

**ARTICLE**

# Self-esteem and career adaptability: Moderating roles of parental and peer support

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**Abstract**

The present study aimed to examine the long-term associations between self-esteem and career adaptability and to investigate the moderating roles of parental and peer support in these associations. The two-wave longitudinal study used a sample of 3126 graduates from vocational upper secondary education during their career transition. Questionnaires were administered at two time points: 2 months before graduation (T1) and 10 months after graduation (T2). The results of linear regression and moderation analysis showed that (1) self-esteem had a longitudinal positive effect on career adaptability, (2) perceived parental and peer support did not have significant effects on career adaptability, and (3) peer support served as a moderator in the relationship between self-esteem and career adaptability. The findings emphasize the psychosocial nature of career adaptability and highlight the role of perceived peer support in the career adaptability of vocational education graduates during their career transition.

**KEYWORDS**

career adaptability, parental support, peer support, self-esteem, vocational education graduates

The Czech Republic, like many other countries (e.g., Austria, Switzerland, Slovak Republic, Slovenia, and the United Kingdom), has a large number of students in upper secondary education enrolled in the vocational stream (see OECD, 2021, p. 185, for more details). Upon graduation, two thirds of Czech graduates with a vocational education apprenticeship and more than one third of graduates with a

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school graduation certificate choose to work rather than pursue further education (Chamoutová et al., 2019). Thus, after completing their vocational upper secondary education, many Czech graduates face one of the most challenging career tasks—the career transition. Graduates from vocational education, therefore, need skills enabling them to adapt to changing career contexts. The important psychosocial meta-competency for successful career adaptation is reflected in the construct of career adaptability, characterized by the set of problem-solving and coping resources that individuals use when dealing with current and anticipated occupational tasks, transitions, or traumas (Savickas & Porfeli, 2012).

Therefore, it is not surprising that vocational psychology has a long-standing interest in exploring the antecedents of career adaptability (Johnston, 2018). In the present study, we focused on self-esteem, a key resource for career development because it enables the selection, alteration, and implementation of other resources such as career adaptability and environmental resources (Haenggli & Hirschi, 2020). According to the career construction model of adaptation (Savickas, 2009, 2013; Savickas & Porfeli, 2012; see also Hirschi et al., 2015; Rudolph et al., 2017), self-esteem has been identified as a critical indicator of adaptivity and, thus, as a precursor of career adaptability (Rudolph et al., 2017). Because career adaptability is an individual psychosocial resource (Savickas & Porfeli, 2012), the development of career adaptability is attributed to the interplay between individual characteristics and social context (Blustein, 2011; Brown & Lent, 2019; Savickas, 2013). Perceived social support is an important contextual factor that can strengthen or inhibit the association between self-esteem and career adaptability (Blustein, 2011; Brown & Lent, 2019). Although previous studies have shown that self-esteem and perceived social support are positively associated with career adaptability (e.g., Cai et al., 2015; Ghosh & Fouad, 2017; Rudolph et al., 2017), limited research has focused on the interactive effects of self-esteem and perceived social support on career adaptability (e.g., Atağ et al., 2018). Furthermore, the social support perceived by young people usually includes support from parents and peers. As an individual develops, the importance of parents and peers in their psychosocial support preferences and self-concept validation changes (e.g., Laible et al., 2004; Markiewicz et al., 2006). Only a small number of studies (e.g., Hirschi, 2009; Hlađo et al., 2020; Hui et al., 2018) have examined the roles that parents and peers play in young peoples' career adaptability, and no study has investigated the moderating effects of perceived parental and peer support on the relationship between self-esteem and career adaptability. Thus, the unique role of each figure remains unclear. Previous longitudinal studies (Cheung & Jin, 2016; Hirschi, 2009) have shown that career adaptability develops and changes over time under the influence of social support, but research investigating the relationship among self-esteem, social support, and career adaptability has been solely cross-sectional. Moreover, the samples in previous research comprised mostly tertiary education students and participants who were not currently in the career transition process.

