**Abstract**

The provision of workplace-based experiences (internship/placement) is an important component of the training program of students attending vocational education courses. Regarding the impact of such experiences on vocational development, research results are not conclusive enough, mainly if we consider the theoretical expectation that work experiences clearly affect the vocational development of adolescents. The main purpose of this study is to clarify the relationship between work experience quality and students’ vocational development. Using a longitudinal design (pre - and post internship), we conducted a study that explores the relationship between perceived qualities of the training experience (autonomy, colleagues feedback, social support, learning opportunities, supervisor training, supervisor support) and the different dimensions of career exploration (beliefs, behaviors, and reactions), in a sample of Portuguese high school students (*N* = 346, twelfth grade). Overall, results suggest that the quality of work experience is relevant for the vocational development of students. With the exception of supervisor training, all other internship qualities were single significant predictors of career exploration over the internship period. Finally, implications for career interventions and for future investigation are offered in light of the results.

***Keywords*:** career exploration; quality of work experience; vocational education and training; vocational development.

1. **Introduction**

Workplace learning constitutes an important component in the training program of students attending vocational education courses at a secondary education level. Concerning the impact of such experiences on the vocational development, research results are not conclusive enough (Creed & Patton, 2003; Frone, 1999; Skorikov & Vondracek, 1997), mainly if we consider the theoretical expectation that work experiences clearly affect the vocational behavior of adolescents (e.g., Dawis, 2005; Lent, Brown & Hackett, 2002; Mitchell & Krumboltz, 1996; Savickas, 2005; Super, Savickas & Super, 1996; Vondracek, Lerner & Schulenberg, 1986; Vondracek & Porfeli, 2008). Two major reasons for this are: a) the way in which the quality of work experiences has been measured, in most cases considering only its more quantitative aspects (e.g., number of hours) (Barling & Kelloway, 1999; Loughlin & Barling, 1998; Mortimer, 2003; Stone & Josiam, 2000; Tesluk & Jacobs, 1998), which are known not to have a large differentiating effect on vocational development (e.g., Mortimer & Finch, 1996; Mortimer, Harley & Staff, 2002; Mortimer & Zimmer-Gembeck, 2007); b) and the poor internal validity of some of the previous studies, because the adopted design (e.g., cross-sectional studies) does not allow one to attribute the observed within-subject changes in the vocational domain to the participation in work experiences (Brooks, Cornelius, Greenfield & Joseph, 1995). Aiming to overcome this set of limitations and, in turn, contribute to clarifying the role of internship quality on career exploration outcomes, the present study adopts a longitudinal design, with repeated measures, and includes a multi-dimensional evaluation of the quality of internships and of the process of career exploration.

**Relationship between Training Experience and Vocational Development**

For students attending Vocational Education (VET), learning in workplace contexts implies the mobilization of the competencies they previously acquired in school, the contact with a new organizational reality, the performance of a new role (e.g., intern), and frequently a reflection about themselves in relation with these new learning experiences in which they are partaking. For many students, this formal and structured contact with the world of work gives them the opportunity to intentionally explore, in a direct manner, a reality which, until this point of their careers, had always been mediated by other sources of information (Csikszentmihalyi & Schneider, 2000). Authors, such as Brooks and collaborators (1995), Pedro (1983), Super (1957), Vondracek et al. (1986), and Watts (1996), stress the value of direct experiences within workplace contexts, such as internships or job shadowing activities, considering them as the most realistic modalities of career exploration. Spokane (1991) integrates these type of experiences into distal modalities of information gathering, specifically those modalities which, contrary to the more proximal strategies, promote a larger complexity and cognitive integration in the process of career choice and adjustment.

On the other hand, Mortimer, Zimmer-Gembeck, Holmes and Shanahan (2002) underline that it is precisely in real work contexts that adolescents can more easily explore the different aspects of the self, test new roles, and develop social and decision-making skills. Considering this, the importance of training experience for students’ vocational development relies largely on the direct interaction they are able to have with the different qualities of the work context (e.g., social support, learning opportunities) and on the subsequent reflection that aims to organize, and integrate this new learning experience into their experiential repertoire (Kuijpers, Meijers & Gundy, 2011; Petherbridge, 1996; Watts, 1996).

