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## **Resilience As a Relational Construct: Theoretical and Empirical Evidences.**

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## Introduction

Positive psychology is concerned with identifying, measuring, and enhancing human strengths and is a complementary framework for the deficit-based medical model. While the pathogenic paradigm focuses on why and how illness occurs, the salutogenic paradigm focuses on the origins and development of health and wellness, and looks at the functioning of the individual in various life circumstances. Of particular interest within this paradigm are theories which focus on individual's resilience, as the ability to maintain psychological well-being even when exposed to trauma or adversity. The general aim of this study is the integration and systematization of scientific knowledge regarding the relational nature of resilience by critically evaluating the more recent literature and analyzing and integrating the theoretical models at the basis of the different definitions of the construct. Specifically, we first explored and assessed the extent to which the five components of Model ERAAwC of Relational Competence Theory (RCT, L'Abate & Cusinato, 2011), that is Emotionality, Rationality, Action, Awareness and Context, can explain the strengths and abilities that produce, enhance and even reduce resilience. Then, as the emotional and awareness component empirically emerged as prevalent, we further investigated their contribution to resilience building on the Broaden and Built Theory of Positive Emotion by Tugade and Fredrickson (2004) and Zautra's Dynamic Model of Affects (2004). Finally, following Bonanno's (2004) paradigm we collected evidences that there are substantial individual variation in response to potentially traumatic events leading to multiple and sometimes unexpected pathways to resilience .

Theoretically, we integrated the contribute of Relational Competence Theory (RCT, L'Abate, 1995), the Broaden-and Built Theory (Tugade & Fredrickson, 2007), The Dynamic Model of Affect (Zautra, 2004), the Coping and Emotion Flexibility paradigm (Bonanno, 2011), and the Multiple Trajectories of Outcome Approach

(Bonanno, 2008) to resilience research, proposing a conceptualization of resilience as “relational”.

Empirically, we examined the interpersonal, emotional and cognitive components of resilience, the processes that promote and reduce it, and the heterogeneity of responses (outcomes) to potential trauma across several studies, samples, measures and methodologies: 1) The influence of emotional and relational resources on parenting quality ( $N = 324$ ), 2) Resilience and its shielding effect on relationship quality and life satisfaction ( $N = 318$ ), 3) Relational Resilience and Pro-social behavior in adults ( $N = 339$ ), 4) The effects of Resilience on substance abuse and treatment ( $N = 429$ ), 5) Resilience and Social Network dynamics ( $N = 121$ ).

This research aims to make an innovative and advanced contribution to the field with an integrated, theoretically and empirically grounded understanding of resilience that may be used to develop preventative intervention models in various contexts. Importantly, investigating resilience as a relational construct may result in specific intervention strategies aimed at assisting both individual and families in managing the turbulences and transitions of their life stages as well as unexpected potentially traumatic events.

## **Part 1: Theoretical Evidences.**

## Theoretical Evidences

The literature on resilience has been evolving over the past 70-80 years, however, only in the last two or three decades it has grown into a broad, dynamic and comprehensive field of study as the construct can be considered applicable at the individual, family, group or organisational level and the topic is therefore relevant to a number of fields of study (O'Neal, 1999). Resilience has been described either as an individual's capacity for maintenance, recovery or improvement in mental health following life challenges (Ryff, Singer, Dienberg Love, & Essex, 1998), a successful adaptation following exposure to stressful life events (Werner, 1989), and as an individual's capacity for transformation and change (Lifton, 1993) and classified in literature (Masten, Best & Garnezy, 1990) into three classes: 1) as predictor of good outcome in high-risk groups, 2) as moderator able to enhance or reduce the effect of adversity, 3) as pattern of recovery from trauma. The study of resilience has arisen from the empirical identification of characteristics of survivors of trauma and adversities and, despite lacking a theory of reference, has evolved from the first simplistic attempts to describe resilient qualities to uncover the process of attaining those qualities (Connor & Zhang, 2006).

Although family research has mainly focused on addressing the complex issues of determining what protective and recovery factors are critical to adjustment and adaptation in the face of specific risks, cluster of risks as well as family crisis situations, contemporary resilience research has progressed beyond descriptive issues to focus on the underlying processes by which all factors exert their influence, mainly focusing on self-regulatory (emotion, arousal, behavior) processes, stress responses and the ability to capitalize on support structures (interactions and attachment). Researchers have concluded that each person has an innate capacity for resilience, proving that resilience is not a fixed personality trait, but rather the process of doing what is necessary to survive in different contexts (Bonanno, 2008)

Resilience or the ability to thrive in the face of adversity is determined by complex interactions between genetic makeup, previous exposure to stress,

personality, coping style, availability of social support and using multivariate designs, it appears that no single variable explains more than a small portion of the variance (Bonanno, Brewin, Kaniasty, & La Greca, 2010). Resilience comprises cognitive and behavioral tendencies that reflect dispositional character traits and patterns of behavior that develop through life experiences (Burns & Anstey, 2010) and determine substantial individual variation in response to potentially traumatic events (Bonanno, 2004). A stable trajectory of healthy functioning, or resilience, when exposed to trauma or adversity, is typically the most common outcome observed (Bonanno, 2010).

Considering its dynamic, contextual, and also attributional nature, we proposed that resilience needs a competence-based approach, grounded in a developmental systemic perspective, which emphasizes relational processes, emotional and cognitive strengths, resources and context. Thus, this research explored resilience as a relational construct, focusing on those interpersonal characteristics that support efforts to promote harmony and balance during developmental transitions, changes over time, crisis, prolonged challenges and traumatic events.

The general aim of the first, theoretical part of this paper is the integration and systematization of scientific knowledge regarding the relational nature of resilience by critically evaluating the more recent literature and proposing an integrated dynamic model of resilience. In the second, empirical part of this work the components at the basis of relational resilience are analyzed and investigated and the dynamic model tested. Specifically, we first explored and assessed the extent to which the five components of Model 1 ERAAwC of Relational Competence Theory (RCT, L'Abate & Cusinato, 2011), that is Emotionality, Rationality, Action, Awareness and Context, can explain the strengths and abilities that produce, enhance or reduce resilience. Then, as the emotional and awareness component emerged as prevalent, we further investigated their contribution to resilience in light of the Broaden and Built Theory of Positive Emotion by Tugade and Fredrickson (2004) and The Dynamic Model of Affect by Zautra (2004). Finally, we introduced

the Coping and Emotion Flexibility paradigm (Bonanno, 2011), and the Multiple Trajectories of Outcome Approach (Bonanno, 2008) challenging the assumption that resilience is rare and proposing that it represents a distinct, common trajectory of healthy response to potentially traumatic events with substantial individual variation (Bonanno, 2010).

## **Chapter 1.1 - Relational Competence Theory (RC).**

Hierarchical relational competence theory (L'Abate, 1986, 2005, 2008; L'Abate & Cusinato, 2011) views paradigms as conceptual constructions overseeing a variety of psychological theories and models. Relational competence theory gives dimensional and relational meanings to monadic psychiatric classification and comprises 16 models derived from meta-theoretical and theoretical assumptions that encompass relational competence socialization in different settings and in different relationships (Bakan, 1968; Brehm, Miller, Perlman, & Campbell, 2002; Clark & Mills, 1979; DeGenova & Rice, 2005). These models are interrelated models at different levels of abstraction and complexity which represent attempts to capture the process of socialization in intimate and non-intimate relationships. This theory applies not only to individuals in relationships but also to dyadic and multi-relational systems, such as couple, family, parent-child, siblings, in-laws as well as to non-intimate exchange relationships (L'Abate et al. 2010).

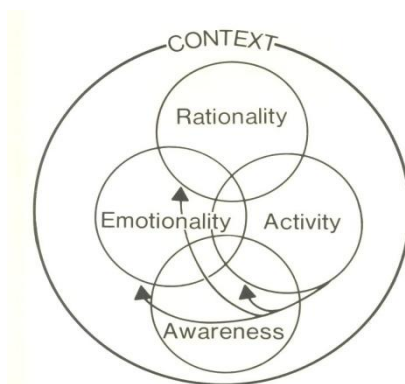
### **Relational Competence.**

Whether resilience is even best considered as a single, underlying psychological quality or a series of related, but distinct qualities is still a major theoretical and measurement issue. Current evidences suggest that domain specificity seems more useful in research and practice applications than an overall and global definition of resilience, indeed, of questionable utility (Neill & Dias, 2000). Numerous measures have been developed to assess different factors related to resilience and have been used both with clinical and non-clinical populations. However, their psychometric properties have revealed several limitations, mostly referable to the multi-dimensional nature of the measures (Campbell-Sills & Stein, 2007). Thus in this thesis we have proposed Relational Competence (Cusinato & L'Abate, 2010), a multidimensional construct (Figure 1.0) consisting of a hierarchy of specific abilities and skills (emotions, cognitions, actions, awareness and context sensibility) that

allow measurement and validation (L'Abate & Cusinato, 2010) as the conceptual framework for a dynamic and relational model of resilience. A relationally competent individual is resilient, and the higher the level of such competence, the greater the likelihood of withstanding stresses, threats, and crises (L'Abate, 2009). Relational Competence (RC) is defined by how effective an individual is in relation with others, and is composed of skills that involve learning processes over a life-time from continued reciprocal, expressive, close, committed, interdependent, and prolonged interactions (L'Abate, 2005; Bakan, 1968; Brehm, Miller, Perlman, & Campbell, 2002; Clark & Mills, 1979; DeGenova & Rice, 2005). According to Model<sup>1</sup> (ERAAwC) of Relational Competence Theory (L'Abate & Cusinato, 2010), RC varies along a horizontal dimension based on individual resources available and exchangeable in relationships within self and others (Figure 1.2) and is defined by five sequential components: *Emotionality*, *Rationality*, *Activity*, *Awareness*, and *Context*.

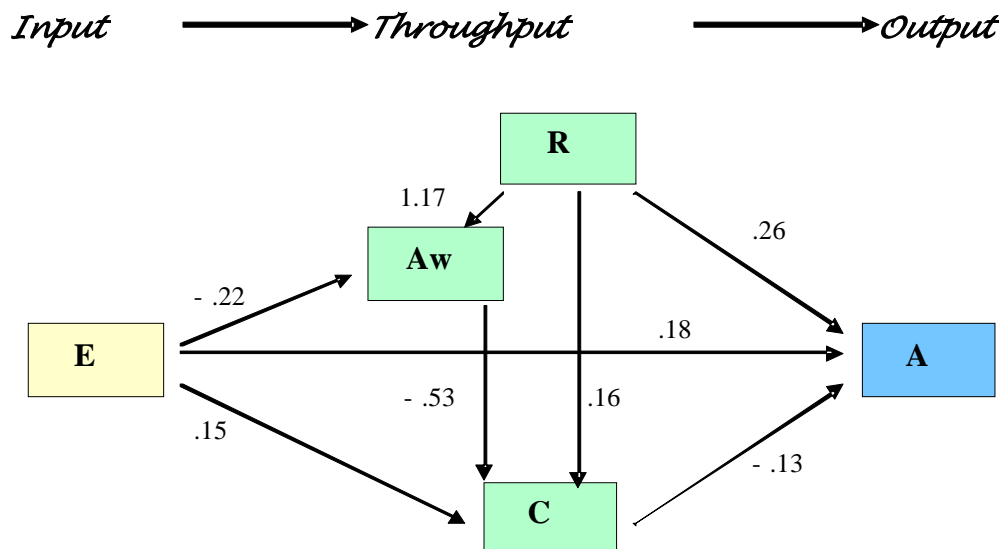
The multiple dimensions of competence have been viewed and measured in research as an important outcome (Gadner, 1993; Weissberg & Greenber, 1997) in itself, indicative of positive development. Resilience, which involved adaptive responses to environmental stressors and changes and an opening up of opportunities (Rutter, 1987), requires functioning and skills in different areas including emotional, cognitive, behavioral and moral/ethical competence.

**Figure 1.1.** The E-R-A-AW-C model of relational competence (L'Abate, 1986)



This ERAAwC model serves as a basis for understanding the development of personality socialization from *E* to *C* (L'Abate, 1986, 1994, 1997) and describes an almost invariant sequence of steps in an information processing that starts with *E* (expressing and sharing feelings), progresses to *R*, (negotiation and problem-solving about pros and cons of possible courses of action), find agreement or consensus about which particular course of action (*A*) to follow, and verify its effectiveness (*Aw*) with acknowledgment, denial, or ignorance of context.

**Figure 1.2** Standardized coefficients ( $\lambda$ ) for the ERAAWC dimensions (Cusinato & Corsi, 2005)



Relational Competence Theory states that 'Socialization in the relationships varies along dimensions ranging from functional to dysfunctional styles and prototypes connected to real life conditions rather than to abstract, hypothetical, inferred, or ideally intra-psychic constructs. These connections attribute dimensional, relational, and contextual meanings to otherwise static, monadic, and non-relational psychiatric categories and serves as a framework to understand psychiatric classification according to relational dimensions rather than according to categorical lists of symptoms and syndromes (L'Abate, 2005).

Socialization, that is the process whereby relational competence is articulated, nurtured, molded, and produced by lifelong relationships, by pleasurable and painful events, and by traumatic and joyful experiences (L'Abate, 2011) has been identified as one of the best predictor of resilience (Blum, 1998). As the perceived presence of a supportive social network enhances a person's capacity to deal with life's challenges (Heatherton & Nichols, 1994; Wagnild & Young, 1993), we expected social (relational) competence to include factors that compose resilience and Resilience to be significantly accounted for by Relational Competence and involving emotional, cognitive, social and learning processes over a life-time from continued interactions with intimates and non-intimate. In light of Relational Competence Theory (L'Abate & Cusinato, 2010) resilience is a natural result when a family system operates in balanced, congruent ways. Although each individual possesses the potential for resilience, an interplay between the individual and the broader environment is responsible for its level. (L'Abate et al. 2010). Thus it does not function uniformly and automatically, but waxes and wanes in response to contextual and relational variables (Tusaie & Dyer, 2004). *Competence* is "a pattern of effective adaptation in the environment, either broadly defined in terms of reasonable success with major developmental tasks expected for a person of his/her culture, society and time or more narrowly defined in terms of specific domains of achievements while *Resilience* is a "manifested competence in the context of significant changes to adaptation or development" (Masten and Coatsworth, 1998, p. 206)

***RAQ Relational Answer Questionnaire***

Individual level of functionality in a relational context is assessed with the Relational Answer Questionnaire (RAQ, version 2001, Cusinato & Corsi, 2005; Cusinato & Colesso, 2008, see Appendix). This 66 item, 7 factor scale measures the adequacy of the relational answer defined as a balanced level and use of all five components of Model<sup>1</sup> ERAAwC. If the scores for each component are too high or too low, or the scores are not distributed among the components in a balanced way, the relational answer may be inadequate and dysfunctional. Its reliability and concurrent validity has been well established in previous studies (Gianesini, Cusinato & Colesso, 2010; L'Abate et al., 2010; L'Abate & Cusinato, 2011; Gianesini, 2011) and in the empirical section (Part 2) of this work. The reliability of the RAQ subscales for the empirical evidences, as presented in Part 2, was all acceptable.