Further investigations are needed to explore the long-term effects of self-esteem and social support on career adaptability, especially among vocational upper secondary school graduates during a career transition. Expanding upon the previous literature, we aimed to investigate primarily the extent to which perceived parental and peer support, as situational factors, strengthens or inhibits the relationship between self-esteem and career adaptability. We attempt to contribute to the literature in several ways. First, we examined the moderating role of perceived social support in the relationship between self-esteem and career adaptability separately for parents and peers. Second, in contrast to previous studies, we applied a longitudinal research design in which we separated the dependent variable (i.e., career adaptability at T2) from independent variables in time, and we also controlled for career adaptability at T1. This approach enabled us to assess the changes in career adaptability over time as predicted by the independent variables in question. Third, we included a sample of vocational upper secondary school graduates in their actual career transition. Specifically, we assessed the roles of self-esteem and perceived parental and peer support before leaving vocational education on graduates' career adaptability when adapting to a new school or work environment. We provide longitudinal evidence regarding the career development of the understudied population of vocational education graduates during the career transition.

## SELF-ESTEEM AND CAREER ADAPTABILITY

Self-esteem, an integral part of the self-concept, refers to a person's subjective evaluation of themselves as worthy, competent, and valuable (Rosenberg, 1965). According to the career construction model of adaptation, self-esteem is one of the relatively stable, context-general, and trait-like psychological characteristics defined as adaptive readiness that condition the use of adaptability resources when dealing with various unfamiliar issues on a career path (Hirschi et al., 2015; Rudolph et al., 2017; Savickas, 2013; Savickas & Porfeli, 2012). Low self-esteem can hinder the development of the necessary strategies for coping with career challenges and transitions. Individuals with low self-esteem are less able to perceive themselves accurately and tend to underestimate their capabilities (Feldman, 2003). Additionally, they are more likely to display poor psychological adjustment in stressful situations (Zeigler-Hill & Wallace, 2012). As such, they tend to avoid career decision-making processes (Saka et al., 2008). In several empirical studies, self-esteem has been found to be a substantial predictor of an individual's career adaptability (Van Vianen et al., 2012; Cai et al., 2015; Rudolph et al., 2017; Rusu et al., 2015).

## THE MODERATING ROLE OF SOCIAL SUPPORT FROM PARENTS AND PEERS

Career adaptability is a psychosocial construct involving the interaction between individuals and their environments (Savickas, 2013). It is derived from the interconnection between a person's characteristics and their social context and can either enhance or suppress the process of successful career adaptation (Savickas, 2013). The existing research has increasingly recognized the important role of this relational context in shaping career adaptability while also empirically supporting the association between social support and career adaptability (e.g., Ghosh & Fouad, 2017; Guan et al., 2016; Han & Rojewski, 2015; Hlado et al., 2020; Hui et al., 2018; Wang & Fu, 2015). However, there is still a lack of research that might provide a deeper understanding of the interaction between individual characteristics, such as self-esteem, contributing to career adaptivity and relational contexts, such as social support from parents and peers, in career adaptability development (e.g., Ataç et al., 2018).

Some theories have suggested ways that perceived social support may affect the relationship between self-esteem and career adaptability. According to the ecological systems theory (Bronfenbrenner, 1992), individuals with the same or similar individual characteristics may exhibit psychological or behavioral differences due to different external environments. The buffering model of social support was probably the first hypothesis to conceptualize social support, an essential external environmental variable, as a moderator (Cohen & Wills, 1985). In this model, social support was assumed to buffer the negative impact of stressful events and situations, including occupational stress (e.g., Pow et al., 2017), and to contribute to better psychological adaptation. Arguments for the joint effect of social support and personal factors such as self-esteem in career adaptive behaviors can be found in the relational theory of working (Blustein, 2011) and the career self-management model (Brown & Lent, 2019; Lent & Brown, 2013). Through the lens of the relational theory of working (Blustein, 2011), individuals who receive encouragement and affirmation from the loved ones can develop more effective coping strategies when facing various career challenges and transitions, whereas those without social support may struggle as they face career demands (Blustein et al., 1995; Feldman, 2003; Saka et al., 2008; Zeigler-Hill & Wallace, 2012). Furthermore, the career self-management model (Brown & Lent, 2019; Lent & Brown, 2013) posits that social support facilitates or inhibits career adaptability by moderating the relationship between individual traits and career adaptability resources. Specifically, when there is more social support, people with greater self-esteem tend to feel higher self-confidence in the face of career transitions and, thus, are predisposed to adapt to career changes more successfully.

