"YES … I CAN": PSYCHOLOGICAL RESILIENCE AND SELF-EFFICACY IN ADOLESCENTS

Elisabetta Sagone
Researcher in Developmental and Educational Psychology, esagone@unict.it
Maria Elvira De Caroli
Full Professor in Developmental and Educational Psychology, m.decaroli@unict.it
Department of Educational Sciences, University of Catania, Italy

http://dx.doi.org/10.17060/ijodaep.2016.n1.v1.240

Fecha de Recepción: 11 Enero 2016
Fecha de Admisión: 15 Febrero 2016

ABSTRACT

The aim of this study was to verify the correlations between three types of self-efficacy and factors of resilience in a sample of 155 Italian early adolescents. We used the following measures: the Scholastic Self-efficacy Scale, the Empathic Self-efficacy Scale, and the Problem solving Self-efficacy Scale (Caprara, 2001) and the Resiliency Attitudes and Skills Profile (De Caroli & Sagone, 2014). Results demonstrated that early adolescents highly self-efficient in problem solving and in scholastic performances, and those who reported a higher empathic self-efficacy tended to express a greater resilience than lowly self-efficient ones. Future research could deepen these significant relations in children and adults.

Key words: empathic self-efficacy, problem solving, resilience, adolescence

1. INTRODUCTION

The central aim of this paper is to explore the relationship between psychological resilience and self-efficacy in adolescence (Bandura, 1986; Wagnild & Young, 1993), suggesting to deepen the role of different types of self-efficacy in relation to this important construct considered as the ability to overcome hardships and flourish in the face of them (Ryff & Singer, 2003) and to bounce back from adversities adopting positive coping strategies (Masten et al., 1999). As recently realized in Italian school-context (Sagone & De Caroli, 2013), we applied the model of Wagnild and Young (1993) for the analysis of resilience verifying the hypothesis according to which the adolescents with high levels of resilience perceived themselves as more efficient in general (and, specifically, in scholastic context) than those with low levels of resilience. It is noteworthy to distinguish the generalized self-efficacy (Schwarzer, 1994; Scherbaum, Cohen-Charash, & Kern, 2006) and the situationally-oriented and domain-specific self-efficacy (Pajares, 1996); so, as noted by Schwarzer (1994), the former corresponds to the belief in one's competence to cope with a broad range of stressful situations or challenging demands (see Schwarzer & Jerusalem, 1995), whilst the latter is conceptualized as the

belief in one's malleable ability to handle specific tasks and life skills (Caprara, 2001; Pajares & Schunk, 2001).

1.1. Psychological resilience: definition and measurement

Psychological resilience is referred to both the *ability* to successfully cope with change, misfortune or adversity (Flach, 1989; Wagnild & Young, 1993; Garmezy, 1996) and the *dynamically defined process* of overcoming the negative effects of risk experience with positive outcomes (Rutter, 1993; Lightsey, 2006) and avoiding the negative development associated with these risks (Olsson, Bond, Burns, Vella-Broderick, & Sawyer, 2003). On the basis of the Flach's theory (1989), focused on the "law of disruption and re-integration" in terms of the act of "falling apart" or "being distressed by change", resilience has been considered as the "ability an individual has to recover from distressing and challenging life events with increased knowledge to adaptively cope with similar adverse situations in the future"; additionally, resilience is made up of the psychological strengths required in order to successfully navigate change. This theory postulated that temporary challenges are viewed as good opportunities to deal with old wounds, to discover new coping mechanisms, and generally re-organize one's perspective on daily life. This process, defined as "re-integration", could permit to re-form ones' view of the world and of oneself in the light of a homeostatic process (Flach, 1989).

