et al., 2015; Prem et al., 2017). Engagement in CSM could thus have a curvilinear effect on (positive) outcomes, due to its resource demands. Future research could address these issues by paying more attention to who is more or less able to self-regulate their career and for whom career self-regulation yield positive, but potentially also negative results.

Another promising avenue for research investigating career self-regulation is to draw on regulatory focus theory (Higgins, 1997), which would allow to develop a more refined understanding of how individuals might differently approach CSM and what its effects could be. According to regulatory focus theory, individuals differ in how they self-regulate behaviors: ‘promotion-focused’ individuals focus on achieving desired aims by approach-oriented behaviors; ‘prevention-focused’ individuals focus on avoiding undesired outcomes by avoiding losses and making mistakes. While promotion- and prevention-focused individuals might both engage in CSM behaviors, they may do so with very different motivations: promotion-focused individuals might aim at creating new career opportunities, while prevention-focused individuals might aim at reducing uncertainty (Petrou et al., 2018). Moreover, a promotion- vs. prevention focus might also lead to qualitatively different CSM behaviors. When faced with career challenges (e.g., organizational restructuring), promotion-focused individuals might engage in CSM that aims at exploring new opportunities, while prevention-focused employees might engage in CSM behaviors that have worked in the past (e.g., more heavy work investment). As these examples illustrate, examining career self-regulation by incorporating regulatory focus theory offers a range of promising avenues for future research.

**The role of context in career orientations and CSM.** Although scholars seem to agree that contextual variables play an important role in the process of career self-management, very few studies have incorporated people’s social and organizational context.

Yet, as we have argued in the model of career self-regulation, career progress is the result of a dynamic interaction between person and environment (Hirschi & Dauwalder, 2015). We therefore urge future research to examine the direct and reciprocal relations of individual- and contextual factors with career self-regulation. For example, research could examine how career orientations affect CSM in different organizational contexts (see also Guan et al., 2019), or how different organizational contexts promote or hinder career self-regulation and/or moderate its effects on career outcomes (Bagdadli & Gianecchini, 2019). Similarly, research could incorporate the role of job insecurity – one of the most important psychosocial hazards in contemporary careers (De Witte et al. , 2015; Schaufeli, 2016) – and examine whether job insecurity may boost (i.e., a challenge) or inhibit (i.e., a hindrance) career self-regulation (De Cuyper et al., 2019). The latter may be especially troublesome given the importance of career self-regulation for finding new employment (e.g., Waters et al., 2014) and for mitigating feelings of insecurity and career dissatisfaction (Koen & Parker, 2020).

In extension of this point, research could pay more attention to individual- and contextual reasons why people fail to engage in career self-regulation in the first place. This could be informed by recent theoretical considerations on career inaction, the failure to act sufficiently over some period of time on a desired change in one's career (Verbruggen & De Vos, 2019). According to this theoretical reasoning, such failures to proactively change one's career might result from internal, personal factors – such as insufficiently crystallized career alternatives – as well as from external, contextual factors – such as the degree of embeddedness in- and off the current job, and social norms of staying in the current job/career (Verbruggen & De Vos, 2019). In fact, the need to engage in CSM in changing career contexts may in itself inhibit CSM. That is, according to conservation of resources theory (Hobfoll, 1989; 2001), the context can determine the extent to which people are able to draw on their resources. Workers in changing career contexts, then, may need their resources to cope with feelings of insecurity and change, which leaves less resources to engage in CSM. Put differently, the changing context that calls for career self-regulation may paradoxically also obstruct people's ability to engage in CSM. Again, this notion points towards a dynamic interplay between context, career orientations, and CSM.

**Proactivity in career orientations and CSM.** Because CSM is typically seen as a form of proactive behavior, the career orientations and CSM literatures could benefit from a more substantive integration with the larger proactivity literature. Indeed, CSM can be conceptualized as a form of proactive career behavior, which shows similarities but also important differences to other types of proactive behaviors, such as proactive work behaviors

or proactive strategic behaviors (Parker & Collins, 2010). As our review showed, several studies examined proactive personality as an antecedent to new career orientations and CSM. However, research would benefit from going beyond this specific antecedent and integrate multiple predictors for proactive behaviors in their studies to obtain a more comprehensive understanding of what promotes people to be more or less active in CSM. For example, studies could focus on the role of emotions, goals, and agency beliefs as motivational predictors for proactivity (Parker et al., 2010). Within such a framework, career orientations can be seen as a “reason to” motivational factor, which should, combined with “can do” (e.g., self-efficacy beliefs) and “energized to” (e.g., positive emotions) motivational states, lead to more CSM behaviors. Examining joint as well as unique effects of different antecedents of proactive career behaviors, including proactive motivational states, would open up the possibility to examine within-person fluctuations in motivational factors and how they relate to within-person changes in CSM (Hirschi et al., 2013). Emerging research on this issue showed, for example, that fluctuations in perceived social support and positive emotions promoted more weekly CSM among students. However, variables that had established positive effects on the between level (e.g., self-efficacy) did have no effect on the within level (Hirschi & Freund, 2014).

Apart from a one-sided view on CSM as a proactive behavior, research could also pay more attention to the possibility that CSM could be aimed at maintaining the status quo (vs. initiating change) or at avoiding negative career outcomes (vs. attaining positive outcomes). Here, research on CSM could benefit from recent developments in job crafting and job search research. That is, in line with the above described promotion and prevention foci (Higgins, 1997), research on job crafting showed that approach crafting (which aims at role expansion and social expansion) had more positive effects on performance, engagement, and strain than avoidance crafting (which aims at work-role reduction and withdrawal) (Bruning & Campion, 2018; Zhang & Parker, 2019). Likewise, the job search literature has recently distinguished between approach motives (i.e., when individuals seek advancement or growth via higher level positions) and avoidance motive (i.e., when individuals seek escape the current work situation; Zimmerman et al., 2012). While both may initially lead to similar job search behavior, approach motives may result in higher quality job search because it helps job seekers to evaluate failures during the job search process in a positive, learning-oriented way (Van Hooft et al., 2013).

Thus, evaluation or feedback processing seems to be the crucial element that ties together the outcomes of successful (proactive) career behaviors. As such, we believe that

attention to the factors that can facilitate or impede the use of feedback can greatly contribute to the understanding of career self-regulation. For example, individual differences such as optimism, internal attribution, and controllability may benefit self-regulation in general and feedback processing in particular, although it should be noted that such effects may be curvilinear because people with, for example, extreme optimism may not recognize their limits or may persist for too long (Van Hooft et al., 2013). We believe that this notion again underlines the essential role of studying individual actions in context, and shows how important it is for future research to examine the gain- and loss spirals associated with the role of resources in successful career self-regulation.

**Work-nonwork perspectives on career orientations and CSM.** Another promising line for future research is to approach career orientations and CSM from a work-nonwork perspective. As highlighted by Greenhaus and Kossek (2014), a contemporary understanding of career development necessitates that the close connection between work and nonwork life domains is taken into account. Yet, as our review showed, very little research on career orientations and CSM has adopted such a work-nonwork perspective. This is somewhat surprising given that a focus on the “whole self” vs. the “work self” is a key feature of a protean career orientation (Hall & Moss, 1998) and work-nonwork boundary management is often mentioned as a key component of CSM (King, 2004).