Few studies have focused on the interactive effects of self-esteem and perceived social support on career adaptability (e.g., Ataç et al., 2018). More concretely, on a sample of Turkish undergraduates, Ataç et al. (2018) showed that perceived social support moderates the relationship between self-esteem and career adaptability. However, Ataç et al. (2018) did not distinguish between the perceived support provided by parents and peers.

Based on the assumption of the crucial roles of significant others in the career development of young people (Blustein, 2011), it has been shown that career adaptability maturation is attributed to perceived social support from parents and peers (e.g., Guan et al., 2016; Han & Rojewski, 2015; Hirschi, 2009; Tian & Fan, 2014; Wang & Fu, 2015). The emotional support provided by parents contributes significantly to an individual's confidence in coping with career-related decisions, tasks, and transitions (Guan et al., 2016) and can diminish the effect of stressful career-related challenges (Restubog et al., 2010). As parents obviously play an essential role in their children's career planning, career decision-making, career exploration, and ability to face career tasks, the associations between parental support and career adaptability have been well established (Guan et al., 2016; Han & Rojewski, 2015; Hirschi, 2009; Hlado et al., 2020; Tian & Fan, 2014). However, as individuals develop, their relationship focus shifts from parents to peers, with young people turning to their friends for comfort, advice, or cheering up (Markiewicz et al., 2006). The support young people draw from their peers facilitates their career transitions (e.g., Wentzel, 2017). For example, adolescents who enjoy positive peer support tend to be more confident in their career decision-making (e.g., Patel et al., 2008). Consistent with these findings, the existing research has demonstrated that peer support is positively related to career adaptability (e.g., Hlado et al., 2020; Tian & Fan, 2014). In addition, parents and peers play increasingly important roles in young peoples' self-esteem (Bum & Jeon, 2016; Laible et al., 2004; Li et al., 2014). However, the question of whether linkages between self-esteem and career adaptability are associated differently with social support from parents and support from peers during career transitions remains unanswered.

## PURPOSE OF THE STUDY

The aforementioned studies indicate that self-esteem and perceived social support enhances career adaptability, and moreover, that perceived social support plays a moderating role in the relationship between self-esteem and career adaptability (e.g., Ataç et al., 2018; Blustein, 2011; Brown & Lent, 2019; Savickas, 2013). However, little is known about the long-term effect of self-esteem and perceived social support from parents and peers on career adaptability among vocational upper secondary school graduates during a career transition. Thus, the main aim of the present study was to examine whether perceived social support provided by parents and peers moderates the link from self-esteem to career adaptability in vocational upper secondary school graduates in their actual career transition. We proposed the following hypotheses:

**Hypothesis 1.** *Self-esteem is a positive predictor of changes in career adaptability in vocational education graduates during their career transitions.*

**Hypothesis 2.** *Perceived parental support (H2a) and peer support (H2b) are positive predictors of changes in career adaptability in vocational education graduates during their career transitions.*

**Hypothesis 3.** *Perceived parental support (H3a) and peer support (H3b) serve as moderators for the relationship between self-esteem and career adaptability in vocational education graduates during their career transitions such that the relationship would be stronger in individuals with high social support than in those with low social support.*

## METHODOLOGY

### Participants

Participants in this study were recruited from 44 public vocational upper secondary schools in the Czech Republic. Overall, 3126 participants completed the survey in the first wave of data collection (T1; 46.5% were females). The average age was 18.8 years ( $SD = 1.15$ ; range 18–26). The survey in the second wave of data collection (T2) was completed by 512 participants (69.6% were females), a total retention rate of 16.4%. Their average age was 18.9 years ( $SD = 0.97$ ). At T2, 63.2% of the participants were preparing for a graduation examination and 36.8% were preparing to complete an apprenticeship certificate; 55.0% lived in a complete family; 14.4% of their mothers and 15.3% of their fathers had a university degree; 31.7% were employed; 2.3% had a part-time job; 6.2% reported a combination of study and work; 6.6% were unemployed; 34.7% studied at the university; and 18.5% studied at other types of nonuniversity schools.