Subsequently, according to the most famous conceptualization of resilience, proposed by Wagnild and Young (1993), resilience has been defined in terms of "a personality characteristic that moderates the negative effects of stress and promotes adaptation" and consisted of the following five components (valued by means of the first 25-item version of the Resilience Scale for Adults): 1) *equanimity*, that is, the balanced viewpoint of one's life and experiences; 2) *perseverance*, that is, the persistence in spite of adversity and the willingness to continue the struggle to reconstruct one's life; 3) *self-reliance*, that is, the ability to recognize personal strengths and limitations; 4) *meaningfulness*, that is, the understanding that life has a purpose and the estimation of one's contributions; 5) *existential aloneness*, that is, the awareness that each individual's life path is unique. These five components have been grouped in two central factors, that is, *personal competence* (e.g., self-reliance, independence, invincibility, mastery, resourcefulness, and perseverance) and *acceptance of self and life* (e.g., adaptability, flexibility, and balanced perspective of life).

More recently, on the basis of Hurtes and Allen's approach (2001) and according to our revised factorial model of resilience (De Caroli & Sagone, 2014), highly resilient individuals try to figure out things they don't understand (engagement), to deal with the consequences of their actions and can change their behavior in order to match them with the situation (adaptability), tend to avoid situations where they could get into trouble and learn from their mistakes (control), are likely to know when they are good at something (competence), and tend to look for the "brighter side" of tough situations and to manage stress with sense of humor (sense of humor).

Resilience has been studied with targets ranging from childhood to adulthood using various measures: for example, the Resilience Scale (RS: Wagnild & Young, 1993), the Dispositional Resilience Scale (Prati, 2010), the Connor-Davidson Resilience Scale (Connor & Davidson, 2003), the Resilience Scale for Adults (Friborg et al., 2003) and the Resiliency Attitudes and Skills Profile (RASP: Hurtes & Allen, 2001). This last measure, with the relative framework of reference for the analysis of resilience, was the focus of the current study.

1.1. Perceived self-efficacy: definition and measurement

Perceived self-efficacy is defined as the set of "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances" (Bandura, 1986, p.391), in relation to three main dimensions: *level*, *strength*, and *generality*. In line with the

Social Cognitive Theory (Bandura, 1997), significant differences among individuals are noted in the *level* of difficulty of tasks that they believe they can perform, in the *strength* of their beliefs about their ability to achieve a given level of difficulty, and, lastly, in the *generality*, that is referred to the idea according to which "efficacy beliefs associated with one activity can be generalized to similar ones within the same activity domain or across a range of activities" (see Holladay & Quinones, 2003, p.1094). Furthermore, perceived self-efficacy is "conceptualized as *perceived operative capability.* It is concerned not with what one *has* but with belief in what one *can do* with whatever resources one can muster. The operative nature of perceived self-efficacy is an integral feature of the procedure used to access people's efficacy beliefs. Individuals are not asked to rate the *ability they possess,* but rather the strength of their assurance they *can execute* given activities under designated situational demands" (Bandura, 2007, p.646).

The three types of self-efficacy analyzed in this paper are referred to the individual's ability to sense another person's feelings and need for emotional support, to experience emotions from another person's perspective, and to be sensitive to how one's actions affect others' feelings (that is, *emphatic self-efficacy*), to the perceived ability to solve and cope with problems in a creative and innovative way (that is, *self-efficacy in problem solving*), and to the belief about one's ability to overcome the tasks in school-context (that is, *self-efficacy in scholastic performance*). Differences for sex have been observed in the sense that women perceived themselves as more efficient in empathic self-efficacy than men, while men perceived themselves as more efficient in social self-efficacy than women (Caprara & Steca, 2005); in addition, Coleman (2003) and Vera et al. (2004) showed that social self-efficacy of females is significantly higher than males. Moreover, Eklund et al. (2012) found that girls reported a higher academic self-efficacy than boys.

A number of self-efficacy measures are recognized and validated by several researchers in different and specific domains: for example, academic self-efficacy (Multon, Brown, & Lent, 1991; McCormick & McPherson, 2003), self-efficacy for learning (Zimmerman, 2000), coping self-efficacy in at-risk behaviors (Kasen, Vaughan, & Walter, 1992; Chesney et al., 2006), health self-efficacy (Lee e tal., 2008), teaching self-efficacy (Vieluf, Kunter, & van de Vijver, 2013), creativity self-efficacy (Mathisen & Bronnick, 2009), career decision self-efficacy (Betz & Hackett, 2006), pregnancy self-efficacy (Bland et al., 2013), regulatory emotional self-efficacy (Caprara et al., 2008), empathic self-efficacy (Di Giunta et al., 2010), and so on.

