THE RELATIONSHIP BETWEEN PROTEAN CAREER ATTITUDE AND CAREER SUCCESS:

THE MEDIATING ROLE OF CAREER SELF-MANAGEMENT

ANS DE VOS
Ans.Devos@vlerick.be

NELE SOENS
Nele.Soens@vlerick.be
THE RELATIONSHIP BETWEEN PROTEAN CAREER ATTITUDE AND CAREER SUCCESS:

THE MEDIATING ROLE OF CAREER SELF-MANAGEMENT

ANS DE VOS
Vlerick Leuven Gent Management School
NELE SOENS
Vlerick Leuven Gent Management School

Contact:
Nele Soens
Vlerick Leuven Gent Management School
Tel: +32 09 210 98 64
Fax: +32 09 210 97 00
Email: Nele.Soens@vlerick.be
ABSTRACT

A protean career attitude is considered as an important determinant for career success in the contemporary career era. In this article we test a model in which we specify the relationships between protean career attitude, career self-management behaviors, career insight, and career success outcomes (psychological success and perceived employability). A survey was conducted among a sample of 289 employees. The results support the idea that a protean career attitude is a significant antecedent of career success and that this relationship is fully mediated by the development of career insight. Career insight moderates the relationship between career self-management behaviors and psychological success. The implications of these findings for understanding the process through which individuals’ career attitude affect their career success are discussed.

Keywords: protean career attitude, career self-management, career insight, subjective career success, employability.
INTRODUCTION

Over the years there has been extensive writing on the changing career environment. While traditional careers tended to be defined in terms of advancement within a limited number of organizations, contemporary careers are viewed as boundaryless (Arthur, Khapova & Wilderom, 2005). They reflect a ‘new deal’, in which the psychological contract between employer and employee does no longer automatically include a promise of lifetime employment and steady career advancement (e.g. Arthur & Rousseau, 1996; Roehling, Cavanaugh, Moyhihan & Boswell, 2000). This new deal implies that employees have to engage in a range of career self-management activities in order to create the career options that allow them to realize their personal career goals and that ensure their employability (Hall & Moss, 1998; Kuijpers, Schyns & Scheerens, 2006; Sturges, Conway, Guest & Liefsooghe, 2005; van Dam, 2004). A changing attitude of employees toward their career development and their own role within this is needed (Briscoe & Hall, 2006).

The concept of “protean career attitude” offers a valid approach to study contemporary careers (Hall & Moss, 1998). A protean career attitude reflects the extent to which an individual manages his or her career in a proactive, self-directed way driven by personal values and evaluating career success based on subjective success criteria (Hall, 2002). Despite the fact that the protean career concept has received widespread attention in the career literature, empirical research is still in its early stages. It is assumed that a protean career attitude is associated with career success, but empirical evidence is scarce. In contrast, over the past decades a wide range of studies have been conducted that address career competencies that are critical for career success in the new career era (e.g. Eby, Butts & Lockwood, 2003; Kuijpers et al., 2006). While these studies underscore the importance of proactively managing one’s career, they could gain from a stronger embeddedness in the theoretical framework offered by the protean career literature. The conceptualization of the protean career as an attitude reflecting a feeling of personal agency suggests that this attitude will engage individuals in managing their own career. This, in turn, should increase their feelings of career success. By relating the protean career attitude to the development of career insight, career self-management behaviors and career success this study responds to the need for empirical research on the predictive validity of the protean career attitude for understanding the practical results of protean career attitudes (Briscoe, Hall & DeMuth, 2006).
CAREER SUCCESS WITHIN THE NEW CAREER ERA

Career success

Career success refers to the accumulation of positive work and psychological outcomes of career experiences (Seibert & Kraimer, 2001). Following Eby et al. (2003) in this study we focus on two indicators of career success that are in line with the notion of boundaryless careers. First, in the boundaryless career the emphasis is on inter-firm mobility and unpredictability (Arthur & Rousseau, 1996; Eby et al., 2003). In this context, psychological success, rather than objective position, is viewed as the major indicator of career success. It refers to feelings of satisfaction and accomplishment of one’s career (Seibert et al., 1999). Second, employability refers to an individual’s capability of remaining employed with the current employer or with another employer (Eby et al., 2003; Sanders & de Grip, 2004; Stickland, 1996; Van Dam, 2004). In an employment context characterized by instability and uncertainty, the extent to which individuals succeed in staying employable in their current organization or on the external labor market is viewed as an important indicator of career success (Bird, 1994; Sullivan et al., 1998).