Addressing this issue is timely and important as an increasing number of people face the challenge to combine work and nonwork life roles due to shifting gender roles and technological advancements (Greenhaus & Kossek, 2014). Emerging research moreover suggests that engagement in specific types of leisure activities (Kelly et al., 2020) and actively considering nonwork roles relative to career (Hirschi et al., 2020) are important components to develop a sustainable career, which is characterized by productivity, health, and happiness in the long run (De Vos et al., 2020). Moreover, people with stronger protean career orientations tend to show stronger concerns for having time for nonwork involvements, which aligns with the assumption that contemporary careers are driven by personal values (Hall et al., 2013). Importantly, such concerns for nonwork involvements do not imply that workers deem their work or career less important; rather, their view of what constitutes a successful career incorporates both work- and nonwork elements (Gerber et al., 2009). Future research should thus pay attention to the increasing importance of nonwork elements in career self-regulation, for example, how people set career goals under consideration of nonwork goals, draw on nonwork resources and deal with nonwork demands to promote their careers, develop

career strategies that take nonwork roles into account, and monitor and process feedback that stems from events and outcomes that occur in nonwork roles.

**Interventions to promote career orientations and CSM.** Our review showed that there are no or relatively few intervention studies in the career orientations and CSM literatures, respectively. Most interventions studies in the careers literature focus on other –attitudinal– career outcomes, such as career maturity, decision-making self-efficacy, or career decidedness (Whiston et al., 2017). The herein identified CSM intervention studies also had a strong (albeit not exclusive) focus on individual attitudinal components, such as career self-efficacy, job search intentions, goal commitment, or self-directed attitude (Ogbuanya & Chukwuedo, 2017; Raabe et al., 2007; Verbruggen & Sels, 2008; Vuori et al., 2019). Yet, there are few intervention studies focusing on behavioral components of CSM, such as networking or career exploration (e.g., Behrens & Nauta, 2014; Koen et al., 2012; Spurk et al., 2015) or more general career behaviors (e.g., Akkermans et al., 2015; Kossek et al., 1998).

The literature would clearly benefit from more carefully conducted intervention studies that aim directly at enhancing career orientations and different CSM behaviors. Such studies could also be used to gain a more thorough theoretical and practical understanding of how and when career orientations and CSM behaviors affect career outcomes, with the added value of unpacking the causality and direction of the relation between career orientations and CSM –provided that they employ an experimental design. One intervention approach that would integrate career orientations and CSM, could be to target a change in career orientations as the motivational foundation that can trigger subsequent CSM behaviors. Potentially, developing such interventions could be informed by interventions that aimed at promoting a proactive, self-directed mindset among participants, for example, by setting challenging goals, active information seeking, adequate and flexible planning and execution, and active feedback seeking (Campos et al., 2017) or by developing a clear and attractive vision of one’s professional future (Strauss & Parker, 2018). However, as noted earlier, interventions should take a multilevel approach that follows our proposed model. This means that to increase effectiveness, interventions should address not only individual factors, but also social and organizational context and support. We presume that such interventions can provide psychological (e.g., goal clarity, confidence) and contextual resources (e.g., family and supervisor support) to participants. This should, in turn, increase the willingness of intervention participants to engage in CSM, as CSM is more likely to occur if individuals believe in the relevance and personal capability to engage in CSM behaviors (Lent & Brown,

2013). We would thus propose that interventions are especially important for people with low personal and/or contextual resources, as they might benefit the most from a boost in resources that interventions can provide.

### **Conclusion**

In this systematic review of the literature on career orientations and career self-management, we have taken stock of contents and processes of career self-management in contemporary careers. The results of the systematic review indicated that the interplay between career orientations and career self-management is often implied, while it has remained unclear how these two concepts are related. We have therefore advanced a dynamic and cyclical model of career self-regulation that integrates the literature on career orientations with that of career self-management. This model suggests that researchers and practitioners should simultaneously stimulate people's career orientations and career self-management behaviors, all while taking into account the reality of their social and organizational context. It is our hope that this model may serve to guide future research and advance our understanding of career development and -progress in today's world of work.

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Table 1

*Linkages Between Different Phases of CSM and Career Orientations*

<i>CSM Phases</i>	<i>Link with career orientations</i>
Goal development and selection	Career orientations influence which goals people find more or less attractive in their careers. For example, individuals with a protean career orientation might place a higher value on attaining meaningful work rather than a high position.
Mapping resources, opportunities, and barriers	Career orientations influence which type of resources, opportunities, and barriers individuals pay special attention to. For example, individuals with a boundaryless orientation might place more emphasis on personal employability and be less affected by organizational career development constraints.
Developing action plans and engaging in diverse CSM behaviors	Career orientations influence which action plans individuals derive and which specific CSM behaviors they execute. For example, a self-directed career orientation might lead individuals to engage more in networking and less in participating in organizational training programs.
Monitoring goal progress and revising goals, plans, and actions	<p>Career orientations influence how individuals evaluate their actions and goal progress as well as in which way they revise actions and goals based on feedback. For example, individuals with a boundaryless orientation might evaluate not getting a desired promotion less negatively and more easily derive alternative ways outside the current organization to attain the desired career progress.</p> <p>Career orientations are shaped by the feedback that people receive/process regarding the effectiveness of their actions to attain their career goals. This feedback can reinforce (or weaken) career orientations, if career behaviors corresponding to career orientations are effective (or ineffective) for goal attainment.</p>

Table 2

*Summary of Future Research Directions***Career orientations and CSM as a self-regulatory process**

- Investigate the dynamics in career orientations and CSM (incl. feedback processes) with longitudinal study designs (i.e., repeated measures of same variables)
- Examine potential downsides of different career orientations and engagement in CSM, such as demands on executive functions and exhaustion
- Examine career orientations and CSM as being motivated by approach/promotion and avoidance/prevention regulatory focus

**The role of context in career orientations and CSM**

- Examine the interplay of individual and contextual factors in career orientations and CSM (e.g., how contexts shape and are affected by career orientations and CSM behaviors)
- Examine individual and contextual reasons why individuals fail to engage in CSM

**Proactivity in career orientations and CSM**

- Examine the role of proactive motivation (i.e., emotions, goals, and agency beliefs) as predictors of CSM in addition to career orientations
- Examine how individuals might enact career orientations and use CSM as a way to maintain the status quo and avoid negative career outcomes (vs. initiating change and attaining positive outcomes)

