

Italian validation of the parental career-related behaviors questionnaire (PCB)

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Abstract

Although it has been acknowledged that parental support has an influence on adolescents' career decision-making difficulties, there is no available validated scale in Italian that assesses this support. For this reason, the goal of the present study was to validate an Italian version of the parental career-related behaviors questionnaire (PCB) in a sample of 481 adolescents. An exploratory and confirmatory factor analysis supported the three-dimensional structure of the PCB. The internal consistencies were high for all subscales. Evidence of measurement invariance across boys and girls was observed. Finally, the PCB dimensions were meaningfully related to career exploration activities and career indecision. The strongest associations were found between parental support and adolescents' career exploration activities and between both parents' interference and their lack of engagement behaviors and career indecision in adolescents. These findings suggest that the Italian version of the PCB is a valid tool for assessing parental career-related behaviors and could be of interest for career counselors working with adolescents.

Keywords: parental career-related behaviors, Italian validation, career indecision, career exploration, adolescents

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Making a first career choice is often a substantial challenge for adolescents, and family support seems to be very important for motivating and helping adolescents make adequate decisions (Fouad et al., 2010; Guay, Ratelle, Senécal, Larose, & Deschênes, 2006; Neuenschwander, 2008; Whiston & Keller, 2004). Previous studies have often been based on parenting style or attachment theory approaches and have shown that positive parenting styles and parent-child attachments are associated with greater career exploration and less career indecision (Whiston & Keller, 2004; Sovet & Metz, 2014; Vignoli, 2009). Recently, Dietrich and Kracke (2009) developed a specific tool, the parental career-related behaviors questionnaire (PCB), for career counseling to assess parental career-related behaviors. This questionnaire was drafted in German and measures parental support, interference and lack of engagement in relation to children's career choice. To our knowledge, no versions of this scale in another language have been validated. For this reason, the aim of this study was to develop and validate an Italian version of the PCB in a large sample of Italian-speaking adolescents, testing its three-dimensional structure, internal consistency, measurement invariance across gender and convergent validity of its support dimension. Moreover, the relationships between parental career-related behaviors and both exploration activities and career decision-making difficulties were investigated to assess the criterion validity by studying the extent to which these behaviors were related to specific career choice outcomes.

The Parental Career-related Behaviors Questionnaire

Relationships with parents have been widely shown to be associated with career exploration behaviors or difficulties for adolescents who must choose a vocation (a review is available in Hughes & Thomas, 2003; Whiston & Keller, 2004). With the aim of developing a measure of parental support useful for career counseling, Dietrich and Kracke (2009) reviewed the literature and identified three parental behaviors concerning career selection: *career-related support*, occurring when parents helped their children make their own choices, providing guidance and instrumental support; *interference behavior*, when parents excessively controlled their children's career actions and choices, forcing them to make choices that they did not agree with; and *parental lack of engagement*, which could be due to a lack of interest in their children's career choices or other constraints, for example, lacking

economic resources, not living with their children, working full time, having little time to devote to their children, and being a single-parent. They first developed 32 items for the three career-related parental behavior dimensions. After pre-testing the set of items on a sample of adolescents, they rejected seventeen items due to insufficient psychometric properties but added six new items to the interference scale. Dietrich, Olyai, and Kracke (2006) tested the structure of the PCB and confirmed the theoretical three-dimensional structure. They also suggested reformulating some items to correct for skewness. At the end of development, the instrument contained fifteen items, five for each scale. This instrument was validated in a sample of 359 German adolescents between 15 and 18 years of age (Dietrich & Kracke, 2009). The results confirmed the reliability and validity of the PCB and its three-dimensional structure. Moreover, the support dimension was found to be positively associated with career exploration, while interference and lack of engagement were found to be positively associated with career indecision. These results are in line with other studies on how career exploration and career indecision are affected by an individual's attachment to his or her mother and father (Blustein, Prezioso, & Schultheiss, 1995; Vignoli, 2009; Vignoli, Croity-Belz, Chapeland, de Fillipis, & Garcia, 2005), by parenting styles (Guerra & Braungart-Rieker, 1999; Lopez & Andrews, 1987; Sovet & Metz, 2014), by the degree of perceived availability of social support (Nota, Ferrari, Solberg, & Soresi, 2007) and by other specific career choice-related parental behaviors (Guay et al., 2006; Kracke, 1997; Neuenschwander, 2008). This convergence of results further confirmed the PCB as an appropriate and useful tool.

Perceived Social Support

In addition to the guidance and instrumental support provided by parents and measured by the support dimension of the PCB, other kinds of support and other people can help adolescents make vocational decisions. Indeed, perceived social support is a subjective evaluation of the empathy and support received when needed (Zimet, Dahlem, Zimet, & Farley, 1988; Sarason & Sarason, 1985) and can be provided by family, friends or significant others (Zimet et al., 1988). It has been shown that this "emotional" support, especially that provided by family, is positively related to career decidedness and exploration activities (Hirschi, Niles, & Akos, 2011; Howard, Ferrari, Nota, Solberg, & Soresi, 2009; Nota et al., 2007; O'Brien, 1996; Santos, 2001; Turan, Celik, & Turan, 2014).

