RESILIENCE IN THE PMT

Signe Miranda, Lecturer at VIA University College, Denmark

Celeste Simões, Lecturer at FMH, University of Lisbon, Portugal

Literature for the workshop:

- Cefai, C., Matsopoulos, A., Bartolo, P. Galea, K. Gavogiannaki, M., Zanettic, M. A., Renati, R., Cavioni, V., Miljevic-Ridicki, R., Ivanecd, T., Saricd, M., Kimber, B., Eriksson, Simões, C., & Lebre, P. (2014). A Resilience Curriculum for Early Years and Elementary Schools in Europe: Enhancing Quality Education. *Croatian Journal of Education, 16, 2, 11-32.*

Further readings:

- Simões, C., Matos, M. G., Lebre, P., & Antunes, M. (2014). The impact of cumulative risk on adolescents: How it acts on different outcomes and which assets can moderate it. In S. Ionescu, M. Tomita, & S. Cace (eds.), The Second World Congress on Resilience: From Person to Society (pp.101-106). Bologna: Medimond - International Proceedings.

- Simões, C., Matos, M. G., & Morgan, A. (2015). Facing the adversity: The role of internal assets on well-being in adolescents with special needs. Spanish Journal of Psychology, 18, e56, 1–14.

A Resilience Curriculum for Early Years and Primary Schools in Europe: Enhancing Quality Education

Carmel Cefai[1], Anastassios Matsopoulos[2], Paul Bartolo[1], Katya Galea[1],
Mariza Gavogiannaki[2], Maria Assunta Zanetti[3], Roberta Renati[3], Valeria Cavioni[3],
Tea Pavin Ivanec[4], Marija Šarić[4], Birgitta Kimber[5], Charli Eriksson[5], Celeste Simoes[6]
and Paula Lebre[6]
[1] Department of Psychology, University of Malta, Msida, Malta
[2] Preschool Education Department, University of Crete, Greece
[3] Department of Brain and Behavioral Sciences, University of Pavia, Italy
[4] Faculty of Teacher Education, University of Zagreb
[5] Department of Health and Medical Sciences, Orebro University, Sweden
[6] Faculdade de Motricidade Humana, Cruz Quebrada – Dafundo, Portugal

Abstract

About twenty percent of school children experience social, emotional and behaviour problems during the course of any given year and may need the use of mental health services. The number may rise to up to fifty percent amongst children coming from socio-economically disadvantaged areas and from vulnerable communities. The economic crisis which Europe is undergoing at the moment has exacerbated the risks among those already facing disadvantages such as unemployment of young people and new families, increasing poverty and social disadvantage for the whole communities and regions. These challenges underline the need to equip children from an early age with the requisite skills to help them overcome the challenges and obstacles they are set to face in such circumstances while providing healthy and protective contexts which promote their health and well-being. This paper describes the development of a resilience curriculum for children in early years and primary schools in Europe with the aim of enhancing quality education for all children, including the most vulnerable ones. It presents and discusses the curriculum framework developed from the existing literature, including the key principles, processes and themes underlying the curriculum.

Key words: *curriculum; early years; primary schools; quality education resilience.*

Introduction

The third Strategic Objective of the EU Council's 'Strategic Framework for European Cooperation in Education and Training for 2020' (European Commission, 2009) underlines the need for quality education and support for vulnerable groups, including those coming from disadvantaged backgrounds, Roma children, migrants and children with special educational needs. Such children may be at risk of early school leaving, absenteeism, school failure, social exclusion and mental health problems. For instance, the average rate of early school leaving amongst young people with a migrant origin is double that of native youth while the rate is even higher for Roma populations, who are among the most socially excluded members of society: "Such groups tend to suffer from weaker family support from their families, face discrimination within the education system, and have more limited access to non-formal and in-formal learning opportunities outside compulsory schooling" (European Commission, 2011a). The *Commission Communication on early childhood education and care* (European Commission, 2011b) recommends ensuring and increasing access to good quality early childhood education and care as one of the most effective measures to provide children with a good start in education and to build their resilience and prevent early school leaving. This is particularly relevant in the light of the economic crisis the EU is undergoing at the moment, which may exacerbate the risks of those already facing disadvantage such as unemployment of young people and new families, increasing poverty and social disadvantages for entire communities and regions. The current 20% of children living in poverty in Europe is set to increase as a result of the present economic crisis, with increasing unemployment, taxation and cuts in social benefits leading to further economic hardship, poverty and inequality. *The Agenda for European Cooperation on Schools* (European Commission, 2008) underlines that Europe's growth and prosperity depends on the active participation by all children and young people, while the *Europe 2020* strategy (European Commission, 2010) identifies inclusive growth as one of the key drivers for growth.

A Resilience Perspective in Education

The development of a resilience curriculum in early and primary education in Europe is a direct response to the above objectives and the current social and economic situation in Europe. The curriculum seeks to promote the academic, emotional and social learning of children who may be at risk of early school leaving, absenteeism, school failure, social exclusion and mental health problems amongst others, by providing them with the key tools to overcome the disadvantages and obstacles in their development whilst making use of their strengths. Equipping children with the requisite skills to overcome challenges related to poverty, unemployment, discrimination and social exclusion as well as mobility, urbanization, weakening of social connectedness, competitiveness, excessive consumerism, violence, bullying, and

family stress, would be a very good investment in building a generation of European resilient citizens for the coming years.

The resilience perspective has been particularly focused on identifying the processes which children and young people need to grow and thrive, even in the face of risk and disadvantage, and to overcome the challenges and adversities they face in their development. Resilience is a quality which can be nurtured and developed from a very young age, and the systems impinging on the child's life, such as school, have a crucial and determining role in directing the child's physical, social, emotional and cognitive development towards healthy trajectories even in the face of risk (Benard, 2004; Masten, 2001). Through the study of children who managed to thrive and succeed in the various facets of their development despite the negative circumstances in their lives, the resilience perspective has led to a reconsideration of the ways in which we can foster success and healthy development in children. It suggests that we may be more effective in supporting children's development and well-being by focusing on their strengths rather than on their weaknesses.

Resilience may be defined as successful adaptation in the face of adversity and environmental stressors, such as poverty, unemployment, homelessness, and family instability and breakdown (Masten, 1994). Successful adaption may include the presence of positive academic and social behaviour, absence of undesirable behaviour, good external and internal adaptation, and functioning in normal range. Rather than an extraordinary process, it is "more about ordinary responses which focus on strengths" (Masten, 2001, p. 228). It is context-specific and involves developmental change, rather than a trait that a child is born with or automatically keeps once achieved (Zimmerman & Arunkumar, 1994). In contrast to the invulnerability perspective of earlier research, which focused on individual characteristics such as stress resistance as the determinant of resilience, later studies revealed that resilience is a quality which can be nurtured and developed from a very young age, and the systems impinging on the child's life, such as the family, peer group and school, have a crucial and determining role in directing the children's development towards healthy trajectories even in the face of risk (Benard, 2004; Dent & Cameron, 2003; Pianta & Walsh 1998). Development is the result of the dynamic interactions between the various systems impinging on the child's life (Bronfenbrenner, 1989), and it is the interaction between the child and his or her environment that finally determines the adaptive process. The classic studies on disadvantaged children and communities by Werner and Smith (1992), and Rutter (1998) amongst others, found that despite the high-risk environments in which their participants grew up, the majority developed into healthy, successful young adults. They reported that protective factors had a stronger impact on children's development than the risk factors.

Resilience Education Paradigm

Schools are ideal places to build social and emotional competences such as resilience skills for all children and this is so much more important for vulnerable children

(Goleman, 1995). Helping children to understand their and others' emotions, increase empathy, and develop self-regulation strategies to manage negative emotions, such as anger and stress, are all significant competences which schools need to include in their curriculum and teach them systematically to all students (Elbertson, Brackett, & Weissberg, 2009; Elias, Zins, Weissberg, Frey, Greenberg, Haynes, Kessler, Schwab-Stone, & Shriver, 1997). In seeking to build a resilience curriculum for early and primary schools in Europe, a framework was developed underpinning the key principles informing the curriculum and the processes set to lead from a state of being to a process of becoming (Figure 1).

Resilience education ("paideia", Matsopoulos, 2011) is proposed as a core competence in the early and primary school curriculum and taught on a regular basis by the classroom teachers. It is integrated in the mainstream curriculum rather than a bolt-on, added activity delivered by outside experts; the latter has been found to be largely ineffective in the long term (Greenberg, Weissberg, O'Brien, Zins, Fredericks, Resnik, & Elias, 2003). In their review of evaluations of the SEAL programme in the UK, Cooper and Jacobs (2011) attribute the programme's lack of success to it not being embedded directly in the formal curriculum and the teaching staff not involved in its delivery and reinforcement. Hoagwood, Olin, Kerker, Kratochwill, Crowe, & Saka (2007) reported that ecological and collaborative approaches, which included the classroom teachers amongst others, were the most effective in the promotion of children's social and emotional learning and well-being. The resilience curriculum framework is thus presented as a universal intervention programme targeting all children in the classroom, but with activities reflecting the diversity of learners, particularly vulnerable children coming from disadvantaged backgrounds such as Roma children, migrant children, children living in poverty, and children with special educational needs. Such children are more likely to experience amongst others, weaker family support, prejudice and discrimination, limited learning opportunities and access to health care, negative life events, and bullying, exclusion and isolation (EC 2012; Simões, Matos, Tome, Ferreira, & Diniz, 2009; UNICEF 2005). A resilience curriculum targeting the needs and strengths of such groups, will focus on promoting educational equality, resilience assets for positive development and active citizenship of such children by fostering their internal resources such as self-awareness, problem solving, optimism, adaptability, perseverance, belief in inner strength, positive attitudes, optimism, self- efficacy, sense of coherence and purpose, high academic expectation, empathy and collaboration, as well as their external resources such as caring relationships and meaningful participation at home, at school and in their peer group (Benard, 2004; Cefai, 2008; Dimakos & Papakonstantinopolou, 2012; Førde, 2007; Hutchinson & Dorsett, 2012; King, 2004; Matsopoulos, 2011; McEwen, 2007; Simões et al., 2009*).*

The curriculum will thus operate as a universal, inclusive curriculum for all children in the classroom, including the vulnerable ones (Cefai, 2008). It will take a developmental, inclusive and spiral approach across the early and primary school years, and will be
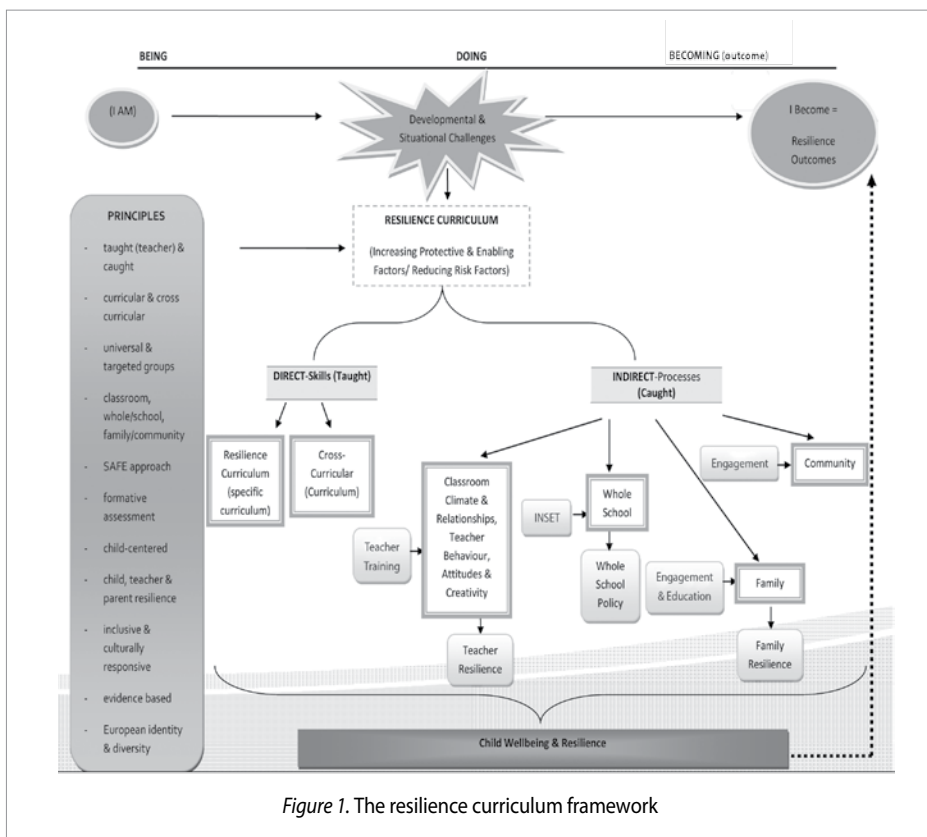
Figure 1. The resilience curriculum framework

based on a European perspective, reflecting the strengths and needs of European society. It will be responsive to the needs of the individual learner differences, underlining the right of all learners for a quality resilience education, and a commitment towards social justice with the awareness of the risks of discriminatory practices due to individual educational needs, minority statuses, and poverty, amongst others. While based on a European identity, it will thus also reflect European diversity, with activities addressing cultural differences across Europe. It will also be evidence based, making use of strategies which have been found to be effective in resilience enhancement. It will search for state-of-the-art service arrangements reflecting the EU agenda for excellence and competitiveness at the global level. At the same time, it will be flexible and reflexive, seeking to achieve the enhancement of ethical standards through reflective practice.