When examining the role of the protean career attitude in explaining career success it is hence important to address both the subjective feelings of psychological success and individuals’ perceptions of employability.

Protean Career Attitude

The protean career concept encompasses the extent to which an individual demonstrates self-directed and values driven career orientations in their personal career management (Briscoe & Hall, 2006; Hall, 2002). It is conceived as being driven by the person, not the organization and is based upon individually defined goals (Briscoe & Hall, 2006). This means that individuals with a protean career attitude take an independent role in managing their career and that they use their own values instead of organizational values as criteria for making career decisions (Briscoe et al., 2006). A protean career attitude does not imply particular behaviors such as job mobility, but rather is a mindset an individual has about his or her career, which in turn affects career-related decisions (Briscoe & Hall, 2006). Individuals can differ in the extent to which they have a protean career attitude. For instance, proactive personality has been found to be positively associated with a protean career attitude (Briscoe et al., 2006).
According to Briscoe & Hall (2006), the extent to which individuals have a protean career attitude has consequences for the saliency of identity and adaptability in their careers. Individuals with a more traditional career attitude tend to take a more passive role in managing their career and are more likely to seek direction from the organization. Individuals with a protean career attitude experience greater responsibility for their career choices and opportunities (Hall, 1976; 2002). One important implication for the individual working in a continuously changing organizational context is that he or she must have a clear sense of personal identity that operates as an internal guide for making career decisions (Hall, 2002). Developing a protean career attitude might thus be important for individuals in order to make career choices that lead to feelings of psychological success and that ensure their employability. As an attitude, it is conceived to set the basis for individual career management initiatives which might include both the development of learning about oneself (acquiring career insight) and taking practical initiatives to manage ones career. As shown in extant research, both career insight and self-management behaviors are important for explaining career success.

**Career Self-Management**

To realize the potential of the new career, an individual must develop new competencies related to the management of self and career (Eby et al., 2003; Hall & Moss, 1998). Inherent to the notion of protean careers is that the individual employee is the primary responsible for managing his or her own career and that a strong sense of identity and values are important for guiding individuals’ career decisions. (Briscoe & Hall, 1999; Briscoe & Hall, 2006; Hall, 2002). Career self-management refers to the proactivity employees show with respect to managing their own careers (King, 2004; Kossek, Roberts, Fisher & Demarr, 1998; Orpen, 1994). It includes employees’ efforts to define and realize their personal career objectives, which can or cannot correspond with the organization’s objectives. A study of the literature on career self-management reveals a wide range of cognitions and behaviors that are being studied, as well as a wide variety of terms used to label “career self-management” (e.g. proactive career behavior, individual career management, career competencies) (King, 2004; Sturget et al., 2000; 2002; Kuijpers et al., 2006). Together these studies indicate that two components of career self-management can be discerned, i.e. a reflective and a behavioral component.
While the former refers to the insights individuals develop into their own career aspirations, the latter refers to concrete behaviors they initiate with the aim of managing their own career.

**Reflective Component of Career Self-Management.** Several studies address the importance of career insight as an antecedent of career success (e.g. Arthur, Inkson, & Pringle, 1999; Ball, 1997; Defillippi & Arthur, 1994; Eby, Butts, & Lockwood, 2003; Kuijpers et al., 2006). This reflective component of career self-management is, for instance, reflected in the ‘knowing why’ and ‘knowing how’ type of career competencies as put forward by DePhilippi & Arthur (1994). According to Mirvis & Hall (1994), psychological success is affected by individuals’ abilities to make sense of their constantly changing work agenda and to integrate their work experiences into a coherent self-picture. This suggests that, in addition to career self-management behaviors, it is important for individuals to develop career insight that allows them to make meaningful choices.