**Quality of the Training Experience and Career Exploration**

Career exploration, while a complex psychological process of exploration of the self and of the external environment (Jordaan, 1963; Patton & Porfeli, 2007; Porfeli & Lee, 2012; Taveira, 2001), ensures career adaptability (Blustein, 1997b; Savickas, 2005, Savickas, Nota, Rossier, Dauwalder, Duarte, Guichard, et al., 2009) and has a particular significance in transitional periods (e.g., school to work transition), in which individuals are frequently challenged with new roles (Blustein, 1997b; Flum & Blustein, 2000; Greenhaus, Callanan & Godshalk, 2000; Jordaan, 1963; Kalakoski & Nurmi, 1998; Taveira, 2001). In regard to work-based learning (e.g., internships), this activity represents a situation that can give rise to a significant increase in exploratory activity (e.g., Blustein & Flum, 1999; Jordaan, 1963; Kalakoski & Nurmi, 1998; Porfeli & Lee, 2012; Taveira & Moreno, 2003), since the adaptation and performance of the students seem to depend on the information that they are able to collect regarding the new learning context.

Assuming the previously explained association, Jordaan (1963) and Blustein (1997a) consider, therefore, that career exploration can, in fact, constitute a main mechanism in the construction of the new meanings that result from the learning experiences that take place in real work contexts. However, this construction depends not only on the attitudes and competencies of the person exploring, but also on the conditions that the specific context offers them (e.g., task diversity, experienced autonomy, supervision, and social relationships) (e.g., Blustein, Prezioso & Schultheiss, 1995; Blustein, 1997a; Blustein & Flum, 1999; Ryan & Deci, 2000).

Within the contextual qualities that the literature considers as essential to promote the career exploration, we begin by highlighting the importance of the relational dimensions found in real work contexts (e.g., Blustein & Noumair, 1996; Blustein et al., 1995; Flum, 2001; Flum & Blustein, 2000). Feelings of anxiety, insecurity, and uncertainty which frequently accompany young people as they enter an internship can be diminished through the support provided by co-workers, teachers, supervisors, and other employees working in the institution where they are interning (e.g., Kenny & Bledsoe, 2005; Nelson & Quick, 1991).

In general, the relational and socio-cognitive approaches to career development advocate that proportioned support in work contexts not only assists in reducing anxiety and stress, but also stimulates the search for support, increases confidence in attempting new tasks, and facilitates the sharing of experiences with co-workers (e.g., Blustein et al., 1995, Vítor não será de colocar uma referência bibliográfica mais recente da abordagem relacional de Blustein, nomeadamente o artigo de fundo que ele publicou o ano paasado ou em 2011 no JVB? ; Hirschi, 2009; Kenny & Bledsoe, 2005; Vignolia, Croity-Belz, Chapeland, Fillipis & Garcia, 2005). From this point of view, we can affirm that relational dimensions are vital components in the connection between the student and the social and pedagogical circumstances inherent to workplace learning (e.g., Blustein, 1997a). In this case, it is important to emphasize the role of the supervisor (e.g., Cheung & Arnold, 2010; Creed, Fallon & Hood, 2009; Kenny & Bledsoe, 2005), since the nature of the provided support should be related to the specificity of the tasks that the student is required to perform (Blustein et al., 1995; Flum, 2001). In other words, the orientation, encouragement, coaching, and feedback that only supervisors and teachers are capable of giving are essential in the process of adaptation of the student into the internship context. In fact, if we keep in mind that exploration within work contexts involves a certain openness to experience (e.g., Blustein, 1997b; Flum, 2001) that is normally accompanied by feelings of vulnerability, we must therefore acknowledge that the support of the supervisor can facilitate self-determination, curiosity, and investment by the student in the accomplishment of learning in workplace contexts.