2. FOCUS OF STUDY

The main purpose of this research is to analyze the correlations between factors of resilience and three types of self-efficacy, revealing the differences for sex and age groups. Analyzing the relationship between psychological resilience and self-efficacy beliefs reported in a more recent literature, a narrow number of empirical evidences showed that the more the individuals reported high levels of resilience, the more they perceived themselves as highly efficient (Lightsey, 2006; Schwarzer & Warner, 2013), also in academic context (Kanevsky, Cork, & Frangkiser, 2008; Speight, 2009; Keye & Pidgeon, 2013; Riahi et al., 2015). For this rationale, we predicted that:

H_1) adolescents highly self-efficient in problem solving will express a greater resilience than lowly self-efficient ones;

H_2) adolescents highly self-efficient in empathy will report a higher resilience than lowly self-efficient ones;

H_3) adolescents highly self-efficient in scholastic performances will show a larger resilience than lowly self-efficient ones.

Differences for sex and age in each of the abovementioned topics will be examined, considering the previous findings in Italian school-context.

2.1. Sampling

The sample of this study consists of 155 Italian early adolescents, divided in 68 boys and 87 girls and recruited from two State Junior Schools sited in Catania, Sicily (Italy). Their age range is from 11 to 13 years (M=11,9, sd=,83). Parental consent for the underage adolescents' participation to this study was requested and obtained in accordance with the requirements of privacy and anonymity laid down by Italian Law (Law Decree DL. 196/2003).

2.2. Measures

The **Empathic Self-efficacy** Scale is composed by 12 statements evaluable on a 5-point Likert scale (Cronbach's alpha=.78) ranging from 1 (equal to *not at all efficient*) to 5 intervals (equal to *completely efficient*): e.g., "How well can you experience how a person in trouble feels?".

The **Problem solving Self-efficacy** Scale consists of 14 statements on a 7-point Likert scale (Cronbach's alpha=.81) ranging from 1 (equal to *not at all efficient*) to 7 intervals (equal to *completely efficient*): e.g., "How well can you find new solutions to problems?".

The **Scholastic Self-efficacy** Scale is formed by 12 statements valuable on a 7-point Likert scale (Cronbach's alpha=.90) ranging from 1 (corresponding to *not at all efficient*) to 7 intervals (corresponding to *completely efficient*): e.g., "How well can you plan your scholastic activities?".

The Italian version of **Resiliency Attitudes and Skills Profile** (RASP: De Caroli & Sagone, 2014) is a self-report questionnaire with 34 statements, judged on a 6-point Likert scale from 1 (corresponding to *strongly disagree*) to 6 intervals (corresponding to *strongly agree*) and grouped into five dimensions typically associated to resilient people: a) *sense of humor* (α=.65; e.g., "Laughter helps me deal with stress"), b) *competence* (α=.68; e.g., "I know when I am good at something"), c) *adaptability* (α=.75; e.g., "I can change my behavior to match the situation"), d) *engagement* (α=.80; e.g. "I try to figure out things I do not understand"), and e) *control* (α=.78; e.g., "I avoid situations where I could get into trouble").

All these measures have been administered in classroom setting by an expert researcher during the time of schooling.

2.3. Data analysis

The data examination was carried out using the SPSS 20 by means of Pearson's linear correlations, linear regressions, and t-tests. Sex and age of participants were used as independent variables, while mean scores obtained on each self-efficacy measures and factors of resilience were used as dependent variables.

3. RESULTS

For self-efficacy measures, descriptive analyses revealed that early adolescents expressed intermediate mean scores in problem solving (M=67,84, sd=11,41), in empathic (M=47,76, sd=6,18), and in scholastic performance self-efficacy (M=42,85, sd=10,11), without significant differences for sex and age. For factors of resilience, descriptive analyses indicated that early adolescents reported high mean scores in dimension of *engagement* (M=4,78, sd=,70), intermediate mean scores in *competence* (M=4,58, sd=,80), *sense of humor* (M=4,55, sd=1,01), and *control* (M=4,49, sd=,90), and low mean scores in *adaptability* (M=4,25, sd=,75), also in this case without significant differences for sex and age.