**Behavioral Component of Career Self-Management.** The behavioral component of career self-management builds on the notion of proactivity and it refers to the concrete actions (e.g. networking, self-nomination, creating opportunities) undertaken by employees to realize their career goals (King, 2004; Noe, 1996; Sturges et al., 2000; 2002). These actions can focus on improvement in one’s current job or on movement within or outside the company (Kossek et al., 1998; Sturges et al., 2002). Several authors have studied the relationship between career self-management behaviors enacted by individuals and career-related outcomes. These studies reveal the importance of a wide range of self-management behaviors, such as collecting information about existing or possible career opportunities, searching for feedback about one’s performance and competencies, and creating career opportunities through networking and actions aimed at enhancing one’s visibility (e.g. Claes & Ruiz-Quintanilla, 1998; King, 2004; Orpen, 1994; Seibert et al., 2001; Sturges et al., 2000; 2002).
Relationship between Protean Career Attitude and Career Self-Management

The protean career concept offers a relevant framework for understanding the relationship between both components of career self-management and career outcomes given its conceptualization as a values-driven, self-directed career attitude important for realizing career success (Hall, 2002). Based on the conceptualization of the protean career as an attitude reflecting a feeling of personal agency (Briscoe et al., 1996), we expect that it will positively relate to the extent to which individuals actively reflect on their career, i.e. develop career insight, and to the extent to which they take concrete initiatives to manage their own career, i.e. career self-management behaviors.

Hypothesis 1: A protean career attitude will be positively associated with the development of career insight.

Hypothesis 2: A protean career attitude will be positively associated with career self-management behaviors.

Relationship between Career Self-Management and Career Success

Over the years, many studies have investigated individual and organizational factors that facilitate individuals’ career success (Ng et al., 2005). Both career self-management behaviors and more cognitive indicators of career self-management (e.g. career competencies) have been examined as antecedents of career success. First, evidence shows that individuals who reflect more actively about their career goals and have a stronger insight in what they want to attain during their career, report a higher level of career success. For instance, Eby et al. (2003) found that career insight has a significant impact on perceived career success and on perceived internal marketability. Second, the behavioral component of career self-management has been found to affect career success. For instance, Kuijpers et al. (2006) found that career control and networking had a significant and positive impact on subjective career success. Seibert et al. (2001) found that employees who take more initiatives to develop their careers, e.g. by seeking out career-oriented feedback, report a more satisfying level of career progression (Seibert et al., 2001). It is assumed that self-managing individuals more actively strive to obtain their desired career goals which in turn should make them feel more successful in their career (e.g. Arthur et al., 2005; Ng et al., 2005).
Seibert et al. (1999) found evidence for their hypothesis that proactive individuals select, create and influence work situations that increase the likelihood of career success. In this sense, career self-management can not only result in more positive feelings about subjective career success, but also in employability because it increases employees’ options for employment, development and the extent to which they can negotiate about job changes (Claes & Ruiz-Quintanilla, 1998).

Hypothesis 3a: There is a positive relationship between career insight and psychological success.

Hypothesis 3b: There is a positive relationship between career insight and perceived employability.

Hypothesis 4a: There is a positive relationship between career self-management behaviors and psychological success.

Hypothesis 4b: There is a positive relationship between career self-management behaviors and perceived employability.

Mediational Hypotheses

Given the conceptualization of the protean career attitude as a general attitude towards one’s career, we propose that the impact of a protean career attitude on career success will be indirect, operating through career self-management. More specifically, we predict indirect effects of protean career attitude on perceived career success and on perceived employability.

Hypothesis 5a: Career insight mediates the relationship between protean career attitude and psychological success.

Hypothesis 5b: Career insight mediates the relationship between protean career attitude and perceived employability.

Hypothesis 6a: Career self-management behaviors mediate the relationship between protean career attitude and psychological success.
Hypothesis 6b: Career self-management behaviors mediate the relationship between protean career attitude and perceived employability.

The model we have developed to this point describes the impact of a protean career attitude on psychological success and perceived employability as being fully mediated by career insight and career self-management behaviors. Although this full mediation is plausible, theoretical work on the protean career attitude suggests that this attitude also has a direct impact on subjective career outcomes (e.g. Hall, 2004; Hall & Moss, 1998). On the basis of this thinking, we also assess the plausibility of partial mediation.