The curriculum will be both "taught" and "caught". The taught component will include explicit and regular teaching of resilience education as a core competence by the classroom teacher, making use of direct teaching of evidence-based and developmentally and culturally appropriate resilience competences with the application to real-life situations. This necessitates a set curriculum and available resources to support consistency of delivery, one of the key criteria of programme effectiveness (Durlak,

Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Collaborative for Academic, Social, and Emotional Learning, 2008). It will follow the SAFE approach, that is, it is sequenced, active, focused and explicit. Research on the effectiveness of resilience and social-emotional learning programmes provides consistent evidence that effective programmes adopt sequenced step-by-step approach, make use of experiential and participative learning, focus on skills development and have explicit learning goals (Durlak et al., 2011; Collaborative for Academic, Social, and Emotional Learning, 2005). Assessment will be formative, underlining areas for further development, with both the teacher and the students involved in the process. The curriculum will take a spiral approach, building from one year to the other as children move from the early years to the early primary years, and then to the junior primary years. This involves a similar process to that of other academic skills, with increasing complexity of behaviour and social contexts requiring particular skills at each developmental level (Weissberg & Greenberg, 1998). A developmental approach strengthens and builds on basic skills from one year to the next, building on what pupils have already learned, and equipping them with skills needed for different stages in their development. There will be three manuals for teachers for each of these three key stages as well as corresponding manuals for parents. The curriculum will additionally be infused in other academic subjects of the curriculum in a structured way, while there will also be home activities to reinforce the skills being learnt at school. Infusing the resilience competences in the other academic content of the curriculum will enable the generalization and internalization of those competences (cf. Diekstra 2008; Elias, 2003; Elias & Synder, 2008).

The curriculum also makes provision for the resilience skills to be 'caught' through the classroom and whole school contexts. The "caught" component of the model focuses on the ecology of the classroom and the school as a whole as well as focusing on administrators and their leadership style, and systemic variables of the school district such as a prevention philosophy in dealing with behaviour problems in the schools. The "taught" component aims to bring multiple changes in the whole school culture, and changing the way teachers and administrators think about resilience, well-being and mental health, helping them also to focus on students' mental health, well-being and resilience in the face of adversity in both the academic and social domains (Johnson, 2008). The teaching of resilience skills by the classroom teacher at both curricular (specific resilience curriculum) and cross-curricular levels will also impact teachers' overall practice and lead to a paradigm shift in teaching and learning in the classroom with resilience education embedded in the whole classroom climate (cf. Mental Health Foundation in Australia, 2005). The classroom relationships, pedagogy, activities, resources and management, will thus provide a context where pupils can practice and apply the skills learned both in the classroom and outside, such as in the playground. For instance, authentic relationships built on a daily basis with all pupils with the teacher's initiative, characterized by a warm affect and genuine interest for the learning and well-being of the pupils, serve as a compensating mechanism to the stressors experienced by the children (Luthar, 2006).

A whole-school approach where the school community, together with parents and the local community, engages in resilience building in all aspects of school life and where the skills addressed in the classroom, are promoted and reinforced at the whole-school level in a structured and complementary way, will help to create a supportive whole-school context and ethos conducive to more effective resilience outcomes (Cefai & Cavioni, 2013; Greenberg et al., 2003; Weare & Nind, 2011). The programme also includes a parents' manual for all three levels (early years, early primary, late primary) to reinforce the skills learnt at school, and encourage parents to adopt the resilience philosophy in parenting their child. A whole school approach will also target the school staff's and parents' own well-being and resilience. Student resilience is symbiotic with the teachers' own resilience, as tired and burnt-out teachers are unlikely to be in a position to foster students' resilience. School staff thus needs to take active steps to maintain their own health, well-being and resilience in their efforts to promote students' resilience (Beltman, Mansfield, & Price, 2011; Howard & Johnson, 2004). Similarly, empowering parents and communities not only to engage collaboratively with the school, but to address their own well-being and resilience, is another important component in a whole school approach to resilience building (Downey & Williams, 2010; Weare & Nind, 2011). The focus is thus on the whole school community operating as a resilient community, with each system connecting to, and supporting, the others (cf. Bronfenbrenner, 1989).

The Curriculum Themes

The curriculum consists of six major themes spiralling from one year to the other at higher levels of complexity as students move from the early years to the early primary years, and then the junior primary years. The six themes have been identified following a review of the resilience literature and a needs analysis of the current socio-economic, educational, and cultural needs of children and young people in the European countries involved in the project.

Developing a Growth Mindset. Developing a growth mindset is essential not only to manage challenges successfully but also to turn them into opportunities for growth and development (Peterson, Ruch, Beerman, Park, & Seligman, 2007; Seligman, Parks, & Steen, 2004). The activities within this theme draw from positive psychology which values positive subjective experience towards the past, present and future, and seeks to build positive qualities to prevent and deal effectively with psychological problems (Seligman & Csikszentmihalyi, 2000). This theme focuses on both cognitive processes such as optimistic thinking, positive self-talk and the disputation of negative thoughts, as well as emotional processes such as the awareness, expression and regulation of positive emotions.

The first sub-theme on the development of positive and optimistic thinking, particularly during setbacks, provides children with opportunities to engage in optimistic thinking, to reflect on and challenge unhelpful thoughts, and consequently

to overcome challenges with a positive attitude (Noble & McGrath, 2008; Seligman, 2002). The first set of activities introduces positive and negative thinking. While younger children may be taught the skill by referring to upside and downside thoughts, older children are then introduced to explanatory styles. Helping children attribute bad events to external, unstable and specific causes is one way of helping them to develop a more positive mindset (Buchanan & Seligman, 1995). In the second set, the goal is to see how thoughts, feelings and actions are related to each other, and in the later years how an adversity can be followed by beliefs and their consequences, that is, the feelings and actions that come about from thinking in a particular way. In the last set of activities, children develop ways to challenge these negative beliefs, such as by providing counter-evidence against a negative thought, asking friends what they would so as to develop alternative ways of thinking, and listing the best, worst and most realistic case scenarios. In the end, children can also rearrange their Adversity, Beliefs, Consequences (ABC) flowcharts to add Disputation (disputing the negative beliefs) and Energization (writing down the feeling after changing the belief) (Seligman, 1998).

The second sub-theme, *Hope, Happiness and Humour,* gives children the opportunity to become aware of, identify and regulate positive emotions, focusing on these three 'Hs'. Positive emotions broaden children's awareness, build their personal and social resources, and buffer against psychological problems (Fredrickson, 2001). The first set of activities focuses on hope as a cognitive process in which persons actively pursue their goals. The activities are built on hope as a process by which individuals engage in pathways thinking, that is the ability to set goals and develop routes to reach them, and agency thinking, the motivation and belief that one can reach these goals (Snyder, 1994). In the happiness activities, children are supported to further explore happiness and what makes them happy. The children also explore ways how they can turn a bad mood into a good one. In the last set of activities, they get a chance to laugh but also to use humour in positive ways, such as the positive appraisal of stressful experience and life events (Peterson et al., 2007).

Building on Strengths. Building on strengths rather than just seeking to address deficit and disadvantage, is a strategic element in promoting favourable mental-health outcomes and resilience in children. The need to develop strengths and resilience have become more pronounced in Europe in the last decades, particularly amongst certain socio-economic and cultural groups, in the face of increasing stresses and disadvantage (Furlong & Cartmel, 2007). This theme focuses on two areas, namely building a positive self-concept and self-esteem, and using strengths in academic and social engagement. In the first subtheme, activities focus on helping children to develop a positive self-concept, namely a positive view of their nature, unique qualities and behaviour (Weiten, Dunn, & Hammer, 2012). Self-concept applies to a variety of domains, namely social, competence, affect (awareness of emotional states), physical (feelings about looks, health, physical condition, and overall appearance), academic,

and family (Bracken, 1992). Historically, self-esteem (how much one values oneself) has been seen as one of three parts of self-concept, the others being self-image (how you see yourself) and ideal self (how you wish you could be). The level and congruence of self-concept and self-esteem are particularly related to well-being and resilience. Respect for oneself is of benefit in itself, but it must also be congruent, that is, aligned to reality. The activities focus on understanding who I am, becoming aware, and being proud, of my strengths, and understanding how the past and present are part of who I am, while identifying my dreams for the future.

Positive and realistic (congruent) self-concepts in students, especially if these are reinforced by teachers, can be expected to impact on academic and social engagement, and thereby on school achievement. As Purkey (1970) pointed out as early as in 1970, attention should be paid to self-concept (rather than just ability or talent) as an important factor in academic success, namely how teachers and schools can enhance positive and congruent self-concepts in students in seeking to engage them in the learning process. The activities focus also on social engagement in the classroom; by promoting social participation and social engagement, a sense of value, belonging and attachment can be promoted (Berkman, Glass, Brissette, & Seeman, 2000). In this subtheme, the activities focus on valuing oneself and others, understanding and appreciating one's strengths and assets, and how to use such strengths in academic learning and social participation and interactions.

Developing Self-Determination. According to self-determination theory, individuals need to feel related, competent, and autonomous for an optimal functioning and development (Deci & Ryan, 2000). The theory highlights three key elements, namely that individuals have the potential to be active players in their own lives through the control of internal (motivation and emotions) and external forces; that individuals have a predisposition towards growth, development and positive functioning; and that social contexts are fundamental to nurture the natural tendency for positive functioning and growth since the latter qualities are not automatic manifestations of the developmental process (Deci & Vansteenkiste, 2004). The interaction between these three components is fundamental for positive development, psychological well-being, and resilience.

The first sub-theme focuses on problem orientation and problem solving skills. Problem solving is identified as one of the determinant skills to deal with adversity, since it moderates the impact of negative life events on well-being (Simões, 2012). It plays a key role in risk assessment, resources evaluation, the establishment of realistic plans, and the search for healthier relationships, which in turn are essential for adaptation and resilience (Werner & Smith, 2001). This subtheme is divided into three sets of activities that encompass the general steps of problem solving. In the first set, children are invited to define problems and generate creative solutions. The second set focuses on the evaluation of solutions and decision making, where children develop skills to evaluate solutions, the time and effort needed, and the results of the

solutions. The third set of activities highlights the implementation and evaluation of the solutions, allowing children to solve problems by trying on solutions, and evaluating the results.

The second sub-theme focuses on empowerment and autonomy. Empowerment is conceptualized as an individual's perception of personal competence and their belief that goals can be attained, while autonomy refers to a sense of one's identity and an ability to act independently and exert control over one's environment (Benard, 2004). The first set of activities focus on a sense of purpose and meaning in life, giving children the opportunity to think about global and situational meaning, and to reflect on their purposes, imagining what will happen when they grow up. The search for the meaning and goal of life is the main concern in an individual's life and, when accomplished, it has a protective effect (Noble & McGrath, 2008). The second set of activities aims to foster agency and self-efficacy, helping children to recognize that they can make things happen, can help others make things happen, and believe that they can do things, achieving their goals and overcoming obstacles. Among the mechanisms of human agency, none is more central or pervasive than belief of personal efficacy, since unless individuals believe they can produce desired effects by their actions, they have little incentive to act or to persevere in the face of difficulties (Bandura, 1997). Both agency and self-efficacy have been referred as being essential to resilience (Benard, 2004; Herrman, Stewart, Diaz-Granados, Berger, Jackson, & Yuen, 2011). The third set of activities highlights the promotion of self-advocacy in children. Self-advocacy, or the ability to speak up for what we want and need (Schreiner, 2007), is an important component of self-determination that has been related with resilience (Goodley, 2005), since it acts as a moderator of the impact of adversity on child's psychological well-being or as a mediator, promoting self-esteem, self-awareness and a greater connection to the community, which are important resilience assets (Benard, 1999; Grover, 2005).

Developing Communication Skills. The development of effective interpersonal communication skills is possible in the balanced relation between the skills of listening and understanding others, and the skills of expressing and standing for oneself. This theme takes this dual approach, first focusing on expressing and standing for oneself, and then on listening and understanding others. The first subtheme focuses on three sets of activities, namely expressing feelings and needs, standing for oneself, and assertive conflict resolution. Assertiveness enables a person to stand for oneself without hurting the others. A child that stands for him/herself states his/her needs clearly, gives feedback on somebody else's behaviour that bothers him/her, and states his/her wishes clearly and, if necessary, repeatedly. S/he is capable to say 'no', show understanding for another person and defend his/her position or integrity without harming the other. A child has no opportunity to practice assertive behaviour if s/he is not in a real or imaginary conflict with an environment. The environment in which a child can practice assertive behaviour supports his/her self-respect, allows

him/her to change his/her mind, gives him/her time to think and relieves him/her of the responsibility for the adults' behaviour and emotional states.