Although they are not identical, the emotional support and career-related support constructs are similar, the former being a more general and the latter a more specific form of support.

Exploration Activities and Career Decision-Making Difficulties

Exploration behaviors have been acknowledged as being particularly adaptive when facing career choices and transitions (Patton & Porfeli, 2007). Career exploration can concern self-knowledge, when individuals explore their interests, abilities, career goals or values, or occupational knowledge, when individuals explore the opportunities available in the working world or educational and career options (Germeijs & Verschueren, 2006; Sampson, Lenz, Reardon, & Peterson, 1999). Career exploration can also be classified according to scope, namely in-breadth exploration, when individuals research very broad types of information, or in-depth exploration, when individuals explore in detail the characteristics of a particular type of occupation or education and consider whether they truly fit the options considered (Gati & Asher, 2001; Germeijs & Verschueren, 2006). Environment and self-exploration, as well as in-breadth and in-depth exploration, have been associated with parental support (Kracke, 1997; Vignoli, Croity-Belz, Chapeland, de Fillipis, & Garcia, 2005; Whiston & Keller, 2004). Dietrich and Kracke (2009) investigated the relationship between parental career-related behaviors, measured with the PCB, and career exploration; they found that parental support was correlated with career exploration ($r = .52$).

Dietrich and Kracke (2009) also investigated the association between the PCB and career indecision, another important aspect to be considered when studying career decision-making processes in adolescents. Based on the taxonomy developed by Gati, Krausz and Osipow (1996), there are three main categories of difficulties related to the career decision-making process. The first, lack of readiness, can be due to a lack of motivation, to a generalized difficulty in making decisions and/or to dysfunctional thoughts about the consequences of making a decision. As a result, lack of readiness has to be overcome in order to start the decision-making process. The two other categories of difficulties are generally experienced during the process of decision-making. A lack of information can relate to different types of information—for example, how to collect useful information, gain information about oneself or one's vocations or find specific information. Information is inconsistent when individuals face contradictory information regarding themselves, their occupation or both or

when they struggle with internal or external conflicts (with parents or significant others) that prevent them from making a satisfactory choice. Counseling interventions in schools or within individual settings that aim to help adolescents make choices are a tool that can address these difficulties. Indeed, when these difficulties persist for too long, they negatively impact the individual's ability to engage in the career-decision process and can, for example, promote avoidance strategies (Gati et al., 1996; Gati, Osipow, Krausz, & Saka, 2000; Guay et al., 2006; Holland & Holland, 1977). With regard to their relationships with PCB, the interference and lack of engagement dimensions were found to be associated with career indecision (r was .25 with interference and .19 with lack of engagement) as measured by Seifert's (1992) scale (Dietrich & Kracke, 2009). However, the specific associations of the three PCB dimensions with the three career-related difficulties and sources of indecision defined by Gati and colleagues (1996) have not yet been investigated. Previous studies have nevertheless found that parental support promotes adolescents' motivation to engage in the career decision-making process (Phillips, Blustein, Jobin-Davis, & White, 2002), although studies have indicated that there is a reciprocal influence between parental support and adolescents' motivation (Dietrich, 2008; Young et al., 2001). Moreover, support has also been associated with career exploration (Whiston & Keller, 2004), as it can diminish lack of information and can overcome difficulties related to inconsistent information. Adolescents who have parents who interfere excessively with their career actions and choices have been found to be more passive in the process of career decision-making (Kracke & Noack, 2005). Parental interference probably diminishes adolescents' readiness and their search for information (Grotevant & Cooper, 1988) and might cause difficulties related to inconsistent information between the information obtained by the adolescent and that coming from their parents (Guay et al., 2006). Finally, parental lack of engagement was considered to reduce adolescents' progress in career development (Mortimer, Zimmer-Gembeck, Holmes, & Shanahan, 2002), probably negatively influencing both their readiness and their motivation to initiate actions aimed at making a career decision. Studies highlighted that it is very important for adolescents to share and agree with their parent's viewpoints on careers and goals (Otto, 2000).