The hypothesized model about the relationships between protean career attitude, career insight, career self-management behaviors, employability and psychological success is presented in Figure 1.

---

METHOD

Sample and Procedure

A survey was conducted among 297 Belgian employees, who had participated in career counseling. After having received formal approval from their clients, 12 counseling centers provided us with the list of their clients having received counseling during a pre-specified reference period (January 2005 – February 2006). In total, contact details from 866 persons were obtained. From this list, only those individuals were retained that had finished the counseling process at least six months before this study took place. From the remaining group, a stratified sample was drawn, taking into account the following criteria: (1) representation of all counseling centers according to their number of clients; (2) representative proportion of men and women, age categories, educational level, ethnic origin and region of living. Based on these criteria, a list of 300 individuals was retained who were contacted for a telephone interview by trained interviewers. If a person refused to cooperate or could not be contacted, another person with the same profile in terms of stratification criteria was selected from the list. Finally 297 respondents participated in the survey. After deletion of cases with missing values, 289 respondents were retained for inclusion in the analyses.
Of these, 60.6% are women. The majority (64.4%) is between 30 and 45 years old and has the Belgian nationality (95.2%). 52.7% holds a degree of secondary education or lower.

**Measures**

**Protean career attitude** ($\alpha = .83$) was measured using the eight items from the ‘self directedness’ subscale of the Protean Career Attitude scale developed by Briscoe & Hall (in Briscoe et al., 2006). Respondents had to indicate on a 5-point Likert scale to which extent they considered themselves as the primary responsible for managing their career in an independent way (e.g. “I am in charge of my own career”).

**Career insight** ($\alpha = .87$). Using a 5-point Likert scale, respondents had to indicate to which extent they felt the career counseling had given them a better insight into their own career aspirations, skills and personality (e.g. “Thanks to the career counseling I have obtained a better insight into what I find important in my career”). Based on prior work by London (1993) and Osipow & Gati (1998), fourteen items were used to construct this scale.

**Career self-management behaviors** ($\alpha = .71$) were assessed using six items from the Individual Career Management scale developed by Sturges et al. (2000; 2002). We used those items that are generally considered as two important components of career self-management and that relate to networking behavior and to visibility behavior. Using a 5-point Likert scale, respondents had to indicate to which extent they had practiced these behaviors since they had participated in the career counseling (e.g. “since the career counseling, I make more contacts with people that can influence my career”).

**Psychological success** ($\alpha = .87$) was assessed via three items from Martins, Eddleston & Veiga (2002). Respondents had to indicate on a 5-point Likert scale to which extent they were satisfied with their career status, with their current job, and with the career progress they had made so far.

**Perceived employability** ($\alpha = .91$) was assessed using three items that were based on Eby et al. (2003). Respondents had to indicate on a 5-point Likert scale to which extent they believed that they were employable (e.g. “I could easily obtain a new job with another employer”).

**Control variables.** We controlled for age, level of education and gender. Three educational levels were coded: low (education until the age of 15), average (high school certification) and high (bachelor and master levels). Gender was dummy-coded as (0 = male, 1 = female).
Analytical Strategy

We tested the hypothesized model and paths using AMOS 7.0. We formed item parcels to create two indicators each for protean career attitude, career insight, and career self-management behaviors in order to reduce the sample size to parameter ratio. Because psychological success and perceived employability were composed only of three items, we used each item as a separate indicator for these two constructs. Following the recommendations of Anderson & Gerbing (1988), we tested our proposed model using a two-stage analytic procedure. First, we fitted a measurement model to the data, and second we tested the underlying structural model. The following indices were used to evaluate the fit of the tested models: (a) chi-square goodness of fit to degrees of freedom ratio, (b) Tucker-Lewis index (TLI; Tucker & Lewis, 1973), (c) root-mean-square error of approximation (RMSEA, Steiger, 1990), (d) standardized root-mean-square residual (SRMR; Bentler, 1990), and (e) the comparative fit index (CFI). Previous work suggests that satisfactory model fit is indicated by TLI and CFI values of .90 or higher and RMSE values no higher than .08, SRMR values no higher than .10 and a chi-square goodness of fit to degrees of freedom ratio no greater than 2 (Bentler, 1990; Browne & Cudeck, 1993).