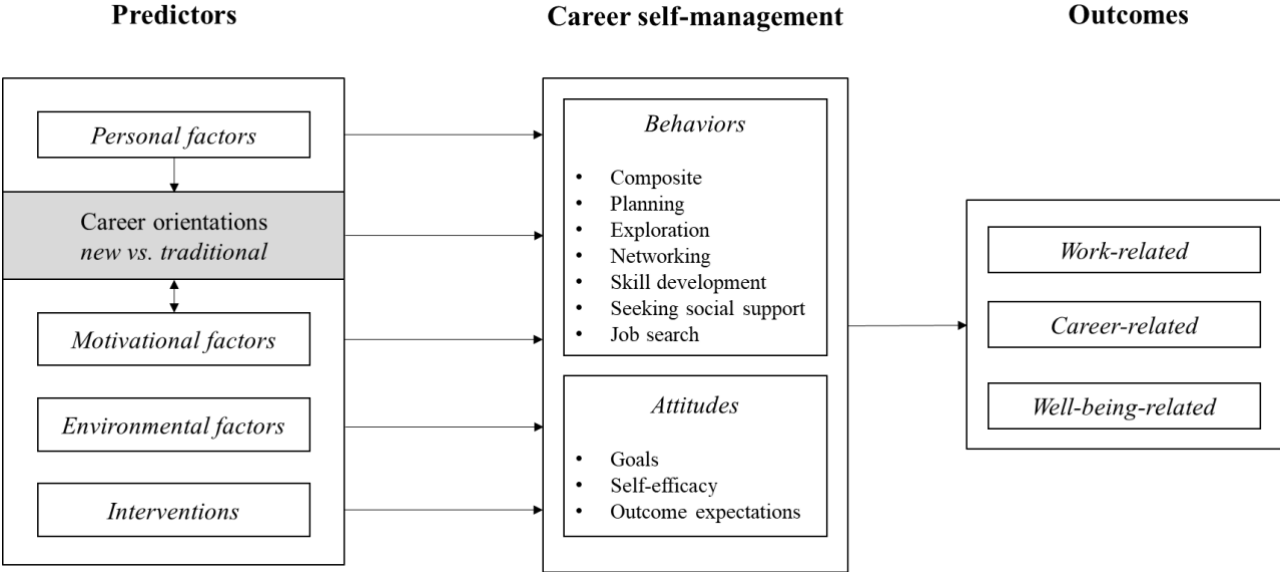
**Work-nonwork perspectives on career orientations and CSM**

- Examine how nonwork factors and considerations (incl. nonwork goals, resources, and demands) affect career orientations and CSM

**Interventions to promote career orientations and CSM**

- Examine how career orientations and CSM behaviors can be promoted by interventions and through which self-regulation processes (i.e., goals, motivation, strategy development, feedback processing) such effects occur
- Take a multilevel approach and examine how contextual factors (e.g., available organizational and social supports) affect intervention effectiveness

**Figures**



*Figure 1.* Integrative summary of findings of the systematic literature review on career orientations and career self-management.

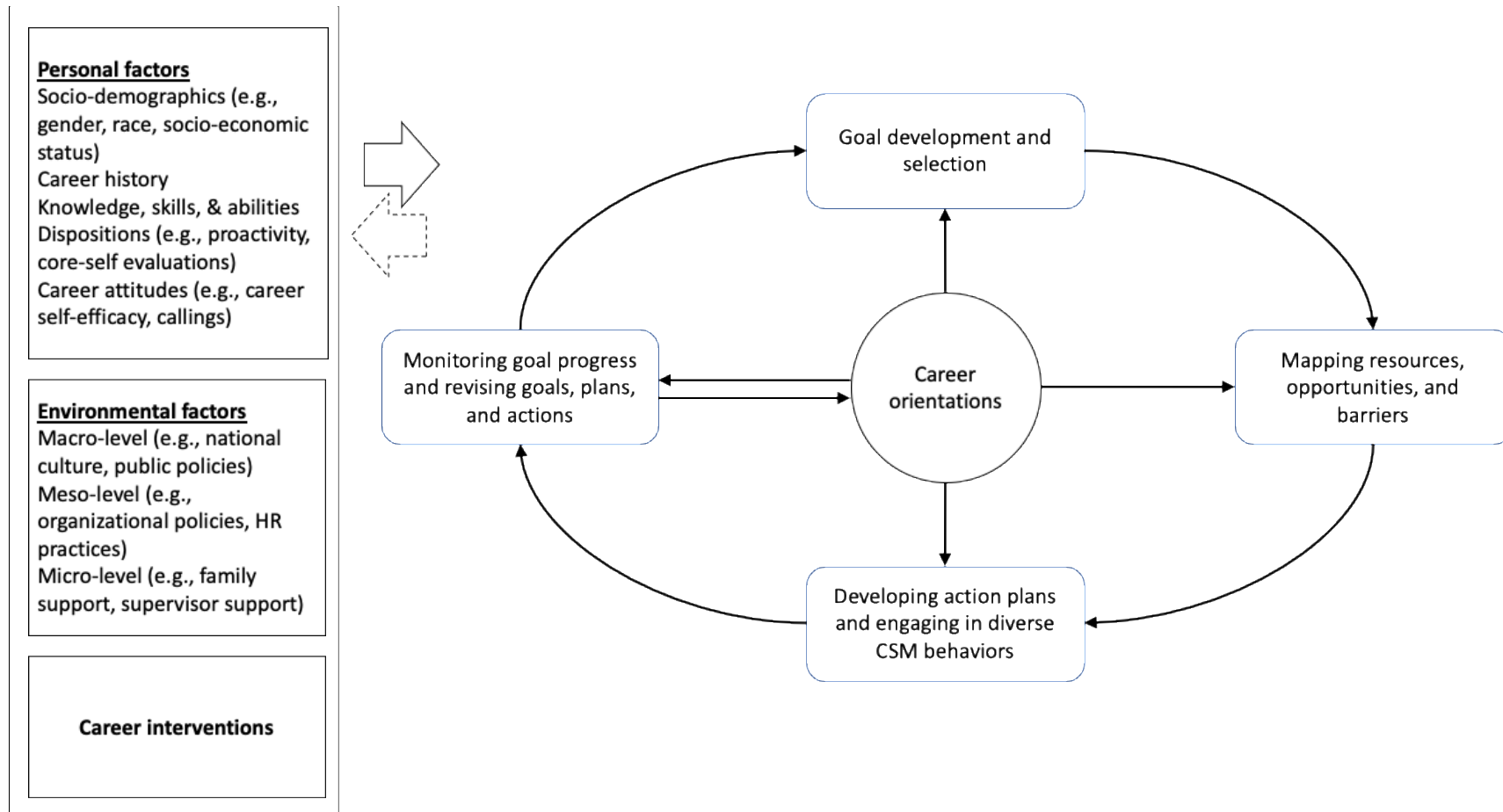


Figure 2: Framework of career self-regulation which integrates career orientations and career self-management processes. Arrows from the box of personal factors, environmental factors, and interventions indicate that they can affect all parts of the depicted process and are affected by the process in return.



## Appendix

This is supplementary material for the paper:

### **Contemporary Career Orientations and Career Self-Management: A Review and Integration**

Andreas Hirschi & Jessie Koen

Published in the 50<sup>th</sup> Anniversary Issue of the *Journal of Vocational Behavior*

#### **Systematic Literature Review Procedure**

We used the Scopus database to identify papers published on career orientations and CSM (as of May 18th, 2020). For career orientations, we searched the terms “career orientation\*” “protean” AND “career”; “boundaryless” AND “career”; and “career” AND “orientation” in the title, abstract, or keywords, resulting on 4,214 hits. For CSM we used the search terms “career management”; “career self-management”; “career behavior\*”; “career behaviour\*”; “career strateg\*”; “career enhancing strateg\*”; “self-directed\*” OR “self directed\*” AND “career” in the title, abstract, or keywords, resulting in 1,889 hits.