Aims of this Study

The first aim of this study was to validate the Italian version of the PCB by assessing its three-dimensional structure and internal consistency. ~~Dietrich and Kracke (2009) did not provide the results of an exploratory factor analysis (EFA) in their PCB validation study; thus, for completeness of information, we decided to perform this analysis.~~ To ascertain whether different norms should be considered for boys and girls, measurement invariance across gender was also assessed. In a second step, the convergent validity of the PCB support dimension was studied by comparing this dimension to a scale that assesses the emotional support provided by family and friends. We expected the parental support subscale of the PCB to be strongly associated with the perceived emotional support provided by family and weakly, although significantly, associated with the emotional support provided by friends. Moreover, to test for criterion validity, the study analyzed the relationship between parental career-related behaviors and adolescents' exploration activities and career decision-making difficulties. Based on the results obtained by Dietrich and Kracke (2009), we expected that career exploration activities would be positively correlated with parental support and negatively correlated with interference and lack of engagement and that the global score of career indecision would be positively correlated with interference and lack of engagement and negatively and only weakly correlated with parental support. Finally, although literature exists concerning the relationship between career-related parental behaviors and constructs similar to those defined by the three dimensions of career indecision as described by Gati et al. (1996), there is a lack of specific studies that elucidate the strength of the association among these constructs. Thus, we simply hypothesized parental support to be negatively associated with all three career decision-making difficulties (i.e., lack of readiness, lack of information, inconsistency of information) and parental interference and lack of engagement to be positively associated with the same three difficulties.

Method

Participants and Procedure

The study was conducted in the Swiss Canton of Ticino, in the Southern region of Switzerland. This is the only Swiss Canton where the only official language is Italian. It borders Italy and has 346,539 inhabitants. The sample consisted of 481 students (252 boys and 229 girls), from 7 of the 35 junior high schools. To increase the representativeness of the selected schools, schools from

various geographical locations (urban, periphery and valley) and of different sizes were included, with the support and agreement of the Department of Education. All participants had just started their last compulsory school year (i.e., the fourth middle school year), and they were aged from 13 to 17 years. The mean age was 14.16 years, and the standard deviation 0.64. The modal value was 14 years of age ($n = 325$). In total, 325 were of Swiss nationality, 53 were Italian, 43 came from an ex-Yugoslavian state, and 28 had Portuguese citizenship. The remaining 32 adolescents came from fourteen other states. Additionally, 198 had already made a definitive decision about their future job or educational path, whereas 283 had not. After receiving information about the aim of the study and being reassured of the confidentiality of their answers, the students completed an online questionnaire in an IT classroom during an ordinary lesson and under the supervision of the first author. Students who had questions about the items could ask for additional explanations. This research complied with the ethical rules of the Swiss Society of Psychology.

Measures

Parental Career-related Behavior Questionnaire. The Parental Career-related Behavior questionnaire (PCB) was developed and validated in German by Dietrich and Kracke (2009) and consists of 15 items assessing three specific parental behaviors: support, interference and lack of engagement in their children's career choices. The participants answered on a 4-point Likert scale ranging from 1 "does not apply" to 4 "fully applies". The internal reliability of the original scale in German was .84 or higher for support (.93 for girls and .84 for boys), .72 or higher for interference (.72 for girls and .78 for boys), and .68 or higher for lack of engagement (.68 for girls and .75 for boys).

Multidimensional Scale of Perceived Social Support. To assess the emotional support provided by family and friends, the Italian-validated versions of the family and friends subscales of the Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988; Prezza & Principato, 2002) were used. Both scales include 4 items. Subjects answered on a 7-point Likert scale from 1 "very strongly disagree" to 7 "very strongly agree". Examples of items include "I can talk about my problems with my family" and "I can count on my friends when things go wrong". The reliabilities were .87 and .85 for the English version of the family and friends subscales, respectively

(Zimet et al., 1988), and .88 and .91, respectively, for the Italian versions of these scales (Prezza & Principato, 2002).

Career exploration activities. Career exploration activities were measured using a single score that was computed by summing the number of different activities that the students had reported performing at the time of the questionnaire. The activities described were the following: thinking by oneself about which educational/vocational path to pursue, discussing with other persons (friends, parents, teachers, etc.) about educational and vocational opportunities, meeting with the career counselor, searching for information on educational/vocational paths they might be interested in, searching for internship opportunities in the vocation in which they might be interested, contacting a school (general or vocational) they might be interested in and speaking with one or more persons working in the vocational field of interest. The mean number of activities performed by the students was 2.13 with a standard deviation of 1.27. The more frequent activities were reflecting alone ($n = 277$) and discussing educational and vocational opportunities with other persons ($n = 251$), 191 participants had searched for information, 123 had searched for internship opportunities in a vocational area of interest, 99 students spoke with someone working in the sector of interest, 69 had met the school counselor, and 13 had contacted a school asking for information. Skewness and kurtosis were .88 and .08, respectively, indicating a normal distribution of the variable.

