PEER TUTORING AND COACHING PROGRAM WITH COLLEGE STUDENTS: IMPLICATIONS FOR A POSITIVE AND HEALTHY INTEGRATION IN UNIVERSITY

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ABSTRACT

As all transition, initiate college is challenging and demanding (Seco, Casimiro, Dias & Custódio, 2005).Studies demonstrated that these changes and demands can cause considerable distress, which have a significant impact in adjustment to college as well as in physical and psychological health (Aspinwall & Taylor, 1992 cit in Baker, 2003). This indicates the importance of intervening in this context. Considering this, the program "Peer Tutoring and Coaching" (Freire, 2009) was developed aiming to assist in freshmen integration and the promotion of several interpersonal and academic competences. The project considers that first year students can be assisted by older students since the latter have more knowledge about the college's functioning.

Participants are all students that integrated the project, which includes tutees (67.2%) and tutors (32.8%) in a total of 58 participants, as well as coaches, in a total of 7 participants. Coaches were 6 females and 1 male with ages between 20 and 21 years old. As for tutors and tutees, 81% are female and 19% are male. Their mean ages was 19,5 years old (D.P.=4,3). The following instruments were used: social-demographic questionnaire; World Health Organization Quality of Life Questionnaire (Bref); Life Satisfaction Scale; Psychological Well-being Scale; Questionnaire of Academic Experiences; and a semi-structured interview.

Results show that tutors and tutees start the project with no differences. Differences between tutors and tutees were more accentuated in the second moment of evaluation (post test). Tutors seem to have better physical, psychological and environmental quality of life, general psychological well-being and psychological well-being related to competences perception, as well as less anxiety related to psychological well-being. Although these differences between tutors and tutees, tutors only differ from the first moment of evaluation in what concerns physical quality of life which was higher in the second moment of evaluation. Alternatively, tutees had a higher physical quality of life, but lower general psychological well-being and positive cognitive-emotional psychological well-being as well as higher anxiety related to psychological well-being in the end of the project. In academic terms, psychological well-being seems to be a good predictor for personal and interpersonal dimensions of academic adaptation of the participants. In relation to coaches, they revealed that they chose to be coaches in order to have a different participation and perspective, pinpointing as advantages less responsibility and more free time, as well as an easier management of the relationship with tutors due to their maturity. They valued the fact that they provided support, had a different experience and could base their performance in their previous experience.

These results demonstrate that there is some impact of the project but it is necessary to rethink some aspects of the project, namely related to tutees (potential extend of tutoring sessions). More studies are needed in order to understand this kind of intervention in higher education.

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1. INTRODUCTION

It is undeniable that entering college is a complex life experience. There are several new interpersonal, social and academic demands that it is necessary to cope with (Baker, 2003). Studies have demonstrated that these changes and demands can cause considerable distress, which have a significant impact in adjustment to college as well as in physical and psychological health, in general (Aspinwall & Taylor, 1992 cit in Baker, 2003). Considering this, colleges globally need to address these questions and implement interventions that promote their students' well-being.

1.1. Young adults and College Context

Young adults that proceed with their studies in higher education seem to have specifications that can differentiate them from their working peers. According to Schaie and Willis (2003), college students cannot be included in the adult developmental stage, since the main characteristics of this stage are the termination of education, employment and consequently financial independence, independent living arrangements, marriage and parenthood , which are not present in these individuals. Considering this, these authors refer that there is a missing stage in development and this can imply the emergence of a new stage for college students.

College can provide a different environment for individuals, one that can promote explorations, interactions, knowledge and ideas (Brack, 2010). Alternatively, students' lives are apparently associated with severe tensions and demands, frequently not limited to their first year as freshmen and the necessary adaptation, but being common across their academic years. In higher education, students are expected to develop several competences in order to cope with the challenges they are facing, namely their transitional process, academic life as well as social and personal life (Pereira, 2006). Although there is this continuity of challenges across the academic experience through the years, it is during the first year of college that most difficulties and problems originate, thus contributing to higher levels of anxiety and stress (Ferraz & Pereira, 2002, cit in Costa & Leal, 2008).

As all transitions, initiate college is challenging and demands transformation in patterns of behavior. This requires the individual to mobilize resources to deal with difficulties, and it is this mobilization that can correspond to a successful integration or unsuccessful if does not occur (Seco, Casimiro, Dias & Custódio, 2005). Specifically for first year students, Clare (1995, cit in Seco, Casimiro, Dias & Custódio, 2005) identified several demands in different areas, such as leaving the household, assuming multiple responsibilities in academic and domestic terms, competing with peers, different academic demands and evaluations and possibility of experience failure, in order to confront these difficulties. The author also referred some important resources, namely cognitive, emotional and social competences; existence of a good peer group; involvement in extracurricular activities that

allow the development of interpersonal competences and provide easier access to social support; have a good study environment, among others.

When facing a stressor, social support can have an important role in the individual's life. According to Jacobson (cit in Helgeson, 2003), there are three phases in the adaptation to a stressor – the crisis phase, when the person is first aware of the stressor; the transition phase, when the individual copes with the stressor; and the deficit phase, when the individual is overwhelmed by the excessive demands of the stressor. Considering this, the severity and timing of the stressor may influence the type of supported needed (Helgeson, 2003). When the stressor is controllable and during the transitional phase, informational support may be the most beneficial; on the other hand, with uncontrollable stressors and for the duration of the crisis phase, emotional support may be more adequate. Instrumental support seems to be important during deficit phase. For college students, in order to adapt to the necessary changes, the support of peers and family seems to be fundamental to students, although sometimes they do not ask for this support (Costa & Leal, 2008). Investigations in Portugal have shown that social support is a significant predictor of adaptation and personal well-being in college students (Moura & Ferreira, 2002), thus the importance of developing interventions that promote social relationships (Seco, Casimiro, Dias & Custódio, 2005).

Based on these assumptions considering social support, extracurricular activities could contribute significantly to the promotion of social relationships. Extracurricular activities may assume a specific relevant role when considering that enroll in college could signify the loss of friendships and social relationships that should be replaced by new ones, something that the involvement in these activities can bring to their participants (Almeida, Soares, Vasconcelos, Capela, Vasconcelos, Corais & Fernandes, 2000).

1.2. The Importance of Intervening in College

As mentioned previously, college can have a considerable impact in individuals, principally when they are enrolling for the first time. Similarly, it has been fairly common the development of programs in this setting including a wide range of areas such as mental and physical health, prevention of risk behaviors, promotion of personal, social and academic competences, among others. For example, in the United States of America, programs for first year students often include as objectives the increase of interactions among students, as well as a close participation of students on academic and non-academic activities, including their expectations and academic engagement (Barefoot, 2000). Frequently, these programs are based in peer interactions (Clulow, 2000)

Colleges and the services they provide must consider the information gathered by investigators about their students and apply it to practical interventions which students can benefit from. Initially, there was a concern with the prevention of problems, but gradually the focus is shifting to the

promotion of positive variables. In fact, in the last years, there is an increased concerned about health and well-being of colleges students (Warwick, Statham & Aggleton, 2008).

The introduction of the World Health Organization's definition of health can be considered a determinant factor for an increasingly positive perspective of the individual. In fact, this organization states that "health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (WHO, 1948), which extended the scope of action of health professionals. This definition looks at the individual as a whole and considers that being healthy is not the opposite of not being ill. It involves a holistic perspective of well-being with personal and social resources, and physical capabilities.

With this definition, WHO developed the concept of "Healthy Cities", cities in which governments actively promote their populations' health and well-being. Similar to this movement, there is an international organization of Healthy Colleges, which Lancaster University (England) is the pioneer. According to Escolme and colleagues (cit in Warwick, Satham & Aggleton, 2008), there are some fundamental reasons why colleges must promote their students' health and well-being. These authors state that the reasons include: students' feelings of well-being and belonging to a college can have a positive impact in their achievement; it is essential to include the promotion of health and well-being in order to provide greater learning opportunities; and also, since there are many negative factors that can influence students well-being and achievement, colleges must try to diminish the influence of these factors.

In this line of research, two important variables are part of this positive perspective namely Health and Quality of Life. How the students perceive their health status and quality of life and what can be done to promote the development of these states in students are fundamental questions that need to be addressed.

Young adults are a population that is increasingly being studied by investigators in several areas, including health and lifestyles; however, these studies are frequently related to their risk behaviors, thus there is little information related to students' health in colleges. Nevertheless, the existent data alerts for a preoccupying reality. When compared to their working peers, university students have poorer health (Stewart-Brown, Evans, Patterson, Petersen, Doll, Baldig & Regis, 2000). Moreover, when considering health-related problems and risk behaviors more specifically related to college students and their lifestyles, it is evident some alerting data, such as alcohol consumption, mainly in what concerns heavy episodic or binge drinking, poor nutrition habits, risk sexual behaviors, drug use, and the most common, stress-related disorders (fatigue, hypertension, headaches, depression, anxiety) (cf. Grace, 1997). The latter are the result of multiple stressors present in college students, namely exams, public presentations, interpersonal relationships and transition to a different household in some cases (Grace, 1997).

As for Quality of life, it has been defined by the World Health Organization (WHO, 1995) as the "individuals' perceptions of their position in life in the context of the culture and value systems in

which they live and in relation to their goals, expectations, standards and concerns". Studies regarding quality of life in college students demonstrate that it is related to academic achievement and can be influenced by academic, social, financial and personal stressors that are common to the academic environment (e.g. Roberts & Clifton, 1992; Rozmus, Evans, Wysochansky & Mixon, 2005). Also, a study with first year students revealed that these individuals rate both their quality of life and self-rated health lower than their working peers (Vaez, Kristenson & Laflamme, 2004).

Besides Health Psychology, Positive Psychology can also give an important contribution to the focus of intervention in positive variables related to the individuals. There are multiple definitions of positive psychology, all including the focus on promoting and developing positive characteristics and strengths that can contribute to optimal functioning in the lives of individuals. These concepts can be summarized in three important variables: positive subjective experience (such as positive emotions), strengths of character and institutions that can help promote experiences and character (Kauffman, 2009).