RESULTS

Table 1 shows the descriptive statistics, alpha reliabilities and intercorrelations between all variables included in the study. Overall, these correlations provide preliminary evidence for the model proposed. Protean career attitude was significantly related to career insight, career self-management behaviors, psychological success and employability. Career insight and career self-management behaviors were significantly related to psychological success and employability.

Table 2 displays the standardized factor loadings for the indicators used in the measurement model. Table 3 displays the fit statistics for the measurement model. Overall, the fit indices show that the hypothesized measurement model provided a good fit to the fit the data, \( \chi^2 (44, N = 289) = 68.90, p > .05, \text{TLI} = .980, \text{CFI} = .987, \text{RMSEA} = .044, \text{SRMR} = .036 \).
Following the recommendations of Kelloway (1996), we compared the hypothesized measurement model with two constrained nested models in which certain factors were set to load on a single factor. First, we created a one-factor model in which all of the hypothesized factors were set to load on a single underlying factor. Second, we created a the two-factor model in which the protean career attitude, career self-management behaviors and career insight constructs where set to load on a single factor, and the employability and psychological success factors a second factor. Finally, we compared the fit of the hypothesized measurement model with the less constrained independence model. In each case, the hypothesized measurement model fit the data better than any of the alternatives, both in terms of the fit statistics, and when directly contrasted with a change in chi-square test.

Given the acceptable fit of the measurement model, we tested our structural model (see Figure 1). The fit statistics for the structural model are displayed in Table 4. Overall, the fit indexes suggest a good fit of the hypothesized model to the data. Following Kelloway’s (1996) recommendations, we compared the hypothesized model against two theoretically plausible alternative models (see Table 4). First, we created a non-mediated model in which protean career attitude, career self-management behaviors and career insight were set to load directly on the two career success outcomes. As can be seen from Table 4, this model poorly fitted the data and was a significantly poorer fit than the hypothesized partial mediation model. This supports our proposition about the importance of mediating pathways. Second, we compared the hypothesized model with a partially mediated model. Comparison of the \( \chi^2 \) statistics for both models shows that the inclusion of direct pathways from protean career attitude to career outcomes does not cause a significantly poorer fit than the hypothesized partial mediation model. However, the regression weights from protean career attitude on employability and psychological success were not significant in the partial mediation model. For this reason, and because the hypothesized full mediation model represents the data more parsimoniously, this model was retained as the final model. The final model provided a good fit to the data, \( \chi^2 (47, N = 289) = 78.26, \ p < .01, \ TLI = .966, \ CFI = .975, \ RMSEA = .048, \ SRMR = .047 \).

Given the acceptable fit of the measurement model, we tested our structural model (see Figure 1). The fit statistics for the structural model are displayed in Table 4. Overall, the fit indexes suggest a good fit of the hypothesized model to the data. Following Kelloway’s (1996) recommendations, we compared the hypothesized model against two theoretically plausible alternative models (see Table 4). First, we created a non-mediated model in which protean career attitude, career self-management behaviors and career insight were set to load directly on the two career success outcomes. As can be seen from Table 4, this model poorly fitted the data and was a significantly poorer fit than the hypothesized partial mediation model. This supports our proposition about the importance of mediating pathways. Second, we compared the hypothesized model with a partially mediated model. Comparison of the \( \chi^2 \) statistics for both models shows that the inclusion of direct pathways from protean career attitude to career outcomes does not cause a significantly poorer fit than the hypothesized partial mediation model. However, the regression weights from protean career attitude on employability and psychological success were not significant in the partial mediation model. For this reason, and because the hypothesized full mediation model represents the data more parsimoniously, this model was retained as the final model. The final model provided a good fit to the data, \( \chi^2 (47, N = 289) = 78.26, \ p < .01, \ TLI = .966, \ CFI = .975, \ RMSEA = .048, \ SRMR = .047 \).
Figure 2 shows the significant pathways for the final model. Providing support for Hypothesis 1 and 2, protean career attitude was positively associated with career insight ($\beta = .87, p < .01$) and with career self-management behaviors ($\beta = .76, p < .01$). Career insight was positively associated with perceived employability ($\beta = .62, p < .01$) and with psychological success ($\beta = .67, p < .01$), which supports Hypothesis 3a and 3b. We received no support for Hypothesis 4a or 4b. Contrary to our expectations, career self-management behaviors were not significantly related to perceived employability or psychological success. Together, the significant positive association between protean career attitude and career insight and the significant positive association between career insight and perceived employability and psychological success supports our hypothesis that career insight mediates the relationship between protean career attitude and career outcomes (Hypothesis 5a and 5b). Given the lack of a significant relationship between self-management behaviors and career outcomes, the mediational relationship addressed in Hypothesis 6a and 6b could not be confirmed.