The second subtheme, listening to and understanding others, consists of another three sets of activities, namely effective listening, empathy, and communicating ideas effectively. Effective listening enables children to get to know, understand and accept another person. This skill is very demanding even for adults, but it is an important precondition for acquiring the skill of giving feedback and expressing empathy. Empathy is an ability to put oneself into the other person's emotional state and understand his/her position through perceived or imaginary situation in which that person is. Giving effective feedback is possible only if the relationship is based on the acceptance and an intention to understand and share the feelings, thoughts and the causes of behaviour. Feedback without empathy can influence somebody else's behaviour but is lethal for building acceptance and trust (Juul, 2008). Communication does not finish when we send a message and receive a response, rather it starts at this moment and leads towards the learning of how to communicate the ideas effectively, including an understanding of what the participants in the conversation think, feel, and intend (Schulz von Thun, 2002).

Establishing and Maintaining Healthy Relationships. This theme builds on the previous one, and its first subtheme focuses on establishing and maintaining healthy and rewarding relationships. The activities of this subtheme are designed to support the development of social and prosocial skills in order to create a strong network of positive relationships, focusing on such skills as making and having friends, seeking and providing support, and nurturing relationships. Peer relationships are a very important source of well-being and resilience for children. They can help reduce, mediate and prevent the effects of stress, and also provide information to deal with difficulties (Schaffer, 1996). Children who are able to build and maintain positive relationships with friends and peers are more able to acquire social skills, develop self-awareness and awareness about others, and recruit emotional support in times of stress (Doll, Zucker, & Brehm, 2004).

The first set of activities helps children to reflect on the value of friendship and to deepen strategies to build, maintain and protect positive relationships with friends, and deal successfully with situations which may put friendship at risk. The second set of activities focuses on the development of skills to seek and provide support to others facing difficulties. Social support leads a person to believe that he/she is cared for and loved, esteemed and valued, and/or that he/she belongs to a network of communication and mutual obligation (Hupcey, 1998). An important aspect of this social support system is the ability to ask help from others appropriately. This is a very important communication skill which enables the child to recruit physical, social and emotional support which protects them from the impact of negative events. Nurturing relationships are a crucial foundation for both academic and socio-emotional development, fostering warmth and intimacy, and providing

security, physical safety and protection. In the third set of activities, children have the opportunity to appreciate and practice reciprocal trust and care.

The second sub-theme is composed of activities to enhance cooperative skills, empathy and moral reasoning. The first set of activities is meant to develop skills ranging from the ability to take turns and sharing to cooperation and teambuilding, such as artwork, making collective decisions and playing games in teams. Collaboration among peers fosters children's social and emotional development, including more positive attitudes toward others (Slavin, 1980; 1990). Working with another peer, both in academic and leisure activities, also helps children to be more cooperative and respectful, while at the same time leading to higher self-esteem (Gensemer, 2000). The second set of activities is focused on the skill to recognize and appreciate the motives, behaviours, desires and feelings of others. Empathy is an essential building block for successful interpersonal relationships (Reid, Davis, Horlin, Anderson, Baughman, & Campbell, 2013), impacting also the individual's acceptance by peers, and contributing to the development of morality (Belacchi & Farina, 2012; Braza, Azurmendi, Munoz, Carreras, Braza, Garcia, Sorozaba, & Sanchez-Marton, 2009; Coplan, 2011; Eisenberg, 2000). The third set of activities helps children to critically reflect on, discuss and elaborate solutions to moral and ethical dilemmas (Gasser & Malti, 2012). Practicing ethical and responsible behaviours requires children to focus beyond the self, and develop intellectual and emotional honesty, and a willingness to confront and articulate their vulnerabilities in order to make necessary changes in their personal lives (Staub & Vollhardt, 2008).

Turning Challenges into Opportunities. A tough-mindedness mindset is not something one is born with, but something that can be learned and developed by all children. By making it possible for children to learn to re-frame and turn developmental challenges or life's stressors into opportunities for growth, will help children to engage in behaviours characterized by optimism, courage, and persistence (Newman, 2004; Seligman, 2011). The first subtheme provides opportunities for children to develop courage in adversity and persistence in the face of failure, and consequently to overcome difficulties and setbacks successfully (Scheier & Carver, 1992). Showing courage in the face of adversity, either temporary or permanent, maintaining an optimistic mindset despite setbacks or unfair situations, and exhibiting persistence, are some of the key characteristics of mental toughness in the face of adversity, and key building blocks of resilience in children.

Dealing with rejection by teachers, peers and family members, and consequent negative emotions is the second subtheme. During the activities of this second subtheme, the children learn how to handle rejection by others such as peers, teachers or parents, as well as how to handle effectively negative emotions such as stress, anger, disappointment, frustration, sadness and sense of helplessness, which may emanate from the experience of rejection. Rejected children may have a lack of social-cognitive skills, including peer group entry, perception of peer group norms, response

to provocation, and interpretation of prosocial interactions (Asarnow & Callan, 1985; Dodge, 1985). Helping children to understand the causes and context of rejection by peers and others, and working on developing social-emotional skills and behaviours to deal with such situations are important factors in the development of resilience amongst children facing rejection in their lives.

Bullying is a common occurrence in many schools, particularly amongst vulnerable pupils, such as children with disability and learning difficulties, and children from ethnic minorities (De Monchy, Pijl, & Zandberg, 2004; Norwich & Kelly, 2004). Bullying is related to stress and to such negative emotions as helplessness, frustration, anger, feelings of unfairness and discrimination. It is thus necessary to equip children with the requisite skills so that they would know how to behave when they face bullying and how to manage negative emotions caused by bullying behaviour. Learning how to resolve conflicts, problem solving in bullying situations, being assertive, and learning how to be mentally tough, courageous and determined, are important skills to deal with bullying behaviours and to develop resilience in the face of this adversity (Andreou, Didaskalou, & Vlachou, 2008; Dill, Vernberg, Fonagy, Twemlow, & Gamm, 2004).

Family related stressors, such as family conflict, unrealistic parental expectations, divorce and poverty can be a significant source of stress for children (Graham, 1994; Levendosky, Huth-Bocks, Semel, & Shapiro, 2002). The fifth subtheme seeks to equip such children with the necessary strategies to deal effectively with the above adversities in their lives and to manage related negative emotions, such as frustration, helplessness, disappointment, and lack of security (Pedro-Caroll, 2010). The final subtheme focuses on dealing with change, transitions and loss in life. The activities enable the children to understand and deal with life's various losses, such as losing a pet, a friend, or a loved one, such as understanding loss and death and manage the negative consequences of loss by adopting a positive optimistic outlook in life. The children's ability to believe in themselves, to solve problems in new circumstances, to manage stress effectively, to self-regulate and to develop a positive mindset and optimism, are significant skills in helping children overcome successfully the challenges and bounce back to healthy development (Bonanno, 2004; Fthenakis, 2003; Niesel & Griebel, 2005).

Conclusion

The resilience curriculum framework presented in this paper aims to contribute to the twenty-first century European society where citizens thrive and maximise their growth, despite disadvantage or adversity, in a context fuelled by social inclusion, equity, and social justice. Where many other initiatives tend to focus on risk, this project takes a strengths-based, positive psychology stance, focusing on enhancing resilience and growth rather than simply addressing deficit and disadvantage. Rather than suggesting an add-on activity delivered by outside experts, resilience enhancement in schools is construed as a mainstream, whole school initiative with

the whole school community, including staff, parents and pupils, actively engaged in resilience building at the classroom and the whole school levels making use of both taught and caught approaches. It seeks to do so within a developmental, inclusive and culturally-responsive perspective, seeking to avoid labelling and stigmatisation. It is also based on evidence, good practice and theory as well as the realities faced by school children in the twenty-first century diverse Europe. In line with the evidence-based approach of the framework, the curriculum itself will need to be evaluated for its effectiveness in bringing about positive change and growth amongst European children, particularly amongst those most vulnerable. This is the next phase of the project, where in the coming year, the framework will be piloted in a number of schools across Europe.

Acknowledgement

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Carmel Cefai
Department of Psychology, University of Malta
Msida MSD 2080, Malta
carmel.cefai@um.edu.mt

Anastassios Matsopoulos
Preschool Education Department, University of Crete, Greece
Gallou Campus, Rethimno
74100 Crete, Greece
matsopoulos@gmail.com

Paul Bartolo
Department of Psychology, University of Malta
Msida MSD 2080, Malta
paul.a.bartolo@um.edu.mt

Katya Galea
Department of Psychology, University of Malta
Msida MSD 2080, Malta
katya.galea@um.edu.mt

Mariza Gavogiannaki
Preschool Education Department, University of Crete, Greece
Gallou Campus, Rethimno
74100 Crete, Greece
marizagmelima@gmail.com

Maria Assunta Zanetti
Department of Brain and Behavioral Sciences - Psychology Section
University of Pavia, Piazza Botta, 11
I-27100 - Pavia – Italy
zanetti@unipv.it

Roberta Renati
Department of Brain and Behavioral Sciences - Psychology Section
University of Pavia, Piazza Botta, 11
I-27100 - Pavia – Italy
roberta.renati@unipv.it

Valeria Cavioni
Department of Brain and Behavioral Sciences - Psychology Section
University of Pavia, Piazza Botta, 11
I-27100 - Pavia – Italy
valeria.cavioni@unipv.it

Tea Pavin Ivanec
Faculty of Teacher Education, University of Zagreb
Savska cesta 77, 10000 Zagreb, Croatia
tea.pavinivanec@ufzg.hr

Marija Šarić
Faculty of Teacher Education, University of Zagreb
Savska cesta 77, 10000 Zagreb, Croatia
marija.saric@ufzg.hr

Birgitta Kimber
Department of Health and Medical Sciences, Orebro University
SE-701 82 Örebro, Sweden
b.kimber@telia.com

Charli Eriksson
Department of Health and Medical Sciences, Orebro University
SE-701 82 Örebro, Sweden
charli.eriksson@oru.se

Celeste Simoes
Faculdade de Motricidade Humana, Estrada da Costa 1499-002
Cruz Quebrada – Dafundo, Portugal
csimoes@sapo.pt

Paula Lebre
Faculdade de Motricidade Humana, Estrada da Costa 1499-002
Cruz Quebrada – Dafundo, Portugal
pmelo@fmh.utl.pt

Kurikul otpornosti za rane godine i osnovnu školu u Europi: Poboljšavanje kvalitetnog obrazovanja

Sažetak

Oko dvadeset posto školske djece ima socijalne, emocionalne i druge probleme u ponašanju zbog čega bi im mogla zatrebati pomoć stručnjaka za mentalno zdravlje. Taj bi se postotak mogao povećati i do pedeset posto u djece lošijeg socioekonomskog statusa ili djece koja dolaze iz posebno osjetljivih zajednica. Ekonomska kriza kojom je Europa trenutno pogođena dodatno je povećala rizik među onima koji su već od prije bili suočeni s problemima poput nezaposlenosti mladih pojedinaca i obitelji, povećavanja siromaštva i socijalne nesigurnosti cijelih zajednica i regija. Ti izazovi povećavaju potrebu da se djeci već od rane dobi pruže potrebne vještine koje će im pomoći da prevladaju izazove i prepreke s kojima se u tim okolnostima suočavaju, pružajući im u isto vrijeme zdrav i zaštitnički kontekst koji će promicati njihovo zdravlje i dobrobit. U ovom je radu opisan razvoj kurikula otpornosti za djecu predškolske i osnovnoškolske dobi u Europi s ciljem poboljšanja kvalitetnog obrazovanja sve djece, uključujući i najranjivije skupine. U radu se raspravlja o okviru kurikula razvijenog iz postojeće literature, uključujući ključna načela, procese i teme koje su mu u podlozi.

Ključne riječi: *kurikul; kvalitetno obrazovanje za otpornost; osnovna škola, rana dob.*

RESILIENCE IN THE PMT

Further readings:

- Simões, C., Matos, M. G., Lebre, P., & Antunes, M. (2014). The impact of cumulative risk on adolescents: How it acts on different outcomes and which assets can moderate it. In S. Ionescu, M. Tomita, & S. Cace (eds.), The Second World Congress on Resilience: From Person to Society (pp.101-106). Bologna: Medimond - International Proceedings.

- Simões, C., Matos, M. G., & Morgan, A. (2015). Facing the adversity: The role of internal assets on well-being in adolescents with special needs. Spanish Journal of Psychology, 18, e56, 1–14.

The impact of cumulative risk on adolescents: how it acts on different outcomes and which assets can moderate it

Simões C.[1], Gaspar De Matos M.[2], Lebre Melo P.[3], Antunes M.[4]

[1,2]*Department of Education Sciences, Faculty of Human Kinetics, University of Lisbon/ CMDT/IHMT/Universidade Nova de Lisboa (PORTUGAL)*
[3]*Department of Education Sciences, Faculty of Human Kinetics, University of Lisbon/ INET/MD/ Universidade de Lisboa (PORTUGAL)*
[4] *Rescur Project Researcher (EU), Faculty of Human Kinetics, University of Lisbon (PORTUGAL)*
csimoes@fmh.ulisboa.pt, mmatos@fmh.ulisboa.pt, pmelo@fmh.ulisboa.pt, martaantunes@fmh.ulisboa.pt

Abstract

Cumulative risk is one important threat to positive development in adolescence. This study aims to contribute to a further understanding of the cumulative risk effect on different outcomes and how protective factors can moderate its impact.