This focus on the best of individuals can bring substantial gains at several levels, since it can play an important role in individuals' daily demands and difficulties, thus contributing to a better responsiveness. In this sense, Positive Psychology also tries to promote quality of life, as well as well-being. These interventions targeting to increase individuals' well-being seem to be of particular relevance. It has been demonstrated that it is possible to increase life satisfaction and psychological well-being, and the promotion of positive emotions can improve cognitive, emotional and physical areas of the individual (cf. Kauffman, Boniwell & Silberman, 2009).

The attention given to positive concepts and promotion rather than prevention appears to be a tendency in most scientific domains. In fact, Psychology is changing from a focus in pathology and disorder to a concern with building positive qualities (Seligman & Csikszentmihalyi, 2000), similar to health professionals, who started to emphasize the promotion of health instead of illness prevention. It is in this context that positive psychology and positive development are emerging, as a main issue to be considered for improving students' achievement.

Health Psychology and Positive Psychology seem to have some common ground. In fact, Positive Psychology has contributed significantly to the comprehension of many questions related to health promotion. In the beginning, health promotion was dedicated to the study of the impact of health messages based in fear and vulnerability; Positive Psychology brought a new insight on this question. Studies have shown that positive variables have a significant role in the acceptance of health messages and behavior change (cf. Taylor & Sherman, 2004). For example, a study with college students concluded that those that were more optimistic were more receptive to negative information about health risks (Aspinwall & Brunhart, 1996, cit in Taylor & Sherman, 2004). This can be understood considering that individuals can use their positive experiences and affective states as resources when they need.

Positive psychology emphasizes and values subjective experiences, namely well-being, contentment and satisfaction with the past, flow and happiness in the present, hope and optimism through the future (Seligman & Csikszentmihalyn, 2000).

Life satisfaction is defined as a global construct of satisfaction that each individual makes him or herself (Pilcher, 1998). In this sense, it is a global, subjective measure based on personal judgment that involves several well-being domains, such as health, vigor and mood (Pilcher, 1998). Life Satisfaction seems to be related to a wide range of emotions such as anger, depression and anxiety, as well as health and sleeping habits (cf. Pilcher, 1998). A review of studies made with several populations of different countries and across years reveled that life satisfaction seems to maintain its stability in different cohorts and cultures (Biener & Suh, 1997, cit in Seco, Casimiro, Pereira, Dias & Custódio, 2005).

In what concerns psychological well-being, this concept also relates to the necessity of focusing on more positive variables when considering interventions. In early works, psychological well-being was associated with the study of the perception individuals have of their mental health in order to promote psychological well-being. Later, it has been associated with stress studies and their concept of adaptation. For example, psychological well-being is mentioned in the works of Lazarus and Folkman, (cit in Lima, 2003), when considering stress adaptation the objective is to develop coping strategies to deal with stress in order to restore or maintain the perception of well-being.

In summary, college students can be considered a specific group with different necessities from other populations. They are confronted with several demands which can alter significantly their lives thus having an impact in their general well-being. This indicates the importance of intervening in this context, considering the specificities and competences students must develop to adapt and integrate college, mainly for first-year students. Considering this, the program "Peer Tutoring and Coaching" (Freire, 2009) was developed aiming to assist in freshmen integration and the promotion of several interpersonal and academic competences. The present study intends to evaluate the program in terms of its impact in the life of students in college context. The project considers that first year students can be assisted by older students since the latter have more knowledge about the college's functioning and how to cope with some of the challenges these new experiences may entail.

The benefits of the "Peer Tutoring and Coaching" program exceed simply the prevention of potential problems in adaptation to college. There is a focus in a positive perspective, sustained in the context of variables that promote the development of positive characteristics in students and, therefore, a positive and healthy integration in this life context – college. The way students cope with this new challenges can determine the way they will perform along the years they are in the university, as in terms of academic achievement as in terms of personal and social tasks related to this life context.

1.3. Characterization of the Peer Tutoring and Coaching Project

1.3.1. <u>Theoretical framework</u>

In addition to the aspects mentioned previously, the "Peer Tutoring and Coaching" project (Freire, 2009) also considers Vygotsky's perspective on peer learning processes. In fact, the program and its potential impact can be understood considering Vygotsky general theory and the concept of "Zone of Proximal Development" (ZPD) in particular. This author stated that knowledge starts by being interpersonal before it is intrapersonal, hence the importance of peer collaboration in learning processes, through which individuals develop skills and competences (Mynard & Almarzouqi, 2006). ZPD can be defined as "the distance between the actual developmental level as determined by individual problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers'' (Vygotsky, 1978, p.86). This concept considers processes that are initiating its formation and their development is in course. Similarly, the context of a peer relationship is the base to development of knowledge as well as skills and capacities.

According to the objectives of the project, each student integrated in the project, has the possibility to grow and develop their competencies and skills, in line with Csikszentmihalyi's perspective about flow experience (Csikszentmihalyi, 1991). By participating in this project, students have the opportunity to improve their levels of expertise, engagement and involvement, necessary to the emergence of positive experiences in academic contexts and trajectories. Consequently, their experience as students will be more positive as well as a source of individual complexity, which in turn can cause students to be available to individual and social development. Moreover, by having different roles, students that stay in the project for more than one edition have the opportunity to be engaged progressively in more complex activities and challenges.

This program can have several benefits for both tutees and, tutors and coaches. For tutees, it is possible to promote a global and successful integration in the academic context as they acquire skills that allow them to deal with the demands of the setting at personal, academic and social levels. For tutors and coaches, it is important to consider processes of learning and formation through active involvement and responsibility of the role performed. The differentiation between tutors and coaches is very important and plays a role in motivating tutors for an increased involvement in the project. To achieve these different roles contribute for an increase in personal development and self-complexity, with the acquisition of new skills when facing new challenges (Freire, Fonte e Lima, 2007). And since it is a peer program, being in a peer relationship is also beneficial for all participants. It allows them to learn from each other, to build a relationship based on equality where personal experience is valued.

Participants' perspective about the advantages of the program is very similar to the potential benefits mentioned above. Both tutors and tutees referred significant gains due to participation in the

project, mainly academic, social and communicative, which they perceived as actively contributing to their personal and academic life (Freire & Ferreira, in preparation). This specific study only included tutors and tutees but shows the importance of tutoring for tutors and tutees, and the increased complexity of these processes, from tutoring to coaching. Furthermore, tutors and tutees mentioned becoming more capable and socially involved, more integrated in academic context as well as an improved performance. Also, some participants stated that they developed several skills which will be used in their academic and professional future. All this emphasis in the development and improvement of competences demonstrates one of the main objectives of coaching – what we can do better (Thorn, McLeod & Goldsmith, 2007). Besides this, it was verified that the relationship between tutors and tutees was fundamental, which demonstrates the importance of a peer context in learning.

1.3.2. The Project's Structure

The main objective of this program is to promote new forms of support students with the final purpose of a successful academic integration and personal development. In this project, we consider that academic success is not limited to curricular issues but involves several other variables concerned with personal and social dimensions.

Students participating in this program have different roles depending on their status on the project; they can be tutees, tutors or coaches. The foundation of this program is that students that are entering university for the first time (tutees) can be supported by older students (tutors) through sessions where the objective is to respond to the tutees' integration necessities in order to organize their new life pattern. Alternatively, tutors are supported by other students (coaches) that can help them to perform their tutor role through coaching sessions.

Tutoring related to curricular subjects is not included in this program. The absence of this kind of curricular support is one of the specificities of this project when compared with similar programs implemented in other University contexts (or educational contexts in general). The adoption of this rule is in agreement with the project's interpretation of academic success. In this perspective it is believed that students can improve their academic success through the development of broader competences and skills. It is this wide-ranging perspective about university life and academic success that makes it an innovating way of promoting academic achievement.

In this project, any student attending the first year of college can be tutee; on the contrary, to be a tutor it is necessary that some criteria be met since they will be performing a role that requires them to be responsible for a group of students. Tutors must be students attending at least the second year of college. It is necessary to have academic success, available time to tutoring and motivation to accomplish the role of tutor, sharing their strengths and competencies with their peers. After applying for tutors, students are called for individual interviews and selected. If they are selected to be tutors, they will have to attend a formation course of six hours aimed to develop specific knowledge about

positive pro-social, group and relational behaviors, interpersonal communication skills, stress management, communication competencies, among others, as well as learning about the characteristics and aims of the program itself. Acquiring these skills is fundamental for the good functioning of tutoring sessions and for the development of the relationship between tutees-tutors and tutors-coaches. Alternatively, since tutors can be students from any course of the university, it is also important that they have this formation, which contains topics seldom included on their academic curriculum (with the exception of psychology students), so that they are all prepared to perform tutor's role.

There are two types of tutors: tutors/co-tutors and coaches. On one hand, we have tutors that handle directly tutees in groups of one tutor for a small group of tutees. Also, within the tutor role, there is the role of co-tutors which means that, although having the required characteristics to be a tutor, the student is not yet prepared to work alone with a group. He/she is instead paired with a tutor and together they conduct the tutoring session. In this case, learning by modeling is likewise an intentional tool in the learning process becoming relevant in the peer tutoring context. One the other hand, coaches support tutors in their tutoring process. To be a coach, students need to have been tutors previously. This hierarchy is represented in the following 4-level structure:
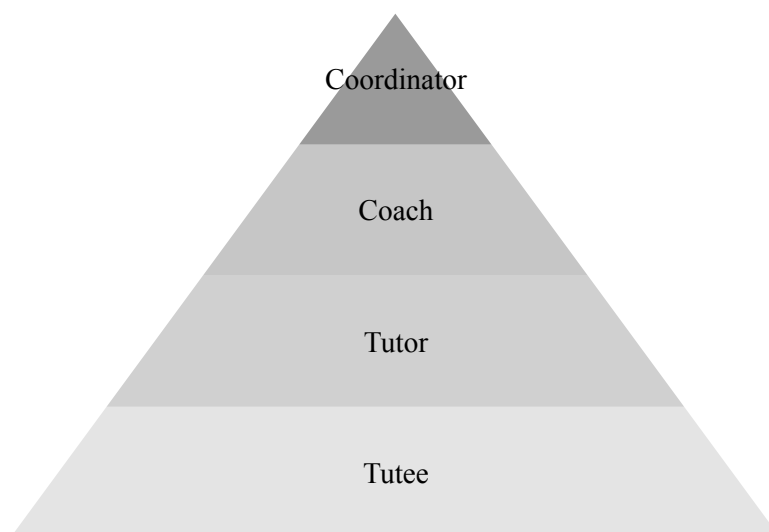
Figure 1: Hierarchy of the different roles participants have in the project

In this structure, peer tutors are directly involved with tutees, engaging in peer tutoring sessions according to structure and rules defined for functioning. In the next level we have coaches that are involved with tutors in coaching sessions. On the top of the hierarchy we have the coordinator, and other involved teachers, that are responsible for all the participants in the project, in this case Professor Teresa Freire. Considering the different possibilities of involvement across time, students can start as tutees, continue as tutors and then become coaches, creating the opportunity for personal improvement

and social involvement which can be an indicator of the impact of this program in their lives and personal development.