Insert Figure 2 about here

DISCUSSION

Protean Career Attitude and Career Success

The aim of this study was to unravel the relationship between protean career attitude, career self-management and career outcomes. Our results show that a protean career attitude is related to feelings of career success and perceived employability through its impact on career insight. These results confirm the idea that having a protean career attitude is important for individuals in the current career landscape. In this way, our results provide empirical support for the presumed relevance of the protean career concept (Hall, 2002; 2004). As outlined by Briscoe et al. (2006), the protean career model has been successful in informing theory but is lacking empirical research and application. This study is, to our knowledge, one of the first to apply the protean career attitude scale in an empirical study, thereby examining its relationship with important career outcomes.
The positive relationship between protean career attitude and career insight extends the finding of a positive correlation between protean career attitude and career authenticity found by Briscoe et al. (2006). While these authors addressed respondents’ feelings regarding the authenticity of their career, we studied career insight, a variable that can be seen as related to but conceptually distinct from career authenticity (Sjevenova, 2005).

The positive relationship between protean career attitude and self-management behaviors supports the idea that those individuals with protean career attitudes actively strive for career success by translating this into concrete actions to manage their career (Hall, 2004). A protean career attitude appears to engage individuals for defining as well as directing their own career path.

**Exploration of the Moderating Role of Career Insight the Relationship between Self-Management Behaviors and Career Outcomes**

In our study career self-management behaviors are not directly related to career outcomes. This contrasts with earlier findings in this field (e.g. Kuijpers et al., 2006; Seibert et al., 2001). Our results suggest that the extent to which an individual is proactive in managing their career does not automatically imply stronger feelings of career success or perceptions of employability. A possible explanation for this difference might be the assessment of self-management behaviors. In our study we explicitly assessed behavioral indicators that do not include a reflective component (networking, creating visibility), in contrast with for instance items assessing feedback-seeking, or asking for career advice. By separating the more reflective aspect of self-management from the behavioral aspect it appears that the latter in itself is not sufficient for career success. In additional post-hoc analyses we have further explored the relationship between career insight, self-management behaviors and career success. Career self-management behaviors are assumed to deliver positive feelings of career success because they imply that individuals actively try to attain their career goals. The underlying assumption is that self-management behaviors are instrumental for attaining career goals. This first of all requires individuals to have insight into their career aspirations and possibilities (i.e. developing career insight, the reflective component of career self-management). Within the boundaryless career context, individuals are confronted with seemingly infinite possibilities and it is assumed that recognizing and taking advantage of such opportunities leads to success (Briscoe & Hall, 2006; DeFilippi & Arthur, 1996).
This might entail the risk that individuals lacking career insight might make the wrong choices. Based on this reasoning it is possible that the extent to which individuals actively manage their career will affect their psychological success and their perceived employability to a larger extent when this is accompanied by increasing levels of career insight. Simply engaging in proactive behaviors to manage one’s career without “knowing why” might not result in the desired effects. This is also included in the notion of the protean career as self-directed and driven by personal values (Briscoe & Hall, 2006). We empirically tested the plausibility of this explanation using moderated regression analysis. Although the interaction term of career insight and career self-management behavior had no significant impact on perceived employability, there was a significant positive interaction effect on psychological success ($\beta = .12$, $p < .05$). Further analyses revealed a significant positive association between career self-management behaviors and psychological success for respondents reporting a high level of career insight, while there was a non-significant negative association for respondents reporting a low level of career insight. This finding supports our idea that self-management behaviors only affect career success to the extent that individuals also develop insight into their career identity. For perceived employability, the relationship might even be more complex given the direct association with alternative employment opportunities, which might, for instance, also be affected by other factors such as insight into the employment market.