Career Decision-making Difficulties Questionnaire. To assess adolescents' career decision-making difficulties, we used the Italian version of the Career Decision-making Difficulties Questionnaire (CDDQ; Gati et al., 1996; Di Fabio & Palazzeschi, 2013). This is a 34-item questionnaire that assesses career indecision on three main scales: lack of readiness, lack of information and inconsistency of information. Each scale includes 3 or 4 subscales, namely, lack of motivation, indecisiveness and dysfunctional myth subscales for lack of readiness; lack of knowledge about the process, self, and occupation and ways of obtaining additional information subscales for lack of information; and unreliable information, internal conflicts and external conflicts subscales for inconsistency of information. The participants answered on a 9-point scale ranging from 1 "does not describe me" to 9 "describes me well" to describe the extent to which statements such as "It is usually difficult for me to make a decision" were true for them. The authors of the original version reported

that the Cronbach's alphas of the reliability of the lack of readiness, lack of information, and inconsistency of information subscales and the total CDDQ score were, respectively, .70, .93, .91 and .80 in an Israeli sample and .63, .95, .89 and .95 in an American sample (Gati et al., 1996). The corresponding alphas were .87 for lack of readiness, .89 for lack of information and .91 for inconsistency of information in the Italian version (Di Fabio & Palazzeschi, 2013).

Translation

The translation of the PCB mostly followed the standard guidelines for translating questionnaires (Sousa & Rojjanasrirat, 2011). Two native Italian-speaking educational researchers translated the items. Their translation was reviewed and amended by Italian-speaking experts in educational research and in career counseling. Back translation of the questionnaire was then performed by a professional bilingual translator who was not involved in the initial translation. Finally, a comparison of the back-translated version and of the original version of the questionnaire was performed by both Italian- and German-speaking natives, and further amendments were made. Although in the German version, the specific wording when referring to parents was "My mother/my father," we decided to use the more general "My family." This wording was also used in the MSPSS (Zimet et al., 1996). Despite this difference from the original scale, two questions included in our questionnaire proved that when referring to career-supportive relatives who were part of the family, adolescents almost always thought of their parents first (and in particular to their mother) and only to brothers and sisters in addition. This ensured the conceptual comparability of our Italian version with the German version of the scale. The wording of items in English (provided by Dietrich and Kracke, 2009) and Italian are shown in Table 1.

Data analyses

The first aim of this study was to assess the factorial structure of the Italian-translated version of the parental career-related behaviors questionnaire that was developed originally by Dietrich and Kracke (2009). Means and standard deviations were computed for each item. To assess the internal consistency, Cronbach's alpha was computed for each subscale. Exploratory factor analysis (EFA) applying the maximum likelihood method with oblique rotation (direct oblimin) using SPSS and confirmatory factor analysis (CFA) applying maximum likelihood estimation using the AMOS

statistical package were performed to test the adequacy of the items and the expected three-dimensional structure of the instrument. For the CFA, raw data in the SPSS format were passed to the AMOS program that computes the covariances as part of its analysis. According to the literature, a model is considered to have a satisfactory fit if the χ^2 per degrees of freedom (χ^2/df) is lower than 3; if the soundness of the fit index (GFI), the comparative fit index (CFI) and the Tucker–Lewis index (TLI) values are approximately .90 or above (Medsker, Williams, & Holahan, 1994); and if the root mean square error of approximation (RMSEA) is approximately .05 or less (RMSEA of approximately .08 or less is also acceptable, Byrne, 2010). To assess invariance across gender, a multiple-group CFA (with gender as the grouping variable) was performed. According to Chen (2007), in multiple-group analyses, the assumption of invariance is tenable if $\Delta CFI < .01$ and $\Delta RMSEA < .015$. Finally, correlations between exploration behaviors and career indecision were computed to test the criterion validity and to further explore associations with the PCB.

Results

The first aim of the study was to assess the factorial structure of the Italian version of the PCB. First, an EFA was conducted on the fifteen items of the PCB with oblique rotation (direct oblimin). The Kaiser-Meyer-Olkin measure confirmed the sampling adequacy for the analysis (KMO = .89), and Bartlett's test of sphericity $\chi^2(105) = 3,401.96, p < .001$, indicated that the correlations between the items were sufficiently large for EFA. The analysis showed that three components had eigenvalues above Kaiser's criterion of 1 and in combination explained 64.27% of the variance. The three-component structure was also confirmed by Cattell's scree test (Cattell, 1966). Each item loaded adequately on the right component and no cross-loadings emerged. Second, a model including the three related scales was tested by means of a CFA. The model was found to adequately fit the data, $\chi^2(87) = 227.52, p < .001$, GFI = .94, TLI = .95, CFI = .96, RMSEA = .058, confirming the adequacy of the three-dimensional structure of the instrument. Item means, standard deviations and standardized factor loadings are reported in Table 2. All factor loadings were above .60 (with the exception of the factor loading of item 6, which was .47), further confirming the soundness of the items used to measure the three dimensions. Positive associations emerged between interference and lack of engagement (estimated factor correlation of .58), and negative associations between support and

interference (estimated factor correlation of $-.14$) and between support and lack of engagement (estimated factor correlation of $-.36$) were observed. These last results suggest discriminant validity (Kline, 2011) between the three different constructs and, in particular, the distinction between the support and interference and between the support and lack of engagement constructs, which were only modestly correlated.