The role of "coach" was introduced after some implementations of the project due to the necessity of introducing new challenges and more complex tasks for participants that were in the program as tutors for more than one year. Underlying this addition to the program is the idea that, by participating in the project, we believe that students become more competent and self-complex, and thus become also more competent in this peer collaboration process. According to this, and considering participants' new expertise, they will be able to tutor tutors, improving tutoring to a new level of peer collaboration – peer coaching. This means that we can differentiate between the tutor that does tutoring to the tutee, and the one that is tutoring other tutors. As tutors with more expertise, these students have different and more complex skills comparing to a student that is tutoring for the first time.

Within this perspective these tutors can share their experiences with first time tutors. So, in order to differentiate this level of expertise in the tutoring process, the role of peer coaching emerged: skillful tutors tutoring first time tutors become peer coaches of these tutors and the process becomes the one of peer coaching. Coaches' training is their own experience in the project and the experience of had been a tutor in previous editions, being now supervised by the staff of the project (coordinator and all teachers involved).

1.3.3. The Project's Functioning

The tutoring session has the duration of approximately between 60 to 90 minutes, being run weekly or fortnightly. This time of duration for each session is due to the fact that sessions are made in groups (from 3-5 students) so enough time is needed for all students to participate and interact. After each session, both tutors and tutees discuss their accordance with the topics worked in the session and agree about the theme for the following sessions. Although tutors have a plan for each session, they can include new topics that have become pertinent for the tutee in the time between sessions that were not possible to include in the session plan. Also, the frequency of the sessions can be negotiated between tutors and tutees according to their needs, which helps to keep tutees motivated to attend sessions.

Examples of themes discussed during sessions include understand the college's official website and the services available online, understand the library's functioning and services, time management, stress and study management, among others. In every tutoring session each tutee needs to fill a formal form concerning "Things I want to work in the next session". This is given to the tutor one week before the session to work on it. If tutees need a different subject that wasn't predicted, it is supposed that tutors have the resources and the experience to find about that specific subject or to who they should ask for help.

Tutees are also required to have a proactive and responsible behavior toward their tutors and sessions. The tutee is not conceived as a recipient of this process but an active element that needs to contribute to the usefulness of the process.

In a monthly structure the tutor has meetings with his/her peer coach (another student) in order to discuss how the sessions are going on, the positive aspects and negative ones, and suggestions to better strategies for tutors acting with tutees. Meetings between coaches and tutors (that become coachees in this specific peer relation) occur in a more flexible structure, being defined every time tutors or coaches decide about its need.

The participants' different roles also reflect two different interventions in this project: peer tutoring and peer coaching.

In this project, peer tutoring occurs in the tutee-tutor relationship. The history of peer tutoring can be traced to ancient civilizations like the Greeks, although their concept was limited to the passing of information from the most able and experienced to the least able (Topping, 1996). Gradually, it was understood that the relationship between tutor and tutee is a reciprocal one. Considering this although there are multiple definitions of peer tutoring, in essence it can be defined as a process in which a participant tutors his/her peers and learns with that experience (Falchikov, 2001; Gordon, 2005). Although it is a reciprocal process, Topping (1996) highlighted that there are specific roles assumed by the participants: tutors and tutees. A peer tutoring project is easier to implement, it seems to be more effective and promotes social interactions among peers (Kohler & Greenwood, 1990).

The application of peer tutoring to an academic context is widely spread and diverse, varying in purpose and structure; however they are mostly limited to academic subjects and in a classroom environment. On the contrary, this project includes peer tutoring in a broader perspective - the integration in university in order to optimize the role of student and, indirectly its academic success.

Several benefits of peer tutoring have been reported for tutors and tutees related to both academic and non-academic outcomes. These include learning academic skills, acquire competences in several academic areas and have a more positive attitude towards learning, develop a more positive self-image, higher levels of motivation, social skills, among others (Gordon, 2005). For tutors, the basic concept is learning by teaching – besides tutoring sessions themselves, the necessary preparation of sessions can increase attention and motivation as well as promote reviews of the existing knowledge and experience. As for tutoring sessions, the processes of simplification, clarification and exemplification can involve additional cognitive challenges for tutors (Topping, 1996). As for tutees, it can have an impact on their learning to be more active, interactive and participative, as well as attitudinal gains, such as commitment, self-esteem, self-confidence and greater empathy with others (Topping, 1996). Also, tutees recognize that since their tutors have gone through the same experience they are more capable of understanding them (Santee & Garavalia, 2006).

Coaching Psychology is a relative recent discipline and can be defined as the discipline "… for enhancing well-being and performance in personal life and work domains…" (Grant & Palmer, cit in

Gyllensten & Palmer, 2005, p.76). The main purpose of coaching is sustained changes, whether they are behavioral, emotional and/or cognitive, through which the defined objectives are reached and performance is enhanced (Douglas & McCauley, 1999). It can be distinguished from psychotherapy since the latter has a great focus in remediating and healing what is disturbed in the individuals (Grant, 2001). On the contrary, coaching aims the enhancement of performance and life experiences, thus having matching positive psychology concepts.

Research in coaching is essential, since this is a recent discipline and is still exploring all its possibilities. According to Bennett and Stein (Bennet 2006, cit in Kauffman & Bachkirova, 2009), research can be conceptualized according to two important variables: the type of coaching and what can be explored during coaching. The authors considered the existence of seven categories of what can be studied during a coaching meeting, namely coaches, clients, relations, processes, outcomes, theories and context. There are also nine types of coaching: executive, life, career, team, high potential, health, development, performance and supervision. Taking into account this two axis, researchers can explore what is the role of the categories that can be studied in each of the types of coaching.

Coaching psychology and positive psychology share some common ground. The focus of positive psychology in building strengths is on the same page as the focus in enhancing performance and well-being in coaching psychology. As a matter of fact, empirical research shows that the development and presence of strengths in the individual is associated with well-being (Park, Peterson & Seligman, 2004, cit in Govindji & Linley, 2007). This fact has implication in coaching psychology and in coaching programs, since it demonstrates that the focus in developing skills in the individuals has several implications and is not limited to the explicit objectives of programs. Coaching programs contribute to enhance diverse dimensions in individuals' lives, namely well-being and life satisfaction (Green, Oades & Grant, 2006).

One important aspect of coaching psychology is the relationship between coach and coachee. It is conceived as a reciprocal relationship, in which both parts influence and are influenced. Research about emotional states during coaching shows that coachees' emotions affect coaches, making this a relevant issue to be considered in coaching practice (Cox & Bachkirova, 2007), mainly when the intervenients are peers in a relation oriented to collaboration.

This importance of the relationship between coach and coachee can assume an especially relevant role when considering a peer context, such as the case of the presented project. In this case, we can consider a different type of coaching – peer coaching. Peer coaching has been defined as a "… structured process by which trained faculty voluntarily assist each other in enhancing their teaching repertoires within an atmosphere of collegial trust and candor." (Kinsella, 1995, cit in Sekerka & Chao, 2003, p.47). Peer coaching can be used to share new ideas, teach and solve problems, among others. It is based in a collaborative relationship between the participants and in sharing personal and professional experiences and knowledge (Becker, 1996). This is a concept that was initially exclusive to teachers, with the objective of sharing and improving their teaching skills so that ultimately students

could benefit from the development of teachers' competences. Nowadays, it is widely include in multiple contexts and participants, namely in health, corporations, schools, universities, as well as several fields including nursing and medical education, patient education, education, staff development, counseling effectiveness, among others (cf. Parker, Hall & Kram, 2008).

The main characteristic of peer coaching, as mentioned before is the context of a peer relationship and its unique contribution is "the inherent mutuality and reciprocity of the process" (Parker, Hall, and Kram, 2008, pp 490). Both coach and coachee are learners in this process, thus the nature of their relationship is crucial to the success of coaching. Characteristics of the relationship that contribute to positive outcomes in coaching include a climate of trust and support, feedback and conversation, among others (Parker, Hall, and Kram, 2008).

It is well known the influence that peers have in individuals' development, just as mentioned before with the vygotskyan perspective. Thus, bringing peers relationships to coaching can have several advantages. First of all, it allows the development of feelings of support; it does not have certain boundaries like other relationships (e.g. teacher-student), and feedback is provided without evaluative purposes (e.g. Parker, Hall, and Kram, 2008), giving a notion of equality in the relationship. A successful peer relationship tends to have some common aspects such as the exchange of information or knowledge; the exchange of roles (in a way that learning occurs for both participants); and the exchange of rank (i.e. maturity, expert role), in which both participants alternate in their expert role (Maitland, 2006).