Overall, our findings support the idea that activity-dependent measures of career self-management might affect the significance of relationships found (Verbruggen, Sels & Forrier, 2007). Our results suggest that studying career attitudes that are unrelated to specific activities, like the protean career attitude, is a more appropriate way to understand the impact of self-directed career management on career outcomes.

**Practical Implications**

There is a growing tendency within organizations to stress the importance of individual responsibility for career development. As a consequence, individuals taking a proactive stance towards their career might be more likely to benefit from career opportunities, hence increasing their chances for career success. Our findings indicate that individuals with a protean career attitude are more likely to engage in career self-management and that this is related to relevant career outcomes.
This implies that if organizations want to stimulate more self-directed career management among their employees, purely training them in career self-management behaviors might not be sufficient. A first important step will be to address employees’ career attitudes. Probably the organizational culture (expressed, amongst others, through human resource practices) regarding responsibility for career development will play an important role here, in addition to attitude trainings. Second, our results suggest that it is important to focus on both the reflective and behavioral component of career self-management. Our results suggest that purely training employees in self-management behaviors, without stimulating them to reflect on their career identity, might not turn out to be effective. In that sense, our results add to the evidence that providing organizational career support which actively engages employees in the management of their own career is important (Verbruggen, Sels & Forrier, 2007).

**Limitations and Suggestions for Future Research**

Our study did have some limitations. First, all data were cross-sectional. This means that we cannot unequivocally determine the direction of relationships we found. Further research using a longitudinal design is needed to further unravel the causal relationships between protean career attitude, career self-management and outcomes. Second, an interesting avenue for future research would be to include objective career success as an outcome of protean career attitude. Given the relationship between objective and subjective career success found in many studies, it would further add to our insight into the role of a protean career attitude by investigating its relationship with both forms of career success. Moreover, including objective success measures would overcome the limitations inherent in studies using only self-perception data. Although self-perceptions are the most relevant way to assess both the antecedent and outcome variables in our model, this holds the risk of common method bias. Fourth, it might add to our understanding on the role of self-management not only to ask respondents to report on their career attitude, self-management behaviors and developed career insight, but to relate this to the opinion of other parties (e.g. employees’ direct supervisors). Since organizational agents still play an important role in affecting organizational decisions about employees’ career opportunities, including their perspective might be important in further unraveling the proposed relationships. Fifth, future research might want to include the organizational component of career management.
It is likely that the career support provided by organizations to their employees will not only affect career outcomes (as shown in earlier research), but that this will also affect employees’ attitudes regarding the responsibility they have for managing their own career.

Together our findings add to the development of a nomological network for protean career attitude and they demonstrate that the concept does have practical value. In that sense, we hope to have contributed to the academic study of protean career attitude and to the potential of the concept for practical recommendations.
REFERENCES


FIGURE 1

Proposed Model
Final Model

Protean career attitude

Career insight

Perceived employability

Psychological success

Career self-management behaviors

$R^2 = .75$

$R^2 = .50$

$R^2 = .26$

$R^2 = .57$

.87**

.76**

.67**

.60**
TABLE 1

Descriptive Statistics, Intercorrelations, and Alpha Reliabilities of Major Variables

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Age</td>
<td>-0.20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Protean career</td>
<td>-0.13*</td>
<td>0.04</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Self-management behavior</td>
<td>-0.07</td>
<td>-0.01</td>
<td>0.55**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Career insight</td>
<td>-0.10</td>
<td>0.02</td>
<td>0.55**</td>
<td>0.45**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Perceived employability</td>
<td>-0.07</td>
<td>-0.01</td>
<td>0.49**</td>
<td>0.41**</td>
<td>0.50**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Psychological success</td>
<td>0.02</td>
<td>-0.09</td>
<td>0.24**</td>
<td>0.19**</td>
<td>0.32**</td>
<td>0.31**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. N = 289. Alphas are on the diagonal. Gender is coded such that 0 = female and 1 = male
* p < .05. ** p < .01.
### TABLE 2