On the other hand, beyond being supportive, learning contexts should also be challenging, promote autonomy, present an appropriate degree of structure, and allow for the acquisition of new skills (e.g., Deci & Ryan, 1985; Ryan & Deci, 2000; referência do artigo de fundo de Ryan e Deci de 2010 que eles publicaram no The Counseling Psychoologist, onde abordavam precisamente estas questões). Based on Self-determination Theory (SDT), Blustein and Flum (1999) and Flum and Blustein (2000) suggest that type A career exploration (i.e. self-generated exploration) can be promoted in work contexts which present the above features. From this point of view, the extent to which the students explore an internship context depends on the support and autonomy they experience which, in turn, can have a significant impact on the diversity and quality of existing learning opportunities (e.g., Vianen, Pater & Preenen, 2008). Given the above, and in line with the relational (e.g., Blustein, Schultheiss & Flum, 2004; Blustein & Noumair, 1996), constructivist (e.g., Savickas, 2002, 2005) and contextualist career approaches (e.g., Young & Collin, Valach, 2002), it appears that the result of the training experience depends on the interaction between the learning opportunities afforded by the working context and the individual student's skills, specifically in the area of career exploration. For this reason, author such Blustein and colleagues (1995) have underlined the necessity to develop competencies in students which allow them to more easily access relational support and learning opportunities that the workplace may offer.

**Present Study**

In line with European Union VET policy, in most UE countries there is a growing effort to make the school curriculum more responsive to the contemporary job market demands (Larson, Wilson & Mortimer*,* 2002; Leney & Green, 2005), with workplace learning experiences constituting the main strategy linking school with occupational reality (Griffiths & Guile, 2004). In Portugal, workplace-based experiences (internships) are a compulsory component of the training program of students attending vocational courses. In the secondary education level, vocational courses last for three academic years (10th, 11th, and 12th grades), and provide a broad range of training. Their main purpose is to give access to the labor market in the short run, but they also allow students to pursue their studies at higher education. Successful completion of these courses (internship included) leads to a Level 3 vocational qualification and a diploma in secondary education. As mentioned earlier, empirical studies have found that work experience quality significantly influence students’ career development (e.g., Brooks et al., 1995; Blustein, 1997b; Carless & Prodan, 2003; Loughlin & Barling, 1998; Mortimer, 2003; Pedro, 1984; Stern, Stone, Hopkins & McMillion, 1990;Stone & Mortimer, 1998; Watts, 1996), although it is not clear whether certain work experience qualities produce a greater effect.

For this reason, the present longitudinal panel study (T1-T2) examines the relationship between perceived qualities of the training experience (autonomy, peer feedback, social support, learning opportunities, supervisor training, supervisor support) and the career exploration process in a sample of Portuguese VET interns (*N* = 346, twelfth grade). Given the previous research, we expect a significant increase in exploratory activity from Time 1 to Time 2 (e.g., Blustein & Flum, 1999; Jordan, 1963; Kalakoski & Nurmi, 1998; Taveira & Moreno, 2003) and that career exploration measured at Time 1 is positively correlated with career exploration measured at Time 2. Furthermore, we expect that career exploration measured at Time 1 explains a significant variance in career exploration measured at Time 2 (e.g., Carless & Prodan, 2003; Creed, Patton & Prideaux, 2007; Kracke & Schmitt-Rodermund, 2001; Miller & Shevlin, 2003; Patton & Creed, 2001; Rogers & Creed, 2011).

Secondly, we predict that the internship quality is positively correlated with career exploration (T2). More specifically, we expect that supportive relationships (e.g., supervisor support, social support, colleagues feedback), autonomy, learning opportunities and supervisor training relate positively to the career exploration process and beliefs and negatively to career exploration stress and decision-making stress. In this light, we also expect that the internship qualities explain significant variance in career exploration at Time 2, after career exploration (T1) and demographic control variables are accounted for (e.g., Blustein, et al., 1995, Creed et al. 2009; Flum & Blustein, 2000; O'Brien 1996; Kracke, 1997, 2002; Rogers, Creed & Glendon, 2008; Ryan & Deci, 2000; Vignoli et al., 2005). We also analyze the effects of demographic variables (age, gender and socioeconomic status) which could have an effect on career exploration development ( e.g., Blustein & Phillips, 1988; Creed et al., 2009; Kracke & Schmitt-Rodermund, 2001; Rogers et al., 2008; Stumpf & Lockhart, 1987; Taveira, Silva, Rodríguez & Maia, 1998; Thompson & Subich, 2006).