To test for gender invariance of the instrument, a multiple-group CFA was performed to assess the measurement invariance among boys and girls. To compute these analyses, the sample was divided into two groups based on gender: there were 252 boys and 229 girls. The results are shown in Table 3. Although the $\Delta\chi^2$ test was significant, the ΔRMSEA and ΔCFI tests confirmed the weak factorial invariance of the instrument across groups (ΔRMSEA was always $< .003$, and ΔCFI was always $< .01$). Strong factorial invariance was supported by only one of the two invariance tests (ΔRMSEA was good, but the ΔCFI was slightly over the threshold of $.01$); however, partial strong factorial invariance ($\Delta\text{RMSEA} = .004$, $\Delta\text{CFI} = .008$) was reached regarding the intercepts of item 10 of the interference scale and of item 12 of the lack of engagement scale. In fact, boys reached significantly higher means than girls on both items. Slightly higher means, although not significantly higher than those in girls, were reached by boys on all other items of the interference and lack of engagement scales, whereas the means were almost the same on all items of the support scale. Establishing weak and partial strong factorial invariance further endorsed the validity of the instrument and its additional usefulness for comparative research. Cronbach's alphas of the three distinct scales were also computed for each gender group. The Cronbach's alpha was $.80$ for boys and $.84$ for girls for the support dimension, $.82$ and $.81$ for boys and girls, respectively, on the interference dimension and $.89$ for both groups on the lack of engagement dimension. A test of the model that constrained latent variables' variances and covariances between latent variables to be equal indicated no differences between boys and girls ($\Delta\text{RMSEA} = .002$, $\Delta\text{CFI} = .009$) (Table 3). As already suggested by the single-item analyses, analyses of the mean differences highlighted the higher perception of interference and lack of engagement among boys compared to girls. The effect sizes for these mean differences were, however, small (interference: $d = .13$, lack of engagement: $d = .23$).

Before analyzing the associations between parental career-related behaviors, emotional support, career exploration activities and career indecision, we computed the Cronbach's alphas for each scale and confirmed the reliability of the measures used. The alpha coefficients are reported in Table 4. Moreover, we assessed if age and having made a decision about one's future job or education had an impact on the different variables. We found only a weak and positive association between age and both interference and lack of engagement ($r = .13, p < .01$ for both correlations), a weak and positive association between having made a decision and the amount of exploration activities performed ($r = .09, p < .05$) and a modest and negative association between having made a decision and career indecision ($r = -.28, p < .001$). Partial correlations were performed to verify if age and having made a decision about one's future job or education affected the associations studied. Controlling for both variables did not change the strength of the associations between variables, thus only bivariate correlations are reported in Table 4. The relationship between the PCB parental support dimension and the perceived emotional support provided by the family was especially strong. Significant but weaker correlations were also found for the support provided by friends. The associations between parental behaviors and the number of activities of career exploration completed by the adolescents were in line with our hypotheses. Support was positively, and interference and lack of engagement negatively, associated with career exploration activities. The correlations with career decision-making difficulties were not high, but they were similar to those found in previous studies investigating the relationship between parental support behaviors and child's career indecision. Parental support correlated negatively with the career indecision scale and with the lack of information (correlations were similar for subscales) and the inconsistency of information (the correlation was significant only for the external conflict subscale: $r = -.14, p < .01$) dimensions. No associations were found between support and lack of readiness, although there was a negative and significant correlation ($r = -.17, p < .001$) between support and the lack of motivation subscale of the lack of readiness dimension. Parental interference behaviors correlated positively with the global scale and with the lack of readiness (r values were significant only for the lack of motivation and dysfunctional thought subscales), lack of information (r values were similar for subscales) and inconsistency of information (r values were significant for all subscales and reached $.38, p < .001$, for

external conflicts) dimensions. Parental lack of engagement was positively associated with the global scale and with the lack of information (r values were significant and $< .13$ for all subscales, except for the additional information subscale, in which they reached $.20$) and inconsistency of information (r values were significant only for the internal ($.15, p < .01$) and external ($.34, p < .001$) conflicts subscales) dimensions of career indecision. No associations emerged between parental lack of engagement and adolescents' lack of readiness, although a positive and significant correlation emerged ($r = .14, p < .001$) between parental lack of engagement and the lack of motivation subscale.

Discussion

The first aim of this study was to validate an Italian version of the PCB in a sample of Swiss adolescents, testing its psychometric properties and measurement invariance across gender. Our second aim was to establish the convergent validity of the support PCB dimension by measuring the perceived emotional support provided by family and friends and to test for the criterion validity of the three PCB dimensions by investigating their associations with exploration activities and career indecision. Moreover, the use of the CDDQ (Gati et al., 1996) to assess career decision-making difficulties enabled the investigation of more in-depth relationships between parental career-related behaviors and sources of career indecision.