Although few studies have been conducted about peer coaching (Sekerka & Chao, 2003), it appears that this research domain is increasing. This tendency is probably due to the application of peer coaching to new and relevant contexts, because there is an acknowledgement that learning is a social process and is influenced by peers (Ladyshewsky, 2006). For example, in a peer coaching program for nurse students, senior students accompanied juniors in their first contact with patients, a situation that can be a very stressful and anxious. Junior students reported a diminution in anxiety levels and considered coaching benefic for them. Senior students also found coaching benefic, allowing them to practice leadership skills (Broscious, & Saunder, 2001 cit in Newham-Kanas, Gorczynski, Morrow & Irwin, 2009). Other study tried to evaluate the impact of a peer coaching program for diabetics in behavioral change and concluded that this type of coaching is effective (Joseph, Griffin, Hall & Sullivan, 2001, cit in Newham-Kanas, Gorczynski, Morrow & Irwin, 2009).

Considering these issues, it is perceptible that coaching psychology and peer coaching have a long way ahead. It is fundamental to explore relations between variables present in coaching programs to develop methodologies and assessment instruments in order to understand the underlying processes involved.

In our perspective these processes are related to these three main conceptual approaches as being presented in this project: positive psychology, coaching psychology and health psychology. It is their interrelation that creates an innovative way of promoting skills and competencies among

students, making them personally improved, academically involved and socially committed (Freire, Fonte & Lima, 2007; Freire, Lima & Fonte, 2009). These concepts are express in the structure and way the program works, based on peer collaboration and simultaneously in the different roles taken by students along time. Each role has specific aims, but all together they contribute to the development of successively higher skills, making students progressively able to face new and complex challenges in academic settings, or along their career trajectories considering a life-span perspective (Parker, Hall, and Kram, 2008).

Furthermore, besides tutoring and coaching sessions, tutors and coaches must create support materials, individually and in groups. Individually, each tutor and coach develop materials that support their tutoring sessions, and these materials should be available for all the elements of the program at the end of school year, including them in their written report (delivered at the end of the project's edition) along with sessions plans as well as new suggestions for next tutoring and coaching projects.

Despite this individual contribution for the group, tutors and coaches work in group with the purpose of developing more generic materials for the program, such as, an ethic code, production of divulgation materials and elaboration of rules, among others. These tasks appeal to their sense of commitment and responsibility in this process. Together, students learn and teach, share and create, being aware of their power as persons that are responsible for others, even when they are peers.

The role of tutor is recognized by the university as an institutional role being formally inserted in the final diploma of competences of the student. This aspect constitutes one of the reasons to join the project, to be engaged and to not drop out of the project.

1.4. Aims of the study

Considering the specificities, characteristics and objectives of this program, we believe that it is essential to objectively assess the impact that the involvement in this project has for the intervenient parts. As presented in the International Coaching Research Forum (Kauffman, Russell, & Bush, 2008) by Professor Teresa Freire, there are several sub-projects that can be considered for investigation based in this peer coaching program with college students. Nevertheless, specifically for this research we are aimed to attend questions related to the impact of the involvement in peer tutoring and coaching program in positive variables, namely quality of life, life satisfaction and psychological well-being. We also intend to verify if these positive outcomes can influence the adaptation to college, this adaptation measured in terms academic experiences. In a larger scope, we intend to analyze if this program contributes to the promotion of a healthy and positive integration in the university context, as well as to an individual and social positive development for all intervenient parts.

We are questioning if there will be differences before and after participation in the program for tutees and tutors, as well as if there will be differences between them in these two moments of evaluation. Considering the outcome variables defined, we evaluated both tutors and tutees considering their quality of life, life satisfaction and psychological well-being. Furthermore, we question if these outcome variables (quality of life, life satisfaction and psychological well-being) can predict academic experience variables related to their adaptation. As for coaches, we question what importance role of coach had from their perspective as well as if they evaluate it as having a significant impact in them.

2. METHOD

2.1. Participants

Participants are all the students that integrate the project "Peer Tutoring and Coaching" of University of Minho for the academic year of 2009/2010, which includes tutees (67.2%, n=39) and tutors (32.8%, n=19) in a total of 58 participants, as well as coaches, in a total of 7 participants. Coaches were 6 females and 1 male with ages between 20 and 21 years old, all are third year students from Psychology.

As for tutors and tutees, 81% (n=47) are female and 19% (n=11) are male. Their ages varies between 17 and 48 years old, with a mean of 19.5 years old (SD=4.3).

The majority of participants were graduating in Psychology (81%, n=47). As for the remaining, 2 (3.4%) were graduating in Communicational Sciences, 2 (3.4%) in Law, 2 (3.4%) in International Relationships, 1 (1.7%) in Biomedical Engineering, 1 (1.7%) in Informatic Engineering, 1 (1.7%) in Applied Foreign Languages, 1 (1.7%) Optometric Sciences and 1 (1.7%) in Biological Engineering.

A discriminated characterization of participants by their roles is in table 1.

		Tutors n=19	Tutees n=39
Sex	Males	21.1% (n=4)	17.9% (n=7)
	Females	78.9% (n=15)	82.1% (n=32)
Course	Psychology	84.2% (n=16	79.5% (n=31)
	Communication Sciences	5.3% (n=1)	2.6% (n=1)
	Law		5.1% (n=2)
	Biological Engineering		2.6% (n=1)
	Applied Foreign Languages		2.6% (n=1)
	Optometric Sciences		2.6% (n=1)
	International Relations		5.1% (n=2
	Biomedical Engineering	5.3% (n=1)	
	Informatic Engineering	5.3% (n=1)	
Year	1st		100% (n=39)
	2nd	68.4% (n=13)	
	3rd	5.3% (n=1)	
	4th	5.3% (n=1)	
	5th	5.3% (n=1)	
Living arrangements	Outside household	52.3% (n=10)	56.4% (n=22)
	Household	47.7% (n=9)	43.6% (n=17)
Age		M= 20 (SD=1.7)	M= 19.1 SD=.39

Table 1: Socio-demographic characterization of the participants by subgroups (tutors and tutees)

2.2. Instruments

2.2.1. Self-report Instruments

Health-related variables

To evaluate health variables, it was used the "Questionário socio-demográfico e clínico" [Socio demographic questionnaire] (Maia e Seabra, 2003), which also included demographic information. This questionnaire comprises health problems, namely sleep, eating, gastrointestinal, digestive and respiratory problems, as well as some risk behaviors, such as smoking, alcohol consumption and coffee consumption. Answers were given in a dichotomous format (yes/no). It was also included a question about living conditions of participants, specifically if they are living with their families or not.

Quality of life

In order to evaluate quality of life it was used the WHOQOL-Bref (WHO, 1995; Portuguese version of Vaz Serra et al, 2006). This is a general measure that considers the subjective perspective of the individual's quality of life. It is possible to use this measure with both clinical and nonclinical populations. The WHOQOL-Bref is an abridged version of the WHOQOL-100; the necessity of having a reduced version was related to the time of administration of the WHOQOL-100.

The Portuguese version of this questionnaire has 26 items in a 5-point scale. A general scale can be calculated with two of the items that are broader and refer to general perception of quality of life and general perception of health. The remaining 24 items are divided in four domains: physical (e.g. pain, energy, sleep), psychological (e.g. positive and negative feelings, concentration, self-esteem), social (e.g. personal relationships, support) and environmental (e.g. security, health care, leisure).

The validation of this instrument for the Portuguese population reveled acceptable values for administration. Internal consistency demonstrated Cronbach's alpha values of .92 for all 26 items, .79 for the four domains of the instrument, .87 in Physical Domain, .84 in Psychological Domain, .64 in Social Domain, and .78 in Environmental Domain. The Social Domain had the lowest value, which the authors justify considering the number of items this domain has (3).

Psychological well-being

To evaluate psychological well being it was used the Psychological Well-Being Scale (Bizarro, 1999). This scale has 28 items in a 6-point scale, organized in 5 sub-scales: Anxiety, which includes complaints normally associated with anxiety; Negative Cognitive-emotional, which evaluates cognitive and emotional aspects of psychological well-being that are more negative; Social Support which includes people that the individual can count on; Competencies Perception, which evaluates the

individuals' competences in general as well as related to school and interpersonal competences; and Positive Cognitive-emotional which evaluates cognitive and emotional aspects of psychological well-being that are more positive.

In addition to the 5 sub-scales, it is also possible to obtain a total score of well-being. The questionnaire assesses of psychological well-being considering two domains: well-being as absence of indexes of difficulties (sub-scales anxiety and negative cognitive-emotional) and well-being as the presence of positive factors or resources (sub-scales social support, competencies perception and positive cognitive-emotional).

In what concerns psychometric characteristics, subscales present fidelity values between .85 and .90 (Cronbach's alpha) and a value of .93 (Cronbach's alpha) for total scale (Bizarro, 1999).

Life Satisfaction

To evaluate Life satisfaction it was used the Life Satisfaction Scale (Diener, Emmons, Larsen & Giffin, 1985; adapted for Portuguese population by Neto, Barros & Barros, 1990). This scale has 5 items in a 5-point Likert scale. Total score can range from 5, which corresponds to a low life satisfaction, to 25, which corresponds to a great life satisfaction.

In original version was validated with a sample of college students and reveled an internal consistency of .87 (Cronbach's alpha). The Portuguese validation was also with a sample of college students and obtain an internal consistency of .77 (Cronbach's alpha).

College Adaptation

College adaptation was measured by the Questionnaire of Academic Experiences (QVA-r - Almeida, Ferreira & Soares, 1999). This self-report questionnaire aims to evaluate the personal, relational and institutional dimensions of students' adaptation to the academic context. This questionnaire was constructed specifically for Portuguese students and has 60 items in a 5-point Likert Scale. These items are grouped in 5 dimensions: personal, interpersonal, career, study and institutional. Personal dimension to items related to self and physical, psychological well-being perceptions (α=.87). The Interpersonal dimension includes peer relationships and involvement in extracurricular activities (α=.86). Career dimension refers to the adaption to the course and career perspectives (α=.91). Study dimension includes the individual's study competences, time management and utilization of academic resources (e.g. library) (α=.82). Institutional dimension refers to the interest about the institution and the perception of quality of services and structures (α=.71).