1. **Method**
   1. *Participants*

Participants were 346 twelfth grade students (176 boys, 50.9%; 170 girls, 49.1%), from 16 vocational education high schools in southern Portugal. Ages ranged from 16 to 26 years old, with a mean of 18.41 (*SD* = 1.573), at the first time of measurement (T1). About 18,5% of the participants are older than expected for this level of education, because VET courses in Portugal admit young adults needing to acquire professional qualification before entering the labor market. Regarding socioeconomic status (SES), approximately half of the sample was coded as low SES (48.5%), 45.4% as medium SES, and only 6.1% of the students were coded as high SES. All participants did their curricular internship during the academic year of 2007/2008. The students averaged about 221 hours of placement in their internships (ranging between 185 to 310 hours).

* 1. *Measures*

A *Demographic Questionnaire*was used to collect information regarding students’ gender, age, socioeconomic status (SES) and internship duration. Socioeconomic status (SES) was determined by the professional qualifications (ranging from 1 - unskilled to 9 – highly skilled workers, according to the Portuguese National Classification of Occupations) and the educational level (ranging from 1 - basic education to 7 - university degree) of the parents. The scores for father and mother were taken as indicators of the family socioeconomic status (3 levels: low, medium and high).

*Career Exploration* **–** Students career exploration was assessed using the Portuguese version (Taveira, 1997) of the Career Exploration Survey (CES; Stumpf, Colarelli & Hartman, 1983). The CES is a multidimensional self-administered scale with 54 items, designed to assess five beliefs about exploration - Employment Outlook (3 items, e.g., “*what are the possibilities of getting a job in the professions that interest you most*”, α = .84), Certainty of Exploration Outcomes (3 items, “*how certain are you that you will begin work upon graduation in the specific job you prefer*”, α = .89), External Instrumentality (11 items, e.g., “*what is the probability that each of the following activities will result in obtaining your career goals – planning my job search in detail*”, α = .85), Internal Instrumentality (4 items, e.g., “*what is the probability that each of the following activities will result in obtaining your career goals - learning more about myself*”, α = .73), and Importance of Preferred Position (3 items, e.g., “*How important is to you at this time to work at the job you prefer*”, α = .68); four dimensions of the career exploration process - Self Exploration (5 items, e.g., “*in the last three months, I’ve been retrospective in thinking about my career*”, α = .70), Environment Exploration (4 items, e.g., “*in the last three months, I initiated conversations with knowledgeable individuals in my career area*”, α = .76), Intended-systematic Exploration (2 items, e.g., “*in last three months, I intended to conduct activities to try out my skills*”, α = .62), and Amount of Information (3 items, e.g., “*how much information do I have on what one does in the career area(s) you have investigated*”; α = .68); and three reactions to vocational exploration - Satisfaction with Information (3 items, e.g., “*How satisfied are you with the information you have on the specific job in which you are interested*”, α = .81), Exploration Stress (4 items, e.g., “*how much undesirable stress have the following caused you relative to other significant issues with which you have to content – exploring specific jobs*”, α = .78) and Decisional Stress (4 items, e.g., “*how much undesirable stress have the following caused you relative to other significant issues with which you have to content – deciding what I want to do*”, α = .91). Responses were given on a five-point (items 1 to 43) and seven-point (items 44 to 53) Likert-scale, with higher scores indicating a higher degree of exploratory behavior/beliefs/reactions. The validity, reliability and multidimensionality of the CES have been widely demonstrated (e.g., Bartley & Robitschek, 2000; Rowold & Staufenbiel, 2010; Stumpf, et al., 1983). Regarding the Portuguese version, confirmatory factor analysis (CFA), conducted by Taveira (1997), with a sample of 9th and 12th grade students, supported a 12 first-order factor structure of the CES.