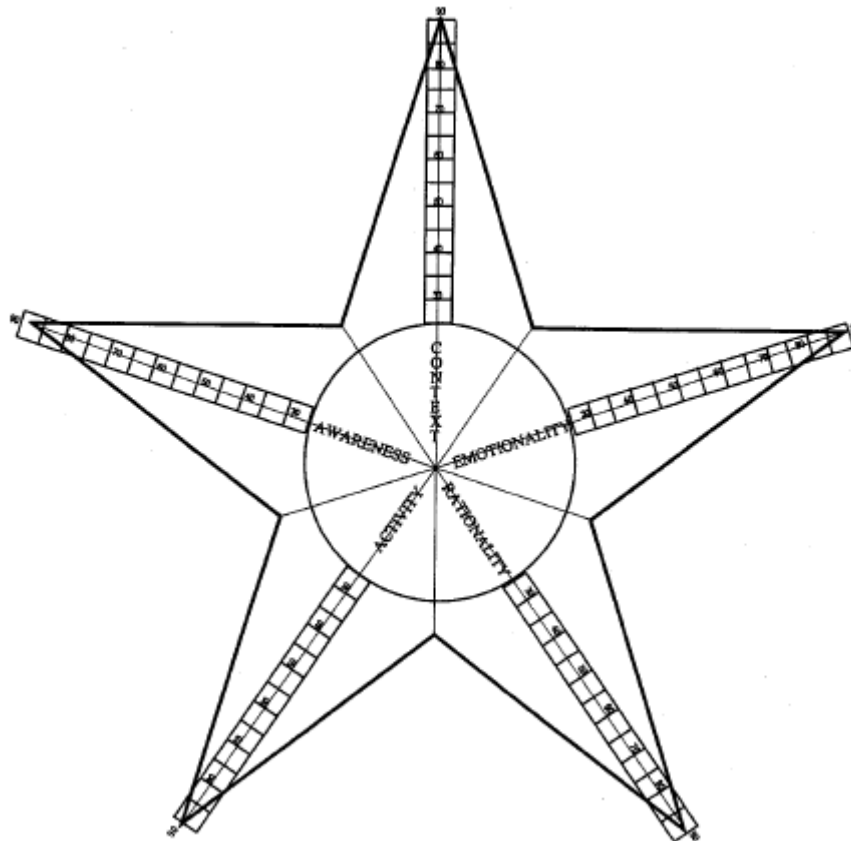
The first proposal about Model<sup>1</sup> dates back to Hansen and L'Abate (1982), summarized and adapted with the acronym ERAAwC, used as a model of negotiation between and among intimates and non intimates (L'Abate, 1986). At a different application level, it was known as the model "Lucky Star" (Figure 1.3). It was later reinterpreted as an experiencing-expressing continuum (L'Abate, 1994), then defined as the horizontal dimension of family relationships (L'Abate, 1997), approaching a formal Information-Processing Model (L'Abate, 2005) with the goal of emphasizing the plurality of dimensions beyond available knowledge. Indeed this model asserted the priority of emotionality over cognition that finally resulted in a "meta-theoretical" model (L'Abate & Cusinato, 2011). Yet, the ingredients of the model remained the same since the beginning: Emotionality, Rationality, Activity, Awareness, and Context which are contained in the afore-mentioned acronym as well as representing the titles of the scales in the first version of the RAQ that operationalized the model: E, R, A, Aw, C. (L'Abate & Cusinato, 2011) .

**RAQ Psychometric Characteristics**

The psychometric characteristics of the scale are presented in Table 1.1 showing a satisfactory reliability (L'Abate & Cusinato, 2011). Correlations among its subscales are shown in Table 1.2

*Table 1.1. Psychometric Characteristics of the RAQ scales*

	E <sub>feeling</sub>	R <sub>relational</sub>	A <sub>performance</sub>	E <sub>expressed</sub>	AW <sub>relational</sub>	AW <sub>feedback</sub>	C <sub>sensitiveness</sub>
Cronbach's $\alpha$	.77	.71	.72	.82	.71	.71	.77
Items:	10	10	10	10	10	6	10
Mean	29.26	33.66	33.86	34.34	36.44	22.49	25.71
SD	6.17	5.91	4.99	5.11	4.87	3.46	4.72



**Figure 1.3 "Lucky Star" model (reprinted from Cusinato, 2001, p. 595)**

**Table 1.2.** Pearson's correlations among the seven RAQ scales

	E <sub>expressed</sub>	R <sub>relational</sub>	A <sub>performance</sub>	Aw <sub>relational</sub>	Aw <sub>feedback</sub>	C <sub>sensitiveness</sub>
E <sub>feeling</sub>	.59**	.16**	.21**	--	.13**	.27**
E <sub>expressed</sub>	1	.09*	.37**	.18**	.21**	-.12**
R		1	.29**	.58**	.58**	.14**
A			1	.24**	.36**	--
Aw <sub>meta</sub>				1	.52**	-.21**

\*\*Correlation significant per  $p = .01$ ; Effect size **medium** to **large**:  $r > .30$

The RAQ subscales correlate significantly with each other and in a positive way, except E<sub>feeling</sub> and Aw<sub>relational</sub>, C<sub>sensitiveness</sub> and A<sub>performance</sub> without significant correlation, while C<sub>sensitiveness</sub> correlates negatively with E<sub>expressed</sub> and Aw<sub>relational</sub>. The most significant correlations are between the two E, between R<sub>relational</sub> and the two Aw (and with each other), between E<sub>expressed</sub> and A<sub>performance</sub>. Significant correlations between R<sub>relational</sub> and the two E shows a connection between the cognitive and the emotional resources.

### RAQ Gender differences

Variance analyses showed that females score significantly higher than men in dimension E<sub>feeling</sub> ( $t = -12.21$  (477),  $p = .001$ ; Cohen's  $D = -1.12$ ) and E<sub>expressed</sub>, although the difference here is less pronounced ( $t = -7.59$  (477),  $p = .001$ ; Cohen's  $D = -.70$ ). Furthermore, awareness as feedback is also higher for females than for males ( $t = -2.27$  (477),  $p = .02$ ; Cohen's  $D = .21$ ). Once broke down by subgroups, the size level increases with age: E<sub>feeling</sub>:  $F = 8.60$  (2, 475),  $p = .001$ ; E<sub>expressed</sub>:  $F = 3.13$  (2, 475),  $p = .015$ ; R:  $F = 9.03$  (2, 475),  $p = .001$ ; A<sub>performance</sub>:  $F = 9.41$  (2, 475),  $p = .001$ ; Aw<sub>relational</sub>:  $F = 4.40$  (2, 475) = 4.40,  $p = .002$ ; C:  $F = 3.05$  (2, 475),  $p = .02$ . E1, E2, R, A, Aw<sub>relational</sub> are higher in married compared to unmarried individuals:

$E_{\text{feeling}} = F = 12.78 (2, 47), p = .001$ ;  $E_{\text{expressed}}: F = 8.15 (2, 475), p = .001$ ; R:  $F = 4.45 (2, 475), p = .01$ ; A:  $F = 9.60 (2, 475), p = .001$ ;  $A_{\text{wrelational}} F = 3.08 (2,475), p = .05$ . Education and occupation do not show significant differences between subgroups.

### **Concurrent Validity of RAQ Subscales**

The convergent and divergent validities of each RAQ subscales have been extensively tested between 2001 and 2011 and exploratory factor analysis has identified the most consistent items related to each dimension (Corsi, 2002; Zuliani, 2004; Cusinato & Corsi, 2005; Sandonà, 2006; Zanardini, 2006; Arnaldi, 2007; L'Abate & Cusinato, 2011). These empirical studies supported the scale reliability, construct validity of the RAQ self-report questionnaire by verifying its criterion and convergent validity with the Coping Strategies Inventory (COPE, Carver, Scheier, & Weinstraub, 1989), Post-traumatic Reaction Scale (PRS), the Family Environment Scale (Moos & Moos, 1976), Rosenberg Self-esteem Scale (RS, Rosenberg, 1985), Adult Attachment Questionnaire (AAQ, Salvo, 1998), and Differential Emotional Scale (DES, Tiberi & Pedrabissi, 1988), Emotional Intelligence Scale (EIS, Schütte et al., 1998), Impulse Control Scale (ICS), and Emotion Control Scale (ECS), both sub-scales of Big Five Questionnaire (BFQ, McCrae & Costa, 1987), State-Trait Anger Expression Inventory (STAXI, Spielberger, et al. 1995), and Chabot Emotional Differentiation Scale (CEDS, Chabot & Licht, 2006).

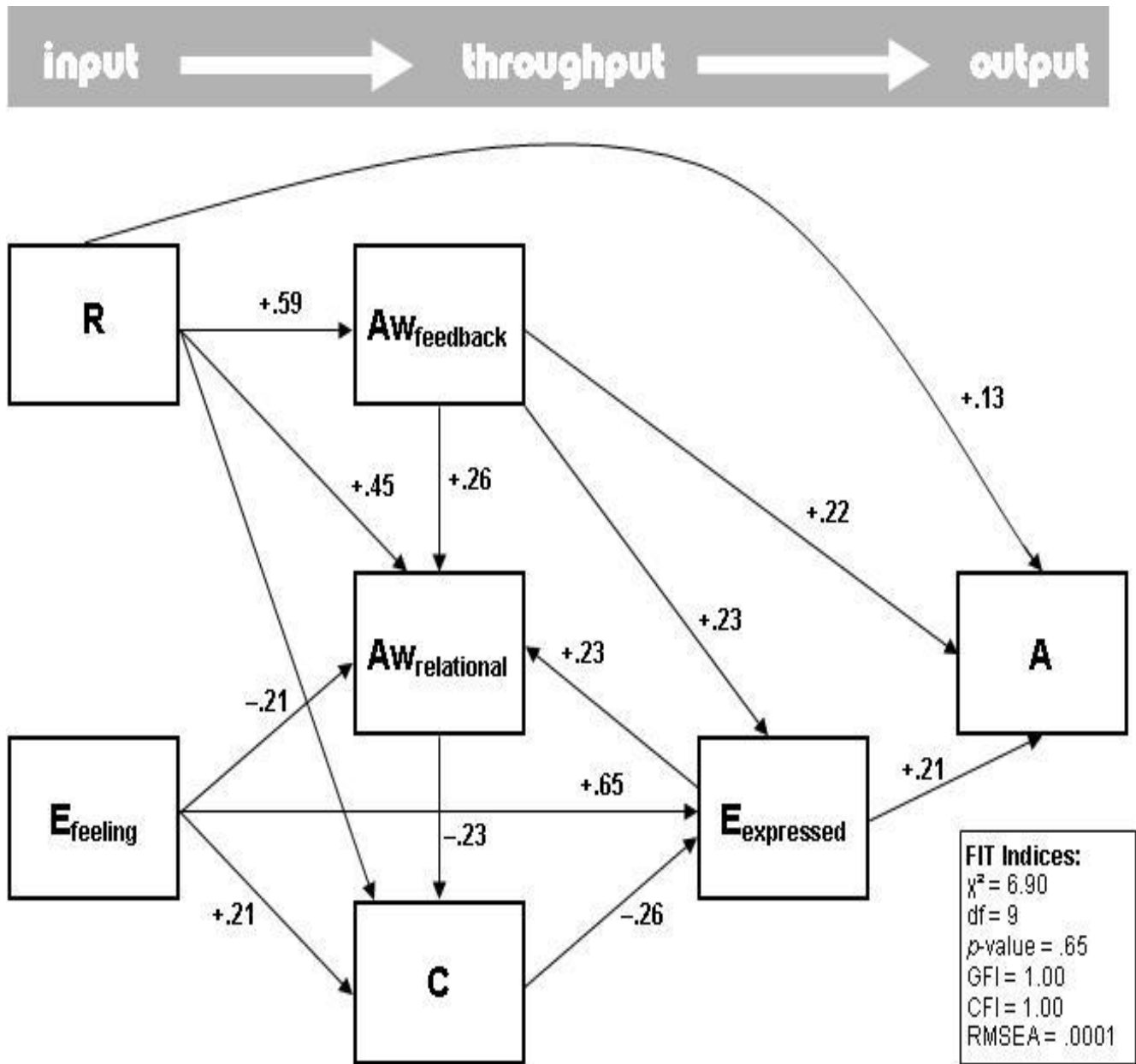


Figure 1.4. RAQ empirical model (Edition 2011)

**Emotionality Scale ( $E_{\text{feeling}}$  and  $E_{\text{expressed}}$ )**

Exploratory factor analysis on the Emotionality Scale (E) identified consistent items relating to a new dimension related to inner feelings (called  $E_{\text{feeling}}$ ) with a reliability of  $\alpha = .83$  for 10 items.  $E_{\text{feeling}}$  correlations with basic emotions are showed in Table 1.3. Negative emotions do not appear probably filtered by awareness.