For career orientations, we initially identified 112 papers with at least 100 citations, from which 61 were excluded because the abstract revealed that they did not focus on career orientations but on related constructs (e.g., career adaptability, work values, or the protean/boundaryless career without including individual career orientations). The full texts of the remaining 51 papers were then reviewed; 18 papers were excluded because the examined orientations that were not directly linked to individuals’ overall career (e.g., nonwork orientations, organizational employability orientations) or conceptually differed too much from our definition of career orientations (e.g., extrinsic motivational orientations). As a

result, we included 33 papers on career orientations with at least 100 citations in the current review (the full list is presented in the Appendix-Table 1).

We calculated the median number of yearly citations for the career orientations and CSM articles with at least 100 citations, which was  $Mdn = 10.25$  (for career orientations,  $Mdn = 10.1$ , for CSM articles,  $Mdn = 10.4$ ). Using this threshold, we initially identified 20 papers published since 2010, from which we excluded 11 because the abstracts did not discuss any orientations that were directly linked to individuals' overall career (e.g., intrinsic work motivation). An examination of the full articles did not lead to any more exclusions. In sum, we retained 9 recently highly cited career orientation papers (full list in Appendix-Table 2).

For papers on career orientations that were published in the JVB, we followed the same procedure. We initially identified 155 papers, from which 102 papers were excluded based on abstract reviewing, because they did not focus on career orientations but on related constructs. After reviewing the full texts of the remaining 53 papers, 26 papers were excluded because they were not directly linked to individuals' overall career and/or did not conform to our definition of career orientations. Eventually, we included 27 papers published in the JVB in the current review. The final list of studies on CSM published in the JVB included 31 studies because three of the included papers consisted of multiple studies (see Appendix-Table 5).

For CSM, we identified 53 papers with at least 100 citations; 14 were excluded based on the abstract because they did not focus on CSM. The full texts of the remaining 39 papers were reviewed, resulting in the exclusion of 13 papers that did not have a CSM content despite what could be expected based on the abstract. Excluded papers did not mention career behavior or attitudes in their abstract, dealt purely with organizational career management practices, focused on profession-specific career strategies that seemed not generalizable to broader populations (e.g., extent of interdisciplinary engagement of academics), or dealt with vocational interests or the choice of specific study majors (e.g., mathematics). This resulted in

26 remaining papers on CSM with at least 100 citations included in this review (full list in Appendix-Table 3).

For recently highly cited CSM articles, we used the same procedure as described for the respective career orientations articles. Using the same threshold, we initially identified 21 papers, from which we excluded 6 because the abstracts did not discuss any career self-management attitudes or behaviors. We excluded one paper based on the full text because it focused exclusively on an organizational career management perspective. In sum, we retained 14 recently highly cited CSM papers (full list in Appendix-Table 4).

For papers published in the JVB on CSM, we identified 108 papers. Based on the abstracts we excluded 43 because they did not focus on CSM. Based on the full texts a further 10 articles were excluded because they did not include a clear CSM content or measure, one was excluded because it reported a study that used the same sample as another article in our final set of papers; eight articles had a stronger focus on career orientations than CSM and were coded under that perspective. This led to a total of 46 articles consisting of 50 studies (two papers included multiple studies) that we included in our review on CSM articles published in the JVB (full list in Appendix-Table 6).

### **Coding Procedure**

The two authors and two research assistants coded all articles selected for our review according to the *type of paper* (1 = quantitative study; 2 = qualitative study; 3 = qualitative review; 4 = meta-analysis; 5 = theory paper); the main focus of the paper in terms of 1 = career orientations; 2 = CSM; 3 = both; for quantitative papers whether they included only predictors of career orientations/CSM (1), only outcomes of career orientations/CSM (2), or predictors and outcomes of career orientations/CSM (3); *study design* with 1 = cross sectional and 2 = multiple waves, as well as the number of waves; for empirical studies we coded the sample(s) of the study as 1 = adolescents, 2 = university students, 3 = working, 4 = retired, or

5 = unemployed job searchers. For papers focusing on *career orientations*, we coded the specific career orientation(s) that was assessed in the paper by name. For papers with a focus on *CSM*, we coded each attitude and/or behavior by name that was assessed as representing CSM (encompassing 20 different behavioral and 31 attitudinal indicators) and categorized the papers as examining CSM in terms of 1 = attitudes, 2 = behaviors, or 3 = both. In a next step, we grouped these into meaningful clusters due to the considerable overlap between different indicators across studies (e.g., “exploration” and “self-exploration”; “job search self-efficacy and “career self-efficacy”). Finally, for the examined career orientation or CSM construct in the study, we coded each measured *predictor and outcome* by name in a first step, resulting in 48 different predictors and 44 different outcomes. In a second step, grouped the predictors and outcomes into meaningful categories, according to their conceptual overlap (e.g., “core self-evaluations” and “regulatory focus” as representing *personality traits*; “mentorship” and “coworker support” as representing *social organizational support*).

**Table 1***Reviewed Papers on Career Orientations Career Orientations –100+ Citation Publications*

<b>Author(s) (year)</b>	<b>Journal</b>	<b>#Citations<sup>a</sup></b>	<b>Type of paper</b>	<b>Key findings/content</b>
Arthur & Rousseau (1996)	Academy of Management Executive	132	Qualitative review	Posits a paradigm shift in terms of new and old careers, and outlines the meaning of a boundaryless career among the shifting of the meaning of terms such as boundary, career, organization, learning, and transition.
Arthur (1994)	Journal of Organizational Behavior	425	Theory	Promoting a new point of departure for careers research: the boundaryless career. An inter-organizational concept of the boundaryless career is presented
Arthu et al. (2005)	Journal of Organizational Behavior	543	Theory	New guidelines for bridging career theory and career success theories, to establish new connections between boundaryless career theory and career success research
Baruch & Hall (2004)	Journal of Vocational Behavior	162	Theory	Discusses how the transformation of careers in corporate settings towards protean and boundaryless careers represent a move towards the model of the autonomous professional inherent in academic culture, and how, at the same time, the academic career is becoming more similar to the norms of corporate careers.
Baruch (2006)	Human Resource Management Review	228	Qualitative review	Claims that changes in contemporary careers have been exaggerated in narratives of boundaryless and protean careers and proposes a more balanced view of the changes in contemporary careers.
Bird (1994)	Journal of Organizational Behavior	109	Theory	Developed the case for extending beyond a primary focus on boundaryless careers as forms of knowledge repositories Knowledge creation process theory discussed at different group, organization and individual levels
Briscoe & Hall (2006a)	Journal of Vocational Behavior	342	Theory	Develops a theoretical account of the possible combinations of protean career orientation and boundaryless career orientation
Briscoe et al. (2006)	Journal of Vocational Behavior	383	Quantitative	Development and validation of new scales for protean and boundaryless career orientation
Cohen & Mallon (1999)	Work, Employment and Society	121	Qualitative	Based upon qualitative interviews of individuals who have left their organization for more organization-independent work, the article explores the process of sense-making of more boundaryless careers.