*Internship Qualities*– The Internship Quality Inventory (IQI) (Gamboa, 2011) was developed to measure the students’ perceptions of their practicum training quality. The results of the Exploratory Factor Analysis (EFA), principal component with varimax rotation, indicated 6 reliable factors (factor loadings > .45), which were conceptualized as: Autonomy (4 items, e.g., “*in my internship,* *I was able to use my initiative*”; α = .81), Peer Feedback (4 items, e.g., “*in my internship*, *my colleagues gave me clues to improve my work*”; α = .83), Social Support (4 items, e.g., “*in my internship, the people I worked with were friendly”*; α = .82), Learning Opportunities (8 items, e.g., “*my internship involved the performance of a wide variety of tasks*”, α = .85), Supervisor Training (10 items, e.g., “*advised by my supervisor, always knew what I had to do*”; α = .92) and Supervisor Support (7 items, e.g., “*my supervisor showed much interest in my opinions and ideas*”, α = .87). Participants responded to the items of the IQI on a 5-point Likert-type scale ranging from *strongly disagree* (1) to *strongly agree* (5), with higher scores indicating a higher degree of perceived quality.

* 1. *Procedure*

The study consisted of a short-term longitudinal design with two points of data collection, T1 – before the internship, and T2 – immediately after finishing the internship (14 weeks later). After the initial phase, in which the study was presented to the participating schools, we began establishing the groups and organizing the timing of the data collection. Subsequently, appropriate informed consent procedures (i.e., parents’, students’, and school boards’ permission) were followed in collecting data. The application of the instruments (demographic questionnaire, Career Exploration Survey and Internship Quality Inventory) was carried out by trained co-researchers, in a classroom context, with the assistance of the class teacher. On average, each assessment session lasted around 25 minutes (before and after the internship). There was no attrition from T1 to T2, because after the internship all students had a period of classes in which they prepared for final exams. To ensure data confidentiality, pairing of the questionnaires was made using an alphanumeric code.

1. **Results**

The first set of analyses examined the effect of the training period on the vocational development of students: differences between moments in the career exploration measures (paired sample *t* test). Table 1 presents the means and standards deviations for the studied variables, at both moments (T1-T2). Concerning the vocational variables (CES), with the exception of the subscales Internal Instrumentality (II) (*Mdifference*= .03, *p* > .05) and Importance of Preferred Position (IPP) (*Mdifference*= .19, *p* > .05), mean values rise from the first (T1) to the second moment (T2), meaning that there was an increase in exploratory activity during the internship period, which was accompanied by higher levels of satisfaction with information (SI) (*t* = -4.99, *p* < .01, *d* = .30) and a higher level of stress regarding career exploration (ES) (*t* = -3.04, *p* < .01, *d* = .20) and career decision making (DS) (*t* = -2.26, *p* < .05, *d* = .14). [insert table 1]

Correlational analysis, also presented in Table 1, show that girls had more favourable exploratory activity than boys (External Instrumentality, Internal Instrumentality and Environment exploration). At T2, older students presented more favourable exploratory beliefs (Employment outlook, External instrumentality and Internal instrumentality) and higher values in all subscales of the exploration process. With regard to the socio-economic status (SES), the students from higher levels are the ones seeking information in a more systematic and intentional manner (ISE) (T2).

The results presented on the diagonal (T1 x T2) show that there is some stability in exploratory activity, considering that these range from *r* = .29 (Exploration Stress - ES) to *r* = .49 (Amount of Information - AI). Taking into account the results presented below (T1) and above (T2) the diagonal, we found that, in general, the different dimensions of the CES show significant correlations in the expected direction. Also in Table 1, the results suggest that, overall, the quality of the internship is positively correlated with the different variables of career exploration (T2), the most notable being the observed values between Supervisor Support and External Instrumentality (EI) (*r* = .36, *p* < .01). As regards to the length of the internship, there were no significant correlations between this variable and the measures of career exploration (CES).