2.2.2. Semi-structured Interview

Peer Coaching Variables

Peer Coaching and its impact were evaluated through a semi-structured interview for coaches. It had near 10 questions concerning reasons to join, to continue in the project and to have chosen to be a coach; general evaluation of the role and comparison with other roles in the project, impact of the role in terms of competences' development, academic achievement and general quality of life, well-being and life satisfaction. In the end it was included a general question about the participants course in the project and what gains were associated with long-term participation.

2.3. Procedure

Participants were all tutors, tutees and coaches participating in the peer coaching program in the academic year of 2009/2010. Students participated voluntarily in the program and were offered a material compensation. Considering the different roles performed in the project, three groups were formed to conduct the analysis: tutees, tutors and coaches. Data from tutors and tutees were collected before and after tutoring sessions began while coaches' data were collected after coaching sessions ended.

In relation to data collection, it was used different methodologies considering the subgroups. For tutors and tutees it was used self-report measures which evaluated quality of life, psychological well-being, life satisfaction, health-related variables and academic achievement. In addition to this, it was also included socio-demographic measures in order to consider possible relevant information, such as age, sex, course, place of residence during classes. Alternatively, we believe to be important to consider information related to whether the participant is living (or not) in his/her household, since it is frequent for students to leave their houses when entering higher education. In what concerns coaches, they were interviewed after the end of coaching sessions, using a semi-structured interview specifically created for this study.

Considering the different type of data collected, results presentation is divided in two parts – the first one with quantitative data from tutors, tutees in a pre-test and post-test design; the second part presents qualitative data post-test from coaches.

In post test analysis we had an experimental mortality rate of about 14%, corresponding to 8 participants, from the group of tutees. Participants that weren't evaluated in the second moment were excluded from analysis.

2.4. Data Analysis

To analyze quantitative data it was used SPSS Software (version 17.0). Comparisons between tutees and tutors both in pre and post measures as well as comparisons in tutees and tutors from pre to pos test were conducted with nonparametric statistic given that the number of participants was small; it was used Mann-Whitney Tests for inter-subjects differences and Wilcoxon Tests for intra-subjects differences. In order to test the potential impact of the variables considered to be the outcome of the project's impact (quality of life, life satisfaction and psychological well-being), it was utilized a multiple regression analysis; in this case we used parametric statistic seeing as the total number of participants (tutors and tutees) is considerable and data was normally distributed.

To analyze qualitative data collected with semi-structured interviews with coaches it was used content analysis procedure. Firstly, interviews were transcribed and the materials were organized and prepared for analysis. A floating reading was made and subsequently the registration units were defined for each question in order to start the codification. After defining the units, we proceeded to counting them and categorize them in more general categories (Weber, 1990).

3. RESULTS

3.1. Tutors and Tutees

The analysis of tutors and tutees' data will be done considering moments of evaluation (pre and post test) and their specific role in the project (type of participation – tutor/tutee) in the variables included in this study - health-related variables and outcome variables (quality of life, life satisfaction and psychological well-being).

3.1.1. First moment of evaluation - pre test

Firstly it will be presented results of health-related variables. In the first moment, corresponding to data collection before tutoring sessions began, descriptive statistics shows that the majority of participants didn't present neither risk behaviors nor major health problems in the last year, with the exception of caffeine consumption for tutors (57.9%, n= 11).

Qui-squares tests showed that that isn't any significant associations between tutors and tutess in terms of health problems and risk behaviors.

Descriptive data and chi-square results are summarized in tables 2 and 3.

		Sleep problems	Eating problems	Gastrointestinal problems	Digestive problems
Tutees N= 39 (%)	Yes	17 (43.6%)	5 (12.8%)	5 (12.8%)	4 (10.3%)
	No	22 (56.4%)	34 (87.2%)	34 (87.2%)	35 (89.7%)
Tutors N= 19 (%)	Yes	8 (42.1%)	6 (31.6%)	1 (5.3%)	4 (21.1%)
	No	11 (57.9%)	13 (68.4%)	18 (94.7%)	15 (78.9%)
χ^2		.01 (p= .91)	2.92 (p=.10)	.79 (p= .37)	1.25 (p=.26)

Table 2: Descriptive data and chi-square results of health problems for tutors and tutees

		Regular smoking	Regular drinking	Regular caffeine consumption
Tutees N=39 (%)	yes	2 (5.1%)	11 (28.2%)	12 (34.3%)
	no	31 (79.5%)	24 (61.5%)	23 (59%)
Tutors N=19 (%)	yes	1 (5.3%)	7 (36.8%)	11 (57.9%)
	no	18 (94,7%)	11 (57.9%)	8 (42.1%)
χ^2		.01 (p=.90)	.29 (p=.59)	.81(p=.09)

Table 3: Descriptive data and chi-square results of risk behaviors for tutors and tutees

Subsequently, we proceeded to test differences between participants in moment 1 (pre test) in what concerns the variables considered outcome – quality of life, life satisfaction and psychological well-being. It was used the non-parametric statistic test Mann-Whitney.

Considering the study's objective, we questioned if there are differences between tutors and tutees in the first moment of evaluation when considering general scales and subscales of the outcome variables. Mann-Whitney tests revealed that this was not verified; we found no significant differences between participants, although there are some marginal differences in terms of general quality of life and physical quality of life. Results are summarized in table 4.

		Tutors (N=19) Mean Rank	Tutees (N=39) Mean Rank	Z	p
Quality of Life	General	34.75	26.35	-1.86	.06[†]
	Physical domain	35.16	26.74	-1.80	.07[†]
	Psychological domain	32.66	27.96	-1.00	.32
	Social domain	25.82	29.15	-.74	.46
	Environmental domain	32.55	28.01	-.97	.33
Life Satisfaction	General	31.16	28.69	-.52	.60
Psychological Well-Being	General	26.03	29.77	-.17	.87
	Cognitive-emotional positive subscale	23.16	31.92	-.82	.41
	Social support subscale	28.92	29.04	-1.89	.59
	Competences perception subscale	28.37	29.32	-.03	.98
	Cognitive-emotional negative subscale	24.84	30.38	-.20	.84
	Anxiety subscale	27.50	28.26	-1.21	.23

Table 4: Differences between tutors and tutees in moment 1   [†]p<.10

3.1.2. Second moment of evaluation – post test

In relation to health-related variables in the second moment of evaluation, the majority of participants didn't present health problems, with the exception of sleep problems in tutees, which the majority (51,6%, n=16) seem to have. Qui-Square tests revealed that there are no significant associations between tutors and tutees regarding both health problems and risk behaviors. The results are summarized in tables 5 and 6.

		Sleep problems	Eating problems	Gastrointestinal problems	Digestive problems
Tutees N= 39 (%)	Yes	16 (51.6%)	6 (19.4%)	3 (9.7%)	5 (16.1%)
	No	15 (18.4%)	25 (80.6%)	28 (80.6%)	26 (83.9%)
Tutors N= 19 (%)	Yes	6 (31.6%)	2 (10.5%)	1 (5.3%)	1 (5.3%)
	No	13 (68.4)	17 (89.5%)	18 (94.7%)	18 (94.7%)
χ^2		1.92 (p=.16)	.69 (p= .41)	.31(p= .58)	1.32 (p= .25)

Table 5: Descriptive data and chi-square results of health problems for tutors and tutees

		Regular smoking	Regular drinking	Regular caffeine consumption
Tutees N=39 (%)	yes	3 (9.7%)	7 (22.6%)	13 (41.9%)
	no	28 (90.3%)	24 (77.4%)	18 (58.1%)
Tutors N=19 (%)	yes	0	8 (42.1%)	9 (47.4%)
	no	19 (100%)	11 (57.9%)	10 (52.6%)
χ^2		1.96 (p= .16)	2.14 (p= .14)	.54 (p= .46)

Table 6: Descriptive data and chi-square results of risk behaviors for tutors and tutees

To test differences between participants in terms of quality of life, life satisfaction and psychological well-being, it was used non parametric Mann-Whitney tests.

We questioned if there were differences between tutors and tutees in the second moment of evaluation when considering general scales and subscales of quality of life, life satisfaction and psychological well-being. Mann-Whitney tests revealed that there are significant differences for most variables, with the exception of general and social domain quality of life, life satisfaction, as well as positive cognitive-emotional and social support dimensions of psychological well-being. Results are presented in table 7.

		Tutees (N=31) Mean Rank	Tutors (N=19) Mean Rank	Z	p
Quality of Life	General	22.63	30.18	-1.93	.054
	Physical domain	21.37	32.24	-2.56	.01**
	Psychological domain	20.62	31.92	-2.72	.006**
	Social domain	23.19	26.50	-.81	.42
	Environmental domain	21.98	30.19	-1.95	.05*
Life Satisfaction	General	22.61	30.21	-1.80	.07
Psychological Well-Being	General	21.90	30.33	-1.99	.046*
	Cognitive-emotional positive subscale	24.06	27.84	-.89	0.37
	Social support subscale	25.53	25.45	-.20	.98
	Competences perception subscale	21.73	31.66	-2.35	.019*
	Cognitive-emotional negative subscale	27.63	20.47	-1.70	.08
	Anxiety subscale	29.85	18.39	-2.71	0.007**

Table 7: Differences between tutors and tutees in moment 2   *p<.05   **p<.01   ***p<.001

There are significant differences between tutors and tutees in the physical domain of quality of life (Z=--2.6, p<.01), in the psychological domain of quality of life (Z=-2.7, p<.01), in the environmental domain of quality of life (Z=-1.9, p<.05), in general psychological well-being (Z=-2.0, p<.05), in the competences perception subscale of psychological well-being (Z=-2.3, p<.05) and in the anxiety subscale of psychological well-being (Z=2.7, p<.01). Considering this, tutors seem to have a better physical, psychological and environmental quality of life, as well as a better psychological well-being, psychological well-being related to competences perception, and less anxiety related to psychological well-being.

3.1.3. <u>Differences between moment 1 and moment 2 - Tutees</u>

To test differences between pre and post test in terms of quality of life, life satisfaction and psychological well-being, it was used non parametric Wilcoxon tests.