**Table 1.3** Correlation between  $E_{\text{feeling}}$  and other Emotions

	Sadness	Anger	Fear	Empathy	Guilt	Joy
$E_{\text{feeling}}$	--	--	--	.71**	--	.45**

The analyses showed significant correlations with the criterion scales confirming concurrent validity. However,  $E_{\text{feeling}}$  does not involve negative emotions and appears to refer mostly to inward experiences. The  $E_{\text{feeling}}$  scale measures the first impulsive response to an incoming stimulus, an emotional energy that pushes the individual toward others relationally. It needs to be considered distinct, although close, but not overlapping with expressed emotionality ( $E_{\text{expressed}}$ ). Similarly, crying could be considered an expression of  $E_{\text{feeling}}$  as well as an Action, or reaction to whatever has been experienced by the individual. Additionally, crying could have been provoked by a painful experience as well as by a pleasurable one.

An analysis of variance shows significant age differences in the basic expression of emotions. Depending on age, in fact, the inner expression of the emotional activation varies whereas there are not significant differences in  $E_{\text{feeling}}$  indicating that, with age, the resonance of internal to external stimuli does not change. Gender (male vs. female) and status (single vs. married) differences also emerged. This study has shown that the content validity of the two emotionality scales needs to be considers in conjunction with output-action meanings.

**Rationality Scale ( $R_{\text{relational}}$ )**

In a study involving 113 Croatian war refugees and a similar control group of non-refugees, exactly nine years after the end of the war of former Yugoslavia (Zuliani, 2004), RAQ, Post-traumatic Reaction Scale (PRS) and Coping Orientation of Problem Experience revised (COPEr) were administered. Results did not show any significant correlations between R and PRS but a negative correlation with COPE subscales Disengagement ( $r = -.36, p < .001$ ) and positive with Support ( $r = .28, p < .001$ ) and Problem Solving ( $r = .44, p < .001$ ) for war refugees. Participants in the control group did not show positive correlations between R and COPE subscale Support” ( $r = .28, p < .001$ ) and R and Problem Solving ( $r = .55, p < .001$ ). In another study by Sandonà (2006) in a sample of 175 teenagers (age 12-18, 61 males and 114 females), R resulted positively correlated with FES subscale Cultural Orientation ( $r = .21, p = .02$ ) and more markedly for males ( $r = .30, p = .02$ ). RAQ Scale R also correlated positively with the AAQ subscale Secure ( $r = .13, p = .02$ ) and negatively with subscale Avoidant ( $r = -.19, p = .001$ ) in an empirical inquiry with 302 participants (age 19-70; 117 males, 184 females). Finally, Miozzi (2008) found that R is higher in individuals with higher education ( $F = 12.61 (1, 274), p < .001$ ). Thus, Secure individuals seem to be able to use R better compared to Avoidant individuals. Those who experienced stress or disengagement also showed a weaker R, which represents the ability to constructively manage relationships, a certain degree of integration between rationality and emotionality, the ability to control emotional reactions (anger in particular) and problem solving skills. Consistently, individuals well-differentiated and with higher level of education showed higher cognitive abilities. A variance analysis between  $R_{\text{relational}}$  (10 items, reliability index  $\alpha = .87$ ) and concurrent scales (Table 1.4) consistently showed positive correlation.

$R_{\text{relational}}$  appears to monitor cognitive abilities in intimate relationships in the direction of emotion regulation and emotional intelligence and tends to facilitate a congruent performance in a relational context. In fact, early in the ERAAwC

information processing, R intercepts the first emotional experiences, while still remaining an available resource in each subsequent steps.  $R_{\text{relational}}$  positively correlated with positive relations with partners ( $r = .24^{**}$ ), children ( $r = .19^{**}$ ), and family relationships ( $r = .23^{**}$ ). No significant gender differences emerge ( $t(582) = .37, p = .07$ ), but older individuals have higher  $R_{\text{relational}}$  than younger ( $F(3, 580) = 15.26, p < .01$ ) as well as people with responsibility at work ( $F(4, 578) = 14.40, p < .01$ ) and married/living couples ( $F(2, 581) = 25.55, p < .01$ ). Last, education level shows a significant but small and unexpected tendency from the lower to the higher level ( $F(2, 581) = 14.40, p < .01$ ).

**Table 1.4** Correlations between  $R_{\text{relational}}$  and Concurrent Scales

Concurrent Scales	Scale $R_{\text{relational}}$
CEDS Chabot Emotional Differentiation Scale (Chabot & Licht, 2006).	<b>.49**</b>
RAS (Relational Awareness Scale, Snell, 1998)	.17**
BFQ (Big Five Questionnaire, McCrae & Costa, 1987)	
Impulse Control Scale (ICS)	<b>.36**</b>
Emotion Control Scale (ECS)	.28**
STAXI (State-Trait Anger Expression Inventory, Spielberger, 1988)	
Anger Control	<b>.47**</b>
EIS (Emotional Intelligence, Schütte et al., 1998)	<b>.39**</b>
Self Awareness	<b>.40**</b>
Self Management	<b>.37**</b>
Self Direction	<b>.49**</b>

\*\*Correlation significant per  $p = .01$ ; Effect size **medium to large**:  $r > .30$

**Activity Scale ( $A_{\text{performance}}$ )**

All theoretical and conceptual considerations made for the dimension of Emotionality also apply to the dimension of Activity which in RCT emphasizes the importance of performance in the relational process as a response to a received emotional input. The  $A_{\text{performance}}$  scale comprises 10 items ( $\alpha = .87$ ) expressing performance skills and adequately correlates with  $E_{\text{expressed}}$  ( $r = .67^{**}$ ) and the Dynamic Subscale of the Big Five Questionnaire (SD, Caprara, Barbaranelli, & Borgogni, 2000) (SD,  $r = .41^{**}$ ). In a study with adolescents, this scale showed a negative correlation ( $r = -.19^*$ ) with the Family Environment Scale-Performance Orientation (Sandonà, 2006), while in a group of prisoners (Zanardini, 2006) showed a positive correlation with Rosenberg self-esteem scale (RSE,  $r = .28^*$ ). At the same time, in a qualitative study with detained people, A resulted positively correlated with the psychoticism scale of Minnesota Multiphasic Personality Inventory (Hathaway & McKinley, 1940).

**Awareness Scale ( $A_{\text{wrelational}}$  and  $A_{\text{wfeedback}}$ , )**

Within the area of intimate relationships, Acitelli (1993) defined awareness as: “a person thinking about interaction patterns, comparisons, or contrasts between him/herself and the partner. Although relationship awareness is a process and is not defined here as a personality disposition, there is evidence that thinking about relationships may be a personality trait” (p.151). L’Abate (2005) conceived awareness as “the ability to reflect on one’s own emotionality, rationality, activity, or context” (p. 97) but A<sub>w</sub> also includes a relational ability developed from past relational experiences to conduct and possibly correct and change current relationships. Block (1995, 2007) revealed another experiential aspect defined as “accessible consciousness”, that it the ability to report and act upon experiences and

is equivalent to the existence of the representation of the experience in the brain, the content of which is available for verbal report and for high level process such as conscious judgments, reasoning, and the planning of guidance of action. Braud, & Anderson, 1998; Zelaso, Moscovich, & Thompson, 2007) emphasized Aw both as a tool and as a goal for understanding more adequately inner thoughts and feelings.

At the operational level, Fenigstein, Scheier and Buss (1975) proposed a consciousness model starting from the humans' ability to shift the focus of attention from environment to inner self and vice versa. This self-focus included a public and a private dimension: the first characterized by attentiveness to features of self presentation to others (physical features and mannerisms), the second involving any attentiveness to internal, personal aspects, such memories and feelings of physical pleasure or pain (Buss, 1980). Both dimensions can be dispositional – often referred as “self-consciousness” – or situational, usually labelled “self-awareness”. In this way, public and private self-consciousnesses may assume a configuration of relatively stable traits or elements (Buss & Scheier, 1976) while public and private self-awareness are viewed as transient states susceptible to manipulation (Carver & Glass, 1976: Carver, 1998). This discrimination was made by L'Abate (2005), distinguishing awareness directed toward the self from awareness directed toward the context. Consciousness traits were investigated specifically by Snell (1998) moving from the theory of self-consciousness (Buss, 1980; Fenigstein, Scheier, & Buss, 1975) that created the Relational Awareness Scale (RAS). This scale operationalized three intimate relationship tendencies: (a) Relational Consciousness defined as “a person's tendency to be aware of the private nature and dynamics of his/her intimate relationships”, (b) Relational-monitoring defined as “the tendency to be concerned with the public image of one's intimate relationship”, and (c) Relational-anxiety defined as “the tendency to feel anxious, tense, and inhibited in intimate relationships”. Higher scores on the RAS correspond respectively to greater relational-consciousness, relational-monitoring, and relational-anxiety. Snell (1998) provided evidence for the reliability and the internal consistency of the RAS scale.

On the other hand, Govern and Marsh's (2001) work focused on the transient

states of consciousness and created the Situational Self-Awareness Scale (SSAS) distinguishing public from private self-awareness. Their results showed the existence of three factors labelled (a) “Public Self-awareness”, (b) “Private Self-awareness”, and (c) “Awareness of immediate surrounding”. The SSAS had a reliable factor structure consistent with the theoretical underpinning of public and private self-awareness, but no explanation was given for the “immediate surrounding” construct, somehow foreign to their theoretical framework.

Relational consciousness account for a multidimensional model with four traits of awareness: (a) Awareness as feedback ( $A_{w_{feedback}}$ ), the ability to think about present and past relationships and building/managing relationships (L’Abate, 1986, 2005); (b) Awareness of self ( $A_{w_{self}}$ ), the ability to reflect on own emotionality, rationality, activity, and relationship context expectations (Fenigstein, Scheier, & Buss, 1975; L’Abate, 1986, 2005; Snell, 1998); (c) Awareness of other ( $A_{others}$ ), that is the ability to realize other’s emotionality, rationality, activity, and context expectations (Govern & Marsh, 2001; L’Abate, 1986, 2005); and (d) Awareness of self-regulation ( $A_{w_{regulation}}$ ), that is the ability to represent relational experiences in the brain, for high level process such as reasoning, and the planning of guidance of relational actions (Block, 1995, 2007). The formal model assumes that  $A_{w_{feedback}}$  influences  $A_{w_{self}}$  and  $A_{others}$ , which in return influence  $A_{w_{regulation}}$ . Correlations between the four awareness scales in the model have been consistently and significantly positive (Table 1.5). The correspondence between the formal and the empirical models is strengthened by confirmatory factor analysis (LISREL).

On one hand, thus, past relational experiences increase progressively the realization of cultural and contextual norms that regulate intimate relationships while on the other hand, personality trait characterized by attention to one’s internal dynamics scaffolds the process in various steps moderated by the awareness of specific situational inputs. The attention to public impression management or self-presentation must always be considered in the background to avoid generalizations.

In conclusion, it appear that  $A_{w_{relational}}$  and  $A_{w_{feedback}}$ , which age and gender, sensitive, in that women seem to possess greater capacity to understand relational

competences of others ( $F = 5.65 (2), p < .02$ ), are essential component of what constitutes relational awareness in intimate relationships.

### **Context Scale ( $C_{\text{sensitivity}}$ )**

The context scale distinguishes between the influence of the relationship context on the person and the adaptation to that same context by the individual. The psychometric characteristics and the concurrent validity of the 10- item scale were tested with the Multidimensional Scale of Perceived Social Support (MSPSS, Zimet, Dahlem, Zimet, & Farley, 1988), the scale of Cooperativeness, taken from the Big Five Questionnaire (BF-C, Caprara, Barbaranelli, & Borgogni, 1993).

Context sensitivity does not influence directly the individual' relational answer, but moderates the expression of emotion in relations and thus plays an important role in supporting the relational process. In addition, context sensitivity is made possible by the awareness of all the resources that come into play in the process of information management.

The attenuated or inappropriately modulate expression of positive and negative emotions indicate a lack of behavioral responsiveness to change in the emotional environment, called *emotion context-insensitivity* (Rottember& Gotlib, 2004). In many contexts, this emotional impoverishment, or lack of emotional competence, may violate other's expectations about the interaction as a lack of emotional-expressive reciprocity may frustrate, disrupt and erode interpersonal coordination and relationship quality (Rottember & Vaughan, 2008). Similarly, rigid and unchanging emotional behavior in social interactions could frustrate the other person's desire for dynamic feedback on their own performance and the state of their relationship.

**Table 1.5** Correlations among Four Awareness Scales.

	Aw <sub>feedback</sub>	Aw <sub>self</sub>	Aw <sub>others</sub>
Aw <sub>self</sub>	.50**	1	
Aw <sub>others</sub>	.42**	.57**	1
Aw <sub>regulation</sub>	.44**	.70**	.57**

\*\* Correlation significant at the .01 level

### Relational creativity

In 2009, L'Abate coined the term *relational creativity* (RC) and defined it as a multi-dimensional ability to function successfully according to a variety of redundant positive and original ways with intimates and non-intimates. This ability varies over time under the prolonged stress and distress of necessary commitments, inevitable physical and emotional closeness, and unavoidable interdependence. It's ultimately expressed in the ability to laugh and to cry and sharing joys and hurt feelings with intimates. It can be found in differently worded models of Relational Competence Theory (L'Abate et al., 2010; L'Abate & Cusiano, 2011). Colesso & L'Abate (2011) found that couples with higher levels of RC functioning both quantitatively and qualitatively evidenced higher levels of marital intimacy with partner in general, and of mutual communication of personal values particularly articulated in a circular relation between respect for each other's personal feelings, enhancements of mutual capacities, ability to forgive partner's fault, sharing of hurt feelings, and mutual acceptance of personal limitations. They concluded that RC is a teachable ability that empowers participants to process relevant information and to enhance relational functioning.

### Sharing of hurt feelings

Relational Competence Theory (RCT, L'Abate & Cusinato, 2011) include a model of intimacy defined as the sharing of joys and of hurt feelings. This model involves all five components of previously presented Model<sup>1</sup> (ERAAwC) in a circular process, starting with the feeling of hurt (Emotionality) and progressing to the other components of the model (Rationality, Activity, Awareness, and Context). Being emotionally attuned and available means sharing concern, care, and compassion when hurts (L'Abate, 2011) that is, showing empathy in the "here and now" (Feeney, 2004; Young, 2004). As it takes a certain degree of functionality to share hurt feelings reciprocally, this process is found in functional relationships and is absent in dysfunctional ones. In fact, it takes functionality to admit feeling vulnerable to hurts and to share this vulnerability with others (L'Abate, 2010). Hurt feelings are often referred to in literature by using indirect constructs such as "distress", "negative feelings", "social pain", or "emotional disturbances". In Relational competence theory, instead, intimacy is defined behaviorally as the sharing of joys, hurts, and the fear of being hurt (Feeney, 2007; L'Abate, 2011; Vangelisti, 2001; Vangelisti, et al., 2005; Vangelisti & Beck, 2007). This definition implies that sharing of hurts and of fears of being hurt are the *conditio sine qua non* necessary for forgiveness of errors and of transgressions (Fincham, 2000; Fincham & Beach, 2002; Friesen, Fletcher, & Overall, 2005; L'Abate, 2011).