The sample included 2840 adolescents, 46% boys, mean age 14 years old, in the 6th, 8th and 10th grades of the public school system from Portugal. Data collection was held within the Health Behaviour in School-aged Children (HBSC) survey. For the purpose of this specific study, the questionnaire included questions concerning socio-demographic and behavioural risks, health related quality of life, psychological symptoms, academic achievement, substance use, and environmental and internal resilience assets.

Results showed three different risk effects: a cumulative effect, as referred by Rutter (1979), for substance use, where the significant impact of risk is possible to observe only in the presence of four or more risk factors; a linear effect for academic achievement, where it is possible to verify that each risk factor contributes to a significant decrease in academic achievement; and an effect, between the above mentioned cumulative and linear effects, for health related quality of life and psychological symptoms, where there is a significant increase of psychological symptoms, or decrease of health related quality of life, only in the presence of three risk factors, that is accentuated again in the presence of four or more risk factors. In this context, and for the different outcomes, moderator effects of environmental and internal resilience assets are also explored and discussed.

Keywords: Adolescence, risk effects, protective moderator effects, health related outcomes

Introduction

It is commonly recognized that family poverty and stress, exposure to family or community violence, maltreatment, divorce, poor schools, school disengagement, and lack of local resources constitutes a severe environmental hazard to children's adaptive and healthy development [1]. Several studies refer that children living in these contextual conditions are at greater risk for developing externalizing and internalizing problems [2, 3, 4, 5], such as substance use, psychopathology across the life span [3, 6, 7], poor quality of life [8, 9], and poor academic achievement [1].

Research has shown that generally, in adverse circumstances, risks tend to accumulate [10]. Moreover, in a cumulative risk context, there appears to be a consistent and strong negative relationship between the number of risk factors that children are exposed and their adaptive functioning [11, 12]. Cumulative risk can act through different mechanisms: the presence of multiple risk factors; multiple occurrences of the same risk factor; or the accumulating effects of ongoing adversity [13].Different effects had been reported for cumulative risk. Some studies refer an additive effect [7], or a linear effect, where each risk factor has a significant impact on the outcome, namely some studies found this effect on academic performance [1]. Other studies point to another kind effect, an exponential effect, generally known as cumulative risk, where the combination of four risk factors quadruplicates the likelihood of maladjustment, comparatively with the combination of three risk factors [14]. This hypothesis, emphasizes to a large extent the quantitative aspects of risk as the crucial question comparatively to the qualitative aspects of risk [15, 16].

Those findings point to the conclusion that when children experience significant dysfunction at home and at community environments, their risk for maladjustment and poor health outcomes becomes substantially higher. That comes in line with research showing that if children are faced with continuing and severe assaults from external environmental risks, they cannot sustain a resilient adaptation over time [17].

However, it is essential to highlight that these risks interact with adolescents internal and environmental (family, friends, teachers) assets and in some case this can revert the negative effects of risk factors [18, 19]. Some of these assets and effects are going to be under analysis in this study. This study aims at:

(1) Verifying the relationship between cumulative risk and different health outcomes (substance use, psychological symptoms, health related quality of life,) and academic achievement;
(2) Verifying if internal resilience assets (social and emotional competences) and environmental assets (family social capital, friends' social capital) are moderators of the relationship between cumulative risk and the different outcomes.

Method

1.1   Sample

The sample included 2840 adolescents, 46% boys, aged from 11 to 18 years old (M=13,95; SD=1,80). Data collection was held within the Health Behaviour in School-aged Children (HBSC) survey [20, 21].The study provides nationally representative data of Portuguese adolescents, from 139 Portuguese public schools using cluster sampling with class as the basic sampling unit (28.2% were attending the 6th grade, 31.4% the 8th grade and 40.3% the 10th grade).

1.2   The survey

The main HBSC survey included questions on different aspects of adolescent behaviour and life style [more details about the survey variables can be found in Matos, et al. (2012)]. For the purpose of this specific study, the following variables were used for different purposes:

- Cumulative risk index – father and mother employment, family structure, school satisfaction, skipping classes, and bullied at school;
- Outcomes variables - school achievement, psychological symptoms (3 items), health related quality of life (10 items), substance use (tobacco, alcohol and cannabis – 3 items);
- Moderator variables: Internal resilience assets scale (18 items), family social capital (4 items), friends and other relevant social capital (8 items), teachers relationship (3 items).

1.3   Procedure

Data were collected through anonymous self-completion questionnaires administered in the classroom by teachers [details about the survey procedures can be found in Roberts, Tynjälä, Currie, & King [22]. During the data collection procedure, a letter was sent to all the selected schools with the questionnaires and the information about procedures. The questionnaire took about 60 to 90 minutes to respond. The study had the approval of a Scientific Committee, the National Ethics Committee and the National Commission for Data Protection and followed strictly all the guidelines for human rights protection.

1.4   Analysis

SPSS Statistics 21 was used in data analysis. To obtain the cumulative risk index, each of the six variables were categorized into two categories (0=father/mother have a job, nuclear family, like school, doesn't skip classes, not victim of bullying; 1=father/mother doesn't have a job, single parent or reconstructed family, doesn't like school, skipping classes, victim of bullying). The six dichotomous variables were summed to obtain a score from zero to six. The outcome variables, namely substance use related variables, health related quality of life items, and psychological symptoms variables, were submitted to an *optimal scaling* procedure [see Simões, Batista-Foguet, Matos, & Calmeiro [23], for more details].The object scores were saved to obtain these three outcome factors. For the academic achievement the variable Z score was used. For the moderator variables, reliability analysis were conducted with the items of each moderator under study (internal assets α=.93; family social capital α=.92; friends and other relevant social capital α=.91; teachers relationship α=.64). After the reliability analysis, the items of each scale were summed to obtain the summative scales score. For the moderation analyses, the summative scales scores were categorized in two categories (1=low/medium scores; 2=high scores). In the analyses of variance, when homogeneity of variance wasn't verified, robust tests of equality of means (Brown-Forsythe) were used.

Results

Table 1 presents descriptive statistics for the cumulative risk index, outcomes and moderator variables. Since the last two categories of cumulative risk index had a small number of cases, they were aggregated to the fourth category.

Table1. Frequencies and percentages of cumulative risk index, mean values, standard deviations, maximum and minimum values of outcomes and moderator variables

Variable/Factor								
Cumulative Risk Index		**0**	**1**	**2**	**3**	**4**	**5**	**6**
%		13,7	21,1	31,1	22,3	9,0	2,5	0,3
Outcome variables/factor		Min.		Max.		Mean		SD
Substance use		-.37		9,84		0.00		1,00
Psychological symptoms		-.78		3.11		0.00		1,00
Health related quality of life		-.2.56		1,51		0.00		1,00
Academic achievement		-.2.03		2.04		0.00		1,00
Moderator variables								
Internal assets	Low/Medium	54.03		8.71		18		63
	High	76.14		7.33		64		90
Family social capital	Low/Medium	18.85		4.92		4		24
	High	27.21		1.06		25		28
Friends social capital	Low/Medium	38.64		9.80		8		48
	High	53.77		2.38		49		56
Teachers relationship	Low/Medium	5.07		1.03		3		6
	High	8.57		.50		7		9

1.5 Relationship between cumulative risk and different health outcomes (substance use, psychological symptoms, health related quality of life) and academic achievement

Four one-way ANOVA were carried out to analyse the relations between cumulative risk and health related outcomes and academic achievement. The variance analyses reveals a significant effect for cumulative risk on all the outcomes under study (substance use: $F_{4, 2652}=12.37$, $p<.001$; psychological symptoms: $F_{4, 2652}=14.74$, $p<.001$; health related quality of life: $F_{4, 2652}=18.92$, $p<.001$; academic achievement: $F_{4, 2652}=46.91$, $p<.001$). Despite reaching statistical significance, the effect size, calculated using eta squared, was small for the majority of the outcomes (.02 for substance use and psychological symptoms and .03 for health related quality of life). Only for academic achievement a medium effect size was verified (.07). Post-hoc comparisons using the Scheffe test (for academic achievement) or Dunnett T3 (for health related outcomes) indicated the present of different types of effects. For substance use, a cumulative effect was verified, as previously described, which means that only in the presence of four or more risk factors the levels of substance increase significantly. No differences were found between previous levels of risk (0 to 3). For academic achievement a linear effect was verified, after the first risk factor (no differences were found between no risk factors and one risk factor) where is possible to verify that each risk factor contributes to a significant decrease in academic achievement. For health related quality of life and psychological symptoms an effect between the above mentioned cumulative and the linear effects was verified, where there is a significant increase of psychological symptoms, or decrease of health related quality of life, only in the presence of three risk factors, that is accentuated again in the presence of four or more risk factors.

1.6 Internal and environmental resilience assets as moderators of the relationship between cumulative risk and health and academic outcomes

Since it was verified a significant relation between cumulative risk and health and academic outcomes, four sets two-way ANOVA's (one for each outcome) were carried out in order to see whether internal resilience assets (IA) and environmental assets (family social capital–FamSC, friends and other relevant-FriSC, teachers relationship-TR) can mitigate the effect of cumulative risk (CR) over the outcomes under study. The results are presented in Table 2.

Table 2. Two-way Anova: main effects and interactions of internal and environmental assets, and cumulative risk, and effects size (η^2) for the four outcomes

	Substance Use	Psychological Symptoms	Health Related Quality of Life	School Achievement
CR	$F4, 1583=4.88, p<.01, \eta^2=.01$	$F4, 1583=10.52, p<.001, \eta^2=.03$	$F4, 1583=8.44, p<.001, \eta^2=.02$	$F4, 1583=22.01, p<.001, \eta^2=.05$
IA	ns	ns	ns	$F1, 1583=4.30, p<.05, \eta^2=.00$
CR x IA	ns	ns	ns	ns
CR	$F4, 2603=13.33, p<.001, \eta^2=.02$	$F4, 2603=10.41, p<.001, \eta^2=.02$	$F4, 2603=11.67, p<.001, \eta^2=.02$	$F4, 2603=38.62, p<.001, \eta^2=.06$
FamSC	$F1,2603=11.09, p<.01, \eta^2=.00$	$F1, 2603=89.90, p<.001, \eta^2=.03$	$F1, 2603=192.89, p<.001 \eta^2=.07$	$F1, 2603=10.59, p<.01, \eta^2=.00$
CR x FamSC	ns	ns	ns	$F4, 2603=2.67, p<.05, \eta^2=.00$
CR	$F4, 2556=13.25, p<.001 \eta^2=.02$	$F4, 2555=10.81, p<.001, \eta^2=.02$	$F4, 2555=14.30 p<.001, \eta^2=.02$	$F4, 2555=34.81, p<.001, \eta^2=.05$
FriSC	$F1 2556=7.21, p<.01, \eta^2=.00$	$F1, 2555=4.52, p<.05, \eta^2=.00$	$F1, 2555=65.49, p<.001, \eta^2=.03$	ns
CR x FriSC	ns	ns	ns	ns
CR	$F4, 2591=12.43, p<.001, \eta^2=.02$	$F4, 2591=12.53, p<.001, \eta^2=.02$	$F4, 2591=17.10, p<.001, \eta^2=.03$	$F4, 2591=41.18, p<.001, \eta^2=.06$
TR	$F1, 2591=14.26, p<.001, \eta^2=.01$	$F1, 2591=41.55, p<.001, \eta^2=.02$	$F1, 2591=54.24, p<.001, \eta^2=.02$	$F1, 2591=27.33, p<.001, \eta^2=.01$
CR x TR	ns	ns	ns	ns

As shown in Table 2, only one significant interaction, between cumulative risk behaviour, and family social capital, for school achievement was significant, although with a very small effect size. Nevertheless, significant main effects of cumulative risk (as mentioned in the previous analysis, with medium effect size for school achievement) and internal and environmental assets were obtained. Internal assets present a significant main effect on school achievement, which means that independently of the cumulative risk, adolescents that have higher internal assets present a better school achievement. For the environmental assets, it was possible to verify that family social capital, and teachers' relationship have a significant and positive effect on every outcomes (adolescents with higher levels on family social capital and teachers relationship present lower levels of substance use and psychological symptoms, and higher levels of health related quality of life and school achievement). The same occurs with friends' social capital, except for school achievement, where friends' social capital didn't show a significant effect. Again, for these main effects, the effect sizes were, generally, small. A medium effect size was found for the family social capital on health related quality of life.

Conclusions

Cumulative risk presents an important threat to adolescent well-being and positive development. Our results support the theoretical framework stressing the impact of cumulative risk. We found that there is a significant impact of risk in all of the four outcomes under study (substance use, psychological symptoms, health related quality of life, and school achievement). This impact is higher on school achievement, as revealed by a medium effect size. For these results it may contribute the fact that in the composition of the cumulative risk index, three of the variables are school related variables (school satisfaction, skipping classes and bullied at school). Notably cumulative risk acts differently according to the outcome under analysis. For substance use, a cumulative effect was verified. This finding is similar to the one described by Rutter [14] and verified in other studies [15, 16], since the effect of risk is significantly higher in the group that refers four or more risks, comparatively to the groups that have fewer than four risks. Thus it appears that the risk only acts promoting a significant increase in substance use when it becomes accumulated. For school achievement another kind of effect was verified, a linear or addictive effect as mentioned by other authors [1], was verified after a non-significant impact of the first risk factor, where each risk factor contributes significantly for a progressive decrease in academic achievement. For psychological symptoms and health related quality of life, again a different effect was verified, which can be described as being between the previous mentioned effects. For these outcomes, we found that the first two risk factors don't present a significant impact, but that happens with the third risk factor and again with fourth risk factor.