**Measurement Model Indicator Loadings**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protean Career 1</td>
<td>.846</td>
</tr>
<tr>
<td>Protean Career 2</td>
<td>.770</td>
</tr>
<tr>
<td>Career Insight 1</td>
<td>.752</td>
</tr>
<tr>
<td>Career Insight 2</td>
<td>.711</td>
</tr>
<tr>
<td>Self-Management Behaviors 1</td>
<td>.833</td>
</tr>
<tr>
<td>Self-Management Behaviors 2</td>
<td>.666</td>
</tr>
<tr>
<td>Employability 1</td>
<td>.928</td>
</tr>
<tr>
<td>Employability 2</td>
<td>.797</td>
</tr>
<tr>
<td>Employability 3</td>
<td>.908</td>
</tr>
<tr>
<td>Psychological Success 1</td>
<td>.804</td>
</tr>
<tr>
<td>Psychological Success 2</td>
<td>.945</td>
</tr>
<tr>
<td>Psychological Success 3</td>
<td>.754</td>
</tr>
</tbody>
</table>

*Note. All loadings are significant at p < .01*
### TABLE 3

**Model Fit Statistics of the Measurement Model**

<table>
<thead>
<tr>
<th>Model</th>
<th>( \chi^2 )</th>
<th>df</th>
<th>( \chi^2/df )</th>
<th>( \Delta \chi^2 )</th>
<th>TLI</th>
<th>CFI</th>
<th>RMSEA</th>
<th>SRMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesized five-factor</td>
<td>68.90</td>
<td>44</td>
<td>1.57</td>
<td>---</td>
<td>.980</td>
<td>.987</td>
<td>.044</td>
<td>.036</td>
</tr>
<tr>
<td>measurement model</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independence model</td>
<td>1,961.46**</td>
<td>66</td>
<td>29.72</td>
<td>1,892.56**</td>
<td>---</td>
<td>---</td>
<td>.316</td>
<td>.400</td>
</tr>
<tr>
<td>One-factor measurement model</td>
<td>279.58**</td>
<td>51</td>
<td>5.48</td>
<td>210.68**</td>
<td>.844</td>
<td>.879</td>
<td>.125</td>
<td>.118</td>
</tr>
<tr>
<td>Two-factor measurement model</td>
<td>270.22**</td>
<td>50</td>
<td>5.40</td>
<td>201.31**</td>
<td>.847</td>
<td>.884</td>
<td>.124</td>
<td>.111</td>
</tr>
</tbody>
</table>

**Note.** \( N = 289 \). TLI = Tucker-Lewis Index; CFI = comparative fit index; RMSEA = root-mean-square error of approximation; SRMR = standardized root-mean-square residual. Dashes represent data that were not applicable. **\( p < .01 \)**
### TABLE 4

**Fit Statistics of Tested Structural Models**

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$</th>
<th>df</th>
<th>$\chi^2$/df</th>
<th>$\Delta \chi^2$</th>
<th>TLI</th>
<th>CFI</th>
<th>RMSEA</th>
<th>SRMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesized partially</td>
<td>72.86**</td>
<td>45</td>
<td>1.62</td>
<td>---</td>
<td>.968</td>
<td>.978</td>
<td>.046</td>
<td>.046</td>
</tr>
<tr>
<td>mediated model</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fully mediated model</td>
<td>78.26**</td>
<td>47</td>
<td>1.67</td>
<td>4.50</td>
<td>.966</td>
<td>.975</td>
<td>.048</td>
<td>.047</td>
</tr>
<tr>
<td>Nonmediated model</td>
<td>393.65**</td>
<td>70</td>
<td>5.62</td>
<td>287.27**</td>
<td>.780</td>
<td>.830</td>
<td>.127</td>
<td>.170</td>
</tr>
</tbody>
</table>

*Note.  N = 289. TLI = Tucker-Lewis Index; CFI = comparative fit index; RMSEA = root-mean-square error of approximation; SRMR = standardized root-mean-square residual. Dashes represent data that were not applicable. ** $p < .01$*