According to the Sharing of Hurt Feeling Model, subjectively experienced feelings emerge as separate from observably expressed emotions thus feeling should not be equated with emotions, but rather considered as a subjective appraisal with no positive or negative hedonic valence (L'Abate, 2011). The most frequently used instrument to measure this construct is the Marital Intimacy Questionnaire (MIQ) created as an expansion of Sharing of Hurt Scales (SHS, Stevens & L'Abate, 1989) and as an operationalization of seven factors (Cusinato & L'Abate, 1994): Relational Realism (*how realistically both partners are presenting themselves*), Communication of Personal Values, Respect for Personal Feelings, Acceptance of Personal

Limitations, Promotion of Potentialities, Sharing of Hurts, and Forgiveness of Errors. Stevens and L'Abate (1989) found SHS to have satisfactory concurrent validity with PAIR, the Interpersonal Relationship Scale (IRS, Guerney, 1977), and Waring Intimacy Questionnaire (WIQ, Waring, 1983) while Salvo (1998) ascertained congruencies with Intimacy Anxiety (IAS, Doi & Thelen, 1993), Jealousy dimensions (MJQr, Frison, 1998) and Adult Attachment dimensions (AAQ, Cusinato, Colesso, & Barbon, 2006).

The ability to Share Hurts appears the core element for couple intimacy and the main protective factor for relational stability especially when facing long term parenting challenges as with a child with cerebral palsy, malformation syndrome and mental retardation (Maino, 2005). On the other hand, the capacity to share hurts may influence negatively the relationship as it brings into light the vulnerability of each partner and the potential to hurt and to be hurt by both, especially when there is no crisis and the relationship seem stable.

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### **The Improvement of Relational Competence (RC)**

Higgins (1997) suggested an important distinction that is very relevant to an improvement of Relational competence (RC) in general and the treatment of incompetence in particular. Starting with the distinction between approach and avoidance, Higgins suggested that we approach pleasure (promotion), and avoid pain (prevention). Approach deals with promotion of physical and mental health while Avoidance deals with the prevention of physical and mental sickness.

RC is defined specifically by skills needed for interpersonal success, consisting of general interpersonal, assertiveness, pre-vocational, activities of daily living, micro-interpersonal skills, dating, affective management (anger, sadness, anxiety), cognitive decision-making, problem-solving brain-storming, bargaining, positive thinking, interpersonal awareness, and issues of intimacy, and sexuality. A more generic definition, views RC as a repertoire of verbal and non-verbal behaviors by which participants affect, positively or negatively, the behavior of intimates and non-intimates (peers, parents, siblings, teachers, partners, and co-workers). These behaviors influence the immediate and long term environment by obtaining desirable and removing or avoiding undesirable outcomes, either within the family or within other settings and context (school, work, leisure time). The extent to which individuals are successful in obtaining desirable outcomes and avoiding or escaping undesirable ones, without inflicting pain or suffering on others, defines RC (L'Abate, 2011).

In this perspective, most psycho-educational social training programs are designed to correct specific areas where the level of competence needs to be raised. One single approach is not sufficient to change from incompetence to competence (L'Abate, 2011) thus preventive or therapeutic interventions need to be differentiated according to level and type of functionality. In preventive and therapeutic approaches, Cluster C personality disorders or internalizations need, for example, to be differentiated from Cluster B externalizing disorders .

## Volunteering

Various research studies have been reviewed in various chapters of an edited volume dedicated to altruism and health, and there is no question that volunteering has health-engendering outcomes (Post, 2007). Whether healthier individuals choose to volunteer and, therefore, show a positive outcome is an issue that still remains open to discussion and further research, nevertheless, the relationship between volunteering and health remains clear and valid.

Pro-social behaviors are actions that benefit others without any expectation for later reward (Bryan & London, 1970; Leahy, 1979). The tendency to engage in pro-social behaviors is correlated with interpersonal, relational skills as it provide an opportunity to practice and develop social skills, make more friends and contacts, increase self confidence and life satisfaction, provide with a natural sense of accomplishment, pride and identity, and help gain a more positive view of life and future. Thus volunteerism is a source of community strength, resilience, solidarity, and social cohesion as it increases competence, flexibility, problem solving, self-worth, positive relationships and hope. It can bring positive social change by fostering respect for diversity, equality and the participation of all: it is among society's most vital assets.

As competence refers to the ability to meet the demands of a situation, thus, like the related constructs of adaptation, ego mechanisms, self-efficacy, and intelligent behavior, competence refers simultaneously to the environment and to individual abilities (Masten et al., 1995). The mediating, intervening process that allows people to help others altruistically, that is without expecting rewards or avoiding punishment is *empathy* (Batson, 1991; Hoffman, 1981).

Empathy comprises not only emotional aspects but also cognitive elements, such as perspective taking and causal attribution. Social learning theory holds that pro-social behavior in children is built on the basis of the moral standards available in their environment and the more children observe someone engaging in pro-social

behaviors, the more they tend to share their belongings and help others (Zahn-Waxler, Radke-Yarrow, Wagner, & Chapman, 1992). However the ways in which individuals manage to exhibit positive adaptation under adverse conditions, with the mediation and, possibly, moderation of pro-social behaviors, need to be further explored.

### **Training for Relational Competence (RC)**

RCT practice and training look at maladjustment and deviant behavior as straightforward skill deficits rather than amplifications of inferred conscious and unconscious motivations or internal states or traits (L'Abate, 2005). Hence, people with RC deficits need training or coaching rather than therapy. This training consists of a specific presentation of concepts through verbal and written instruction, lectures, modeling experiences, rehearsals, manuals, corrective verbal/written feedback, homework assignments, relaxation training, self-reinforcement, and printed course materials to guide verbal presentations (L'Abate & De Giacomo, 2003). Specifically, rehearsals consist of repeated practice of newly acquired skills; with repetition of skills open discussion and direct, active participation, to increase generalization from the practice setting to other settings, like home, work-place, or leisure-time activities.

## Chapter 1.2 - The adaptive function of Emotions.

Once we have defined Resilience as a process of continual development of personal competence while negotiating with others available resources, we should then investigate how individual resources are capitalized and the quality and strengths of the relationships where they are exchanged. In social contexts, the use of adaptive emotion regulation strategies facilitate interpersonal interactions and is associated with healthier pattern of physical and psychologically functioning (John & Gross, 2004). The majority of emotion expression occurs during social interactions (Ekman, 1992), with complex informative and evocative functions. Emotions (Lazarus, 2006) can impair or facilitate not only psychological adaptation, but also the accuracy of judgment and task performance.

The central role of emotion expression in adaptation has been investigated by many psychologists (Ekman, 1993; Fridlund, 1992) interested in connecting impaired social functioning to clinical disorders (Keltner & Kring, 1998; Rottember & Johnson, 2007) mostly depression. Depressed individuals, in facts, show emotions inflexibility and express emotions in ways that are inappropriate to dynamically changing environmental contexts. Emotional reactions are triggered when an individual encounter a meaningful inside or outside stimuli and are indexed by several indicators of multiple responses (Rottember & Vaughan, 2008). In fact, the adaptive function of emotions deals with attention to both environmental stimuli and internal clues about the interaction with the environment (Schultz et al., 2005). Emotions are a complex and multidimensional phenomena: every emotion involves multidimensional appraisal processes which are affected by a vast number of factors, such as other emotions, moods, characteristics, environmental circumstances, experience, and physical factors (Solomon & Stone, 2002).

To modify the emotional impact of a situation (John & Gross, 2004) an individual needs to cognitively change how a potentially emotion-eliciting event (*cognitive reappraisal*) is perceived. In addition to cognitive reappraisal, inhibiting

ongoing expression of emotion-related behavior (*emotion suppression*) is another form of emotion regulation that allows changing the way we respond behaviorally once we are already in an emotional state, without modifying the subjective experience (Gross & Levenson, 1993).

Emotions manifest themselves in specific cognitive, behavioral and physiologic reactions and they are crucial for adaptation of environmental stimuli. (Vingerhoets et al., 2008). They result from the outcome of the evaluation of environmental stimuli and as such “they provide the necessary physiologic support for emotion-specific action tendencies, thereby facilitating overt action” (p. 3) Emotions are no longer considered the opposite of rationality and are essential for adequate cognition. Cognitive appraisal, that is changing the way we perceived a potentially emotion-eliciting event, allows modifying the emotional impact of a situation (John & Gross, 2004). In addition to cognitive reappraisal, emotion suppression, that is inhibiting ongoing expression of emotion-related behavior, is another form of emotion regulation that allows to change the way we respond behaviorally once we are already in an emotional state but not to modify our subjective experience (Gross & Levenson, 1993). Intense and unresolved negative emotions have an acute effect on body functioning and trigger and increase the risk of health problems. In social contexts, the use of adaptive emotion regulation strategies facilitate interpersonal interactions and is associated with healthier pattern of physical and psychologically functioning (John & Gross, 2004).

Thus, if emotions are action tendencies that serve an adaptive function (Lang, Bradley & Cuthbert, 1998), adaptive emotion regulation is the norm and therefore emotion dysregulation is dysfunctional (Rodebaugh & Heimber, 2008). Emotional Intelligence, as the ability to perceive, assimilate, comprehend and manage emotions (van Heck & Oudsten, 2008), is not another form or type of intelligence but simply intelligence applied to a particular life domain, that is emotions (Locke, 2005), and therefore can be considered as a skill or competence.

Emotional interactions between parents and child have a great impact on a child’s long-term well-being and emotional interactions among family members

become the foundation for emotional, thus relational, competence, for instilling values and raising moral people. Emotionally intelligent people (Goleman, 1995), in fact, are able to regulate their own emotional states, to sooth themselves when they are upset, to calm down faster thus relating better to others, even in difficult social situations, while performing more efficiently (Gottman, 1997).

## Alexithymia

Researchers from a wide range of fields (neurophysiologic, psychoanalytic, social learning, developmental and genetics) have postulated that many different pathways are involved in the etiology of alexithymia (Jula, Salminen & Saarijarvi, 1999; Valera & Berenbaum, 2001). Some theorists advocate that as a reaction to abuse, especially in childhood, trauma (Berenbaum, 1996) or family factors (King, 2000; Lumley, Mader, Grzmsown & Papneau, 1996), alexithymia becomes allied with maladaptive defenses and coping styles which result in a “suspension” of the boundaries between bodily sensations and emotions (Taylor, Bagby, & Parker, 1997; Wise, Mann, & Sheridan, 2000). Individuals with this “suspension” often report joint stiffness or general body soreness, and have no awareness of or ability to identify the connection between these somatic symptoms and the associated emotion. These losses of connections, which often makes therapeutic interventions much more difficult (Grabe, Spitzer, & Freyberger, 2001), have also been observed in those who suffer dissociative disorders.

Appearing emotionally constricted, expressionless, machine-like, frozen, and exhibiting an inability to establish close ties with others (Krystal, 1998; Wise, Mann, & Shay, 1992) are described aspects of dissociation as well as alexithymic characteristics. The similarities are particularly evident more for the negative dissociative symptoms like losses of knowledge, sensations, affects, perceptions and will-power, rather than the positive symptoms such as hearing voices and re-experiences of trauma. The impaired capacity for the cognitive integration of experiences, the inability of individuals to locate, identify, or experience feelings, or capture emotional experiences in words (van der Kolk, 1994), and diminished differentiation of relevant from irrelevant information (van der Kolk et al., 1996, Waller, Quinton, & Watson, 1995) are apparent in both alexithymia and dissociation. In both phenomena individuals often relate to their environment and themselves in an “as if” or “object like” manner (Taylor, 1984; Morton, 1996) and both evidence complex adaptations, as well as disturbed regulation of affective arousal.

Research suggests that 30-40% of general psychiatric outpatients (Nyklicek, & Vingerhoets, 2000) and approximately 13-19% of the normal adult population exhibit some alexithymia characteristics (Salminen, Saarijarvi, Aarela, Toikka, & Kauhanen, 1999). Vorst and Bermond (2001) noted that older people were less able to fantasize, males less able to emotionalize, and anxious people more likely to fantasize and emotionalize, irrespective of the cognitive components. Increasing age and male gender have exhibited strong associations with alexithymia (Carpenter & Addis, 2000; Posse & Hallstrom, 1998). These results suggest that the affective dimension (emotional arousal and fantasy) and the cognitive dimension should be viewed as distinct factor groupings (Bermond, 1997) and recent neuropsychological investigations of individuals' emotional experiences and conscious awareness offer support for this view (Stone & Nielson, 2001).

Until recently, dissociation was conceptualized as a continuous trait ranging from normal to pathological levels, and as such relatively common, with 80-90% of individuals reporting the experience of some type of dissociative symptom (Atchison & McFarlane, 1994). Waller, Putnam, and Carlson (1996), however, identified two distinct types of psychological dissociation: the first, which encompassed non-pathological experiences, like absorption in movies and books, was seen as inherently genetic and on a continuum (Finkel & McGue, 1997). The second type, pathological dissociation, such as depersonalization and amnesia, was viewed as a typological construct and thus not continuous as previously thought (Bernstein & Putnam, 1986; Cardeña, 1994). In this classification an individual either has or does not have pathological dissociative experiences.

### **Alexithymia and relational competence**

Alexithymia describes problems in affect regulations, such as difficulties with recognizing, processing and regulating emotions (De Rick and Vanheule, 2006) and attachment theorists (Fonagy, Gergely, Jurist & Target, 2002) have underlined the importance of significant others, especially caregivers, in its offset. They have claimed that problems in regulating affects, such as alexithymia, cohere dynamically with a problematic relationship with others. Specifically, an internal working model of cold and overprotective parenting has been found strongly associated with alexithymia (Kooiman et al., 2004) and perceived parenting style have been predictive of differences between a high and a low scoring group on trait alexithymia in samples of alcoholic inpatients (De Rick & Vanheule, 2006). Parker et al. (2001) have studied the association between emotional intelligence (EI) and alexithymia and found the two construct to be independent but overlapping while other studies (Schutte et al., 1998) have found them strongly but inversely correlated.