The search for moderators of these cumulative risks had only revealed a small but significant effect of family social capital on school achievement. All the other internal and environmental assets analysed only appeared as protective factors. Family social capital and teacher's relationship present a significant protective effect for all outcomes under consideration, since adolescents that present higher levels of these assets present lower levels of involvement in substance use and psychological symptoms, as well as a better health related quality of life and higher school achievement. Internal assets present a protective effect only for school achievement and friends and other relevant for all outcomes, except for school achievement.

The findings should be interpreted within the limitations of this study, namely the cross-sectional design and potential errors or bias. Notwithstanding this limitation may have been overcome since our study used a large sample of adolescents with sampling procedures that ensured a nationally representative sample. Finally the procedures to define the cumulative risk variable were created considering similar weight of each item, and it may be the case that each item score has varying levels of weight for the cumulative risk.

Nevertheless, our results point towards two important directions in adolescent resilience: (1) the reduction of risk exposure and its effects, since cumulative risk impact significantly, and negatively, on health and academic outcomes; (2) the importance of internal and external resilience assets promotion, since they act as protective factors for positive outcomes. A special attention to the role of families should be taken in consideration, as well as embrace them as crucial partners for resilience promotion interventions, as it already is advocated in some of these programs [24].

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Facing the Adversity: the Role of Internal Assets on Well-Being in Adolescents with Special Needs

Celeste Simões[1], Margarida Gaspar Matos[1] and Antony Morgan[2]

[1] *Universidade de Lisboa (Portugal)*
[2] *National Institute for Health and Clinical Excellence (UK)*

Abstract. Negative life events are one of the major threats to well-being. Some adolescents are more vulnerable, namely adolescents with special needs that face special challenges for growing up healthy and happy. Nevertheless, internal assets can act as protective factors. The aim of this study is to analyze the factors that moderate the impact of negative life events, among adolescents with special needs, on well-being. The sample included 472 adolescents with special needs, mean age 14 years old. Pupils attended 77 public schools in Portugal. Sample was collected within the HBSC (Health Behavior in School aged Children) Portuguese survey. Questions used in this study, covered well-being, internal assets and life events. Results showed that the well-being of adolescents with special needs who had a set of internal assets (personal and social competences) was protected, even when they faced negative life events. However when several negative life events were present, the assets that continued to be protective were problem solving, $F(4, 383) = 3.79$, $p = .005$, $\eta^2 = .04$, and self-efficacy, $F(4, 377) = 3.39$, $p = .010$, $\eta^2 = .04$, suggesting the resilience properties of these factors.

Over recent decades the interest in positive youth development has increase substantially and some researchers have shifted their focus towards asset based (instead of pathogenic) models of health focusing on positive outcomes. New perspectives and concepts in psychology, such as positive psychology and resilience, have contributed greatly to this shift. In addition further development in the conceptualization of mental health away from traditional mental illness orientations are helpful in progressing the positive health field. Constructs, such as subjective well-being, life satisfaction and quality of life provide examples of how these developments have manifest themselves in research (Masten, 1999; Moore, Lippman, & Brown, 2004; Morgan et al., 2011; Park, 2004).

Subjective well-being and its predictors

Subjective well-being arises from a person perception that their life is desirable, pleasant, and good. Three important characteristics of well-being emerge in this context: it is subjective; includes positive measures; typically include a global assessment of all aspects of a person's life (Diener, 2009)**.** Several authors argue that it plays an important role in adolescent positive development (Matos, Simões, Batista-Foguet, & Cottaux, 2010; Park, 2004; Simões, Matos, & Batista-Foguet, 2014). The predictors of subjective well-being fall into four categories: demographics, personality/dispositional characteristics, acquisition of skills, and environmental variables. In each category it is possible to identify both positive and negative predictors of well-being. One such indicator is life events. The impact of negative life events has obvious links with mental health problems (Edward, 2005; Hjemdal, Aune, Reinfjell, Stiles, & Friborg, 2007; Oatley & Bolton, 1985; Sandberg, Rutter, Pickles, McGuinness, & Angold, 2001). However, research has also shown significant and consistent, although modest associations with well-being (Diener, 2009). In this field it is important to emphasize the cumulative nature of risk, or in this case stressful events, and its consequences on well-being and mental health. The fact that the number of risk factors is a key feature for the understanding of maladjustment problems was raised by Rutter who found that the combination of four risk factors quadruplicates the likelihood of maladjustment, comparatively with the combination of three risk factors (Rutter, 1979). This hypothesis, known has cumulative risk, emphasize to a large extent the quantitative aspects of risk as the crucial question comparatively to the qualitative aspects of risk (Daeater-Deckard, Dodge, Bates, & Pettit, 1998; Forehand, Biggar, & Kotchick, 1998; Simões, Matos, Tomé, & Ferreira, 2008).

Moderators of the impact of negative life events on well-being

An early review conducted by Johnson (1986) found that life stress in children and adolescents was significantly related to anxiety, depression, low levels of self-esteem, delinquent behavior and poor school performance. Although, when other variables, (e.g. social support, behavioral style), were assessed, the results indicated that stressful events are related to adjustment problems in some cases, but not in others. Johnson (1986) therefore reinforced the need to ensure that potential moderator variables are included in research to better understand the pathways to outcomes of interest. This approach has been taken in resilience research which embraces the need to understand how to minimize risk and increase protective factors. Resilience can be defined as an interactive phenomenon or process reflecting relatively good outcomes despite serious experiences of stress or trauma (Luthar, 2003). According to Benard (2004, p. 14), "personal resilience strengths are individual characteristics, also called internal assets or personal competencies, associated with healthy development and life success". The internal assets analyzed in these framework are: cooperation and communication, empathy, problem solving, self-efficacy, self-awareness and goals and aspirations (Hanson & Kim, 2007). *Cooperation and communication* competences are associated with flexibility in relationships, work team skills and assertiveness in the expression of emotions, feelings, ideas and needs (Austin & Kilbert, 2000). These skills promote interpersonal connection and relationship building (Benard, 2004) that are important protective factors for well-being. Moreover, Pennebacker (1997, cit. in Tardy & Dindia, 2006) have demonstrated that talk or write about traumatic life events has a positive impact in subjective well-being. *Empathy*, the ability to understand other feelings and perspectives, is viewed as an important aspect in the area of interpersonal functioning (Fitness & Curtis, 2005) and well-being (Wei, Liao, Ku, & Shaffer, 2011). Wei and collaborators refer that a possible mechanism for these relations can be the fact that when people are empathetic to others, they feel the gratefulness of others, they may feel that are they doing something good for others and more connected to others, and this way experience positive feelings. Several authors also associate empathy to resilience (Benard, 2004; Grotberg, 1997; Kumpfer, 1999; Parker, Cowen, Work, & Wyman, 1990). As Benard (2004) mention "empathy not only helps facilitate relationships development, it also form the basis of morality, forgiveness, and compassion and caring for others" (p.15). *Problem solving* entails the ability to plan, critical think, reflect and evaluate different solutions before taking a decision or go for an action (Austin & Kilbert, 2000). Several studies show

that these abilities are present in resilient children and adolescents (Munist et al., 1998). Problem solving skills seem to have a fundamental role in risk and resources evaluation, in the search for healthy environments or relations, as well as in the development of realist plans that are key aspects for adaptation and resilience (Werner & Smith, 2001). *Self-efficacy* reflects the judgment of an individual's ability to accomplish a certain level of performance (Bandura, 1999). According to Bandura, efficacy beliefs are important foundations of human action. These beliefs affect adjustment not only through their direct impact on outcomes, but also because they influence other outcomes determinants. Like problem solving skills, "efficacy beliefs also play a key role in shaping the courses lives take by influencing the types of activities and environments people choose to get into" (Bandura, 1999). As so, self-efficacy play also an important role on adaptation to negative life events (Boehmer, 2007) and in resilience processes (Rutter, 1987; Taggart, Taylor, & McCrum-Gardner, 2010). *Self-awareness* refers to the capacity to become the object of one's own attention (Morin, 2006). Greater levels of self-awareness were found to be associated to lower levels of depressive symptoms (Tandon & Solomon, 2009) and to well-being (Yalcin, Karahan, Ozcelik, & Igde, 2008). Finally, *goals and aspirations* and other future oriented strengths are associated to positive outcomes in health and school context in adolescence (Benard, 2004). Future goals help to delay immediate gratification (Munist et al., 1998) and the pursuing of attaining self-concordant goals are associated to a better global mood and well-being (Sheldon & Kasser, 2001). Having goals and aspirations is a determinant aspect in active construction of our own lives, that means be an agent (Bandura, 1999; Stein & Newcomb, 1999). As Bandura (2001, p. 2) points "the core features of agency enable people to play a part in their self-development, adaptation and self-renewal with changing times.

The vulnerability of adolescents with special needs

Different life stages may predispose our ability to maintain levels of well-being. However adolescents appear to be particularly vulnerable to risks that can compromise their well-being. Many authors have highlighted (Jessor, 1998; Matos & Sampaio, 2009; Park, 2004; Simões, 2007; Topolski et al., 2001) that adolescents are at risk of peer pressure, substance use problems, violence, academic failure, and mental disorders. Some adolescents, like adolescents with special educational needs, can be especially vulnerable to these risks and consequences (Matos & Equipa do Projecto Aventura Social, 2003; Simões, Matos, Tomé, et al., 2009; Taggart et al., 2010). As a consequence, besides

normative risks, experiences and turning points, these individuals experience also disability-related risks and experiences (Katims, Zapata, & Yin, 1996; King et al., 2003) that increases the likelihood of negative outcomes. Simões, Matos, Ferreira et al. (2009), in a study of adolescents with special educational needs, highlight that they more frequently suffer negative life events, compared to their mainstream peers, such as, more frequent victims of bullying (9.8% adolescents with special educational needs; 4.3% adolescents without special educational needs) or being rejected by classmates (12.1% adolescents with special educational needs; 4.7% adolescents without special educational needs). They also are more likely to perceive their school performance to be lower than average (26.2% adolescents with special educational needs; 19.7% adolescents without special educational needs), feel more pressed to do homework (15.6% adolescents with special educational needs; 10.9% adolescents without special educational needs), feel more frequently unhappy (20.7% adolescents with special educational needs; 13.2% adolescents without special educational needs), lonelier (10.6% adolescents with special educational needs; 6.6% adolescents without special educational needs) and sadder (12.7% adolescents with special educational needs; 8.3% adolescents without special educational needs; Simões, Matos, Ferreira, & Tomé, 2010; Simões, Matos, Tomé et al., 2009). More recently Taggart et al. (2010) found that adolescents with behavioral/emotional problems were more likely to experience a variety of negative life events comparatively to their peers without these kind of health issues (e.g. have been in contact with the police, have been bullied, have experienced community/ sectarian issues, have had parents involved in a court appearance, had both parents unemployed, experienced issues of parental mental health and/or substance abuse). Furthermore, Mitchell and Hauser-Cram (2009) refer that adverse negative life events in family context predicts externalizing and internalizing problems in young children with developmental delays. McBride and Siegel (1997) suggest that learning disabilities can also be a risk factor in adolescent suicide. According to these authors, some issues associated to learning disabilities, namely poor problem solving and social skills, can lead these adolescents to experience many negative life events and impair then to cope successfully with these events. To overcome all the challenges and risks that adolescence poses and maintain good levels of well-being, adolescents with special needs have to be resilient and possess internal assets that help them to cope with life events (Simões, Matos, Ferreira et al., 2009; Taggart et al., 2010).

This study intend to investigate the "relative resilience" of adolescents who already have special needs, that poses to them several challenges, when confronted to further negative life events, that is, their capacity to withstand with resilience when confronted with significant levels of adversity. More specifically, this study aims to contribute to a further understanding of how protective factors can promote the well-being of adolescents with special needs by: a) verifying the most common negative life events experienced by this group; b) analyzing the relationship between negative life events and well-being; c) analyzing the relationship between negative life events and internal assets (cooperation and communication, empathy, problem solving, self-efficacy, self-awareness and goals and aspirations); d) assessing whether internal assets can act as moderators between negative life events and global well-being.

Method

Sample

Sample consists of 472 pupils, adolescents with special needs, 58.7% boys and 41.3% girls, aged 10 to 18 years old (M = 14.09; SD = 1.84). Pupils were from 77 public schools, 50.3% and were attending 6th grade, 35.5%, 8th grade and 14.2%, 10th grade. About half of the sample referred that had an health problem that inhibits them to do things that their peers do (48.7%). From these, 8.3% refer a chronic disease, 9.2% a physical disability, 6.3% a visual disability, 5.4% a hearing disability, 10.0% a language or speech disability, 25.1% learning disabilities, and 10.1% other disabilities (not mentioned). Most pupils had Portuguese nationality (95.7%) and have working parents, either father (76.2%), or mother (60.5%).