We compared participants on selected variables at T1 and T2. At T2, the participants were slightly more likely to be female (60.2%,  $\chi^2(1) = 46.33$ ,  $p < 0.001$ ), to live in complete families (60.4%,  $\chi^2(1) = 7.29$ ,  $p < 0.01$ ), and to have completed their studies with a graduation examination (73.7%,  $\chi^2(1) = 30.68$ ,  $p < 0.001$ ). Moreover, participants at T2 had slightly higher levels of parental support ( $t(597) = -3.95$ ,  $p < 0.001$ ) and peer support ( $t(724) = -3.10$ ,  $p < 0.01$ ). Although these differences were small, it is possible to assume that those willing to participate in T2 after graduating from vocational education came from families with higher socioeconomic status and perceived more social support provided by parents and peers.

### Measures

#### Career adaptability

The participants' career adaptability was assessed using the Czech version of the Career Adapt-Abilities Scale—International Form 2.0 (CAAS-Czech; Hlađo et al., 2020; Savickas & Porfeli, 2012). The CAAS-Czech is a 24-item inventory consisting of 4 subscales that measure specific adaptability resources: concern, control, curiosity, and confidence. Responses are rated on a 5-point Likert scale ranging from 1 (*not strong*) to 5 (*strongest*). Because the four subscales were highly correlated, we used the total score to indicate general career adaptability. In the present study, McDonald's  $\omega$  of the total score was 0.92 at T1 and 0.91 at T2, respectively. The CAAS-Czech modeled as a second-order factor loading onto four subfactors also had a reasonable fit (T1:  $\chi^2(276) = 1780$ ,  $p < 0.001$ ,  $RMSEA = 0.047$  [90% CI = 0.045–0.049],  $TLI = 0.902$ ,  $SRMR = 0.040$ ), providing further evidence of its validity.

#### Self-esteem

Self-esteem was measured using the 10-item Rosenberg self-esteem scale (RSES; Rosenberg, 1979). The Czech version used in this study yielded good psychometric properties (Osecká & Blatný, 1997). The items are measured on a 4-point Likert-type scale with response options ranging from 1 (*agree*) to 4 (*disagree*). Five items are positively worded, and five items are negatively worded. Our results indicated that the best fitting model is a bifactor model with one global factor for self-esteem and one specific factor for negatively worded items that did not correlate with the global factor,  $\chi^2(29) = 339$ ,  $p < 0.001$ ,  $CFI = 0.995$ ,  $TLI = 0.992$ ,  $RMSEA = 0.059$ ,  $SRMR = 0.042$ . McDonald's  $\omega$  for the global factor of self-esteem was 0.88.

## Parental support

Perceived parental support was assessed with the Parent Career Behavior Checklist—Czech Form (PCBC-CZ; Hlađo & Jeřek, 2018). The original instrument was developed by Keller and Whiston (2008) to measure the construct of career-specific parental behaviors. The PCBC-CZ is a 15-item scale consisting of 2 subscales measuring 2 dimensions of career-related parental support—parental psychosocial support (7 items) and instrumental support (8 items)—on a 5-point Likert scale ranging from 1 (*never*) to 5 (*very often*). In the present study, only the parental psychosocial support subscale was used. Data from 909 participants who did not report parental support were removed from the analysis (most often, they reported about themselves, partners, or peers). The 1-factor solution with residual covariances between 2 pairs of items (6 with 7 and 11 with 13) fit the data well,  $\chi^2(12) = 70$ ,  $p < 0.001$ , CFI = 0.998, TLI = 0.996, RMSEA = 0.052, SRMR = 0.030. The parental psychosocial support subscale had good internal consistency ( $\omega = 0.90$ ).

## Peer support

Perceived peer support was assessed using the Close Friend Support Scale (CFSS; Hlađo et al., 2020). The CFSS is a unidimensional seven-item scale. Participants answered items on a 5-point Likert scale ranging from 1 (*never*) to 5 (*very often*). The results of the confirmatory factor analysis showed a good fit:  $\chi^2(14) = 244$ ,  $p < 0.001$ , CFI = 0.998, TLI = 0.997, RMSEA = 0.074, SRMR = 0.030. The internal consistency (McDonald's  $\omega$ ) for peer support was 0.94.