The alexithymia construct has been investigated in relations with various aspect of emotional processing (Taylor & Bagby, 2004) and found comprised of four components: a) difficulty in identifying feeling and distinguishing between feelings and the bodily sensations of emotional arousal, b) difficulty describing feeling to others, c) externally oriented cognitive style and d) constricted imaginal processes. (Nemiah, Freyberg & Aifneos, 1976). On the basis of differences in neurobiology connected with emotional experience, Bermond (1997), proposes an incapacity or reduced ability to experience emotional feelings as a distinct fifth components of the alexithymia construct and proposed in alternative two types of alexithymia: Type I characterized by a low degree of conscious awareness of emotional arousal and a low degree of emotion accompanying cognitions, while Type II is characterized by a normal or high degree of conscious awareness of emotional arousal and a low degree of emotion accompanying cognitions. However, these findings were not confirmed by Babgy et al.'s (2009) factor and cluster analyses on a large international sample which supported the prevailing view of alexithymia as a multi-

faceted dimensional construct and not a taxon that can be decomposed into meaningful subtypes (Taylor et al., 1997). Although Alexithymia is defined as a disorder of affect regulation, in the normal range for both the Affective and Cognitive component (Alexithymia and Type III) it represents normal manifestation of affect regulation while only Type I and Type II should be considered as psychological illness and as a disorder (Moormann et al., 2008). Individuals who experience problems with the cognitive components of Alexithymia, in fact, display a more pathologic personality profile (Type I and Type II), whereas more healthy personality profiles can be seen in individuals where the cognitions accompanying the emotions are highly articulated (Alexithymia and Type III). Individuals with low scores on the emotion component are stress resistant but lack empathy in interpersonal relationship, while highly emotional persons may either outperform themselves, if the cognition accompanying the emotions are well-matched, or may perform far below their standards in stress situation if cognitions accompanying the emotions are nearly absent. (Moormann et al., 2008). Type I persons are emotionally cold, socially and emotionally incompetent but they possess a rational inclination to life, which can be an advantage in many profession where rational thinking devoid of emotional interference is an advance. However, in personal and intimate relations, the emotionally cold and distant behavior may cause them interpersonal problems. Type I alexithymics do not suffer from emotional exhaustion (with feature of schizoid personality style) while Type II alexithymics suffer from lack of emotional stability (neuroticism) and consider themselves incompetent and socially inadequate. They report a high level of somatic complains and sleeping problems, are suspicious, somehow paranoid toward others and react in a depressive manner to problems. They are not capable of feeling related to others and predominantly manifest a psychoneurotic personality structure, a borderline style as often found among women with childhood sexual abuse. Alexithymics score high on facilitating anxiety which means they can excel in challenging situations, are inclined to work actively on problems, as they alleviate themselves by searching for distractions or by seeking support in comforting toughs. Both the emotional and cognitive component of affect

regulation are well tuned, they are “emotional intelligent” and possess an healthy personality structure. They have the capacity to rise above their own standards in demanding situations and show adequate coping mechanisms (well-adapted histrionic personality). Type III individuals also show an healthy profile, possess good social skills and no signs of neuroticism. However, they may be repressors and negative, as threatening experiences are not allowed to enter their conscious awareness (narcissistic personality) (Moormann et al., 2008).

The consequences of failing to learn the basics of emotional intelligence are scientifically grounded (Goleman, 1995): girls unable to distinguish between anxiety and hunger are at risk for eating disorders, while those having troubles controlling impulses are more likely to get pregnant by the end of their teen years, boys impulsivity heighten the risk of delinquency and violence and for both genders the inability to handle anxiety and depression increases the likelihood of abusing drugs or alcohol. The ability to regulate emotions and inhibit inappropriate behavior allows for a more focused attention, strong and lasting attachments, conflict resolution and the mastering of new challenges.

### **Somatoform dissociation**

Somatoform dissociation, which appears to be independent of age and gender (Nijenhuis, 1999; Irwin, 2000), refers to the partial or complete loss of the normal integration of somatoform components of experience, reactions and functions (Nijenhuis, 1999), and involves negative (anesthesia) and positive (pain) symptoms. Although apparently “physical,” no organic cause is found (Engel, 2000), as many of these symptoms affecting sensations, perception and behavior are “mental” in nature. Somatoform and psychological dissociation are thus “highly intertwined phenomena” (Nijenhuis & van der Hart, 1999) positing psychological trauma to be the linking etiological factor (Buhler & Heim, 2001; Vanderlinden, Vandereycken, van Dyck, & Vertommen, 1993).

Clayton (2004) suggested that dissociation, a blocking of connections between affects, cognitions, and voluntary behavior control, influences the development of alexithymia, resulting in the “dissociation” of the physiological, cognitive, and affective components of emotions and that alexithymia could be better conceptualized from a dissociative theoretical stance. She found after controlling for age, gender and psychopathology, that only somatoform dissociation remained significantly related to any facet of alexithymia and was the most influential of the dissociative facets in predicting alexithymia, suggesting a previously unrecognized link between somatoform dissociation and alexithymia. Young males with high levels of somatoform dissociation were more likely to have difficulties with all facets of alexithymia except fantasizing. Regardless of age, males with somatoform dissociation appeared to have greater difficulty emotionalizing their emotions, and to a lesser degree identifying emotions; however, their ability to fantasize emotionally remained. The difficulties males exhibited may in part be due to socialization, as males in general are often not encouraged to focus on emotions. In particular though, males who score high on somatoform dissociation may have specific difficulty realizing their emotions at a level of self-awareness which according to Wheeler,

Stuss, and Tulving (1997) “allows healthy human adults to both mentally represent and become aware of their subjective experiences in the past, present, and future” (p. 331). When this mental process of realization remains undeveloped or incomplete, the emotion may perhaps become “stuck” at the bodily level of information processing. This bodily level could be seen as the first level of emotionality, as the “somatic marker” of emotion and feelings (Damasio, 1994). He claims that persons become aware of emotions at a basic level of consciousness through bodily signals that then need further processing and realization from very basic forms of consciousness to higher levels of consciousness..

In young females, higher levels of psychopathology, combined with pathological psychoform and somatoform dissociation, is related to greater difficulties identifying emotions while their ability to fantasize emotions remained high. Referring to Bermond’s posited types of alexithymia, this suggests that younger females may be more aligned with alexithymia II. If pathological psychoform dissociation, somatoform dissociation and alexithymia II are trauma-related, as research suggests, then females may be initially dissociating as an avoidance reaction to trauma or to cope with aversive or stressful environments, thereby resulting in a disconnection of emotions and a general incapacity to identify emotions. That females maintained a high capacity to fantasize suggests some involvement of dissociation, possibly a paradoxical combination of dissociation, psychopathology, and a socialization process that encourages emotionality for females. While women may be socialized to experience and express emotions, they may, when traumatized, have too little integrative capacity to realize the trauma, and thus develop dissociative symptoms and other types of psychopathology that are trauma-related like fear, phobia, and depression. While younger age in females remained extremely important in relationship to greater alexithymia difficulties, no direct links remained between psychopathology or any of the dissociation factors and alexithymia. Alternatively, lower levels of maturity or perhaps high levels of confusing emotionality may have contributed to the alexithymic difficulties identifying emotions (Clayton, 2004). The interesting finding in Clayton’s research is that

females and males retained the capacity to fantasize emotions. This is unexpected in the light of traditional alexithymia theory (Sifneos, 1973) but not surprising in view of dissociation theory, which suggests a strong relationship between fantasy and dissociation (IJzendoorn, & Schuengel, 1996). Notably however, the results of this study suggest that pathological dissociation and not non-pathological dissociation as may be expected (Putnam, et al., 1996) may influence one's ability to fantasize emotionally.

The influence of trauma and/or abuse in infancy (Ogawa, Sroufe, Weinfield, Carlson & Egeland, 1997), childhood (Berenbaum & James, 1994; Chu & Dill, 1990; Irwin, 1999) and adolescence (Brunner, Parzer, Schuld, & Resch, 2000; Carrion & Steiner, 2000), is strongly indicated in both dissociation and alexithymia. Chu, Mathews, Frey and Ganzel (1996) noted that following trauma, children who develop dissociative tendencies (or a dissociative coping style) tend to present with "failure" to define or acknowledge feelings and often have significant impairment in social and emotional functioning.

### **The role of Emotions in parenting quality**

The importance of parenting quality on childhood positive development has been widely investigated in literature (Cole, 1994; Benson, 2009), however many factors may account for differences in developmental outcomes in children as well as different parenting styles in adults. Parenting style captures two important elements of parenting: *responsiveness* and *demandingness* (Maccoby & Martin, 1983). Parental responsiveness represents the extent to which parents intentionally foster individuality, self-regulation, and self-assertion by being attuned, supportive, and acquiescent to children's special needs and demands (Baumrind, 1991) while parental *demandingness* involves the claims parents make on children to become integrated into the family whole, by their maturity demands, supervision, disciplinary efforts and willingness to confront the child who disobeys (Baumrind, 1991). Categorizing parents according to whether they are high or low on these two parental dimensions creates a typology of parenting styles (Maccoby & Martin, 1983) which reflects different naturally occurring patterns of parental values, practices, and behaviors (Baumrind, 1991) and a distinct balance of responsiveness and demandingness.

The dimension of *demandingness*, relies on a combination of behavioral control and nurturing behaviors and defined two styles of parenting: *authoritative* and *authoritarian*. The *authoritative* parents are flexible and responsive to their children's needs, while making reasonable demands on their children's behavior, encouraging verbal give and take, and frequently explaining the reasoning behind their demands (Baumrind, 1971). *Authoritarian* parents, on the other hand, rely on power assertion, rather than reason, to enforce their demands. They value obedience as a virtue, and favor punitive, forceful measures to enforce demands as their disciplinary decisions are considered final (Baumrind, 1971).

The dimension of *responsiveness* is about meeting the physical, psychological and emotional needs of children and deals with the dynamics of families' emotional relationships (Gottman, 1997). Parenting styles also differ in the extent to which

they are characterized by psychological control which refers to “control attempts that intrude into the psychological and emotional development of the child” (Barber, 1996, p. 3296) through use of parenting practices such as guilt induction, withdrawal of love, or shaming. Focusing on the locus of parental control, Barber (2010) proposed a distinction between Psychological Control (PC) and Behavioral Control (BC) as they seem to elicit opposite outcomes in children. PC has a robust, negative, linear effect on self-worth and internalized problems in children (enmeshment, indifferentiation, social withdrawn) while a lack of non coercive BC, in term of limit setting and awareness, is associated with externalized problems. In this taxonomy, the emotional dimension of parenting, such as the validation of feelings, it’s defined as *respect* and accounts for the parental responsiveness to the child’s emotional and psychological needs.

Awareness of the link between parents’ responsiveness and children emotional intelligence has contributed in the past twenty-five years to a movement toward less authoritarian, more responsive mode of parenting. Parents’ emotional responsiveness helps establishing and practicing patterns for emotion regulation and for raising emotionally intelligence children. When children feel emotionally connected to their parents and the parents use this bond to help regulate their feelings and solve problems, they are well prepared to handle the risks and challenges that lie ahead (Gottman, 1997).

Children’s emotional intelligence is determined to some degrees by temperament, but it’s also shaped by the child’s interactions with his parents which play a fundamental role in the development, establishment and practice of patterns for dealing and regulating emotions. Gottman (1997) proposed that parents who internalize versus those who fail to internalize the emotional knowledge of themselves and their children exhibit four distinct parenting characteristics, defined as *disapproving*, *dismissing*, *laissez-faire* and *emotion coach* typology.

*Disapproving* parents often reprimand, discipline or punish their children for expressing negative emotions as they disapprove them. They focus on the behavior surrounding the emotions, are concerned with the child’s obedience to authority and

are quite judgmental of their children's emotional experience (Gottman, 1997). There is a considerable overlap between the behavior of Disapproving and Dismissing parents, but in more negative way.

*Dismissing* parenting style refers to a lack of awareness and therefore a diminished ability to deal with children's emotions. Such parents fear being emotionally out-of-control, are unaware of emotion regulation strategies and believe negative feelings are inappropriate and not valid under any circumstances (Lagacé-Séguin & d'Entremont, 2004).

*Laissez-Faire* parents are extremely lax in regards to disciplining their children and regulating their emotions, they do not set appropriate limits on their child's behaviors and emotions (Baumrind, 1966), eager to embrace unconditionally whatever feelings their children expressed (Gottman, 1997).

*Emotion coach* parenting style is defined as parents' awareness of own and their children emotions and the ability to differentiate and disclose them, both negative and positive (Gottman & Declaire, 1997; Gottman, Katz, & Hooven, 1997; Lagacé-Séguin & d'Entremont, 2006). This form of parenting is associated with children's increased trust of their feelings, better emotion regulation and more competent problem-solving.

According to Gottman (1997), Emotion Coaching is an art that requires emotional awareness, listening and problem-solving behaviors as it relies on providing children with positive forms of discipline, clearly understood consequences for misbehavior, and parental displays of emotions which teach children adequate ways to handle feelings. Emotion coached children not only do better in terms of academic achievement, health and peer relationships but have fewer behavioral problems, are better able to bounce back from distressing experiences, and well prepared to handle the risks and challenges of life.

Although parenting has been considered one of the most important sources of influence in shaping children's development (Pluess & Belsky, 2010), parenting effects are often moderated by characteristics, both at the phenotypic and genotypic level, of the child and some children may be more, adversely or positively, affected

than others by parenting behavior (Sameroff, 1983). The dual-risk model of development (Monroe & Simons, 1991; Zucherman, 1999) has been proposed as a “biological sensitivity to context” that moderates environmental effects (Boyce & Ellis, 2005), and more recently as a differential-susceptibility framework by Belsky (2010). His idea of a *developmental plasticity* implies that some individuals are more susceptible to the adverse and the positive developmental consequences of parenting (plastic or vulnerable) than others (fixed or resilient) who are less or not at all influenced by the same environmental conditions (Pluess & Belsky, 2010).