In the next step, a hierarchical multiple regression analysis was used to test the hypothesis that the internship quality (IQI) significantly predicts the development of career exploration from T1 to T2. Vocational measures at T2 were entered as dependent variables, while those obtained at T1 were included in the first block, as the base level of the construct, in order to control its effect (this allows the effect of the predictor variables to be assessed independent of pre-existing levels of career exploration). In the next step, the socio-demographic variables (block II) were entered, while all of the variables describing the quality of the internship (IQI) were included in block III (step 3). Summary data for this analysis are reported in Tables 2, 3 and 4.

***Predictors of career exploration beliefs at T2*** [insert table 2]

The results show that the predictor variables at Step 1 (T1) explained the variance of career explorations beliefs at Time 2, as presented below: 13.6 % - Employment Outlook (EO) (*F* (1,341) = 53.86, *p* < .001), 11.8% - Certainty Exploration Outcomes (CEO) (*F* (1,341) = 45.53, *p* < .001), 22.2% - External Instrumentality (EI) (*F* (1,341) = 97.12, *p* < .001), 17.7% - Internal Instrumentality (II) (*F* (1,341) = 73.30, *p* < .001), and about 15.4 % - Importance Preferred Position (IPP) (*F* (1,341) = 61.98, *p* < .001). At Step 2, the socio-demographic variables accounted for an additional variance, which ranged between 2.3% - Employment Outlook (EO) (*F* (3,338) = 3.11, *p* < .05), and 3.1% - Internal Instrumentality (II) (*F* (3,338) = 4.41, *p* < .01). Age was a significant predictor of Employment Outlook (*β* = .14, *p* < .05), External Instrumentality (*β* = .16, *p* < .01), and Internal Instrumentality (*β* = .23, *p* < .01). According to these results, older students reported more favourable exploration beliefs. The internship qualities (IQI) (Step 3) accounted for an extra degree of variance in all career exploration beliefs variables, at T2: 5.2 % - Employment Outlook (EO) (*F* (6,332) = 3.62, *p* < .01), 2.5 % - Certainty Exploration Outcomes (CEO) (*F* (6,332) = 1.64, *p* = .135), 8.8 % - External Instrumentality (EI) (*F* (6,332) = 7.34, *p* < .001), 4.4 % - Internal Instrumentality (II) (*F* (6,332) = 3.29, *p* < .01), and about 4.5 % - Importance Preferred Position (IPP) (*F* (6,332) = 3.13, *p* < .01). Supervisor Support was a significant single predictor for External Instrumentality (*β* = .25, *p* < .01), while Learning Opportunities predicted the increase in Importance of Preferred Position (*β* = .21, *p* < .01).

***Predictors of career exploration behavior at T2*** [insert table 3]

The career exploration variables at Step 1 explained a significant variance of career exploration behavior at Time 2: 19.5 % - Environment Exploration (EE) (*F* (1,341) = 82.73, *p* < .001), 19 % - Self Exploration (SE) (*F* (1,341) = 79.83, *p* < .001), 11.9 % - Intended-systematic Exploration (ISE) (*F* (1,341) = 45.99, *p* < .001), and 24% - Amount of Information (AI) (*F* (1,341) = 107.95, *p* < .001). At Step 2, the additional variables accounted for an extra degree of variance, ranging from 1.8 % - Amount of Information (*F* (3,338) = 2.70, *p* < .05) to 6.2 % - Intended-systematic Exploration (*F* (3,330) = 8.53, *p* < .001). In this block, age was a single significant predictor of all T2 variables, meaning that older students reported more career exploration at Time 2: Environment Exploration (*β* = .12, *p* < .05), Self Exploration (*β* = .14, *p* < .05), Intended Systematic Exploration (*β* = .21, *p* < .01), and Amount of Information (*β* = .12, *p* < .05). On the other hand, Socio-economic Status only predicted the Intended-systematic Exploration (*β* = .13, *p* < .05). Finally, the Internship quality entered at Step 3 accounted for a significant percentage of the variance in all career exploration process variables at Time 2: 8 % - Environment Exploration (EE) (*F* (6,332) = 6.29, *p* < .001), 4.1 % - Self Exploration (SE) (*F* (6,332) = 3.04, *p* < .01), 11.8 % - Intended-systematic Exploration (ISE) (*F* (6,332) = 9.35, *p* < .001), and 3% - Amount of Information (AI) (*F* (6,332) = 2.32, *p* < .05). In this Step, Environment Exploration (EE) at T2 was significantly predicted by Autonomy (*β* = .15, *p* < .05) and Peer Feedback (*β* = .11, *p* < .05), while Self Exploration (SE) at T2 was predicted by Peer Feedback (*β* = .11, *p* < .05), Learning Opportunities (*β* = .15, *p* < .05) and Supervisor Support (*β* = .17, *p* < .05). These last two qualities were also significant predictors of the Intended Systematic Exploration (ISE)(T2): Learning Opportunities (*β* = .16, *p* < .05) and Supervisor Support (*β* = .19, *p* < .05). There was no single significant predictor for Amount of Information (AI) variable.