## Procedure

The results presented in this paper were based on the data obtained in the first and second waves of the data collection. The first wave of data collection (T1; March and April 2018) started in the second semester of the final year of upper secondary school, approximately 2–3 months before the participants graduated. At that point, students usually already know whether they want to enter the labor market, continue their education, or choose another career path. Information was presented to the students explaining the research and their rights and that their data would remain anonymous. It was also specified that they would be asked to complete a self-report questionnaire at three time points in the next 20 months. All participants signed informed consent forms. Data were collected using an online survey or paper-and-pencil methods based on the organizational circumstances of each school. The second wave of data collection took place approximately 10 months after the first measurement point (T2; February and March 2019). The questionnaires were sent to the participants' postal and email addresses as entered in the informed consent forms. Participants could choose to complete the survey online or in printed form (postage costs were paid from the grant funds). Participants were at a time of career transition when the data were collected. Specifically, after completing their vocational education, participants either continued with nonuniversity education, started university education, began working, or were unemployed. Thus, the participants all had to adapt to new career tasks and environments.

## Statistical analysis

Confirmatory factor analysis (CFA) was used to evaluate the structure and reliability of the respective measures. The weighted least squares with means and variances adjusted (WLSMV) estimation method was used because it is considered more suitable for ordinal scales (Beauducel & Herzberg, 2006). To evaluate the goodness-of-fit of the CFA models, we considered several fit indices

**TABLE 1** Means, standard deviations, and correlation coefficients of study variables.

Variable	<i>M</i>	<i>SD</i>	Skewness	Kurtosis	1	2	3	4
(1) Career adaptability (T1)	3.72	0.54	−0.32	0.52	–			
(2) Career adaptability (T2)	3.77	0.55	−0.33	0.08	0.524***	–		
(3) Self-esteem (T1)	2.87	0.58	−0.27	−0.53	0.327***	0.273***	–	
(4) Parental support (T1)	3.80	0.92	−0.90	0.06	0.215***	0.136*	0.253***	–
(5) Peer support (T1)	3.97	0.91	−1.01	0.78	0.303***	0.198***	0.246***	0.233***

\* $p < 0.05$ .\*\*\* $p < 0.001$ .

usually used for this purpose (Kline, 2016):  $\chi^2$  (chi-squared), comparative fit index (CFI), Tucker–Lewis Index (TLI), root mean square error of approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR). For the CFI and the TLI, the cutoff criterion of 0.90/0.95 was employed to evaluate the model, meaning that values above 0.90 indicated an acceptable fit, and values above 0.95 were considered a good fit. For the RMSEA and SRMR, a cutoff criterion of 0.08/0.06 was employed. In this case, the closer the indicator was to zero, the more the model fit the data. Therefore, values below 0.08 indicate an acceptable fit, and values below 0.06 indicate a good model (Hu & Bentler, 1999; Kline, 2016). The  $\chi^2$  model-fit criterion is sensitive to sample size (Schumacker & Lomax, 2010); therefore, it was not interpreted as strictly as the indices mentioned above.

Linear regression and moderation analysis (Hayes, 2018) were used to test the proposed research hypotheses. We conducted a linear regression using the ordinary least squares estimator. A total of four models were estimated to test the hypotheses; the third and fourth models included an interaction term to test the proposed moderation of the relationship between self-esteem and career adaptability in vocational education graduates. In the result section, we report unstandardized regression coefficients with corresponding standard errors and  $p$ -values. The goodness of fit was assessed by the adjusted  $R^2$  measure because adjusted  $R^2$  takes into account the number of variables in the model, so it is more appropriate for the regression models with multiple predictors. We used the R software to run statistical analyses (R Core Team, 2021).

## RESULTS

Prior to testing the hypotheses, manifest variables were tested for skewness and kurtosis, and correlations were examined. The descriptive statistics and the correlation matrix for all study variables are displayed in Table 1.

Concerning the first and second hypotheses, we built two models. In the first model (Model 1), self-esteem was the main predictor; in the second model (Model 2), perceived parental and peer support were the predictors. In addition, career adaptability at T1 was used as a controlling variable in both models. The results of Models 1 and 2 are reported in Table 2. Consistent with Hypothesis 1, self-esteem was a statistically significant predictor of change in career adaptability in vocational education graduates during their career transition (Model 1). On the other hand, when using social support variables as predictors in the model (Model 2), only career adaptability at T1 was statistically significant. Thus, perceived parental and peer support do not seem to be significant predictors of changes in career adaptability, at least not directly. Hence, Hypothesis 2 was not supported.