This study showed that the Italian translation of the PCB is a valid instrument to measure the parental career-related behaviors of support, interference and lack of engagement. The analyses broadly confirmed the three-factor structure, item adequacy and reliability of the PCB. Similar to Dietrich and Kracke (2009), positive associations emerged between interference and lack of engagement, while negative associations emerged between support and interference and between support and lack of engagement; however, in our sample, the support-interference and lack of engagement-interference associations were slightly stronger and the support-lack of engagement association slightly weaker compared to the validation results of the German version. It seemed that item 6, "my parents have their own ideas about my future vocation and try to influence me accordingly," was the least representative of its factor (interference) within the set of related items. This finding is interesting because it suggests a conceptual difference (despite the connection) between parental interference and parents having their own ideas about their children's future and

attempting to influence them, underlying once more how parental guidance and parental interference are two distinct constructs. Furthermore, the results concerning the estimated correlations between the different constructs contributed to further corroborating their distinctions, and in particular, the distinction between the support and interference and between the support and lack of engagement constructs. Interference and lack of engagement were clearly distinct constructs; they were nevertheless moderately correlated. This might suggest that adolescents who perceive their family as interfering in their choices in an authoritarian manner, i.e., without collaboration and only by imposition of their wishes (Baumrind, 1991), could also perceive their parents as lacking interest in their ideas and thus lacking genuine engagement.

Partial strong factorial invariance across genders was also observed. This finding indicates the possibility of using the instrument for comparative analyses between boys and girls and, for example, using multiple-group SEMs (Byrne, 2010; Steenkamp and Baumgartner, 1998). In addition, correlations between the three constructs were also found to be invariant for boys and girls, whereas small differences were found concerning the perception of parents' interference and lack of engagement, which was slightly higher among boys compared to girls. This result could be due to more contentious relationships with boys than with girls (Collins & Laursen, 2004) or to a higher sensitivity of boys compared to girls in perceiving their parents as interfering in their choices or in being disengaged. This could also be due to contextual factors. For example, the fact that girls more frequently have better academic achievement and decide to continue their education in high schools (Marcionetti, Zanolla, Casabianca, & Ragazzi, 2015) implies less difficulties for parents, who can easily find information about these schools and support their daughters. By contrast, boys more frequently choose to start an apprenticeship. This means that a more specific choice has to be made and that parents, to appropriately guide and support their sons, must find specific information on vocations, on educational possibilities, and on the availability of employers, for example. Such efforts obviously take more time and constitute more difficult tasks for parents. This difficulty could be interpreted as a lack of engagement because more engagement is needed or as interference because more discussion about the different possibilities is needed, and this can lead to more conflicts between parents and children.

The associations established regarding the perceived emotional support from family and friends confirmed the convergent validity of the support dimension, whereas the correlations with exploration activities and career indecision partially confirmed criterion validity for the lack of engagement and interference behaviors. More specifically, the results were broadly comparable to those of Dietrich and Kracke (2009) regarding the associations with career indecision; in contrast, small but negligible differences regarding the correlation values, but not signs, were found regarding the associations with career exploration, probably due to the different types of measures used.

The associations between the three dimensions of the PCB and the difficulties one can experience when going through the process of career decision making were also further investigated. The results highlighted that a high level of parental support in making choices was specifically associated with a lower tendency for lack of information and inconsistency of information but not with less lack of readiness. Considering the correlation established between high levels of parental support and a larger number of exploration activities performed, these results are consistent with theories that state that healthy parent-adolescent relationships facilitate career exploration (Blustein, Prezioso, & Schulteiss, 1995). In particular, by giving advice on how information can be found but also, for instance, expressing their opinions on their child's strengths and weaknesses, parents allow adolescents to receive more adequate information and to make a more informed decision.

Furthermore, our results indicated that more than parental support, high levels of parental lack of engagement, due to lack of interest, lack of time or inability to support their child's career choices, were associated with high levels of lack of information and inconsistency of information. In particular, parental disengagement seemed to correlate positively with indecision, as the choices were not shared and consequently not supported by the parents. This is in line with studies analyzing the effects of non-involved parents on their children's choices (Middleton & Loughhead, 1993) as well as with those highlighting how important it is for youngsters to share and agree with their parent's viewpoints on careers and goals (Otto, 2000).