Considering health problems and risk behaviors, we found significant correlations between pre and post measures in sleep problems (X^2= 7.43, p<.01). 38.7% (n=12) of tutees had sleeping problems in post test when they did not have them in pre test.

In relation to quality of life, life satisfaction and psychological well-being from pre to post test, we found differences between pre and post test in the physical domain of quality of life (Z=-2.7, p<.01), which was lower in pre test. There were also differences in Psychological Well-Being, namely in general psychological well-being (Z=-2.3, p<.05) as well as in cognitive-emotional positive scale and anxiety related to psychological well-being (Z=-3.4, p<.001). Scores of these variables were inferior in pre test. Results are summarized in table 8.

		Pre test (n=31)	Post test (n=31)	Z	p
Quality of Life	General	15.2	15.3	-.78	.44
	Physical domain	13.8	14.9	-2.68	.007**
	Psychological domain	14.6	14.1	-.89	.37
	Social domain	16.2	15.5	-1.02	.31
	Environmental domain	14.7	14.3	-1.90	.058
Life Satisfaction	General	18.9	18.2	-1.30	.19
Psychological Well-Being	General	4.6	4.3	-2.27	.02*
	Cognitive-emotional positive subscale	4.5	4.1	-2.09	.04*
	Social support subscale	4.9	4.7	-1.34	.18
	Competences perception subscale	4.4	4.0	-1.81	.07
	Cognitive-emotional negative subscale	2	2.3	-1.23	.22
	Anxiety subscale	2.6	3.1	-3.43	.001**

Table 8: differences between pre and post test in tutees   *p<.05   **p<.01

3.1.4. Differences between moment 1 and moment 2 - Tutors

We only found significant differences in the physical domain of quality of life in tutors from pre test to post test (Z= -2.42, p<.05). Tutors had a higher score in post test in this domain. Results are summarized in table 9.

		Pre test (n=31)	Post test (n=31)	Z	p
Quality of Life	General	16.4	16.5	.00	.11
	Physical domain	15.1	16.5	-2.41	.02*
	Psychological domain	15.3	15.8	-1.05	.29
	Social domain	15.6	16.1	-1.18	.24
	Environmental domain	15.1	15.1	-.38	.70
Life Satisfaction	General	19.4	20.3	-1.53	.12
Psychological Well-Being	General	4.6	4.7	-.78	.44
	Cognitive-emotional positive subscale	4.4	4.4	-.02	.98
	Social support subscale	4.4	4.6	-.79	.43
	Competences perception subscale	4.5	4.6	-.88	.38
	Cognitive-emotional negative subscale	1.8	1.9	-.53	.59
	Anxiety subscale	2.4	2.5	-.40	.44

Table 9: differences between pre and post test in tutors   *p<.05

3.1.5.<u>Impact of Quality of Life, Life Satisfaction and Psychological Well-being in Academic adaptation</u>

In order to understand if the outcome variables – quality of life, life satisfaction and psychological well-being – can predict academic variables it was used standard multiple linear regression. It was considered as academic variables the dimensions of the instrument QVA-r: interpersonal, career, institutional, personal and study. Considering this, five multiple regressions were conducted. All assumptions were fulfilled. It will only be presented data from significant regressions, which were the interpersonal dimension and the personal dimension. All other regressions were no significant.

In relation to the interpersonal dimension, the multiple regression analysis revealed that higher psychological well-being is a significant predictor of higher interpersonal dimension of academic adaptation. This model accounts for 29% of variance in this dimension, although only psychological well-being was a significant predictor. Results are summarized in Table 10.

Predicted variables	Predictor	R^2 (R^2 adjusted)	β Standardized	t	p	F (3,43)
Interpersonal Dimension	Psychological Well-Being	.29 (0.24)	.49	2.57	0,01**	5,86
	Quality of Life		-.31	1.91	.06	
	Life Satisfaction		.19	.91	.37	

Table 10: Multiple regression results for the interpersonal dimension of academic adaptation   **p<.01

As for the personal dimension, a higher Psychological well-being is also a significant predictor of higher personal dimension, accounting for 45% of variance, as can be seen in table 11.

Predicted variables	Predictor	R^2 (R^2 adjusted)	β Standardized	t	p	F (3,43)
Personal Dimension	Psychological Well-Being	0,45 (0,41)	0,43	2,57	0,01**	11,85
	Quality of Life		0,03	0,22	0,83	
	Life Satisfaction		0,27	1,47	0,15	

Table 11: Multiple regression results for the personal dimension of academic adaptation   **p<.01

3.2 Coaches

Data collected with semi-structured interviews with coaches was analyzed through content analysis. Initially, a floating reading was made in order to be familiarized with material. Then, it was defined the registration units from the participants' answers, and after defining the units, we proceeded to counting them and categorize them in more general categories (Weber, 1990). The final categories corresponded to the broad theme of the question made. The objective is not to quantify categories and report their frequency, but to describe all general categories obtained.

Results will be presented considering the topics included in the interview, these being more general categories – reasons to join the project; reasons to continue in the project; reasons to be a coach; expectations related to the role of coach; evaluation of the role performed; differences between being a coach and a tutor; the most and the least valued of being a coach; impact of the role performed in terms of competences development, academic achievement and quality of life and well-being; and finally, the different roles participants performed across time in the project. It will be reported all obtain categories.

In what concerns reasons to join the project, more frequent categories included support provided, integration and being in a peer project. In the reasons to continue in the project across time, participants referred the importance of giving their contribution, their previous experience in the project as tutees and the characteristics of the project (namely being interesting and a unique way of promoting integration). As for choosing to be a coach, it was referred the possibility of being involved in a different perspective, as well as a different type of work to develop.

When considering participants expectations of being a coach, categories included the performance of a different role and the absence of expectations or expectations not very high.

Participants evaluated the role as coach mainly as fulfilling the objective of supporting tutors. Some referred a good performance and others as poor, the latest mentioning the inability to give the role some structure and only intervening when asked.

The differences between performing the role of tutor and the role of coach are easily pointed out by the participants. They mentioned differences in role demands, in role characteristics and in the type of relationship developed with tutees and tutors. Participants affirm that being a tutor demands more time investment, dedication and responsibility, is a role more active, but tutees have some disregard for the role. On the other hand, a coach helps solve problems but doesn't need to prepare sessions, have less responsibility and more free time and that tutors are easier to deal because they are more mature and are more familiar and involved with the project.

In their role performance, participants value the most the fact that they provided support, had a different experience and could base their performance in their previous experience. What were least valued were the lack of involvement in tutoring sessions as well as the lack of contact with tutees, and

characteristics related to the role, namely the fact that this kind of support appears to be more important in the beginning and not during tutoring sessions.

The participants' perspective about the impact of the project and their role as coaches in terms of academic achievement and quality of life and well being is divergent. In what concerns academic achievement, it was referred that the impact was nonexistent, scarce or indirect. About quality of life and well-being, participants pointed out the contribution of the relationships involved, the fact that they are supporting others and personal development. It was encountered more consensus when considering the impact in competences development, namely communicational, relational, of support and development of responsibility. Participants also mentioned that as coaches, competences developed in previous roles were reinforced.

Lastly, when considering the evolution of participants across participation in the project, beginning as tutees, and proceeding as tutors and coaches, participants referred the development of competences and the evolution they had across time. When considering specifically each role, as tutees they mentioned the importance of integration and the perception of their tutor's personal experience as beneficial. As tutors, they identify this role as the biggest contribution to the project as well as the development of several competences. Finally, as coaches, they affirm this is a calmer role with less evolution when comparing with the others.

4. DISCUSSION

Results show that, in general, tutors and tutees start the project with no differences, contrary to what investigation in the area indicates that first year students are normally in higher distress than students from other years (Costa & Leal, 2008) since they were in the process of adaptation to college. Both tutors and tutees seemed to have good quality of life, life satisfaction and psychological well-being. These findings are contrary to the studies that indicate that in the first year there are more problems and difficulties thus more distress between students (Ferraz & Pereira, 2002, cit in Costa & Leal, 2008). Nevertheless, we think that this can be understood if we consider the fact that they are part of a minority that applied to the project, which can indicate a different type of concern and involvement in academic life, and perhaps different resources from students that didn't enroll.

Differences between tutors and tutees were more accentuated in the second moment of evaluation (post test). Tutors seem to have better physical, psychological and environmental quality of life, general psychological well-being and psychological well-being related to competences perception, as well as less anxiety related to psychological well-being. These results can indicate that with the advancing of the school year, tutors could be more prepared to deal with college demands, something that tutees might not have fully developed, thus affecting their quality of life and psychological well-being seeing that. For example quality of life in college students seems to be related to academic achievement as well as being affected by personal and social stressors frequent in the first year of college (e.g. Roberts & Clifton, 1992; Rozmus, Evans, Wysochansky & Mixon, 2005). Tutees also differentiate from tutors in terms of sleep problems since the results indicate an increase in sleep problems among tutees that is consistent with a recent study with students from University of Minho that demonstrated that almost 65% seem to have sleep problems (Lopes, 2009), although we found no sleep problems among tutors. Besides this, both tutors and tutees did not report significant involvement in risk behaviors, which seems to be contrary to others studies (WHO, 2009; Duff, 2005; Precioso, 2004) but also can be understood if we consider the participation in the project as a potential differentiating variable.

Although these differences between tutors and tutees, tutors only differ from the first moment of evaluation in what concerns physical quality of life which was higher in the second moment of evaluation. The physical domain of quality of life is related to pain, energy and sleep (some aspects that can be related to stress) which can indicate that this improvement can reveal some level of stress management, a very relevant competence for college students since these seem particularly vulnerable to stress-related disorders (Grace, 1997). This can indicate the capacity of tutors to perform their role.

These results can indicate that the project has some impact in promoting some positive outcomes, but the major effect could be one of buffering the negative impact that some difficulties and challenges that academic life can have. The differences between tutors and tutees were greater in the second moment, but tutors did not present major differences between pre and post test. This possibly

happened because tutoring sessions provided them with competences to deal with challenges, and that capacity enable them to maintain stability in terms of positive outcomes.