With regard to the third hypothesis, we performed a moderation analysis. The results of the moderation analysis are summarized in Table 2. We built two separate models to perform the moderation analysis. The first model (Model 3) contained perceived parental support as the moderator variable. In the second model (Model 4), perceived peer support played the moderator role. In Model 3, the interaction between self-esteem and parental support was not a significant predictor in explaining career

**TABLE 2** Regression coefficients, standard errors, *p*-values, and model summary information for models (Models 1 and 2) with self-esteem and parental support and peer support as predictors of career adaptability at T2 and for models (Models 3 and 4) with parental support and peer support as moderators of the relationship between self-esteem and career adaptability at T2.

	Model 1			Model 2		
	Coeff.	SE	<i>p</i>	Coeff.	SE	<i>p</i>
Constant	1.68	0.16		1.68	0.20	
Self-esteem	0.09	0.04	<b>0.025</b>			
Parental support				0.01	0.03	0.673
Peer support				<0.01	0.03	0.982
Career adaptability (T1)	0.50	0.04	<b>&lt;0.001</b>	0.55	0.05	<b>&lt;0.001</b>
	Adj. $R^2 = 0.279$			Adj. $R^2 = 0.294$		
	$F(2; 481) = 94.7; p = < 0.001$			$F(3; 313) = 44.8; p = < 0.001$		
	Model 3			Model 4		
	Coeff.	SE	<i>p</i>	Coeff.	SE	<i>p</i>
Constant	1.79	0.49		2.93	0.46	
Self-esteem	<0.01	0.17	0.997	-0.40	0.17	<b>0.017</b>
Parental support	-0.05	0.12	0.690			
Self-esteem × parental support	<0.02	0.04	0.663			
Peer support				-0.31	0.11	<b>0.007</b>
Self-esteem × peer support				0.12	0.04	<b>0.004</b>
Career adaptability (T1)	0.53	0.05	<b>&lt;0.001</b>	0.50	0.05	<b>&lt;0.001</b>
	Adj. $R^2 = 0.298$			Adj. $R^2 = 0.284$		
	$F(4; 313) = 34.6; p = < 0.001$			$F(4; 376) = 38.6; p = < 0.001$		

Note: Statistically significant results ( $p < 0.05$ ) are highlighted in bold.

adaptability after graduation (T2). Thus, perceived parental support does not seem to be a significant moderator, refuting *Hypothesis H3a*. In Model 4, the interaction between self-esteem and peer support was a significant predictor of explaining career adaptability after graduation (T2). These results supported *Hypothesis H3b* and indicated that perceived peer support moderates the effect of self-esteem on career adaptability in such a way that this effect is considerably stronger among vocational education graduates with higher levels of perceived peer support.

## DISCUSSION

Although previous research has established links among self-esteem, social support, and career adaptability, the present study investigated the relationship between these constructs longitudinally and among a specific group of vocational education graduates during their career transition. This is the first study to examine the moderating role of two separate social support sources in the association between self-esteem and career adaptability—the perceived support provided by parents and peers.

In-line with the career construction model of adaptation (Hirschi et al., 2015; Rudolph et al., 2017; Savickas, 2013; Savickas & Porfeli, 2012) and previous findings (Cai et al., 2015; Rudolph et al., 2017; Rusu et al., 2015; Van Vianen et al., 2012), our study confirmed the predictive power of self-esteem for career adaptability among vocational education graduates. More concretely, our results suggest that young people graduating from vocational education with higher perceptions of self-esteem are



more able to prepare for future career tasks, explore career opportunities, take responsibility for their career development, and believe in their ability to solve career-related problems than those with lower self-esteem. Thus, our study provides further empirical support for the career construction model of adaptation by showing that self-esteem represents a key adaptivity resource necessary for obtaining and applying adaptability resources.