***Predictors of career exploration reactions at T2*** [insert table 4]

Regarding the career exploration reactions, results presented at T1 (Block I) explained a significant variance of these variables at T2: 14.6 % - Satisfaction with Information (SI) (*F* (1,341) = 53.14, *p* < .01), 8.4 % - Exploration Stress (ES) (*F* (1,341) = 31.34, *p* < .01), and 14.4 % - Decisional Stress (DS) (*F* (1,341) = 54.77, *p* < .01). In Step 2, socio-demographic variables did not account for additional variance. However, in Step 3, internship qualities accounted for 4.2% of the variance of Satisfaction with Information (SI) (*F* (6,332) = 2.89, *p* < .01), and 3.2 % of the variance of Decisional Stress (DS) (*F* (6,332) = 2.15, *p* < .05) at Time 2. Learning Opportunities (*β* = .15, *p* < .05) and Social Support (*β* = -.16, *p* < .05) were single significant predictors of Decisional Stress (DS).

1. **Discussion**

The first set of analysis, which examined the effect of time on career exploration, revealed that, from T1 to T2, there were statistically significant gains, especially in the exploratory activity that was directed toward the environment (EE and ISE). These results are consistent with the literature which supports the idea that the transition to new contexts of learning, or working, produces an increase in exploratory activity (e.g., Blustein, 1997a, Cheung & Arnold, 2010; Jordaan, 1963, Flum & Blustein, 2000; Kalakoski & Nurmi, 1998; Savickas, 2005, Super et al., 1996, Taveira, 2001). In this case, it was probably due to the need that interns have to guarantee a better adjustment to the new learning context. Concerning the observed relationships between socio-demographic variables and the different dimensions of career exploration (CES), it should be noted that overall the results are consistent with previous studies. Thus, with regard to gender, it was the female participants who reported higher levels of exploration (e.g., Creed et al. 2009; Kracke & Schmitt-Rodermund, 2001; Stumpf & Lockhart, 1987). Consequently, we can infer that, in this sample, girls are perhaps better prepared for career progression and adjustment than boys. With regard to age, this variable was significantly associated with a higher level of career exploration, as was observed in the studies of Blustein and Phillips (1988), Rogers and colleagues (2008), Roger and Creed (2011) and Taveira et al. (1998). In addition to age and gender, the literature stresses the importance of socio-economic status as a predictor of career development (e.g., Thompson & Subich, 2006). However, in the present study, only in the Intended-systematic Exploration was found a positive correlation with socioeconomic level. To some extent, these results can be attributed to the restricted range of SES, considering that 97% of the participants were included in the low and moderate SES levels.

The correlations between the mean values obtained at each of the moments (T1xT2) suggest some stability in exploratory activity. In fact, the literature points out the results from T1 as the best predictors of each of these variables at T2 (e.g., Carless & Prodan, 2003; Cheung & Arnold, 2009; Creed et al. 2007; Kracke & Schmitt-Rodermund, 2001; Lent et al., 2002, Millar & Shevlin, 2003, Patton & Creed, 2001; Rogers & Creed, 2011), especially at the end of adolescence, when the vocational processes most directly involved in career decision making and commitment are more firmly stabilized (e.g., Patton & Creed, 2007; Skorikov, 2007; Super et al, 1996). With regard to the quality of the internship (IQI), the results are also consistent with the vocational literature (e.g., Barling & Kelloway, 1999; Frone, 1999; Mortimer & Finch, 1996, Mortimer et al., 2002; Mortimer & Zimmer-Gembeck, 2007), considering that all of its dimensions significantly correlated, in the expected direction, with most of the dimensions of career exploration.