Correlational analyses were computed between self-efficacy measures and factors of resilience (Table 1), noticing that almost all factors of resilience were linked to the three types of self-efficacy:

a) sense of humor was correlated strongly with self-efficacy in problem solving, but moderately with empathic and scholastic self-efficacy;

b) competence was moderately correlated with self-efficacy in problem solving;

c) adaptability was strongly correlated with problem solving, empathic, and scholastic self-efficacy;

d) control was correlated strongly with scholastic self-efficacy, but moderately with problem solving and empathic self-efficacy;

e) engagement was strongly correlated with problem solving and empathic self-efficacy, but moderately related to scholastic self-efficacy.

Table 1 – Correlations between RASP and self-efficacy scales (n=155)

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RASP	Self-Efficacy in problem solving	Self-Efficacy in empathy	Self-Efficacy in scholastic performance
Sense of humor	,405**	,292**	,219**
Competence	,391**	,160	,155
Adaptability	,472**	,523**	,423**
Control	,309**	,251**	,467**
Engagement	,567**	,631**	,245**

To deepen the influence of self-efficacy on the factors of resilience, we have carried out linear regressions using the factors of resilience as dependent variables and the three types of self-efficacy as independent variables. As shown in Table 2, problem solving self-efficacy positively predicted the dimensions of *competence* (R=,391, R^2=,147, *F*=27,63, *p*<.001) and *sense of humor* (R=,405, R^2=,159, *F*=30,07, *p*<.001); in addition, empathic, scholastic, and problem solving self-efficacy positively predicted *adaptability* (R=,623, R^2=,376, *F*=31,89, *p*<.001); moreover, scholastic and empathic self-efficacy positively predicted *control* (R=,489, R^2=,229, *F*=23,83, *p*<.001); lastly, empathic and problem solving self-efficacy positively predicted *engagement* (R=,690, R^2=,469, *F*=69,04, *p*<.001).

Table 2 – Linear regressions between self-efficacy and resilience (n=155)

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SES	RASP	*Beta*	*t*	*p-value*
Problem solving self-efficacy	Sense of humor	,405	5,484	,000
	Competence	,391	5,256	,000
Empathic self-efficacy	Adaptability	,367	4,92	,000
Scholastic self-efficacy		,266	3,85	,000
Problem solving self-efficacy		,176	2,23	,027
Scholastic self-efficacy	Control	,432	5,93	,000
Empathic self-efficacy		,148	2,02	,045
Empathic self-efficacy	Engagement	,460	6,68	,000
Problem solving self-efficacy		,327	4,75	,000

4. CONCLUSION

The findings of this study indicated that early adolescents showed high *engagement*, intermediate *competence*, *sense of humor*, and *control*, and low *adaptability*. So, in line with the revised model of resilience (De Caroli & Sagone, 2014), it meant that these adolescents perceived themselves as highly able to try to figure out things they don't understand (engagement), moderately capable to know when they are good at something (competence), to look for the "brighter side" of tough situations and to manage stress with sense of humor (sense of humor), and to avoid situations where they could get into trouble and learn from their mistakes (control), but considered themselves as scarcely likely to deal with the consequences of their actions and to change their behaviors for matching them with the situation (adaptability). As predicted in initial hypotheses (H_1, H_2, and H_3), results demonstrated that the more the early adolescents were highly self-efficient in problem solving, in scholastic performances, and in empathy, the more they tended to express a greater resilience. These data were confirmed by linear regressions analysis that revealed the influence of self-efficacy on the factors of resilience. On the basis of theoretical issue proposed by Aspinwall and Richter (1999), one of the central aspects of individual self-efficacy is the belief that by means of exercise of control it is possible to influence the outcome of events in one's life and the successful adaptation to a variety of circumstances; control beliefs are considered as important aspects in the development of competence in adolescents who express high levels of resilience. In the same direction, results of this current paper showed that the factors of control and adaptability are strongly influenced by self-efficacy both in scholastic performance and in empathy.

Future research could deepen the correlation between self-efficacy and resilience in children and adults.

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