When parents can be present for their children emotionally, helping them to cope with negative feelings and guiding them through difficulties, their children are shielded from the damages of traumatic or negative life events (Gottman, 1997). The same interpersonal style that Emotion Coach Parents practice with their children, being emotionally aware, empathetic and open to join problem solving, is a relational style that also improves the relationship with intimate partners. Emotion Coaching, in fact, has buffering effects on both children and parents, and implies being relationally competent and psychologically resilient.

### **Positive Emotions and Resilience**

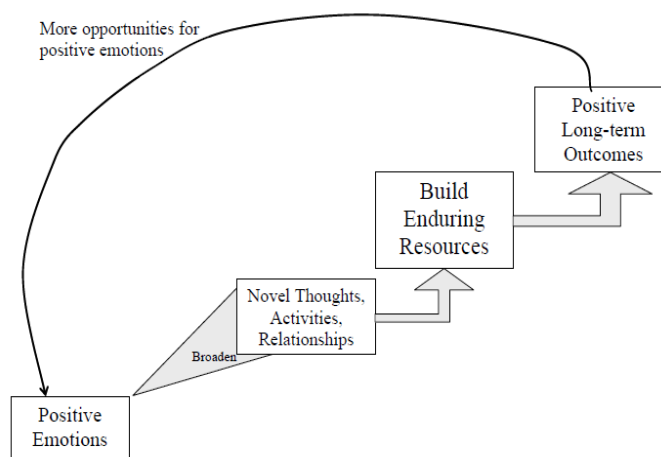
Emotion regulation refers to the attempts to influence the types of emotions people experience, when they experience them and how they are expressed. Strategies aimed to regulate emotions can be maintaining and prolonging, or increasing and enhancing positive emotions (Tugade & Fredrickson, 2007). Positive emotions have a unique ability to down-regulate lingering negative emotions and the psychological and physiological states they generate (Tugade & Fredrickson, 2007). While negative emotions prompt narrow, immediate survival-oriented behaviors (fight-or-flight response), positive emotions broaden one's awareness and encourage novel and exploratory thoughts and actions which over time (the behavioral repertoire) build skills and resources (Figure 1.6). The positivity ratio between positive and negative emotions is 3 to 1. According to Tugade and Fredrickson (2007), positive emotionality and cognitive appraisals of threat would mediate the effect of resilience on regulating physiological arousal associated with stress. Their findings suggest that positive emotions contribute to the ability for resilient individuals to psychologically recover from negative emotional arousal and could reveal the dynamics of psychological resilience as they rather appear to aid resilient individuals in their ability to build psychological resources that are essential for coping effectively with stressful encounters, and lead to post-traumatic growth.

Tugade and Fredrickson (2004) examined resilience focusing on its subjective, cognitive and physiological qualities across several research methodologies. Their Broaden-and-Build theory of positive emotions provided empirical evidence for the construct of psychological resilience positing that negative emotions narrow one's momentary thought-action repertoire by preparing one to behave in a specific way. In contrast, various discrete positive emotions broaden one's thought-action repertoire, expanding the range of cognitions and behaviors that come to mind. Greater emotion knowledge is consequently

associated with larger repertoires of emotion regulation strategies and might provide advantages in the coping process (Tugade and Fredrickson, 2004)

Thus, while traditional coping is reactive, the positive emotions approach seem proactive and future oriented: the individual takes preparatory steps before acting on stress and is able to strengthen his coping capital broadening his/her options for possible action by learning the effectiveness of particular strategies.

**Figure 1.6.** A schematic of the Broaden-and-Build Theory (Tugade & Fredrickson, 2007).



This could be the mechanism by which resilient people achieve superior coping abilities and use their knowledge and complex understanding of positive emotions to flexibly and resourcefully adapt to negative circumstances.

### **Broaden and Build Theory of Positive Emotions**

The broader-and-build theory of positive emotions by Fredrickson (2001) has been used as framework for understanding psychological resilience and has demonstrated that positive emotions contribute to psychological and physical well-being via more effective coping. On the same line, Tugade, Fredrickson and Barrett (2004) have examined individual differences in psychological resilience and positive emotional granularity, defined as the tendency to represent experiences of positive emotion with precision and specificity. Examining differences in these traits, they demonstrated that positive emotions play a crucial role in enhancing coping resources in the face of negative events. They used a multi-method approach in three studies to predict that resilient people use positive emotions to rebound from and find positive meaning in stressful situations (Tugade and Fredrickson, 2004). They hypothesized that positive emotions are active ingredients within trait resilience and showed that positive emotions fully accounted for the relations between pre-crisis resilience and later development of depressive symptoms and pre-crisis resilience and post-crisis growth in psychological resources, suggesting that positive emotions in the aftermath of trauma buffer resilient individuals against depression (Fredrickson et al., 2003).

Positive emotions, thus, appear to aid resilient individuals in their ability to build psychological resources that are essential for coping effectively with stressful events and *positive emotional granularity*, the tendency to represent the positive emotion experienced with precision and specificity, could explain individual differences (Tugade et al., 2004).

For resilient individuals, cultivating positive emotions during coping can become an automatized behavior, depending on the frequent and consistent pairing of internal responses with external events. Automatically accessible emotions require minimal cognitive resources to be activated if triggered in those same environments without conscious thought or intent. With such automatic activation of positive

emotions and proficiency, coping cognitive resources can be allocated to other concerns. (Tugade & Fredrickson, 2007).

## **Positive emotional granularity.**

Positive emotional granularity is the tendency to discriminate between positive emotions (joy, interest, contentment), rather than representing feelings in terms of more global states (pleasantness). Recent research demonstrates that positive emotions can be differentiated from one another (Shiota & Keltner, 2002) and that distinct positive emotions serve to broaden and build personal resources in different ways (Fredrickson, 1998; 2001). Whether individuals actually make these distinctions in their everyday experiences of emotion and coping predict emotion regulation and resilience. Positive emotions experienced by people are protective factors serving important short-term health-promoting functions as well as long-term advantages for coping in the future. Moreover, individuals with a fine-tuned understanding of emotions, especially during times of stress (Tugade & Fredrickson, 2002), have a better insight into discrete emotion concepts. Such information could be beneficial in directing coping and it is associated with healthier outcomes (Tugade & Fredrickson, 2003).

**Emotion regulation.**

The overarching presupposition that emotions can be categorized as “positive” and “negative”, mutually exclusive and distinct has been considered highly disputable. Emotions cannot be divided on a simple polar scale and are not a set of somatic changes, as specific emotions do not necessarily evoke specific somatic changes (Hacker, 2004). On the same line, empirical symptoms are not the criteria for whether an emotion is present, because emotions are intentional (Smedslund, 1991; 1997). At the base of the ability to sustain affective differentiation are skills related to emotion regulation, including the ability to identify, understand, process, and express emotions (Davis, Zautra and Smith, 2004)

Evidence from decades of cognitive and information-processing research has consistently shown that affective processes such as mood and emotion are significant influences on both encoding and retrieval processes. However, the extent to which the elicitation or presence of one emotion influences, or is influenced by, the presence of another (inversely) related emotional state is not clear. The key to developing an integrative perspective may reside in considering the context in which emotions are felt or judged by an individual. The experience of emotion always occurs in an environmental context where the individual process information from multiple sources, including emotional inputs, to develop adaptive responses to the current demands the environment is placing upon him/her. An optimal response at any given time required maximal flexibility, resources allocation and complex, time consuming processing. However, during times of stress, uncertainty or difficulties, the individual needs to process information more rapidly and focus on the immediate demands of a potentially threats to well-being to alleviate the discomfort of the situation. In adverse circumstances, positive (PA) and negative (NA) emotions fuse to become a simple bipolar dimensions with a high inverse relationship between the two (Devis, Zautra and Smith, 2004).

An alternative perspective posits that positive and negative affects exist on distinct dimensions, such that positive and negative systems can be activated independently (Watson, Wiese, Vaidya, & Tellegen, 1999; Cacioppo & Bernston, 1994; Cacioppo, Gardner & Bernston, 1999) based on evidences that negative events relate to change in NA but not PA, and that positive events related to changes in PA but not NA (Gable, Reis & Elliot, 2000; Goldstein & Strube, 1994). Recent finding on the neural substrates of emotions, using brain (PET) and functional magnetic resonance imaging (fMRI), suggested the existence of distinct neural systems for positive and negative evaluative channels that can be manipulated independently (Canli, Desmon, Zhao, Glover & Gabrieli, 1998; Canli, Zhao, Desmon, Kang, Gross & Gabrieli, 2001; Davidson, Jackson & Kanlin, 2000). Although positive and negative affects appear to be regulated by separate neurocognitive systems (Canli et al, 1998), both rely extensively on neuronal feedback loops during stress to function optimally (Sackheim & Weber, 1982).

In their experimental and longitudinal work, Zautra et al. (Zautra, Berkhof, & Nicolson, 2002) found individual differences in the within-subject correlations between affects and concluded that there may be personality differences that account for individual differences in the slopes linking PA and NA. While Chorpita, Albano, & Barlow (1998) suggested that PA is a differentiating variable as it plays little role in anxiety, but is suppressed in depressive states. Similarly, Watson and Kendall (1989) suggested it is a deficit in PA attendant with increased NA that characterizes the difference between anxiety and depression. Employing the behavioral activation/inhibition scale (BAS/BIS) of Carver and White (1994), Sutton and Davidson (1997) found that higher levels of left-sided prefrontal anterior cortex activity (BAS) are related to higher levels of PA, whereas higher levels of right-sided cortical activity (BIS) are related to higher levels of NA. Gable et al. (2000) showed that high BAS activity was related to greater PA levels, whereas greater BIS activation was related to greater NA, while cross factor relationships were not significant. Davidson (2000) has summarized studies linking brain activation with PA and NA and suggested that one context is set by the individual's own affective

style: people vary in their extent of prefrontal activation, and consequently experience chronic levels of positive or negative affective styles.

The tripartite model of depression and anxiety hypothesizes that positive and negative affect are related to depression and anxiety. However, the specific role of cognitive and psychological well-being in constructs like resilience within this model and throughout adulthood is unclear. Burns et al. (2011) sought to determine, in a sample (N=3989) from two longitudinal population-based cohorts, age 20-24 and 40-44 the interrelatedness of two affective measures of well-being, positive and negative affect with two cognitive measures of psychological well-being, resilience and mastery and found four affective and cognitive dimensions of well-being: positive and negative affect, resilience and mastery. Their structural equation models identified the psychological variables as significantly related to subjective well-being, which fully mediated the effects of resilience and partially of mastery on depression and anxiety in young and middle adulthood.

Consequently, both the bipolar and bi-factorial models are needed in describing positive and negative affect, but neither provides a comprehensive framework that accounts for the complexity of affective phenomena (Zautra, 2004). Social engagement, and thus relational competence and resilience, derives from needs that arise from both affective systems, as individuals seek interpersonal contact for both enjoyment and alleviation of suffering.

### Chapter 1.3 - A dynamic model of affect (DMA)

One mechanism by which positive emotions may play a role in the regulation of negative states that accompany pain has been proposed by Zautra et al. (2001) in their dynamic model of affect (DMA).

This model proposes that positive and negative affective systems function relatively independently under conditions that promote maximal information processing, while the two affects become strongly inversely related under adverse conditions. Building on research examining the contextual determinants of information processing (Linville, 1985), the Dynamic Model of Affect (DMA) Zautra (2003) specifies conditions under which both bivariate (positive and negative affects are independent) and bipolar (they operate inversely from each other) models of affect are valid and analyzes both affect systems functioning concurrently (Reich, Zautra, and Davis, 2003), plus the model predicts that the inverse correlation between PA and NA is greater during high vs. low stress.

The role of emotional understanding and the level required to promote affective differentiation is not straightforward. The degree of affective differentiation varies within and between individuals over time and thus the influence of situational context on this differentiation. However, affective appear less differentiated with increased pain (Davis, Zautra & Smoth, 2005). Moreover, increased skills in understanding emotions related to greater differentiation between NA and PA among individuals in chronic pain. Consequently, the straightforward, but it may be a potential moderator of the interplay between PA and NA. During times of pain and stress when positive and negative affect are strongly related, the ability to continue to laugh and experience pleasure may leave less room for the powerful negative emotions that can seem so overwhelming. During times of low pain and stress when positive and negative affect represent separate dimensions, the ability to enhance positive emotions could serve to “broaden and build” the resources for coping with flare-ups of pain and increase overall life satisfaction (Fredrickson, 1998).

Kabat-Zinn (1982) has suggested another approach to emotional processes, an active, dynamic acceptance of the stress and the negative cognitions: *mindfulness*. Such acceptance lowers the stress response and uncouples positive feelings, allowing for a less constricted emotional life (Reich, Zautra, & Davis, 2003) as people undergoing stressors tend to engage in hyper vigilance and other anticipatory fear responses and thus NA tends to dominate cognitive processes to the exclusion of positive emotions.

Finally, Zautra, Berkhof, & Nicolson (2002) in their experimental and longitudinal work, probed for individual differences in the within-subject correlations between affects and found evidence of different pattern of relationships between PA and NA, thus concluding that personality differences account for individual differences in the slopes linking PA and NA.

Initially the DMA (Zautra, Potter, & Reich, 1997) emphasized the importance of the role of contextual factors in feelings and emotions as individuals' report feelings closely linked to their environment. This information-processing model regards processing information about the environment and the emotion felt in that environment as a continuum from simple, unitary, undifferentiated, and unidimensional to complex, highly differentiated, and multidimensional.