Alternatively, tutees had a higher physical quality of life, but lower general psychological well-being as well as positive cognitive-emotional psychological well-being and higher anxiety related to psychological well-being in the end of the project. This seems to point to an insufficient impact of the project as tutees scored lower in the second moment of evaluation. Psychological well-being seems to be the most negatively affected variable in tutees; according to Lazarus and Folkman (cit in Lima, 2003), the objective of stress adaptation is to restore the perception of well-being, which can indicate that tutees have yet to complete their adaptation to college environment. This can raise some considerations related to the most appropriate time for tutoring sessions to end. Until this moment, sessions ended around the end of first semester, but these results may indicate the necessity of some support until the end of the academic year.

Studies have shown that peer tutoring can have several advantages to both participants in tutoring, in academic and non-academic terms, such as learning academic skills, acquire competences in several academic areas and have a more positive attitude towards learning, develop a more positive self-image, higher levels of motivation, social skills, increased attention and motivation, commitment, self-esteem and self-confidence, among others (Gordon, 2005; Topping, 1996). These outcomes can contribute to the development of competences that can be used besides tutoring sessions, helping individuals to face daily challenges and contributing to a better life. In this project, it seems that these competences can contribute in some level to diminish the potential negative impact that the adaptation to academic life can have, with the exception of anxiety and competences perception for tutees, which can indicate that tutees don't develop enough competences to deal with the challenges and difficulties across time.

The differences between tutors and tutees can also be understood considering that tutors also have coaching sessions besides tutoring sessions, which can indicate that they might develop their competences through two types of intervention whereas tutees only have tutoring sessions. In fact, just as research demonstrates, peer coaching has several advantages that are not only limited to the coach, but also to the coachee, including the importance of the relationship between them (Parker, Hall, and Kram, 2008), as well as development of feelings of support, absence of boundaries like other relationships, and feedback is provided without evaluative purposes, giving a notion of equality in the relationship (e.g. Wynn & Kiomrey, 1999). Considering this, the role of tutor seems to be the most beneficial for participants of the project.

In academic terms, psychological well-being seems to be a good predictor for personal and interpersonal dimensions of academic adaptation in the participants of the project. It is understandable that the personal dimension of academic experiences is predicted by psychological well-being since this dimension refers to self and physical, psychological well-being perceptions. As for the interpersonal dimension, this includes peer relationships and involvement in extracurricular activities.

These dimensions' characteristics are similar to the specificities of the project, and are concordant with studies about social support which showed that is a significant predictor of adaptation and personal well-being in college students (Pinheiro, 2003; Moura & Ferreira, 2002).

In what concerns coaches, the information given by these participants can provide some insight not only about their role performance, but also about their perspective and experience as tutees and tutors. As tutees, they refer to the role as a receiving one and as a way to have an easier integration with the support of their peers. They remained in the project in order to contributing and repaying what they received in the previous year. The role of tutor is seen as the most important role of the project and the one when most competences are developed. Being a tutor demands more responsibility and investment at several levels, although some tutees have some disregard for the role. Nevertheless, they chose to be coaches in order to have a different participation and perspective, pinpointing as advantages less responsibility and more free time, as well as an easier management of the relationship with tutors due to their maturity. As we can see, the role of tutor seems to have an assumed importance by participants, fact that can help understand quantitative results. Coaches consider the role of tutor more demanding and when they can develop more competences in the project, which might function as a buffer for stressful situations, as mention previously; this aspect should be consider in further investigation.

The importance of the tutor's role can also be verified when coaches were asked about their participation across time in the project. They identify the role of tutor as the biggest contribution to the project as well as the possibility of development of several competences, although they refer that there is an evolution across time.

Despite this, coaches also refer the importance of their role in the project. They valued the fact that they provided support, had a different experience and could base their performance in their previous experience. It is important to consider this in future coaching interventions and coach's formation, mainly the fact that participants felt that it was important being able to use their past experience in the role. In terms of participants' formation in the project, it could be important to include the experience from previous tutors (coaches).

The participants' perspective about the impact of the project and their role as coaches in terms of academic achievement and quality of life and well being seems to diverge. Mostly, they refer that there is an impact although in a minor scale when comparing to the tutor's role. In what concerns academic achievement, they failed to see a direct relation between the performance of the role and their academic achievement, although when questioned about competences development, they mentioned communicational, relational, support and development of responsibility, which can have an impact in academic achievement. Coaches also referred again the importance of the role of tutor and the fact that competences developed mainly as tutor were reinforced as coaches. About quality of life and well-being, coaches pointed out the contribution of the relationships involved, the fact that they are supporting others and personal development. This impact seems to be congruent with other

investigations about peer coaching, such as leadership skills (Broscious, & Saunder, 2001 cit in Newham-Kanas, Gorczynski, Morrow & Irwin, 2009), and other studies that demonstrated that the presence and development of strengths in the individual seems associated with well-being (Park, Peterson & Seligman, 2004, cit in Govindji & Linley, 2007).

In this sense, the project needs to take this information into account and consider some reformulations. Tutees are the group in need of more support and, although there was some improving from pre to post program, it must be considered the fact that anxiety increased and psychological well-being decreased. Considering this, tutees could not be able to answer to all demands of academic adjustment yet, so it could be relevant to include general study competences in sessions and stress management. This part could be developed by coaches trough coaching sessions with tutees since coaches are more experienced students. With this, tutees would also benefit in a more direct way of coaching, just like tutors seem to benefit. Moreover, it could give more importance to the role of coach, being necessary more investment and responsibility.

Coaches also mentioned that what was least valued in their role was the lack of involvement in tutoring sessions as well as the lack of contact with tutees, facts that can be overcome with the creation of coaching sessions for tutees, as mentioned before. They also referred the fact that this kind of support appears to be more important in the beginning and not during tutoring sessions. This can have implications in the investment both coaches and tutors (in this relationship as coachee) have in their roles. In fact, most coaches mentioned that their tutors resort to them when mainly in case of difficulties and questions. In this sense, it is important to give more structure to the role and specific objectives to reach that can guide coaches' intervention.

Limitations

This study has some limitations. First of all, it did not include a comparison group for tutees. It would be very important to be able to compare tutees and non-tutees to understand if the fact that the students that choose to enroll in this kind of program are different from the ones that choose to not participate. In addition, it would also be important to verify if there are differences between tutees and non-tutees post program. This should be considered for future investigations.

The reduced number of participants was also a limitation of this study, since it was only possible to utilize non parametric statistics in testing the differences intra and inter-subjects.

Conclusion and Future directions

We consider that this study is only the first step in this complex project. There is much more to be done and understood. It would be very interesting to continue to evaluate these participants across time in a longitudinal design, considering different steps of their lives, namely their different roles in the project, their possible evolution in academic life and when beginning professional life. We believe that the competences developed in the project can be permanent gains that can contribute to cope with different challenges across time, promoting well-being and quality of life.

Furthermore, and considering the limitations pointed to this study, future research should include a comparison group, as well as try to increase the number of participants. This last point will only be possible if the number of participants in the project increases in subsequent academic years.

It is also important to extend the obtained results, namely in terms of processes of tutoring and coaching and their impact in participants through qualitative studies with interviews and recording sessions. Peer coaching and tutoring are interventions with several benefits and with the flexibility of being adaptable to any context and population. Understanding the underlying processes that contribute to the development of competences and well-being is fundamental to the application of these interventions.

In a time when positivity, well-being and health are in the center of attention, a project that promotes these kinds of outcomes should be studied and invested. Colleges' staff must be concerned not only with their students' academic achievement but also with their well-being, health and development of competences necessary to face life during and outside college. These concerns should reflect interventions in higher education, being available so that students can potentiate their resources. In this sense, projects with these characteristics should be used in all universities as a main goal for academic success.

5. REFERENCES

Almeida, L., Soares, A., Vasconcelos, R., Capela, J., Vasconcelos, J., Corais, J., & Fernandes, A. (2000). Envolvimento extracurricular e ajustamento académico: um estudo sobre as vivências dos estudantes universitários com e sem funções associativas [Extracurricular Involvement and academic adjustment: a study about college students experiences with and without associative functions]. In A. Soares, A., J. Capela, L. Almeida, R. Vasconcelos & S. Caires (Eds). *Transição para o Ensino Superior* [Transition to Higher Education] (pp. 167-187). Braga: Universidade do Minho.

Almeida, L. S., Soares, A. P. C., & Ferreira, J. C. (2002). Questionário de Vivências Acadêmicas (QVAr): Avaliação do ajustamento dos estudantes universitários [Academic experiences questionnaire (QVAr): evaluation of college students' adjustment]. *Avaliação Psicológica, 2*, 81-93.

Baker, S. (2003). A prospective longitudinal investigation of social problem-solving appraisals on adjustment to university, stress, health and academic motivation and performance. *Personality and Individual Differences 35*, 569-591.

Barefoot, B. (2000). The first-year experience: are we making it better? *About Campus*, 12-18.

Becker, J.M. (1996). *Peer coaching for improvement of teaching and learning.* Teachers Network. Retrieved February, 2010 from http://www.teachnet.org/TNPI/research/growth/becker.htm.

Bizarro, L. (1999). *O bem-estar psicológico durante a adolescência* [Psychological well-being during adolescence]. Dissertação de doutoramento. Faculdade de Psicologia e de Ciências da Educação da Universidade de Lisboa.

Brack, T. (2010). Young adults and higher education: Barriers and breakthroughs to success. *The Future of Children*, 20 ,1, 109 -132.

Clulow, V. (2000) Student involvement and transition: A role for peer tutoring? Paper presented at The 4th Pacific Rim - First Year in Higher Education Conference: Creating Futures for a New Millennium. Brisbane: Queensland University of Technology

Costa, L. & Leal, I. (2008). Um olhar sobre a saude psicologica dos estudantes do ensino superior – avaliar para intervir [A look at the psychological health of college students – evaluate in order to intervene]. In Isabel Leal, José Luís Pais Ribeiro, Isabel Sita & Susana Marques (Orgs). Actas do 7º Congresso Nacional de Psicologia da Saúde [Minutes of the 7th National Congress of Health Psychology]. Porto: Universidade de Coimbra.