Finally, high levels of interference due to excessive parental control over their children's choices were associated with strong tendencies for lack of readiness, lack of information and inconsistency of information in adolescents. Parental interference was the only dimension associated

with adolescent's lack of readiness in making career choices and was the dimension that was the most strongly associated with adolescent's perceptions of having inconsistent information. In particular, interference correlated moderately with the external conflicts subscale ($r = .38, p < .001$) and was the only PCB dimension that was significantly correlated with the dysfunctional thought subscale, albeit modestly ($r = .12, p < .05$). There could be different explanations for these results. For instance, the perception of adolescents' disengagement towards making a career choice (which could also be due to an overestimation of the importance of making the right choice) could have induced their parents to force them to commit to this process, an action that the adolescents might have interpreted as their parents' attempts to force them to make a (possibly inadequate) choice. Additionally, the adolescents might have shown an interest in one or more vocations, and by forcing them to explore other possibilities, the parents may have been perceived as interfering with their choices (Young et al., 2001). As parents' opinions are so important for exploring both oneself and one's possible vocations (Whiston & Keller, 2004), adolescents may end up feeling confused with respect to the information received regarding vocations, their ideas on their interests and abilities, and the ideas that their parents have about them and their best vocational option. Parental interference, as well as parental disengagement, may also hinder the individual's perceptions of self-efficacy in searching for a vocation or in making decisions (Ryan, Solberg, & Brown, 1996), which has been proven to mediate the relationship between parental behavior and children's career indecision (Nota et al., 2007).

Limitations and Future Perspectives for Research

Although different interpretations remain to be confirmed, possibly with longitudinal research designs that will be able to clarify the direction of effects, we hope that the results of this study contribute to the understanding of the associations between parental support, interference and lack of engagement and the different difficulties and thoughts that cause career indecision in adolescents. Indeed, although studies have shown that parents influence their adolescents' vocational choices more than any other individual, including counselors, teachers, friends or even people working in the identified occupation of interest (Bardick, Bernes, Magnusson, & Witko, 2004; Vertsberger & Gati, 2015), the studies that have been performed are still insufficient in providing the empirical research and analysis needed to understand the depth of a family's influence on a son's or daughter's

vocational choice (Keller & Whiston, 2008). We hope that the validation of the Italian version of the PCB will allow the topic to be studied further and will reduce this research gap. Nevertheless, this study has two main limitations, which present some research possibilities. First, the Italian version of the PCB was validated in a sample of Italian-speaking adolescents from a specific region of Switzerland. This region borders Italy but has different cultural characteristics and a different education system. The psychometric findings of the PCB could vary for Italian adolescents. Hence, it would be appropriate to replicate our findings with Italian adolescents to test and extend the applicability of the PCB to that population. A cross-cultural study investigating Swiss and Italian adolescents would surely be of interest. Second, all the adolescents investigated were starting their last year of compulsory school. It would be intriguing to study the relationship among parental behaviors, adolescents' exploration activities and career indecision at a different point in time closer to the end of compulsory school, i.e., the moment when a choice has to be made. This would also contribute to clarifying the direction of effects between career-related parental behaviors and adolescent motivation to start and persist in the career decision-making process.

Conclusion

This study validated the Italian translation of the PCB scale in a large sample of Swiss Italian-speaking adolescents. The associations with emotional social support also highlighted the differences between the two support constructs, and the study of the associations of the exploration behaviors and career indecision dimensions further stressed the importance of understanding the mechanisms by which parents support or inhibit their children's choices. We believe that the use of the PCB could help researchers achieve this goal and that it could be fruitfully applied to the practice of school career counselors, allowing them to reveal problematic parent-adolescent relationships that could hinder the career decision-making process and to help clients overcome the related difficulties. In particular, this study showed how parents' lack of engagement and interference contribute negatively to their child's decision-making process. School career counselors could try to involve parents in this process, noting the importance of their children making a choice by the end of compulsory school as well as their importance in this process. They should also provide more support to the adolescents who perceive

their parents as being disengaged and act as informed mediators when parents are perceived as excessively interfering in an adolescent's choice.

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Table 1 *English and Italian item wordings*