The survey

The questionnaire used in this study was the "*Risk and resilience in adolescence survey*" (Simões, Matos, Tomé, et al., 2009). This questionnaire includes, besides sociodemographic questions, a set on HBSC/WHO questions regarding life styles (Currie, Smith, Boyce, & Smith, 2001; Matos et al., 2006), and a set of questions related with *Resilience*, *Life events* and *Global well-being* (Simões, Matos, Tomé, et al., 2009).

For the purpose of this study, the following instruments were used:

Life Events Checklist (Johnson, 1986)

Forty-one life events list and four open questions (e.g. moving to a new home, death of close friend, failing a grade). For each event, adolescents indicate: (a) if they have experienced the event in past year; (b) whether they viewed as a good or a bad event; (c) the effect or impact in ones' life (1- None; 4-A lot).

Resilience – California Healthy Kids Program Office (CHKS, 2000)

Eighteen items referring to six Internal assets (3 items per assets; 1-Never; 5-Always): cooperation and communication (e.g. "I enjoy working together with other students my age"); empathy (e.g. "I try to understand what other people feel and think"); problem solving (e.g. "I know where to go for help with a problem"); self-efficacy (e.g. "There are many things I do well"); self-awareness (e.g. "I understand why I do what I do"); goals and aspirations (e.g. "I have goals and plans for the future").

Global Well-being (Kidscreen 10-Gaspar & Matos, 2008)

Ten items (1-Never; 5-Always) referring to well-being in main life areas (e.g. "Feel good and in shape"; "Have enough time for your own"; "Perform well on school").

Procedures

Sample was collected within the HBSC/WHO Portuguese health survey (Matos, et al., 2006; Simões, Matos, Tomé, et al., 2009). From a national official list of schools from the whole country, 143 public schools were selected at random. Detailed sampling and data collection procedures were presented elsewhere (Currie et al., 2001; Matos et al., 2006). During the HBSC data collection procedure, a letter was sent to all the selected schools asking for a special collaboration in order to extend this survey to adolescents with special needs. Those would answer to a special questionnaire, after answering an adapted and reduced version of the HBSC survey, concerning health related behaviors. Response rate for schools was 54%.

Analysis

PAWS Statistics 18 was used in data analysis. Reliability analyses were conducted with the items of each Internal Assets subscale and Well-Being scale. After the reliability analysis, the items of each scale/subscales were summed to obtain the six internal assets subscales and the global well-being scale. The *Negative Life Events Scale* was obtained by selecting the negative events that had been experienced in past year from the life events checklist. Each event, selected as bad event, was multiplied by its impact or effect. After this operation all these scores were summed to obtain the Negative Life Events Scale.

Analysis of variance was chosen to analyze the impact of Negative Life Events on Global Well-being and impact of Negative Life Events on Internal Assets (One-way between-groups analysis of variance) and the moderation effect of internal assets (Two-way between-groups analysis of variance). To run these analyses it was assured that the main assumptions of analysis of

variance were met (dependent variable measured at continuous level; random sampling as mentioned in the previous section; independence of observations, i.e. national large sample, stratified by regions, of the Portuguese adolescents with SEN in mainstream). The homogeneity of variances was also tested. When the Levene's test for homogeneity of variances was significant, Robust test (Brown-Forsythe test) was used, in one-way ANOVA, and a more stringent significance level for main effects and interaction effects (i.e. .01) was set in the two-way ANOVA analysis. The assumption of normal distribution of dependent variable for each combination of the groups of the independent variables wasn't verified for all the groups, nevertheless it is also known that ANOVA is quite "robust or tolerant" to violations of normality (Pallant, 2007).

To run the moderation analysis (Two-way ANOVA), the six Internal Assets subscales were categorized in three categories. The scores of each Internal Assets subscales were divided into three equal groups (low, medium and high scores) through visual binning in SPSS (2 cutpoints, equal percentiles based in scanned cases). The Negative Life Events Scale was also categorized into three groups. The criterion for the categorization was theoretical, namely the cumulative risk effect mentioned above. The first group was composed by the subjects that refer no negative events in the past year (score 0); the second group include the subjects that refer few negative life events with significant impact their life's[1] (score 1 to 12); the third group included the subjects that refer several negative life events in past year (score above 12).

The missing data for the scales included in the analysis ranged from 11% (for problem solving scale) to 16% (for self-awareness).

Results

Cronbach Alpha for each of the six sub-scales of the Internal Assets ranged from .60 (cooperation and communication sub-scale), to .76 (self-awareness sub-scale). The Global Well-being scale (Kidscreen 10) had a Cronbach Alpha of .75 (after elimination of the item "your parents treat you fairly"), and was therefore from then on including 9 items. Psychometric properties of these scales (including Confirmatory Factorial Analysis of Global Well-being scale) were deeply reported elsewhere (Matos, Gaspar, & Simões, 2012; Simões, Matos, Tomé, et al., 2009). For the internal assets subscales, a confirmatory factorial analysis was performed in order to confirm its structure (first order model). The analysis showed good fit indices (CFI & NNFI >.95; RMSEA & SRMR <.05) with all factors

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[1]In this group the maximum number of negative life events with great impact or effect was three

loadings above .55. Table 1 presents descriptive statistics for the Internal Assets subscales, Global Well-being and Negative Life Events scales.

Negative life events referred by adolescents with special needs

Table 2 present the ten most referred negative life events. In these groups of events there are family related events, school related events and friends related events. As it is possible to see these events are qualified by the majority of the adolescents as bad events. Nevertheless, about one third of the adolescents hadn't qualified the "Change in parent's financial status" and "increased absence of a parent from home" as negative. The life event most referred by the adolescents with special needs was "making failing grades on report card", reported by 27.5% of the adolescents and by 92.9% of these as a negative event. This event was followed by "death of a family member" that occur in 22.9% of the cases and "serious illness or injury in family member, in 14.3% of the cases. The percentage of adolescents that referred a great impact of these events on their

lives is above 40%. An exception is made in "change in parent's financial status" that only about one quarter (27.8%) had mentioned as having a great effect. On the opposite side, the percentage of adolescents that referred that these events had no effect in their lives was below 30%. Again, an exception was made in the case of "failing a grade" that was referred by 42.2% as having no effect in their lives.

Relationship between Negative Life Events (NLE) and Global Well-being (GWB)

A one-way between-groups analysis of variance was conducted to explore the impact of *Negative Life Events (NLE)* on levels of *Global Well-being (GWB)*, as measured by the Global Well-being scale. As mentioned before, subjects were divided into three groups according to the number of *NLE* that had occurred in the last year. The robust test of equality of means was used since the test of homogeneity of variances was significant. The Brown-Forsythe test indicated a statistically significant difference at the $p < .05$ for the three *NLE* groups: $F(2, 407) = 4.70$, $p = .03$. Despite reaching statistical

Table 1. *Mean values, Standard Deviations, Maximum and Minimum values and Cronbach Alpha of Internal Assets Subscales, Global Well-being and Negative Life Events Scales*

Scale	Subscale	Min.	Max.	M	SD	α
Internal Assets	Cooperation and Communication	3	15	11.11	2.59	.60
	Empathy	3	15	10.38	3.07	.69
	Problem solving	3	15	10.67	3.13	.75
	Self-efficacy	3	15	10.89	2.40	.67
	Self -awareness	3	15	10.99	2.93	.76
	Goals and aspiration	3	15	9.80	3.42	.62
Global Well-being		11	45	34.15	5.99	.75
Negative Life Events		0	91	5.54	8.65	

Table 2. *Frequencies and percentages of negative life events and its impact*

Event	Experience in past year		Bad Event		Impact or Effect %			
	N	%	N	%	No	Some	Moderate	Great
Making failing grades on report card	125	27.5%	104	92.9%	24.0%	8.7%	25.0%	42.3%
Death of a family member	104	22.9%	84	92.3%	25.0%	10.7%	13.1%	51.2%
Serious illness or injury in family member	65	14.3%	57	93.4%	21.1%	12.3%	15.8%	50.9%
Change in parent's financial status	99	21.8%	54	67.5%	22.2%	11.1%	38.9%	27.8%
Troubles with classmates	63	13.9%	50	92.6%	22.0%	20.0%	14.0%	44.0%
Failing a grade	58	12.8%	45	84.9%	42.2%	2.4%	11.1%	44.4%
Death of a close friend	43	9.5%	38	97.4%	28.9%	7.9%	18.4%	44.7%
Increased number of arguments between parents	46	10.1%	37	92.5%	27.0%	16.2%	10.8%	45.9%
Losing a close friend	47	10.4%	35	89.7%	20.0%	11.4%	22.9%	45.7%
Increased absence of a parent from home	60	13.2%	34	68.0%	17.6%	20.6%	8.8%	52.9%

significance, the effect size, calculated using eta squared, was .02. Post-hoc comparisons using the Dunnett T3 test indicated that mean scores for the group with no *NLE* (*M* = 34.07; *SD* = 5.80) and the group with few *NLE* (*M* = 34.72; *SD* = 5.57) were significantly different from group with several *NLE* (*M* = 31.90; *SD* = 7.59). The group with no *NLE* did not differ significantly from the group with few *NLE*.

Relationship between Negative Life Events (NLE) and Internal Assets

To analyze the impact of NLE on Internal Assets (*Cooperation and Communication, Self-Awareness, Goals and Aspirations, Empathy, Problem Solving and Self-Efficacy*) a one-way between-groups analysis of variance was conducted. The robust test of equality of means was used for self-awareness since the test of homogeneity of variances was significant. Table 3 presents descriptive data, *F* test and effect sizes for the six internal assets. As it is possible to see, there are significant differences in empathy, problem solving and goals and aspirations levels in the different negative life events groups, being the adolescents with negative life events the ones who present higher levels of these assets. Post-hoc comparisons using Tukey HSD test indicated that empathy mean score for the group with several NLE were significantly higher comparatively with the groups with few and without NLE, while for problem solving and goals and aspirations mean scores, the differences were only between the group with several NLE and the group without NLE (significantly higher for the group with several NLE comparatively with the group without NLE).

The group with few NLE doesn't differ from the other two groups for problem solving and goals and aspiration mean scores. Despite reaching statistical significance, the effect size, calculated using eta squared, was very small.

Internal Assets moderating the relationship between Negative life events (NLE) and Global Well-being (GWB)

Despite the small effect size obtained in the previous analysis, a set of two-way between-groups analysis of variance were conducted to explore the moderate effect of each of the six Internal Assets (*Cooperation and Communication, Self-Awareness, Goals and Aspirations, Empathy, Problem Solving and Self-Efficacy*) on the relation between *NLE* and *GWB*. As mentioned above, each Internal Asset subject was divided into three groups according to their scores (low, medium, high) (see Table 4 for ranges and means of each group).

In the first analysis it was intended to explore the moderating effect of *Communication and Cooperation* in the relationship between *NLE* and *GWB*. There was a statistically significant main effect for *Cooperation and Communication*, $F(2, 364) = 12.11$, $p < .001$. The effect size for *Cooperation and Communication* was medium (partial eta square = .06). Post-hoc comparisons using Tukey HSD test indicated that the mean score for the group with low levels of *Cooperation and Communication* skills (*M* = 32.37; *SD* = 5.84) was significantly different from the medium (*M* = 34.68; *SD* = 5.29) and high levels *Cooperation and Communication* skills groups (*M* = 35.91; *SD* = 6.19). The group with medium and

Table 3. *Mean values, Standard Deviations, F test and effect sizes for the six internal assets within each Negative Life Event group*

Internal Assets	NLE Group	*M*	*SD*	*F* test / Effect size
Cooperation & Communication	None	11.20	2.58	
	Few	11.04	2.74	$F(2, 397)= .19, p=.829$
	Several	11.00	2.16	$\eta^2 = .00$
Self-Efficacy	None	10.79	2.58	
	Few	10.93	2.32	$F(2, 409)= .15, p=.859$
	Several	10.93	2.35	$\eta^2 = .00$
Empathy	None	10.15	2.98	
	Few	10.08	3.17	$F(2, 397)= 5.77, p=.003$
	Several	11.63	2.50	$\eta^2 = .03$
Problem Solving	None	10.26	3.27	
	Few	10.64	3.09	$F(2, 419)= 4.22, p=.015$
	Several	11.72	2.81	$\eta^2 = .02$
Self-Awareness	None	10.65	3.43	
	Few	11.09	2.63	$F(2, 393)= .84, p=.432$
	Several	11.06	3.05	$\eta^2 = .00$
Goals & Aspirations	None	9.24	3.67	
	Few	9.78	3.32	$F(2, 402)= 3.20, p=.042$
	Several	10.64	3.28	$\eta^2 = .02$

Table 4. *Internal assets subscales: Ranges and means (M) for the low, medium and high groups*

Internal Assets *Subscales*	Low		Medium		High	
	Range	*M*	*Range*	*M*	*Range*	*M*
Cooperation and Communication	3–10	8.38	11–12	11.34	13–15	13.92
Empathy	3–9	6.95	10–12	11.05	13–15	13.85
Problem solving	3–9	7.34	10–12	11.12	13–15	14.20
Self-efficacy	3–10	8.69	11–12	11.47	13–15	13.80
Self -awareness	3–9	7.57	10–13	11.62	14–15	14.63
Goals and aspiration	3–8	5.82	9–11	9.85	12–15	13.72

high levels of *Cooperation and Communication* skills did not differ significantly from each other. The main effect for *NLE* was also significant, $F(2, 364) = 6.69$, $p = .001$; however the effect size for *NLE* was small (partial eta square = .04). Post-hoc comparisons indicated that the mean score for the group with several negative life events ($M = 31.26$; $SD = 7.53$) was significantly different from the group with few ($M = 34.80$; $SD = 5.47$) and the group without *NLE* ($M = 34.51$; $SD = 5.81$). The groups with few and without *NLE* did not differ significantly from each other. The interaction effect between *Cooperation and Communication* and *NLE* was not statistically significant, $F(4, 364) = 1.58$, $p = .180$.