As expected, the internship quality variables were significant predictors of the career exploration activity over the course of the internship. Supportive social contexts (social support and supervisor support) emerged as significant predictors of career exploration beliefs, behaviors and reactions. Taken together, these results reinforce the assumptions of the relational perspectives of career exploration (e.g., Blustein, 1997b; Blustein & Noumair, 1996; Blustein et al., 1995, 2004, Flum, 2001, Blustein & Flum, 1999; Flum & Blustein, 2000), as well as the results of some of the empirical studies carried out in the last few years (e.g., Cheung & Arnold, 2010; Creed et al., 2009; Hirschi, 2009; Kenny & Bledsoe, 2005; Kracke, 2002; Rogers et al., 2008). Thus, the support provided by supervisors and colleagues promotes students’ career exploration and decreases decisional stress, pointing to the fact that relational dimensions emerge as critical features of the internship environment.

On the other hand, consistent with the point of view of Ryan and Deci (2000; colocar o tal artigo de 2010 publicado no TCP, aqui ou anteriormente, porque discute precisamente estas questões em contextos clínicos e de aconselhamento) and Flum and Blustein (2000), in this study, autonomy and learning opportunities were also related to higher levels of career exploration over the internship period. Autonomy predicted an increase in environment exploration, while learning opportunities were positively related with an increase in self and in systematic exploration. However, contrary to our expectations, learning opportunities emerged as a significant predictor of an increase in decisional stress, which suggests, according to some of the main theoretical models in Vocational Psychology (e.g., Lent et al., 2002; Savickas, 2002, 2005; Super, 1957; Super et al., 1996), that, in certain circumstances, learning experiences in the real-work contexts may serve as an interesting opportunity for students to carry out a re-evaluation of their own skills and interests, and accordingly in the process of career decision-making.

In sum, our results demonstrate the relevance of the internship experience to the vocational development of students attending vocational education courses. Moreover, and in agreement with Tesluk and Jacobs’ (1998) model of work experience, the impact of the training experience on career exploration seems to depend on the qualities found in the working context, such as social support, learning opportunities and supervisor support. These results, from our point of view, also highlight the ecological and relational nature of the vocational development process (e.g., Vondracek et al. 1986; Vondracek & Porfeli, 2008; Young et al., 2002), placing the center of the analysis in the interactions established between the student and his significant learning context.

**5. Implications, limitations and future directions**

In terms of implications for vocational intervention, our main contribution lies in altering the former idea that internships, as a modality of experiential learning, always have a uniform and positive impact on students’ development. Therefore, as suggested by Vondracek (2004), career intervention should be based on complete information relating to either the students’ vocational profile (interests, style decision-making, self-efficacy, goals and career plans), and the qualities of learning environments (e.g., internship). In this light, teachers and school psychologists must pay special attention to the quality of the support and of the learning opportunities provided during the internship.

Finally, we would like to address some of the limitations identified in this study, which may be overcome in future research. Firstly, there is the need to carry out longitudinal studies with several waves of data collection, covering the entire training cycle (10th, 11th, and 12th grade), in order to analyze the impact of the internship experience in the scope of the developmental trajectory of students. In fact, short-term longitudinal studies, with only two measures, have a strong limitation, considering that they only allow linear analyses between the moments of data collection (T1-T2). Secondly, it is important to ensure that in future research, beyond self-report measures, other indicators are used, namely the students’ training plan (e.g., learning goals), the supervisor profile (e.g., teacher training, work experience, communication skills), and the workplace features (e.g., human and technical resources), in order to clarify to what extent these aspects affect the perceptions of students about the quality of their learning experience.

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