De Janasz et al. (2003)	Academy of Management Executive	114	Qualitative	Based upon qualitative interviews, the paper examines how executives use networking and mentoring relationships across organizational boundaries to direct their careers.
De Vos & Soens (2008)	Journal of Vocational Behavior	178	Quantitative	Tests a model that posits that the positive relation between protean career orientation and career success is mediated by career insight and career self-management behaviors. The results show that career insight fully mediate the relation, with no additional effect of career self-management behaviors.
Defillippi & Arthur (1994)	Journal of Organizational Behavior	499	Theory	Competency-based view of careers based on people's beliefs (know-why), skills and knowledge (know-how) and networks (know-whom)
Direnzo & Greenhaus (2011)	Academy of Management Review	111	Theory	The article proposes a cybernetic model of the relation of boundaryless and protean career orientation to job search, voluntary turnover, and career self-management behaviors of employees
Eby et al. (2003)	Journal of Organizational Behavior	411	Quantitative	Three classes of career competencies (Know why, know whom and know how) described as predictors of success in the boundaryless career (criteria were perceived career satisfaction, perceived internal marketability and perceived external marketability)
Feldman & Ng (2007)	Journal of Management	254	Theory	Proposes an integrative framework of career mobility and career embeddedness and provides a critique of the boundaryless career concept
Forrier et al. (2009)	Journal of Occupational & Organizational Psychology	109	Theory	Extending the concepts of the boundaryless and protean career to include career mobility to develop an understanding of the complex interplay between agency and structural factors Career mobility: a conceptual model that maps the main factors that determine and constrain transitions in careers
Gerber et al. (2008)	Journal of Vocational Behavior	119	Quantitative	Applies latent profile analysis to examine the career orientation of employees and its correlates, resulting in four career orientation profiles: traditional/loyalty, traditional/promotion, independent, and disengaged.
Guest (2004)	International Journal of Management Reviews	169	Qualitative review	Reviews the literature on flexible employment contracts and how it affects workers. Contests the claim that flexible employment contracts always lead to negative outcomes and instead posits that those with boundaryless career orientations may achieve positive outcomes as a result of flexible employment arrangements.
Hall & Mirvis (1995)	Journal of Vocational Behavior	228	Qualitative review	Examines the implications of shifting career contracts for older workers, in light of the protean and boundaryless career orientations.

Hall (1996)	Academy of Management	537	Theory	Discussion of emerging career landscape for organizations, the individual and the new career contract
Hall (2004)	Journal of Vocational Behavior	528	Qualitative review	Reviews the protean career literature, emphasizing its relation to the transformation of economic and organizational contexts.
Inkson (2006)	Journal of Vocational Behavior	124	Theory	Develops a theoretical account of protean and boundaryless careers as metaphors and how this metaphor has been used in the scientific literature.
Inkson et al. (2002)	Organization Studies	187	Theory	Contextualizes boundaryless careers within management studies, critique offered on inaccurate labelling, loose definitions, overemphasis on personal agency, and poor empirical support for the dominance of boundaryless careers according to the boundary theory
Mezias & Scandura (2005)	Journal of International Business Studies	137	Theory	Develops a theory of international mentoring by integrating protean and boundaryless career perspectives with expatriate and mentoring literature
Mirvis & Hall (1994)	Journal of Organizational Behavior	195	Theory	The discussion of how a boundaryless career should lead to psychological success by describing the contours of the boundaryless career, aging over several career cycles, integrating diverse experiences into identities and new employer-employee relationships
Pringle & Mallon (2010)	International Journal of Human Resource Management	141	Theory	Critically examines the boundaryless career construct, arguing that its application to groups such as women, collective cultures, local ethnic groups is limited.
Rodrigues & Guest (2010)	Human Relations	128	Theory	Discussion of boundaryless career by discussing conceptual and operational problems and integration of evidence from labor economics on job stability that argue against the collapse of a traditional career model; the boundary theory is described to conceptualize career boundaries
Segers et al. (2008)	Journal of Vocational Behavior	100	Quantitative	Examines how demographic variables are related to boundaryless and protean career orientation-related motivational attitudes and how these motivational attitudes form clusters.
Stahl et al. (2002)	Journal of World Business	322	Quantitative	Examines the boundaryless career orientations of expatriates and how far their outcome expectations for the impact of expatriate assignments on career success align with the boundaryless career concept.
Sullivan & Arthur (2006)	Journal of Vocational Behavior	394	Theory	Develop a model of boundaryless careers based upon the possible combinations of physical and psychological mobility

Sullivan & Baruch (2009)	Journal of Management	402	Qualitative review	Reviews the protean and boundaryless career literature as well as the "next generation of career concepts", among which the authors count kaleidoscope careers and hybrid careers.
Sullivan (1999)	Journal of Management	485	Qualitative review	Reviews the literature on boundaryless careers and developmental stage theories of careers
Tams & Arthur (2010)	Journal of Organizational Behavior	106	Qualitative review	Reviews the boundaryless career literature and argues that a better theoretical account of how career agency is contextualized is necessary.

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*Note:* <sup>a</sup>as of May 18<sup>th</sup> 2020; summary of review results: total of 10 articles published in the JVB (with 2,588 total citations), 7 in the Journal of Organizational Behavior (2,288 total citations), 3 in Journal of Management (with 1,141 total citations), 2 in Academy of Management Executive (with 246 total citations), 1 each in Academy of Management, Academy of Management Review, Human Relations, International Journal of Management Reviews, Journal of International Business Studies, Journal of Occupational and Organizational Psychology, Journal of World Business, and Work, Employment; 17 theory papers (52%); 8 (24%) qualitative reviews, 6 (18%) quantitative studies, 2 (6%) qualitative studies.



Table 2

*Recent Highly Cited Papers on Career Orientations*

<b>Author(s) (year)</b>	<b>Journal</b>	<b>#Citations<sup>a</sup></b>	<b>Type of paper</b>	<b>Key findings/content</b>
Andresen et al. (2015)	International Journal of Human Resource Management	52	Quantitative Study	Examines how protean and boundary career orientation are differentially related to self-initiated and assigned expatriation. Findings indicate that only physical mobility preferences are differentially related to expatriation type.
Briscoe et al. (2012)	Journal of Vocational Behavior	94	Quantitative Study	Examines how protean and boundaryless career orientations relate to work and career outcomes via different career self-management behaviors and career attitudes in the context of the Great Recession
Direnzo et al. (2015)	Journal of Organizational Behavior	53	Quantitative Study	Examines how protean career orientation positively relates to work-life balance via a sequence of mediators
Donald et al. (2019)	Studies in Higher Education	17	Quantitative Study	Examines how human capital, social career support, and protean career orientation are positively related to perceived employability of university students.
Guan et al. (2019)	Journal of Vocational Behavior	13	Qualitative Review	Reviews the literature on boundaryless careers and its relation to career success
Gubler et al. (2014)	Journal of Organizational Behavior	86	Qualitative Review	Reviews the protean career literature and provides a new conceptual framework of protean career and its associated components
Hall et al. (2018)	Annual Review of Organizational Psychology and Organizational Behavior	24	Qualitative Review	Reviews the careers field, including career self-management and career orientation literature, from a work-home perspective and suggests directions for future research from that perspective
Smale et al. (2019)	Journal of Organizational Behavior	12	Quantitative Study	Examines how national culture moderates the effect of career self-management behaviors on subjective career success

Uy et al. (2015)	Journal of Vocational Behavior	56	Quantitative Study	Examines how proactive personality is related to protean and boundaryless career orientations via entrepreneurial alertness to opportunities in a sample of undergraduates.
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*Note:* <sup>a</sup>as of May 18<sup>th</sup> 2020; summary of review results: 6 (66%) quantitative studies; 3 (33%) qualitative reviews.