Item
<i>Support - Supporto</i>
1. My parents talk to me about my vocational interests and abilities. La mia famiglia mi parla dei miei interessi e delle mie abilità professionali.
2. My parents encourage me to seek information about vocations I am interested in. La mia famiglia mi incoraggia a cercare informazioni sulle professioni e le formazioni che mi interessano.
3. My parents support me in getting an apprenticeship. La mia famiglia mi aiuta a cercare un posto di apprendistato o a iscrivermi in una scuola.
4. My parents give advice on the choice of careers available. La mia famiglia mi dà dei consigli sulle scelte scolastiche e professionali che potrei fare.
5. My parents talk to me about apprenticeship opportunities in various careers. La mia famiglia mi parla delle opportunità di apprendistato o scolastiche relative alle diverse professioni.
<i>Interference - Interferenza</i>
6. My parents have their own ideas about my future vocation and try to influence me accordingly. La mia famiglia ha un'idea precisa della professione che dovrei svolgere e cerca di convincermi ad andare in quella direzione.
7. My parents interfere too much with my vocational preparation. La mia famiglia interferisce troppo con la mia scelta scolastica e professionale.
8. My parents try to put through their ideas of my future vocation. La mia famiglia cerca di impormi la sua idea sulla mia futura formazione.
9. My parents would talk me out of a vocation they don't like. La mia famiglia cerca di farmi cambiare idea rispetto a una formazione che loro non vogliono che faccia.
10. My parents try to push me in a certain direction regarding my future vocation. La mia famiglia sta cercando di spingermi a scegliere una certa formazione o professione.
<i>Lack of engagement - Assenza di coinvolgimento</i>
11. My parents are not really interested in my future vocation. La mia famiglia non è realmente interessata alla mia futura formazione.
12. My parents don't care about my vocational preparation. La mia famiglia non si cura della mia formazione e delle mie scelte scolastiche e professionali.
13. My parents cannot support my vocational preparation because they know too little about different vocations. La mia famiglia non può aiutarmi nella scelta di una formazione, perché ne sa troppo poco delle formazioni e professioni esistenti e accessibili.
14. My parents cannot support my vocational preparation, because they are too busy. La mia famiglia non può aiutarmi nella scelta di una formazione, perché deve occuparsi di altre cose e non ne ha il tempo.

15. My parents cannot support my vocational preparation, as they face difficulties at work themselves.

La mia famiglia non può aiutarmi nella scelta di una formazione, anche i miei genitori hanno i loro problemi professionali.

Note. The validated scale exists only in German, the English wording here exposed was provided by the PCB authors in their scale validation study (Dietrich & Kracke, 2009).

Table 2. Means and standard deviations of items and results of confirmatory factor analysis

Item	<i>M</i>	<i>SD</i>	Support	Interference	Lack of engagement
1.	3.16	.76	.61		
2.	3.22	.80	.66		
3.	3.41	.76	.66		
4.	3.33	.72	.79		
5.	3.11	.82	.75		
6.	2.31	1.01		.47	
7.	1.96	.88		.74	
8.	1.84	.93		.82	
9.	1.62	.89		.79	
10.	2.08	1.02		.66	
11.	1.44	.84			.73
12.	1.45	.79			.78
13.	1.65	.84			.75
14.	1.52	.81			.90
15.	1.50	.76			.82

Note. *M* = Mean; *SD* = Standard deviation.

Table 3 *Test of invariance across gender*

Model tested	χ^2	<i>df</i>	<i>p</i>	$\Delta\chi^2$	Δdf	<i>p</i>	RMSEA	Δ RMSEA	CFI	Δ CFI	TLI	Δ TLI
Configural invariance	320.05	174	<.001	-	-	-	.042	-	.956	-	.947	-
Weak factorial invariance	358.01	186	<.001	37.96	12	<.001	.044	.002	.948	.008	.941	.006
Strong factorial invariance	415.22	201	<.001	57.21	15	<.001	.047	.003	.935	.013	.932	.009
Partial strong factorial invariance	397.25	199	<.001	39.24	13	<.001	.046	.002	.940	.008	.937	.004
Variance and covariance invariance	432.82	205	<.001	35.57	6	<.001	.048	.002	.931	.009	.929	.008

Note. Measurement invariance is reached when Δ CFI < .01 and Δ RMSEA < .015 (Chen, 2007).

Table 4 *Correlation matrix*

	1	2	3	4	5	6	7	8	9	10
1 PCB S	(.82)									
2 PCB I	-.06	(.82)								
3 PCB LE	-.30 ***	.48 ***	(.90)							
4 ES Fam	.61 ***	-.18 ***	-.34 ***	(.90)						
5 ES Fr	.25 ***	-.10 *	-.10 *	.28 ***	(.91)					
6 Exploration	.22 ***	-.12 **	-.17 ***	.13 **	.11 *	-				
7 CDDQ Total	-.13 **	.23 ***	.18 ***	-.15 **	-.06	-.09	(.92)			
8 CDDQ LR	-.03	.14 **	.07	-.06	-.04	-.06	.78 ***	(.62)		
9 CDDQ LI	-.17 ***	.18 ***	.16 ***	-.16 ***	-.09	-.11 *	.94 ***	.59 ***	(.92)	
10 CDDQ II	-.11 *	.30 ***	.23 ***	-.15 **	-.03	-.03	.88 ***	.58 ***	.75 ***	(.82)

Note. PCB S = support career parental behavior; PCB I = interference career parental behavior; PCB LE = lack of engagement career parental behavior; ES Fam = family emotional support; ES Fr = friends emotional support; CDDQ = career decision making difficulties questionnaire, with LR = lack of readiness, LI = lack of information, and II = inconsistency of information; Exploration = number of career exploration activities. In parentheses, Cronbach's alpha coefficients are reported for each scale.

* $p < .05$, ** $p < .01$, *** $p < .001$