In the second analysis it was intended to explore the moderating effect of *Empathy* in the relationship between *NLE* and *GWB*. The main effect of *Empathy*, $F(2, 367) = 2.60$, $p = .076$, did not reach statistical significance. The main effect for *NLE* was significant, $F(2, 367) = 8.63$, $p < .001$. The effect size for *NLE* was small (partial eta square = .05). Post-hoc comparisons indicated that the mean score for the group with several *NLE* ($M = 31.37$; $SD = 7.49$) was significantly different from the group with few ($M = 34.85$; $SD = 5.46$) and the group without *NLE* groups ($M = 34.14$; $SD = 5.79$). The group with few and without *NLE* did not differ significantly from each other. The interaction effect between *Empathy* and *NLE* was statistically significant, $F(4, 367) = 3.58$, $p = .007$. The effect size for this interaction, calculated using eta squared, was .04. Additional analyses to explore this relation were conducted. The sample was split into three groups, corresponding each group to a different level of the *Empathy* variable, and separated one-way ANOVA*s* were conducted. In the low levels of *Empathy* group there was a statistically significant difference at the $p < .001$ for the three *NLE* groups: $F(2, 139) = 9.65$, $p < .001$. The effect size, calculated using eta squared, was .12. Post-hoc comparisons using the Tukey HSD test indicated that mean score for several *NLE* group ($M = 28.10$; $SD = 5.82$) was significantly different from the few *(M = 35.31; SD = 5.21)* and the no *NLE* groups ($M = 33.44$; $SD = 4.73$).

The group with few *NLE* did not differ significantly from the group without *NLE*. In the medium levels of *Empathy* group the effect of *NLE* was not significant $F(2, 129) = 1.77$, $p = .174$. In the high levels of *Empathy* group there was a statistically significant difference at the $p < .05$ for the three *NLE* groups: $F(2, 96) = 3.61$, $p = .031$. The effect size, calculated using eta squared, was .07. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for several *NLE* group ($M = 31.00$; $SD = 8.36$) was significantly different from the few *NLE* groups ($M = 35.68$; $SD = 6.10$). The group without *NLE* ($M = 33.04$; $SD = 7.54$) did not differ significantly from few and several *NLE* group. Figure 1 illustrates the moderation effect of *Empathy* in the relation between *NLE* and *GWB*.

The third analysis was conducted to explore the moderating effect of *Problem Solving* in the relationship between *NLE* and *GWB*. There was a statistically significant main effect for *Problem Solving*, $F(2, 383) = 17.37$, $p < .001$. The effect size for *Problem Solving* was medium (partial eta square = .09). Post-hoc comparisons using Tukey HSD test indicated that the mean scores for the group with low levels of *Problem Solving* ($M = 32.71$; $SD = 6.18$) was significantly different from the groups with medium levels *Problem Solving* ($M = 34.48$; $SD = 5.46$) and high level *Problem Solving* ($M = 35.85$; $SD = 5.72$). The group with medium levels of *Problem Solving* group did not differ significantly from the high levels of *Problem Solving* group. The main effect for *NLE* was also significant, $F(2, 383) = 6.41$, $p = .002$. The effect size for *NLE* was small (partial eta square = .03). Post-hoc comparisons indicated that the mean score for the group with several *NLE* ($M = 32.04$; $SD = 7.66$) was significantly different from the group with few *NLE* groups ($M = 34.70$; $SD = 5.57$). The group without *NLE* ($M = 34.24$; $SD = 5.70$) did not differ significantly from the few and several *NLE*. The interaction effect between *Problem Solving* and *NLE* was statistically significant, $F(4, 383) = 3.79$, $p = .005$. The effect size for this interaction was .04. Additional analyses to explore this relation were conducted. The sample was split into three groups corresponding each group to a different level
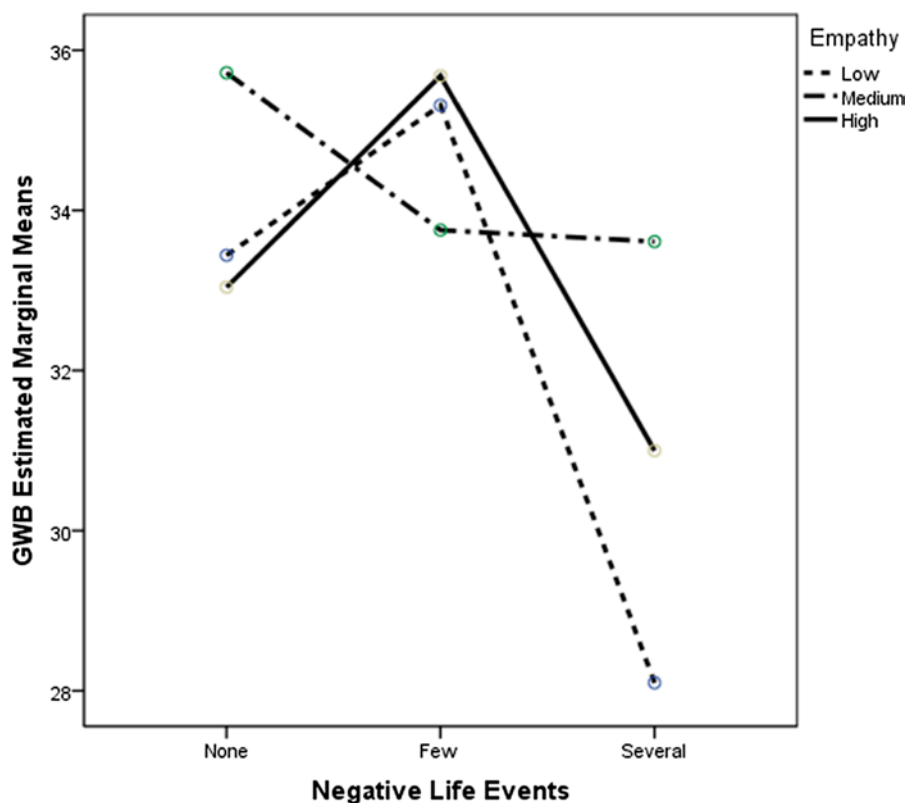
Figure 1. Analysis of the relationship between *Negative life events, Global well-being and Empathy.*

of the *Problem Solving* variable and separated one-way ANOVAs were conducted. In the low levels of *Problem Solving* group there was a statistically significant difference at the $p < .001$ for the three *NLE* groups: $F(2, 146) = 12.21$, $p < .001$. The effect size, calculated using eta squared, was .15. Post-hoc comparisons using the Tukey HSD test indicated that mean scores for several *NLE* group ($M = 25.50$; $SD = 7.82$) was significantly different from the few ($M = 33.35$; $SD = 5.77$) and the no *NLE* groups ($M = 33.64$; $SD = 5.15$). The few *NLE* group did not differ significantly from the group without *NLE*. In the medium levels of *Problem Solving* group the effect of *NLE* was not significant $F(2, 118) = .30$, $p = .742$ as well as in the high levels of *Problem Solving* $F(2, 116) = .43$, $p = .654$. Figure 2 illustrates the moderation effect of *Problem Solving* in the relation between *NLE* and *GWB.*

The fourth analysis was conducted to explore the moderating effect of *Self-Efficacy* in the relationship between *NLE* and *GWB*. There was a statistically significant main effect for *Self-Efficacy*, $F(2, 377) = 24.33$, $p < .001$. The effect size for *Self-Efficacy* was medium (partial eta square = .12). Post-hoc comparisons using Tukey HSD test indicated that the mean score for the group with high levels of *Self-Efficacy* ($M = 37.07$; $SD = 5.42$) was significantly different from the low levels *Self-Efficacy* group ($M = 32.91$; $SD = 5.60$) and medium level *Self-Efficacy* group ($M = 33.83$; $SD = 6.12$).

The group with medium levels of *Self-Efficacy* group did not differ significantly from the group with low levels of *Self-Efficacy*. The main effect for *NLE* was also significant, $F(2, 377) = 7.05$, $p = .001$. The effect size for *NLE* was small (partial eta square = .04). Post-hoc comparisons indicated that the mean score for the group with several *NLE* ($M = 31.37$; $SD = 7.49$) was significantly different from the group with few ($M = 34.95$; $SD = 5.47$) and the group without *NLE* groups ($M = 34.36$; $SD = 5.80$). The groups with few and without *NLE* did not differ significantly from each other. The interaction effect between *Self-Efficacy* and *NLE* was statistically significant, $F(4, 377) = 3.39$, $p = .010$. The effect size for this interaction was .04. Additional analyses to explore this relation were conducted. The sample was split into three groups, corresponding each group to a different level of the *Self-Efficacy* variable and separated one-way ANOVAs were conducted. In the low levels of *Self-Efficacy* group there was a statistically significant difference at the $p < .001$ for the three *NLE* groups: $F(2, 155) = 11.41$, $p < .001$. The effect size, calculated using eta squared, was .13. Post-hoc comparisons using the Tukey HSD test indicated that mean score for several *NLE* group ($M = 27.00$; $SD = 5.60$) was significantly different the few ($M = 33.96$; $SD = 5.04$) and the no *NLE* groups ($M = 32.67$; $SD = 5.29$). The few *NLE* group did not differ significantly from the group without *NLE*.
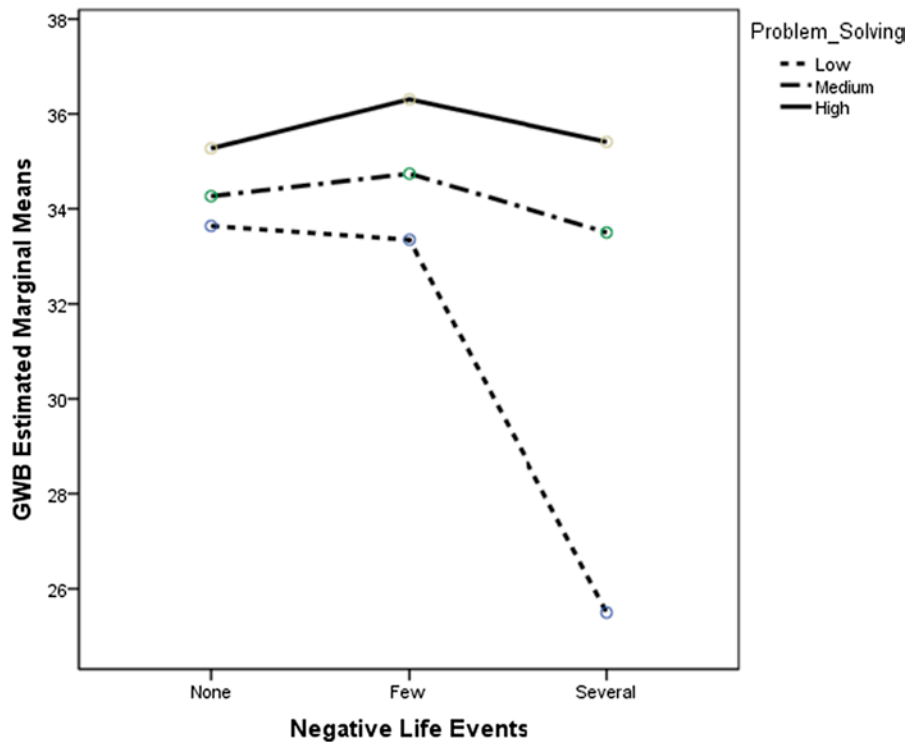
Figure 2. Analysis of the relationship between *Negative life events, Global well-being and Problem Solving.*

In the medium levels of *Self-Efficacy* group the effect of *NLE* was also significant $F(2, 120) = 4.33$, $p = .015$. The effect size was .07. Post-hoc comparisons using the Tukey HSD test indicated that mean score for several *NLE* group ($M = 33.83$; $SD = 6.12$) was significantly different the few ($M = 34.48$; $SD = 5.83$) and the no *NLE* groups ($M = 34.61$; $SD = 5.59$). The few *NLE* group did not differ significantly from no *NLE* group. In the high levels of *Self-Efficacy* group the effect of *NLE* was not significant, $F(2, 99) = .42$, $p = .658$. Figure 3 illustrates the moderation effect of *Self-Efficacy* in the relation between *NLE* and *GWB*.