Table 3

*Reviewed Papers on Career Self-Management –100+ Citation Publications*

<b>Author(s) (year)</b>	<b>Journal</b>	<b>#Citations<sup>a</sup></b>	<b>Type of paper</b>	<b>Key findings/content</b>
Barnett & Bradley (2007)	Career Development International	103	Quantitative	Tests whether the relationship of proactive personality and organizational career support with career satisfaction is mediated by career self-management behaviors.
Blustein et al. (1995)	The Counseling Psychologist	139	Qualitative review	Reviews the career development literature from the perspective of attachment theory. Reviews literature that connects adolescents' and adults' attachment styles to career self-management behavior and attitudes.
Brett & Stroh (1997)	Journal of Applied Psychology	101	Quantitative	Relates managers' career mobility behavior to objective career success while consideration gender as a boundary condition. Findings show that males achieved higher success when they showed more organization-external compared to organization-internal career mobility, while females did not.
Bridgstock (2009)	Higher Education Research and Development	398	Theory	Construes a framework that outlines the importance of career self-management for university graduates' employability. Recommends approaches for career self-management training in university.
Brousseau et al. (1996)	Academy of Management Executive	162	Theory	Argues for a pluralistic understanding of careers, positing that different types of careers can be distinguished by their associated mobility patterns and work values. Makes recommendations how organizations could improve their functioning by adopting such a pluralistic career understanding in HR practice.
Crant (2000)	Journal of Management	1017	Qualitative review	Reviews and integrates literature on different proactive behaviors in organizational settings. Career self-management is considered a subtype of proactive behavior.
De Hauw & De Vos (2010)	Journal of Business and Psychology	104	Quantitative	Using a matched sample of millennials in a time period of economic boom versus a time period of recession, the authors report differences in the psychological contract expectations between time points. Findings further indicate that expectations to frequently change employer were related to some facets of psychological contract expectations.

De Vos & Soens (2008)	Journal of Vocational Behavior	178	Quantitative	Tests a model that posits that the positive relation between protean career orientation and career success is mediated by career insight and career self-management behaviors. The results show that career insight fully mediate the relation, with no additional effect of career self-management behaviors.
Feldman & Ng (2007)	Journal of Management	254	Theory	Develops a framework of career mobility and its relation to career success and reviews the extant literature. Also provides a critique of the boundaryless career concept and suggests alternative frameworks.
Forret & Dougherty (2004)	Journal of Organizational Behavior	272	Quantitative	Shows that multiple types of networking behaviors are positively related to objective and subjective career success, and that these relations are moderated by gender.
Gould & Penley (1984)	Organizational Behavior and Human Performance	189	Quantitative study	Develops a measure of career self-management behavior and tests how it relates to a number of largely sociodemographic antecedents. Further tests how career self-management behaviors are related to objective career success.
Inkson & Myers (2003)	Career Development International	175	Qualitative	Through qualitative interviews, the study explores predictors and career development outcomes of overseas experience of young people. Argues that the effects of overseas experience on career development are complex and unpredictable, but that it may strengthen protean and boundaryless career orientations and capabilities.
Judge & Bretz (1994)	Journal of Management	275	Quantitative study	Focuses on the political side of career self-management and tests how political influence behavior relates to career success. Ingratiation behavior was positively related to career success, whereas self-promotion was negatively related to career success.
King (2004)	Journal of Vocational Behavior	243	Theory	Develops a framework of career self-management which the author defines as a "dynamic process, involving the execution of a set of co-occurring behaviors [...] intended to prevail upon the decisions made by those who are in a position to influence their desired career outcomes." The framework focuses on the types of behaviors that are considered career self-management.
Kossek et al. (1998)	Personnel Psychology	144	Quantitative study	Reports the results of an intervention intended to facilitate career self-management. The study finds that the intervention failed to increase career self-management and hypothesizes that the lack of integration of the intervention with HR strategy is responsible for this lack of success.

Lent & Brown (2013)	Journal of Counseling Psychology	238	Theory	Develops a process model of career self-management based on social cognitive career theory. Gives examples of contexts and behaviors to which the model can be applied (e.g., career decision making).
Lent & Hackett (1987)	Journal of Vocational Behavior	292	Qualitative review	Reviews literature on the role of career self-efficacy in career development. Highlights methodological issues as well as the need to study the role of career self-efficacy in adults' career self-management.
Lent et al. (2000)	Journal of Counseling Psychology	857	Theory	Develop a process model of how contextual supports and barriers function in career development and career self-management processes. The model is considered an extension of social cognitive career theory.
Metz & Tharenou (2001)	Group and Organization Management	120	Quantitative	Tests how human capital and social capital relates to women's career advancement, and whether they function differently between levels of hierarchy. Career self-management behavior is conceived as a social capital aspect. The study finds mixed support for the hypothesis that social capital becomes more important at higher hierarchical levels.
Noe (1996)	Journal of Organizational Behavior	154	Quantitative	Tests a model that links career self-management behaviors and career goal attributes to development behavior and supervisor-rated performance. Career exploration and distance from career goal predicted learning behavior and attitudes. Career self-management was not related to job performance.
O'Neil et al. (2008)	Journal of Business Ethics	151	Qualitative	Reviews the field of women's career development. The article highlights patterns that women's career seem to follow, as well as tensions within scholarship which is suggested to be at the same time aiming to objectively study gender while operating under a male-biased understanding of career.
Richardson & Mallon (2005)	Journal of World Business	171	Qualitative	Based on qualitative interviews with self-initiated academic expatriates, the study reports participants reasons for expatriation as well as context beliefs regarding the value of international experience for career success.
Strauss et al. (2012)	Journal of Applied Psychology	169	Quantitative	Develops the concept and measurement of future work self over multiple studies. Future work self is established as a predictor of CSM behaviors with incremental validity over other career identity constructs.
Sturges et al. (2005)	Journal of Organizational Behavior	207	Quantitative	Relates career self-management to organizational experiences of organizational career management help, psychological contract fulfillment, and organizational commitment. Tests a model that posits career self-management as a predictor of these organizational experiences, which mediate between career self-management and organizational behavior (e.g., job performance).

Sturges et al. (2002)	Journal of Organizational Behavior	190	Quantitative	Tests how organizational commitment, organizational career management, and career self-management are related. The study indicates that the relations may be reciprocal, and that levels of organizational commitment may influence different types of career self-management behavior.
Vance (2005)	Journal of World Business	123	Qualitative	Through qualitative interviews, a taxonomy of self-initiating career path strategies and activities for obtaining significant foreign work experiences is developed.