Stressful events place demands on the individual system, raising uncertainty and threatening current adjustment. Thus, attentional resources become concentrated on the immediate demand, narrowing attention and reducing processing capacity; discrimination is simplified, and generalization is expanded. Consequently, the DMA predicts that, under high stress, PA and NA tend toward collapse into a simple bipolar dimension with highly inversely coupled affect. Any given stimulus is considered as eliciting affective responding in one of two separate affect systems, positive or negative. Such responding in turn is related to one of two separate activation systems, a behavioral approach system and its antecedent PA or a behavioral avoidance system and its antecedent NA. However, it is possible for a given stimulus to elicit both simultaneously (Reich, Zautra and Davis, 2003). The DMA specifies that, under stress, information-processing capacity is reduced as the

organism is under the pressure of coping with a stressful event. These basic mechanisms of positive and negative affective functioning have been located by fMRI techniques in separable brain regions. Employing the behavioral activation/inhibition scale (BAS/BIS) of Carver and White (1994), Sutton and Davidson (1997) found that higher levels of left-sided prefrontal anterior cortex activity (BAS) are related to higher levels of PA on the PANAS, whereas higher levels of right-sided cortical activity (BIS) are related to higher levels of NA. Gable et al. (2000) showed that high BAS activity was related to greater PA levels, whereas greater BIS activation was related to greater NA. However, cross-factor relationships were not significant.

The two affect systems are relatively separate and strongly associated with left and right prefrontal areas involved in approach and avoidance. Nevertheless neural activation may both enhance PA and shorten NA suggesting that major component of affective activity is emotional regulation, the ability to temper emotional reactivity in the face of arousing (and perhaps stressful) conditions. Such an approach is, ultimately, contextual, indicating the need for simultaneous consideration of multiple sources of input and complex regulation of the interaction of various neurological and hormonal systems operating simultaneously.

The study of the relationships between PA and NA reveals a complex but rich, heuristic linkage of emotions, stress, and cortical motivational systems and an array of variables and processes (Zautra, Potter, & Reich, 1997) fruitful for an integrative approach to resilience.

Ong, Bergeman, Bisconti and Wallace (2006), concluded that the adaptive benefits of positive emotions are greatest when individuals are under stress; that positive emotions are more common among high-resilient individuals while those low in psychological resilience tend to have difficulty regulating negative emotions and exhibit heightened reactivity to daily stressful life events. Positive emotional processes are a key component of what it means to be resilient (Bonanno, 2004; Fredrickson et al., 2003; Zautra, Johnson, & Davis, 2005).

Finally, the concept of resilience has relevance not only to those undergoing significant life challenges but also to those experiencing daily stressors that spontaneously arise and subside in naturally occurring contexts.

### **Substance Abuse**

Substance abuse can be interpreted in light of the DMA. Intoxicating substances serve the purpose of emotion regulation as both reduction of social anxiety or negative affective states, and amplification of positive states have shown to motivate substance abuse (Swendsen et al., 2000). Zautra (2003) proposed that increasing simplicity could be an affective consequence of abuse and dependency. The substance itself, over time, increasingly functions as a stressor, provoking a narrowing of the affective space depending upon the degree of dependency (Davis, Zautra and Smith, 2005) The DMA specifies that, under stress, information-processing capacity is reduced as the individual is under the pressure of coping with a stressful event. Stress is considered arising from a threat to well-being, and information processing is narrowed to aid successful coping with the stressor; this shrinks positive information processing in the service of enhancing negative reactivity to cope with the stressor. The DMA postulates that a deficit in information-processing complexity stress induced is a central mechanism whereby the affects become inversely related. According to this type of model, because stress has negative consequences, information processing under stress would play a causal role in slanting attention away from positive states and toward negative states, resulting in an inverse correlation between them (Reich, Zautra and Davis, 2003).

Recent research explored what is called “uncoupling,” the separating of the affects which tend to become inversely coupled under stress. Uncoupling should allow the person freer access to positive feelings and healthful emotional states such as psychological resilience, even in the presence of stress (Reich, Zautra and Davis, 2003)

## Uncoupling

The ability to maintain the separation between positive and negative emotions in times of stress has been confirmed as a resilience mechanism (Chow et al., 2007). Although positivity and negativity may often be characterized by reciprocal activation, they are also characterized by uncoupled activation, co-activation, or co-inhibition. Uncoupled activation occurs when changes in one system are not accompanied by changes in the other, co-activation and co-inhibition occur when changes in one system are associated with parallel or opposite changes in the other system, respectively (Larsen, McGraw, Cacioppo, 2001).

The DMA model characterizes adaptation to stress as the successful uncoupling of negative and positive emotions. Uncoupling between PA and NA could correspond to a sensation of oscillation of positive and negative affects, not always synchronized, like an increased feeling of joy and pleasure associated with increased anxiety and stress. Russell and Carroll's (1999) circumplex model holds that happiness and sadness are polar opposites and, thus, mutually exclusive. In contrast, the evaluative space model (Cacioppo & Berntson, 1994) proposes that positive and negative affect are separable and that mixed feelings of happiness and sadness can co-occur. When people are happy they generally smile, laugh, and seek out others; when they are sad they frown, cry, and withdraw from others (Shaver et al., 1987). Theorists disagree over the relationship between happiness and sadness in experience and, in particular, over whether happiness and sadness can be experienced simultaneously (Larsen, McGraw, Cacioppo, 2001). Measures of emotion therefore have consisted of summed ratings of several positive (happy, joyful, fun/enjoyment) and negative emotions (depressed/blue, unhappy, angry) that varied in activation. Congard et al. (2011) were able to identify predictable, characteristic patterns of variations in individual behaviors across different situations as a function of trait anxiety, whilst integrating the dynamic relationship between positive and negative affectivity, which was presented in a two-

dimensional affective space. They found nonlinear relationships between changes in PA and NA, and curved trajectories in affective space and believed that coupling/uncoupling and the line curvature reflected some kind of internal regulatory process. A negative event could give some reason to feel negative emotion but in itself this kind of event does not necessarily suppress the sources of positive affect in that person's environment. An increase in NA is then expected, and due to the inhibitory coupling effect, this increase in NA is associated with a decrease in PA. However, if there are still some reasons to feel positive emotions in the environment, these positive emotions will reappear. The inhibitory coupling effect can then occur in the other direction where the increase in PA will curb the increase in NA originally produced by the negative event and help to recover (Congard et al. , 2011)

This emotion regulation skill is particularly important when cognitive performance tend to decline as in old age. Chow et al. (2007) examined the dynamic of the linkage between positive and negative emotions and complex cognitive task finding age difference in emotion regulatory strategies. Older adults, in fact, manifested a significant unidirectional coupling from negative emotions to cognitive performance while younger adults from negative to positive emotions and from cognitive performance to both positive and negative emotions.

## Mindfulness

Mindfulness is described as being highly aware and focused on the reality of the present moment, accepting and acknowledging it, without getting caught up in the thoughts about the situation or emotional reactions to the situation (Kabat-Zinn, 2005). The mindfulness component of the ‘acceptance versus change’ dialectic lies in building acceptance skills. Mindfulness has been demonstrated to improve tolerance of negative emotions (Siegel 2007, Linehan 1993) and as negative emotions produce anxiety, tolerance of negative emotions reduces it and increases acceptance of adversity. Increased acceptance of adversity promotes resilience by reducing the psychological impact of adverse circumstances. Mindfulness practices help people to become more aware of how they are feeling, emotionally and physically, from moment to moment, seeing how their emotions affect their perceptions of their physical symptoms. Kabat-Zinn (1990) outlined seven foundations of mindfulness practice: *nonjudging* (being aware of judging and reaction to inner and outer experiences); *patience* (understanding and accepting that sometimes things must unfold in their own time); *beginner’s mind* (seeing everything as if for the first time); *trust* (taking responsibility for being yourself and learning to listen to and trust your own being); *non-striving* (realizing that there is no goal other than for you to be yourself); *acceptance* (seeing things as they actually are in the present; and *letting go* (releasing thoughts, feelings, and situations that the mind seems to want to hold on to).

Mindfulness training provides powerful cognitive-behavioral coping tools (Kabat-Zinn et al., 1992; Astin, 1997). While sharing some similarities with other cognitive interventions, mindfulness-based approaches focus on attending to and altering cognitive processes rather than changing their content (Orsillo, Roemer, Block-Lerner, & Tull, 2004). Numerous mindfulness practices that cultivate a proactive approach to building resilience skills are available.

Some authors (Shapiro, Schwartz, and Bonner, 1998) have suggested that mindfulness training allows individuals to develop alternative paradigms and therefore interpret experiences in new ways so that, a stressful situation may be perceived as an opportunity rather than a threat, and call it “cognitive flexibility (Roemer & Orsillo, 2003).

## Chapter 1.4 - Multiple Trajectories of Adjustment

Bonanno (2004) suggested that there is a substantial individual variation in response to potentially traumatic events, including four prototypical and empirically derived outcome trajectories from mild to severe disruption in normal functioning: resilience, recovery, delayed reactions, and chronic dysfunction. A stable trajectory of healthy functioning, resilience is typically the most common outcome observed (Bonanno, 2010). Factors that promote resilience are heterogeneous and include a variety of individual, demographic, and socio-contextual so that that some factors promoting resilience to potentially traumatic events may be maladaptive in other contexts, whereas exposure to risk factors could be sometimes more broadly adaptive. Bonanno's studies revealed a number of unique and variable patterns or outcome trajectories (Figure 1.7).

### Chronic Dysfunction

Although there is considerable variability in the type, severity, and duration of potentially traumatic events, PTSD has been observed in adults only in 5% to 10% of exposed individuals, with the exception of prolonged or severe events. Chronic grief reactions, defined as prolonged suffering and inability to function, usually lasting several years or longer, in fact, tend to be more prevalent after more extreme losses, such as when the death event involves violence or when a child dies. In longitudinal studied, only a small group of those initially experiencing elevated depression symptoms during bereavement, usually 10% to 15% of the entire sample, continue to suffer persistent grief and depression, and ultimately chronic disturbances in functioning over the long term (Bonanno, 2010). However with children the question is more complex, as they may fail to show evidence of PTSD or complicated grief but have increased externalizing symptoms, substance use, academic problems, or

peer conflict (Bonanno & Mancini, 2012). Individuals who display the *chronic trajectory* tend to have the most severe symptoms following exposure to a potentially traumatic event (PTE) and the symptoms tend to persist across time.

### **Delayed Distress**

Delayed distress trajectory (Bonanno et al., 2007; Layne et al., 2007) is characterized by initial resistance that later on becomes too difficult to be sustained and is replaced by distress. Initially a low number of symptoms are present followed by an increase usually by 18 months indicative of delayed symptoms. Delayed PTSD resembles sub threshold psychopathology that gradually worsens over time and should not be intended as a denial or confused with absence of overt signs of PTSD. The absence of PTSD symptoms after exposure to potentially traumatic events, in fact, should not be considered psychopathology (Bonanno & Mancini, 2008). Individuals with *delayed trajectory* have symptoms that are not very prominent or severe during the first 6 months following exposure to a PTE but with time, they show an abrupt increase in the number and/or severity of symptoms.

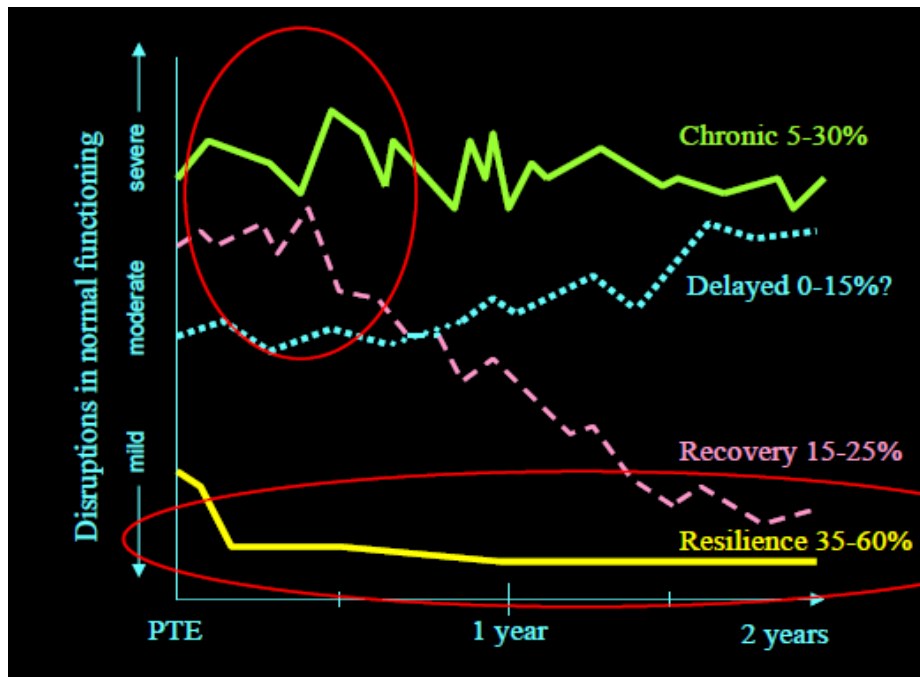
### **Recovery**

This trajectory is characterized by an initial high level of symptoms followed by a decline over time indicative of recovery. When normal functioning is temporarily substituted by threshold or sub-threshold psychopathology like symptoms of depression or Posttraumatic Stress Disorder (PTSD), usually it will gradually returns to pre-event levels after a period of at least several months. The recovery trajectory is characterized by a gradual return to baseline levels of functioning within 1 to 2 years. Recovering individuals may constitute the majority of those initially symptomatic; however they ultimately adjust over time (Bonanno, Rennieke and

Dekel, 2005). Individual showing a recovery trajectory have an abrupt onset of symptoms following exposure to a PTE with the symptoms showing gradual improvement with time.

## **Resilience**

It is a consistent, stable low-symptom trajectory showed by individuals who have no problems with their functioning following exposure to PTEs. This ability of adults exposed to an isolated and potentially highly disruptive event, such as the death of a close relation or a violent or life-threatening situation, to maintain relatively stable, healthy levels of psychological and physical functioning and a renewed capacity for generative experiences and positive emotions. For developing children, the definition of healthy adaptation is a complex issue hinging on the temporal and socio-contextual characteristics of stress and adaptation at different points in the lifespan, but is more straightforward in adults whose responses to PTEs can usually be assessed in terms of deviation from or return to normative (baseline) functioning (Bonanno, 2004). Resilient individuals experience some form of transient stress reaction, however, these reactions are usually mild to moderate in degree, are relatively short-term, and do not significantly interfere with their ability to continue functioning. A relatively stable trajectory of healthy functioning does not result from any specific dominant factor. Rather, it is the result of multiple independent risk and protective factors, each contributing to or subtracting from the overall likelihood of a resilient outcome.