The fifth analysis intended to explore the moderating effect of *Self-Awareness* in the relationship between *NLE* and *GWB*. There was a statistically significant main effect for *Self-Awareness*, $F(2, 366) = 12.55$, $p < .001$. The effect size for *Self-Awareness* was medium (partial eta square = .07). Post-hoc comparisons using Tukey HSD test indicated that the mean score for the group with low levels of *Self-Awareness* ($M = 32.23$; $SD = 5.54$) was significantly different from the medium ($M = 34.60$; $SD = 5.59$) and high levels *Self-Awareness* groups ($M = 36.29$; $SD = .6.53$). The group with medium and high levels of *Self-Awareness* did not differ significantly from each other. The main effect for *NLE* was also significant, $F(2, 366) = 8.91$, $p < .001$. The effect size for *NLE* was small (partial eta square = .05). Post-hoc comparisons indicated that the mean score for the group with several *NLE* ($M = 31.26$; $SD = 7.53$) was

significantly different from the group with few ($M = 34.83$; $SD = 5.62$) and the group with no *NLE* groups ($M = 34.30$; $SD = 5.59$). The group with few and no *NLE* did not differ significantly from each other. The interaction effect between *Self-Awareness* and *NLE* was not statistically significant, $F(4, 366) = .66$, $p = .620$.

In the sixth analysis it was intended to explore the moderating effect of *Goals and Aspirations* in the relationship between *NLE* and *GWB*. There was a statistically significant main effect for *Goals and Aspirations*, $F(2, 371) = 5.53$, $p = .004$. The effect size for *Goals and Aspirations* was small (partial eta square = .03). Post-hoc comparisons using Tukey HSD test indicated that the mean score for the group with low levels of *Goals and Aspirations* ($M = 33.48$; $SD = 6.01$) was significantly different from the high levels *Goals and Aspirations* group ($M = 35.30$; $SD = 5.83$). The group with medium levels of *Goals and Aspirations* ($M = 33.84$; $SD = 5.89$) did not differ significantly from the low and the high levels of *Goals and Aspirations* groups. The main effect for *NLE* was also significant, $F(2, 371) = 9.46$, $p < .001$. The effect size for *NLE* was small (partial eta square = .05). Post-hoc comparisons indicated that the mean score for the group with several *NLE* ($M = 30.65$; $SD = .88$) was significantly different from the group with few ($M = 34.83$; $SD = .41$) and the group without *NLE* groups ($M = 34.44$; $SD = .54$). The group with few and no *NLE* did not differ significantly from each other. The interaction effect between *Goals and Aspirations*
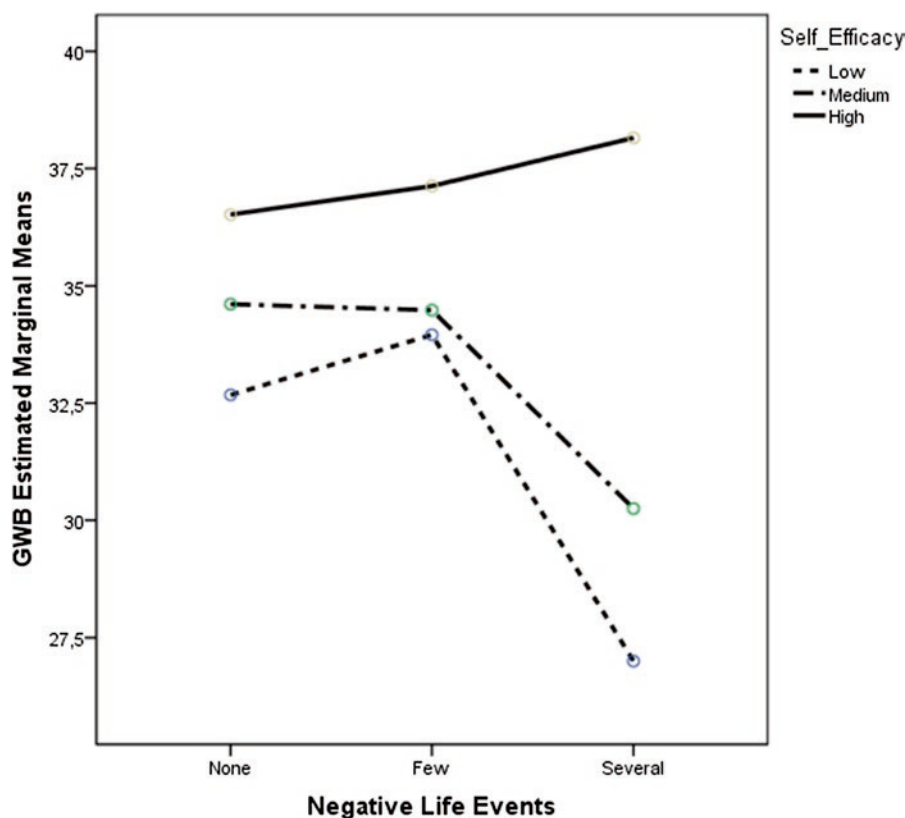
Figure 3. Analysis of the relationship between *Negative life events, Global well-being and Self-efficacy.*

and *NLE* was not statistically significant, $F(4, 371) = .72$, $p = .576$.

Discussion

Results showed that adolescents with special needs face different negative life events in their lives, but simultaneously had a set of internal assets that are protective factors regarding their well-being. Nevertheless, it is important to point that not all adolescents have protective or resilience factors to help them to deal with significant levels of adversity, but the ones who possess these factors generally have better results. In addition, another important remark is that neither all adolescents are confronted with significant levels of adversity, nor all the internal assets under study present a moderate effect over the impact of negative life events on well-being.

The negative life events most referred by the adolescents were events related to the main life contexts: family, school or peers. Some events like "change in parent's financial status" and "increased absence of a parent from home" weren't qualified as negative by about one third of the adolescents, probably because they were associated to positive outcomes. Some of the most referred events, namely "making failing grades on report card", "failing a grade" and "troubles with

classmates", were related to school context. Other studies conducted with special needs adolescents point out also for the presence of negative events in this context (Matos et al., 2006; Simões, Matos, Ferreira et al., 2009; Simões, Matos, Tomé et al., 2009). Although the majority of these events, were referred by the adolescents as having a great effect or impact in their lives, it seems important to point out that failing a grade was referred has having no impact for almost half of the adolescents. In this scope it is relevant to highlight that the way life events are perceived and categorized, influence the experience of adversity. The perception of an event as negative or stressful leads to negative emotions and feelings like anxiety, fear, sadness, lack of hope, guilty or anger. Some recent studies show that emotional regulation have an important role in this process, acting as a protective or risk factor for resilience in the initial stages to event exposure. Cognitive emotion regulation abilities, namely selective attention control and cognitive reappraisal of stressful events, when used in an adaptive way can prevent negative outcomes like depression (Troy & Mauss, 2011). For instance, these authors refer that selective attention control over irrelevant negative stimuli for wellbeing can lead to negative outcomes, being the reverse when these stimuli are relevant to well-being. Also cognitive reappraisal can have a protective role in stressful life contexts,

specifically when this strategy is used to change the intensity of negative emotions triggered by the confrontation with stress.

Negative Life Events had a negative and significant impact on Global Well-being, even it is a small impact, which is consistent with Diener's (2009) claims. A close analysis showed that there is a certain level of multiple negative life events to which adolescents seem more vulnerable. This fact is also consistent with the literature, that suggests that the cumulative effect of multiple negative life events is one major threat to well-being and positive adjustment in adolescence (Daeater-Deckard et al., 1998; Forehand et al., 1998; Rutter, 1979; Werner & Smith, 2001).

Negative Life Events had also a significant impact on Internal Assets. The analysis conducted in this scope showed that the levels of empathy were significantly higher in the groups that had been exposed to several negative life events in the last year comparatively to the ones that hadn't been exposed to this kind of events or only to few negative events. Moreover, the levels of problem solving and goals and aspirations were significantly higher in adolescents that had to face some level of adversity (few or several negative life events) comparatively to the ones that haven't been confronted with negative life events. These results are in line with the thriving hypothesis (Carver, 1998) that points to the positive effects that can result from the confrontation with adversity, namely knowledge and competences acquisition.

The moderator effect of internal assets on the impact of negative life events in well-being was found only in three of the six assets under analysis. Regarding "cooperation and communication", "self-awareness" and "goals and aspirations" it was only found a single significant main effect on well-being, which means that the adolescents that referred higher levels of these assets have higher levels of well-being independently of the number of negative life events. Nevertheless, these effects were small regarding "cooperation and communication" and "goals and aspirations". Regarding "self-awareness" it was found a medium effect on well-being. These results are consistent with the literature that refers these assets as important features in well-being (Austin & Kilbert, 2000; Benard, 2004; Sheldon & Kasser, 2001; Yalcin et al., 2008).

Considering "Problem Solving" and "Self-Efficacy" it was also found a significant effect on well-being, in this case a medium effect. These effects show that high or medium levels of problem solving and high levels of self-efficacy seem to have a protective effect on well-being, which is consistent with other studies (Austin & Kilbert, 2000; Bandura, 1999; Benard, 1995; Boehmer, 2007; Munist et al., 1998; Werner & Smith, 2001). Nevertheless, besides the main effects, it was also found a significant interaction, although with a small effect, between these assets and the negative life events. An in-depth analysis of the interaction between problem solving and negative life events, showed a large effect of negative life events on well-being in the group with low levels of problem solving skills. This means that in the presence of several negative life events, adolescents with low problem skills decrease significantly their levels of well-being, while regarding adolescents with medium or high levels of problem solving skills, the number of negative life events has no significant impact in well-being levels, which means that medium or high levels of problem solving have a protective-stabilizing effect on well-being (Luthar, Cicchetti, & Becker, 2000).

Regarding "self-efficacy" it was also found a large effect of negative life events on well-being in the low levels of self-efficacy group, in the same way as it had happen with problem solving. Once more, in the presence of several negative life events, adolescents with low self-efficacy levels decrease significantly their levels of well-being. Nevertheless, this same profile is verified also for medium levels of self-efficacy, which points out that high levels of self-efficacy are required to cope with significant adversity, while medium levels of problem solving skills seem enough to deal with success considering similar levels of adversity. Only high levels of self-efficacy had revealed a protective-stabilizing effect on well-being (Luthar et al., 2000).

The effect of empathy on well-being wasn't statistically significant. Nevertheless, the interaction between empathy and negative life events was significant, although small. The detailed analyses showed that, in the groups with high levels and low levels of empathy, there was a medium effect of negative events which was expressed by a significant decrease in the well-being levels, in the presence of several negative life events. For adolescents with medium levels of empathy the number of negative life events has no significant impact in the well-being levels. It seems that "too much" empathy or "not enough" empathy, both have not the desired protective effect on well-being, as had happened with medium levels of empathy. As such, "medium" seems the "right amount" of empathy in order to cope with different levels of adversity. These results are indeed a bit unexpected and deserves surely further research, since there are several authors that point out the importance of empathy on well-being (Wei et al., 2011) and in the resilience processes (Benard, 2004; Grotberg, 1997; Kumpfer, 1999; Parker et al., 1990).

It seems still important to mention an interesting feature highlighted in this study that is the fact that while negative life events (few or several) are associated to high levels of problem solving and that these

skills act as resilience factors (i.e. can maintain the levels of well-being even in the presence of significant difficulties), for empathy it was found also that high levels of negative life events are associated to high levels of empathy, but these high levels aren't in turn protective of well-being. So, even though the thriving hypothesis, that points to some positive effects of adversity, namely gain of competences as mention before, can be applied in this case, it seems that in some cases these gains aren't always a plus for well-being.

This study highlighted the impact of negative life events in well-being and to the importance of internal assets. Both these results are important issues regarding psychotherapeutical interventions targeting young people either planning more universal interventions, or more selective interventions. Even in the presence of especially heavy negative life events, the promotion of internal assets seems always a good starting point.

Considering the negative impact of stressful events in adolescents with special needs (McBride & Siegel, 1997; Mitchell & Hauser-Cram, 2009) and the lack of important assets in this group, it is extremely important to include these assets, in school-based intervention programs, as a way to help adolescents with special needs to face daily challenges and stressful life events.

It is still important to mention that these findings should be interpreted within the limitations of the study, which include its cross-sectional design, the potential error or bias from self-report and the heterogeneity of the population of adolescents with special needs. Also the lack of analysis by gender, age, and type of special need can be mentioned as a limitation of the study.

The cumulative effect of life events is a threat to Well-being in Adolescents with Special Needs. In this context, Internal Assets are important protective factors for Well-being. This is the case of Cooperation and Communication, Self-Awareness and Goals and Aspirations that appear as protective factors since higher levels of these assets are associated to higher levels of Well-being independently of the level of Negative Life Events. Problem Solving and Self-Efficacy are moderators of the relation between Negative Life Events and Well-being: Medium and high levels of Problem Solving appear as a resilience factor, while only high levels of Self-Efficacy seems effective to cope successfully with high levels of adversity. Empathy appears also as moderator of impact of Negative Life Events on Well-being but only in medium levels; High levels of Empathy hadn't reveal as a protective factor for Well-being. Taking in account these results, the promotion of internal assets is a promising feature in pychotherapeutical interventions, aiming at you people autonomy and well-being, especially regarding young people facing multiple adversity.

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