Cox, E. & Bachkirova, T. (2007). Coaching with emotion: how coaches deal with difficult emotional situations. *International Coaching Psychology Review, 2, 2*, 178-188.

Csikszentmihalyi, M. (1991). *Flow: The Psychology of Optimal Experience*. New York: Harper Collins.

Damon, W. (2004). What is positive youth development? *The ANNALS of the American Academy of Political and Social Science 591*, 13-24.

Douglas, C. A., & McCauley, C. D. (1999). Formal developmental relationships: A survey of organizational practices. *Human Resource Development Quarterly*, 10, 3, 203-220.

Duff, C. (2005). Party drugs and party people: examining the 'normalization' of recreational drug use in Melbourne, Australia. *International Journal of Drug Policy 16*, 161-170.

Falchikov, N. (2001). *Learning Together: Peer Tutoring in Higher Education*. London: Routledge

Freire, T. (2009). "Tutorias e Coaching por Pares" [Peer Tutoring and Coacinhg]. Projecto no âmbito do Programa Qualidade: Metodologia de Ensino/Aprendizagem – Bolonha.

Freire & Ferreira (in preparation). From peer tutoring to peer coaching: Studying college students' perceptions.

Freire, T., Fonte, C., & Lima, I. (2007). As experiências óptimas na vida diária de adolescentes: implicações para um desenvolvimento positivo. *Psicologia, Educação e Cultura*, XXI, 2, 223-242.

Freire, T., Lima, I., & Fonte, C. (2009). Life interets and optimal experiences in the school life of adolescents. In T. Freire (Ed.), *Understanding positive life: perspectives on Positive Psychology* (pp. 131-151). Lisboa: Climepsi.

Gordon, E. (2005). *Peer Tutoring: A Teacher's Resource Guide*. Maryland: Scarecrow Education.

Govindji, R. & Linley, A. (2007). Strengths use, self-concordance and well-being: implications for strengths coaching and coaching psychologists. *International Coaching Psychology Review, 2, 2*, 143-153.

Grace, T. (1997). Health problems of college students. *Journal of American College Health, 45, 6*, 243-250.

Grant, A. (2001). *Towards a Psychology of Coaching: The Impact of Coaching on Metacognition, Mental Health and Goal Attainment*. Sydney: Macquarie University.

Green, L., Oades, L. & Grant, A. (2006). Cognitive-behavioral, solution focused life coaching: enhancing goal striving, well being and hope. *The Journal of Positive Psychology, 1, 3,* 142-149.

Gyllensten, K. & Palmer, S. (2005). Can coaching reduce workplace stress? A quasi-experimental study. *International Journal of Evidence Based Coaching and Mentoring, 3, 2*, 75-85.

Helgeson, V. (2003). Social support and quality of life. *Quality of Life Research, 12*, 25-31

Kauffman, C. & Bachkirova, T. (2009). Spinning order from chaos: how do we know what ro study in coaching research and use it for self- reflective practice. *An International Journal of Theory, Research and Practice, 2, 1*, 1-9.

Kauffman, C. (2009). Positive psychology & coaching: moving from theory to intervention. In T. Freire (Ed). *Understanding Positive Life Research and Practice on Positive Psychology*. Lisboa: Climepsi.

Kauffman, C. M., Russell, S. G., & Bush, M. W. (Eds.). (2008). *100 Coaching Research Proposal Abstracts. International Coaching Research Forum*. Cambridge, MA: The Coaching & Positive Psychology Initiative, McLean Hospital, Harvard Medical School and The Foundation of Coaching.

Kauffman, C., Boniwell, I. & Silberman, J. (2009). The positive psychology approach to coaching. In E. Cox, T. Bachkirova & D. Clutterbuck. *Handbook of Coaching* (pp. 158-171). California: Sage

Kohler, F. & Greenwood, C. (1990). Effects of collateral peer supportive behaviors within the classwide peer tutoring program. *Journal of Applied Behavior Analysis 23*, 307-322.

Ladyshewsky, R. (2006). Building cooperation in peer coaching relationships: understanding the relationships between reward, structure, learner preparedness, coaching skill and learner engagement. *Psychotherapy, 92*, 4-10.

Lima, J. (2003). *Bem-estar Psicológico e Experiências Óptimas na Adolescência: um estudo exploratório com estudantes do 11º ano de escolaridade* [Psychological well-being and optimal experiences: a study with 11th grade students]. Masters Dissertation presented in Minho University. Braga: Universidade do Minho.

Mahoney, C. & Lafferty, C. (2003). Special issue on positive youth development [Editorial]. *American Journal of Health Behavior, 27, 1*, S3-S5.

Maitland, R. (2006) Peer coaching: enabling skills development in corporate South Africa. In F. Campone & J. Bennett (Eds.) Proceedings of the Third International Coach Federation Coaching Research Symposium. Lexington: ICF.

Moura, M. & Ferreira, J. (2002). Suporte social e adaptação ao ensino superior [Social support and adaptation to higher education]. In António Pouzada, Leandro Almeida & Rosa Vasconcelos

(Eds). Contextos e Dinâmicas da Vida Académica (pp. 137-146) [Contexts and dynamics of academic life]. Braga: Universidade do Minho.

Mynard, J., & Almarzouqi, I. (2006). Investigating peer tutoring. *ELT Journal* 60, 13-22.

Neto, F., Barros, J. H., & Barros, A. (1990). Satisfação com a vida. *In* L. Almeida, R. Santiago, P. Silva, O. Caetano, & J. Marques (Eds). *Acção educativa: análise psico-social* (pp. 105- 117). Leiria: ESEL/APPORT

Newnham-Kanas, C., Gorczynski, P., Morrow, D. & Irwin, J. (2009) Annotated bibliography of life coaching and health research. *Internation Journal of Evidence Based Coaching and Mentoring, 7, 1*, 39-103.

Organização Minudial de Saúde (2009). *Handbook for Action to Reduce Alcohol-Related Harm*. Copenhaga: WHO

Organização Mundial de Saúde. (1948). WHO Definition of Health [online]. Consulted in November, 2009 in http://www.who.int/about/definition/en/print.html

Park, P., Hall, D. T., & Kram, K. E. (2008). Peer coaching: a relational process for accelerating career learning. *Academy of Management Learning & Education*, 7, 4, 487-503.

Pereira, A. (2006). Stress e Doença: Contributos da Psicologia da Saúde na Última Decada [Stress and Illness: Contributions from health psychology]. In Isabel Leal (Ed). *Perspectivas em Psicologia da Saúde* [Perspectives in Health Psychology] (pp.145-167). Coimbra: Quarteto.

Pilcher, J. (1998). Affective and daily event predictors of life satisfaction in college students. *Social Indicators Research, 43*, 291-306.

Precioso, J. (2004). Quando e porquê começam os estudantes universitários a fumar: implicações para a prevenção [When and why college students start to smoke: implications to prevention]. *Análise Psicológica, 3*, 499-506.

Roberts, L. & Clifton, R. (1992). Measuring the affective quality of life of university students: the validation of an instrument. *Social Indicators Research 27*, 113-137.

Rozmus, C., Evans, R., Wysochansky, M. & Mixon, D. (2005). An analysis of health promotion and risk behaviors of freshman college students in a rural southern setting. *Journal of Pediatric Nursing, 20, 1*, 25-33.

Santee, J. & Garavalia, L. (2006). Peer tutoring programs in health professions schools. *American Journal of Pharmaceutical education, 70, 3*, 70-80

Seco, G., Casimiro, M., Pereira, M., Dias, M. & Custódio, S. (2005). Para uma Abordagem Psicológica na Transição do Ensino Secundário para o Ensino Superior: Pontes e Alcações [An approach to the transition from high school to higher education: brigdes and trapdoors] . *Leiria: Instituto Politécnico de Leiria*

Sekerka, L. & Chao, J. (2003). Peer coaching as a technique to foster professional development in clinical ambulatory settings. *Journal of Continuing Education in the Health Professional, 23*, 30-37.

Seligman, M. & Csikszentmihalyi, M. (2000). Positive Psychology: an introduction. *American Psychologist 55, 1*, 5-14.

Shaie, K. & Willis, S. (2003). *Adult Development and Aging*. Upper Saddle River: Prentice Hall.

Stewart-Brown, S., Evans, J., Patterson, J., Petersen, S., Doll, H., Baldig, J. & Regis, D. (2000). The health of students in institutes of higher education: an important and neglected public health problem? *Journal of Public Health Medicine,* 22, 4, 492-499.

Taylor, S. & Sherman, D. (2004). Positive psychology and health psychology: a fruitful liason. In Alex Linley & Stephen Joseph (Eds). Positive Psychology in Practice. New Jersey: John Wiley & Sons.

The WHOQOL Group (1995). The World Health Organization Quality of Life Assessment (WHOQOL): position paper from the World Health Organization. *Social Science Medicine, 4, 10,* 1403–1409.

Topping, K. (1996). The effectiveness of peer tutoring in further and higher education: a typology and review of the literature. *Higher Education, 32*, 321-345.

Vaez, M., Kristenson, M. & Laflamme, L. (2004). Perceived quality of life and self-rated health among first-year students. Social Indicators Research, 68, 221-234

Vaz Serra A, Canavarro MC, Simões MR, Pereira M, Gameiro S, Quartilho MJ, et al. (2006). Estudos psicométricos do instrumento de avaliação da Qualidade de Vida da Organização Mundial de Saúde (WHOQOL-Bref) para Português de Portugal. Psiquiatria Clínica, 27, 1, 41–9.

Vygotsky, L. (1978). *Mind in Society: The Development of Higher Psychological Processes*. Cambridge: Harvard University Press.

Warwick, I., Satham, J. & Aggleton, P. (2008). Healthy and Health-Promoting Colleges – Identifying an Evidence Base. London: Thomas Coram Research Unit, Institute of Education, University of London.

Webber, P. (1990). *Basic Content Analysis*. Newbury Park: Sage Publications.