As the role of social context is not adequately considered in the research on career adaptivity and career adaptability (Ataç et al., 2018), the goal of our study was to examine the relationship between perceived social support from parents and peers and career adaptability. We explored how parental and peer support as contextual factors strengthen or inhibit the relationship between self-esteem and career adaptability. The design of the present study allowed us to shed light on the changing importance of perceived social support from parents and peers in vocational education graduates' career adaptability. Findings in the present study did not provide evidence of a direct link between social supports obtained from parents and peers and career adaptability reported by other studies (e.g., Han & Rojewski, 2015; Hlado et al., 2020). Our results showed that perceived social support plays a moderating role in the relationship between self-esteem and career adaptability. However, only peer support served as a moderator of the association between these constructs. More concretely, the positive relationship between self-esteem and career adaptability was stronger for individuals with higher levels of peer support than for those with lower levels of peer support. As suggested by some theories (Blustein, 2011; Brown & Lent, 2019), perceived peer support can improve the effect of self-esteem on vocational students' career adaptability. Vocational students with higher self-esteem can engage in career exploration, planning, and decision-making; however, peer encouragement helps develop more adaptive coping strategies when facing various career challenges and transitions (Blustein, 2011).

On the other hand, parental support did not longitudinally predict career adaptability nor act as a moderator of the link between self-esteem and career adaptability. Our findings might suggest possible changes in the quality of parent–child relationships, the availability of a parental supportive network, and the ability or willingness of young people to actively seek parental support (Blain et al., 1993). Furthermore, our study indicates a declining role of parents in young peoples' self-concept and career development, while the importance of peer support is growing (e.g., Bum & Jeon, 2016; Laible et al., 2004; Li et al., 2014; Markiewicz et al., 2006). Studies on academic motivation, engagement, and success have already drawn attention to the unique role of peers during the school years (Wang et al., 2018; Wentzel, 2017; Wentzel et al., 2021). Peers also influence the risk of dropout in vocational students (Elffers, 2012) and of disengagement from education and work (Vancea & Utzet, 2018), indicating the important part they play in young peoples' career transitions. It appears that vocational students could benefit from peer support in enhancing the feeling of their own competency to explore, make decisions, and cope with difficulties, which are crucial in dealing with further career tasks. However, further research into the role of peers regarding vocational education graduates' career development is needed.

## Limitations, future directions, and practical implications

The present study results need to be considered in light of limitations that inform directions for future research. First, we used self-reports in our study. Thus, we must bear in mind that our findings reflect the participants' reports of their perceptions of themselves, their abilities, and their social environment. The responses might also be upward biased due to social desirability effects (Proctor et al., 2009). Second, our sample consisted of Czech graduates from vocational upper secondary schools, reducing the generalizability of our findings to other populations or cultural contexts. An important area for future research would include deepening our knowledge about the constructs of the present study in more diverse samples, reflecting racial and ethnic differences, various educational systems, and more varied labor markets. Third, the present study focused on perceived parental and peer support as moderators. Future research might examine other possible moderators that further

explain the relationships between self-esteem and career adaptability. For example, individuals may prefer romantic partners over peers (Umemura et al., 2015). Fourth, a large part of the sample was lost to attrition. Lower response rates do not necessarily reduce the scientific value and contribution of the study; however, its generalizability may be limited.

Despite these limitations, the present study has several practical implications. Our findings suggest that career education and career counseling interventions addressing career adaptability need to focus on helping vocational education graduates recognize and strengthen their sense of worth and actively build a network of relationships with peers that can be used as a source of support. A general approach to strengthening self-esteem is to foster situations that promote young people's feelings about themselves as worthy and valuable (Hui et al., 2018). In the Czech Republic, vocational students are prepared directly in work settings with a stable working team composed of peers solving similar career tasks. Such an environment offers the opportunity to build deeper social relationships with schoolmates and to draw upon their social support. Therefore, counselor interventions should focus on developing mutually beneficial interactions with schoolmates and peers and strengthening relationships that provide support and enhance self-worth (c.f., Schultheiss, 2003).

## CONCLUSION

The present study employed a longitudinal research design to examine the associations between self-esteem, perceived social support from parents and peers, and career adaptability in vocational education graduates in their actual career transitions. The results showed that self-esteem enhances career adaptability. Moreover, perceived social support from peers plays a moderating role in the relationship between self-esteem and career adaptability. As such, the present study provided empirical evidence for the career construction model of adaptation by showing that career adaptivity in terms of self-esteem contributes to the development of career adaptability. In addition, this study demonstrated that career adaptability is derived from the interaction between self-esteem and perceived social support from peers, highlighting the role of contextual factors in career adaptability development. Finally, it emphasized the role of perceived peer support over parental support in the career adaptability of graduates from vocational education during their career transition.

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