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*Note:* <sup>a</sup>as of May 18<sup>th</sup> 2020; summary of review results: total of 4 articles in the Journal of Organizational Behavior (823 total citations), 3 each published in JVB (with 713 total citations) and Journal of Management (1,546 total citations), 2 each in Journal of Applied Psychology (270 total citations), Journal of Counseling Psychology (1,095 citations), Journal of World Business (294 total citations) and Career Development International (278 citations); 13 (50%) quantitative studies; 6 theory papers (23%); 4 (15%) qualitative studies; 3 (11%) qualitative reviews

Table 4

*Recent Highly Cited Papers on Career Self-Management*

Author(s) (year)	Journal	#Citations <sup>a</sup>	Type of paper	Key findings/content
Akkermans & Kubasch (2017)	Career Development International	33	Qualitative Review	Provides an overview of trending topics in career field, including career self-management and career orientation-related topics such as attitudes and identity.
Aquilina (2013)	International Journal of the History of Sport	78	Qualitative Study	Examines how student-athletes use career self-management to develop their dual (i.e., academic and athletic) careers.
Baruch & Vardi (2016)	British Journal of Management	51	Theory Paper	Proposes a perspective on careers that pays attention to both the positive and the "dark side" of contemporary career concepts.
Greenhaus & Kossek (2014)	Annual Review of Organizational Psychology and Organizational Behavior	95	Qualitative Review	Reviews the careers field, including career self-management and career orientation literature, from a work-home perspective and suggests directions for future research from that perspective
Jackson & Wilton (2017)	Higher Education Research and Development	41	Quantitative Study	Examines how career self-management competencies predict perceived employability of UK and Australian graduates
Lent et al. (2016)	Journal of Vocational Behavior	49	Quantitative Study	Tests the social cognitive career theory model of career self-management in two samples of university students, exploring how several antecedents relate to career exploration and decision-making
Lent et al. (2017)	Journal of Vocational Behavior	47	Quantitative Study	Develops a new scale that examines the sources of self-efficacy and outcome expectations for career exploration and decision-making in university students.

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Taber & Blankemeyer (2015)	Journal of Vocational Behavior	60	Quantitative Study	Examines how future work self relates to career self-management behaviors and whether dimensions of career adaptability have incremental validity for specific types of CSM behaviors
Tomlinson (2017)	Education and Training	35	Theory Paper	Develops a model of graduate employability based in various forms of capital
Wang & Wanberg (2017)	Journal of Applied Psychology	35	Qualitative Review	Provides a historical overview of the career self-management and retirement literature

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*Note:* <sup>a</sup>as of May 18<sup>th</sup> 2020; Other recently highly cited papers include Briscoe et al. (2012), Jung and Takeuchi (2018), Penn and Lent (2019), and Smale et al. (2019); summary of review results: 8 (54%) quantitative studies; 3 (23%) qualitative reviews; 2 theory papers (15%); 1 (8%) qualitative study.



**Table 5***Reviewed Papers on Career Orientations – Journal of Vocational Behavior Publications*

<b>Author(s) (year)</b>	<b>Type of paper</b>	<b>Sample(s)</b>	<b>Sample region(s)</b>	<b>(# of measurement waves)</b>	<b>Examined career orientations</b>
Baruch & Hall (2004)	Theory	Working	n/a	n/a	Protean & boundaryless career orientation
Beigi et al. (2020)	Qualitative	Working	Asia	1	Boundaryless career orientation
Briscoe & Hall (2006a)	Theory	n/a	n/a	n/a	Boundaryless & protean career orientations produce 8 career profiles (lost/trapped, fortress, wanderer, idealist, organization man/woman, solid citizen, hired gun, hired hand, protean career architect)
Briscoe, & Hall (2006b)	Theory	n/a	n/a	n/a	Protean & boundaryless career orientation
Briscoe et al. (2006) (Study 1: Scale construction)	Quantitative	University students	North America	1	Protean & boundaryless career orientation
Briscoe et al. (2006) (Study 2: Reliability & validity of scales)	Quantitative	University students	North America	1	Protean & boundaryless career orientation
Briscoe et al. (2006) (Study 3: Convergent validity)	Quantitative	University students	North America	1	Protean & boundaryless career orientation
Briscoe et al. (2012)	Quantitative	University students	North America	1	Boundaryless mindset & protean self-directed career attitude
Çakmak-Otluoğlu (2012)	Quantitative	Working	Europe	1	Protean & boundaryless career orientation
Chan et al. (2012)	Quantitative	University students	Asia	1	Protean & boundaryless career orientation
Cortellazzo et al. (2020)	Quantitative	University students	Europe	2	Protean career orientation
De Vos & Soens (2008)	Quantitative	Working	Europe	1	Protean career orientation

Gerber et al. (2009) (Study 1: Identification of career orientations)	Quantitative	Working	Europe	1	Identification of four types of career orientation: traditional/promotion, traditional/loyalty, independent & disengaged
Gerber et al. (2009) (Study 2: relationship to work attitudes and demographics)	Quantitative	Working	Europe	1	Traditional/promotion, traditional/loyalty, independent & disengaged career orientations
Guan et al. (2019)	Theory	n/a	n/a	n/a	Boundaryless career orientation
Hall (2004)	Theory	n/a	n/a	n/a	Protean career orientation
Hall & Mirvis (1995)	Theory	Older workers	n/a	n/a	Protean career orientation
Herrmann et al. (2015) (Study 1: Concurrent and incremental validity)	Quantitative	Working	Europe	1	Protean career orientation
Herrmann et al. (2015) (Study 2: Incremental predictive validity)	Quantitative	University students & working sample	Europe	1	Protean career orientation
Holtschlag et al. (2020)	Quantitative	Working	Europe	2	Protean career orientation
Inkson (2006)	Theory	n/a	n/a	n/a	Protean & boundaryless career orientation
Li et al. (2019)	Quantitative	University students	Multiple	1	Protean career orientation
Rodrigues et al. (2019)	Quantitative	University students	Europe	2	Protean & boundaryless career orientation
Rodrigues et al. (2013)	Qualitative	Working	Europe	n/a	Identified career orientations: service, entrepreneurship, autonomy/independence, occupational, lifestyle, security, challenge & career advancement orientations
Rodrigues et al. (2015)	Quantitative	Working (dyads: supervisor included)	Europe	1	Protean & boundaryless career orientation
Segers et al. (2008)	Quantitative	Working	Europe	1	Protean & boundaryless career orientation
Steiner et al. (2019)	Quantitative	Adolescents	Europe	3	Protean career orientation
Sullivan & Arthur (2006)	Theory	n/a	n/a	n/a	Boundaryless career orientation
Uy et al. (2015)	Quantitative	University students	Asia	1	Boundaryless & protean career orientation

Verbruggen & Sels (2008)	Quantitative	Working	Europe	3	Protean career orientation
Waters et al. (2014)	Quantitative	Unemployed job searchers	Oceania	3	Protean career orientation

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*Note:* Summary of review results: 17 quantitative studies (63%), two qualitative studies (7%), eight theoretical articles (30%). The quantitative studies (including multiple substudies) were 15 cross-sectional studies (75%), five multi-wave studies (25%) and no intervention studies. The samples of empirical studies were working adults (52%), university students (39%), adolescents and unemployed job seekers (9%); sample region were Europe (61%), North America (22%), Asia (13%), Oceania (4%), 0 from Africa and Latin America & Caribbean, 1 cross-cultural. Topics: from the 17 quantitative studies, 4 (24%) solely on predictors of career orientations, 3 (18%) on both antecedents and outcomes, 9 (53%) solely on outcomes, and 1 (6%) on measurement development (Briscoe et al., 2006); Antecedents; demographic (24%), dispositional (43%), and self-efficacy related (33%). Outcomes; career self-management behavioral outcomes (20%), career-related outcomes (60%), and performance-related outcomes (20%).

**Table 6***Reviewed Papers on Career Self-Management (CSM) – Journal of Vocational Behavior Publications*

Author(s) year(s)	Type of paper	Sample(s)	Sample region(s)	(# of measurement waves)	Focus of CSM
Andre et al. (2019)	Quantitative	Adolescents	Europe	3	Behaviors
Betz (1977)	n/a	n/a	n/a	n/a	Qualitative review
Briscoe et al. (2012)	Quantitative	Working	North America	1	Behaviors
Byrne et al. (2008)	Quantitative	Working	North America	1	Attitudes & behaviors
Callanan & Greenhaus (1990)	Quantitative	Working	North America	1	Attitudes
Cortellazzo et al. (2020)	Quantitative	Working	Europe	n/a	Attitudes
Claes & Ruiz-Quintanilla (1998)	Quantitative	Working	Multiple	3	Behaviors
Davis et al. (2020)	Quantitative	University students	North America	1	Attitudes & behaviors
De Vos & Soens (2008)	Quantitative	Working	Europe	1	Attitudes & behaviors
Donnelly (2009)	Qualitative	Working	Multiple	n/a	n/a
Duarte (2009)	Qualitative review	n/a	n/a	n/a	n/a
Feij et al. (1995)	Quantitative	Working	Europe	2	Behaviors
Gianakos (1995)	Quantitative	University students	North America	1	Attitudes & behaviors
Guan et al. (2017)	Quantitative	University students	Asia	3	Behaviors
Hammer & Vardi (1981)	Quantitative	Working	North America	1	Behaviors
Herrmann et al. (2015) – Study 1	Quantitative	Working	Europe	1	Behaviors
Herrmann et al. (2015) – Study 2	Quantitative	University students	Europe	2	Behaviors
Heslin et al. (2020)	Theory	n/a	n/a	n/a	n/a

Hirschi et al. (2013) – Study 1	Quantitative	University students	Europe	2	Behaviors
Hirschi et al. (2013) – Study 2	Quantitative	University students	Europe	3	Behaviors
Inkson (2004)	Theory	n/a	n/a	n/a	n/a
Ireland & Lent (2018)	Quantitative	University students	North America	1	Attitudes
Kidd (1998)	Qualitative review	n/a	n/a	n/a	n/a
Kidd (2004)	Theory	n/a	n/a	n/a	n/a
Kim et al. (2018)	Quantitative	Working	North America	1	Attitudes
Kim et al. (2019)	Meta-analysis	n/a	n/a	n/a	Attitudes & behaviors
King (2004)	Theory	n/a	n/a	n/a	n/a
Lee et al. (2014)	Qualitative review	n/a	n/a	n/a	n/a
Lent & Hackett (1987)	Qualitative review	n/a	n/a	n/a	n/a
Lent et al. (2016)	Quantitative	University students	North America	1	Attitudes & behaviors
Lent et al. (2017)	Quantitative	University students	North America	1	Behaviors
McEnrue (1989)	Quantitative	Working	North America	1	Attitudes
Munley (1977)	Theory	n/a	n/a	n/a	n/a
Noe & Steffy (1987)	Quantitative	Working	North America	1	Behaviors
Ogbuanya & Chukwuedo (2017)	Quantitative	University students	Africa	3	Attitudes & behaviors
Pérez-López et al. (2019)	Quantitative	University students	Europe	2	Attitudes & behaviors
Praskova et al. (2014)	Quantitative	University students	Oceania	2	Behaviors
Raabe et al. (2007)	Quantitative	Working	Europe	4	Attitudes & behaviors
Ryba et al. (2015)	Qualitative	Working	Europe	n/a	n/a
Rynes et al. (1988)	Quantitative	University students, working	North America	1	Attitudes
Simosi et al. (2015)	Qualitative	Working	Europe	n/a	n/a

Singh et al. (2009)	Quantitative	Working	Oceania	2	Behaviors
Swanson (1992)	Qualitative review	n/a	n/a	n/a	n/a
Taber & Blankemeyer (2015)	Quantitative	University students	North America	1	Behaviors
Valls et al. (2020)	Quantitative	Working and unemployed job seekers	Europe	2	Behaviors
Vansteenkiste et al. (2013)	Quantitative	Unemployed job-seekers	Europe	1	Behaviors
Vondracek (2001)	Theory	n/a	n/a	n/a	n/a
Vuori et al. (2019)	Quantitative	Working	Europe	3	Attitudes
Weng & McElroy (2010)	Quantitative	Working	Asia	1	Behaviors
Wolff & Moser (2010)	Quantitative	Working	Europe	3	Behaviors

*Note:* Summary of review results: 34 (68%) quantitative studies, 3 (6%) qualitative, 6 (10%) qualitative reviews, 1 (2%) meta-analysis, 6 (12%) conceptual papers. 18 (53%) studies examined predictors and outcomes of CSM; 9 (26%) included only predictors, 7 (21%) included only outcomes. 20 (54%) papers examined working adults, 15 (41%) papers university students; 1 paper adolescents, 1 paper unemployed adults. 14 (38%) papers examined samples from North America, 16 (43%) from Europe, 2 (5%) Oceania, 2 (5%) Asia, 1 (3%) Africa; 18 (51%) papers focused on behavioral aspects of CSM, 8 (23%) focused on attitudinal aspects, 9 (26%) investigated both behavioral and attitudinal components. 9 papers (33%) examined as a composite CSM measure, 8 (30%) papers investigated career planning, 7 (26%) career exploration, 6 (22%) networking, 4 (15%) seeking social support, 4 (15%) skill development, and 3 (11%) job search. For CSM attitudes, 12 (71%) studies measured CSM with some type of self-efficacy, 5 (29%) assessed CSM with some sort of outcome expectation; of the 28 studies that examined predictors of CSM 16 studies (57%) examined some type of personality trait, 11 (39%) examined environmental support or barriers, 10 (36%) investigated work or career orientations; 6 (21%) career identity or goals, 8 (29%) work experiences, 3 (11%) future time perspective, 3 (11%) career adaptability, and 2 (7%) self-efficacy. Of the 25 studies that examined outcomes of CSM, 13 (52%) focused on employment outcomes, 8 (32%) examined career decision outcomes, 3 (12%) examined work attitudes, 6 (24%) subjective career success, 2 (8%) objective career success, and 4 (16%) investigated psychological well-being outcomes.

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