**Figure 1.7.** Prototypical empirically derived patterns of disruption in normal functioning across time after potentially traumatic events (PTE) (Bonanno, 2004).

### Coping flexibility

Beliefs can influence the outcome of events as they foster flexibility in coping and the view that stressful life events are challenges. The capacity for positive emotions helps regulate distress as it fosters social support from others and a *flexible repertoire* of coping and emotion regulation behaviors. The term *coping flexibility* captures the degree to which the person will be flexible enough to cope in whichever way the situation calls for and to embraces stressful events as challenges (Bonanno, 2011). Successful adaptation depends on the flexibility to modify emotional expression in accord with situational constraints and this coping flexibility predict better long-term adjustment after exposure to stressful life events (Bonanno, Wortman, & Nesse, 2004). According to this approach successful adaptation depends not so much on any one regulatory process, but on the ability to flexibly enhance or suppress emotional

expression in accord with situational demands. Both the enhancement and the suppression of emotion expression serve adaptive ends, but also require cognitive resources (Bonanno, 2001; Gross, 1998). A flexible application of coping strategies corresponds with the nature of the stressor (Cheng, 2001). Successfully meeting the demands of traumatic live events require a pragmatic, goal-oriented approach. Such “pragmatic coping” may involve behaviors that under normal circumstances would be less effective or even maladaptive, and thus sometimes be “ugly” but necessary to adjustment (Bonanno & Mancini, 2012).

## **Willingness to express and share emotions**

The nature of the relationships a person perceives to have with another person is determines that person’s willingness to express or suppress emotions as clearly emotions convey information about needs likely or unlikely to elicit a support response or even exploitation as vulnerabilities are revealed. In exchange relationships, one gives benedicts to the partner either in response to a previously received benefit or with the expectation that the partner ill repay. Generally, in close relationships characterized by mutual, non-contingent responsiveness to need, the willingness to freely express emotion will be higher (Clark & Finkel, 2005). Thus, relationship type and quality does influence the expression of emotion. Emotions researchers have long recognized that emotion, as experiences internally (feelings) communicates information to the self and may motivate the individual to attend to his/her own needs (Frijda, 1986, 1993; Clark & Finkel, 2005) whereas emotions outwardly expressed convey information about the individual’s need to others (Leventon, 1994; Miller & Leary, 1992). Consequently, the tendency to belief that others do care increases the likelihood of emotion expression. As important part of emotional intelligence is the ability to flexibly choose to express or to suppress emotion depending upon context (Bonanno, Papa, O’Neil, Westphal & Coifman,

2005) particularly as both positive and negative emotions are sometimes wise to be expressed and sometime wise to be suppressed (Clark & Finkel, 2005 )

### **Expressive flexibility**

Expressive flexibility, the ability to both enhance and suppress emotional expression, predicts better self-reported adjustment after the occurrence of stressful and potentially-traumatic events and serves as a protective factor (Bonanno, Papa, O'Neill, Westphal, and Coifman, 2004). The construct of expressive flexibility, its measurement, and its role in adjustment have been recently tested in the context of potential threat (Bonanno, 2007, 2011). Results seem to indicate that it is reasonably stable by young adulthood, it interacts with stressful life events to predict adjustment and it is strongly associated with resilience when measured in a threatening context. While both enhancement ability and suppression ability independently contributed to resilience, enhancement was more relevant in the non-threat context and suppression was more relevant in the threat context (Coifman et. al., 2007). Expressing or suppressing emotional expression is not as important for adjustment as is the ability to flexibly express or suppress as demanded by the situational context (Bonanno et al., 2004), as positive emotions are not always adaptive and negative emotions are not always inappropriate. This capacity for flexibility, that seems to be trait-like (Seivert & Bonanno, 2008) has been observed very early in development yet can change over time as a result of the dynamic interplay of personality and social interactions with key attachment figures. It is a personality resource that helps bolster resilience to aversive events, such as childhood maltreatment, and can be enhanced or reduced by developmental experiences and eventually become stable (Bonanno & Mancini, 2012) .

### **The other side of Sadness**

Bonanno (2009) has challenged the predominant view of “grief work” by exploring loss across diverse patterns of adjustment and contexts. It emerged a “*wavelike*” nature of grief, oscillating from “loss-oriented” to “restoration-oriented” processes, and a powerful portrait of resilience as the “*marvelous human capacity to squeeze in brief moments of happiness and joy that allows us to see that we may once again be moving forward*” (p.19). Grief is not a one-dimensional experience following pre-determined stages as individuals show different patterns or trajectories of grief reactions across time. They may indeed cope effectively (resilience), experience gradual return to normal daily routines (recovery) or find impossible to deal with the pain of loss (chronic grief). A “one-size-fit-all” approach or intervention to support adjustment and recalibration may interfere with a natural recovery process rather than help. Despite Sadness being a big part of grief, there is also a positive side to it: bereavement is a powerful experience, dramatically shifting people’s perspective of life. Loss, in fact, requires adjustment but also opens new opportunities.

Bonanno (2009) argues that newer studies, with changed standards of evidence, have found absolutely no support for the idea that grief is a time-consuming work that must be done before full recovery is possible. The author also believes that psychological problems do not have to be necessarily traced back to earlier unresolved grief reaction nor healthy responses to loss are suspect, but simply most bereaved people exhibit a natural resilience. Bonannos’ criticism is mostly grounded in a lack of empirical data, and sampling errors and he challenges the idea that the key component of grief is only an intense, plain, silent, all encompassing and bottomless sadness, like an “*inward desolation*” (p. 27). Referring to Ekman’s (1992, 1993) research showing that emotions are varied, complex and useful, the author underlines that emotions help us manage challenges in two main ways, feeling them, (coming and going) and showing them to others. The function of sadness is to turn our attention inward, promote deeper and more effective reflection, become more

detail-oriented, accurate in evaluating our abilities and performances, and less biased toward others. It's an "essential tool that help us accept and accommodate to the loss" (p. 31) and comes "equipped with a build-in safety mechanism" (p.21), that "dampens our biological systems so that we can pull back" (p. 32). Facial emotion expression, thus, are a compelling signal to others that help is needed. Emotion are short-terms reactions, "personal and raw" (p. 36) to immediate demands, and their usefulness depends on its context.

Essentially bereavement is a non uniform or static stress reaction, and grief is tolerable only because it comes and goes in a kind of oscillation: individuals temporarily lighten up and reconnect with those around them, then dive back down to continue the process of mourning (Bonanno et al. 2004). Resilience in response to potentially traumatic life events is common, abundant, prevalent, the norm rather than the exception, but is not homogeneous. Some experience a "*wondrous sense of calm, even serenity*" (p. 59) , many manage to keep their spirit up through the use of humor, while only a few remain depressed or exhibit enduring psychiatric symptoms. Clues about resilience are the quality of the relationship that was lost, the presence of others to turn to for comfort, the ability to use avoidance and distraction as coping strategies, a broader flexibility to adjust to the shifting demands of different situation, a broader repertoire of behaviors, and emotion expression flexibility (Bonanno et al. 2005). Being flexible in expression or suppressing emotions is adaptive. The best approach to unexpected adversities seems to be a "pragmatic coping" or a "coping ugly", as humans "are wired to survive, adapt, and change gears" (Bonanno, 2009, p. 81). When sadness becomes too strong, overwhelming, "pernicious and dysfunctional" (p. 97) individuals withdraw from world, loose the focus in life, experience confusion about their identity and tend to ruminate on the past and repeatedly rebuff, deny access and locked out other in their lives. According to the author (Bonanno, 2009) "the glue that seems to bind yearning, emptiness and isolation together is dependency" (p. 102), defined as an overly investment and reliance on another person.

In conclusion, humans are equipped with a set of in-born psychological processes that help them cope with loss, while turning their attention inward, reflect and recalibrate to the reality of loss. They move in and out of sadness, to gradually return to a state of equilibrium. This kind of adaptive oscillation is achieved by switching to more positive states of mind, by finding joy and laughter within pain, and making sense out of it. Thus positive emotions “propel us out of sadness”, but also connect us to others (Bonanno, 2009, p. 199). Resilient people are more flexible in the way they use emotions, using sometimes even behavior strategies that under normal circumstances are not perfectly healthy like self-serving biases, blaming external factors, or focusing on positive outcomes. Many aspects of bereavement fade gradually with time, because when people grieve they deal with the unknown and “*live with the dissonance*” (p. 201) powerfully evoked by death.

## **Potentially Traumatic Life Events (PTE)**

It is crucial to consider that not all aversive events are traumatic. Rather, such events are best understood as “potentially traumatic events” (PTE) (Norris, 1992; Bonanno, 2004) that may become traumas depending on factors like the intensity and duration of exposure, demographic, personality variables and situational variations (Bonanno, Rennieke, & Dekel, 2005; Brewin, Andrews, & Valentine, 2000). Stressful life events can range from relatively mild but pervasive hassles to less common but much more severe and potentially debilitating traumatic events (Zautra, 2003). An event is considered traumatizing if one experiences, witnesses, or confronts a situation that involves actual or threatened death or serious injury to oneself or others and if it elicits a response of intense fear, helplessness, or horror (American Psychiatric Association, 1994). A number of large-scale epidemiological studies have revealed that exposure to potentially traumatic events (PTE) is unfortunately quite prevalent (Gray & Slagle, 2006).

While the likelihood of developing chronic PTSD depends on the type of PTE experienced, the overall rate of PTSD given traumatic exposure across different types of PTEs has been estimated approximately around 9% (Breslau et al., 1998). Although PTSD is a form of psychopathology following traumatic exposure, other disorders such as major depressive disorder and substance dependence disorders may also occur instead of, or in addition to, PTSD (Chilcoat & Menard, 2003; Kessler et al., 1995).

Evidences suggest that an increased level of emotional involvement and arousal is connected with better memory recall of important events (Conway et al., 1994; Neisser et al., 1996; Pezdek, 2003; Schmolck, Buffalo, & Squire, 2000; Smith, Bibi, & Sheard, 2003). However, recollection for details surrounding these significant life events was not perfect and over time became distorted. It is advantageous to screen for exposure to traumatic events in most contexts (Gray & Slagle, 2006) because of the relatively high comorbidity of trauma with other psychological disorders (Kessler et al., 1995) and conditions like substance dependency.

In positive psychology, psychological processes are often studied in the absence of stressors, losses or trauma (Jowkar, Friberg & Hjemdal, 2010) while in resilience research their presence is a premise. Type, duration, and intensity of exposure to potentially traumatic events has been shown to influence the prevalence of healthy adjustment, with resilience varying from 33% to 50% across exposure categories (Bonanno & Mancini, 2012). It has long been recognized that people exposed to the same potentially traumatic events (PTEs) are affected differently. The majority of persons who experience a single PTE do not develop Posttraumatic Stress Disorder (PTSD) but may experience other disorders, such as depression; however, others do not seem to be adversely affected by such exposure (Bonanno, 2004). Post traumatic stress disorder diagnosis (PTSD) requires the identification of a traumatic event, but very few studies have evaluated methods of potential traumatic event assessment and their impact on PTSD diagnosis.

Resilience is typically the most common outcome although there are multiple and sometimes unexpected pathways to resilience (Bonanno 2004, 2005, 2008). Resilience in children was explored in response to aversive and enduring life circumstances, with protective factors fostering positive outcomes at the end point of the developmental period. Resilience in adult, on the other hand, is a response to potentially traumatic events (PTE) that usually is an isolated event occurring in otherwise normal circumstances and with protective factors fostering minimal response or a rapid return to baseline functioning within 2 years. Adults common reaction to loss and trauma, represents a transient stress reaction (disequilibrium), a brief period of fluctuations in levels of distress and well-being, but still a relatively stable trajectory of healthy functioning (STHF), where the capacity for generative experiences and positive emotions (Fredrickson et al., 2007) and laughter (Keltner & Bonanno, 1997) is renewed.

## **Post Traumatic Stress Disorder (PTSD)**

Prospective research suggests that only previous stressors resulting in PTSD tend to predict PTSD at subsequent exposure, thus an important qualifier for resilience is the actual, empirically observed outcome of current and previous life stressors (Bonanno & Mancini, 2012). The social ecology PTSD conceptual framework understands PTSD as depending on social phenomena, before and after trauma. And PTSD, indeed, has been linked with increased life stress before and after the marker traumatic event. Charuvasta and Cloitre (2008) found social support to be an effective emotion regulator as the behavior of others can soothe or exacerbate trauma-driven fears.

There is a large literature regarding the role of social support in influencing the outcomes of stressful life events and buffering against psychological distress (Cohen, 1991; Cohen et. al, 1997). However, there is debate about the nature of the relationship between social support and PTSD as some studies indicate that social

support exerts its influence as a protective factor against the risk of PTSD, whereas others suggest that the relative absence of support is salient as it creates an increased risk for PTSD (Yehuda, 2000; Yule, 2000). The relative impact of each, sometimes occurring even simultaneously, is context sensitive and relative to the nature of the trauma, the individual's needs, and the nature of the social or interpersonal relationships (Bonanno & Mancini, 2012).

## Chapter 1.5 Defining and Operationalizing Resilience

The evolution of the construct of resilience from physiological and psychological research extends from the 1800's to the present. Tusai and Dyer (2004) have reviewed it proposing the importance of a dynamic, interactive perspective for understanding resilience, suggesting that the complexity of the construct requires a holistic approach, and underlining the importance of exposure to diverse experiences and educational perspectives for professionals. The domains of resilience are, indeed, developmentally appropriate and change with different life stages. Resilience thus appears to be a process that can be developed at any time during lifespan, and thus is not an inherent characteristic of personality. It is, indeed, the result on an interplay between the individual and the broader environment which determines its level (L'Abate, 2010) and thus varies by life cycle and by ethnicity (McCubbin, 1996). The development of resilience is, in fact, based on the synergy shared between individuals and their environments and experiences (Gillespie , Chaboye & Wallis, 2007). Consequently, integral to the definition of resilience in research is the interaction among risk and protective factors at an intrapersonal, interpersonal and environmental level.

The controversy on the prevalence of resilience in general and clinical population, which ranges from 15% to 50%, depends primarily upon different definition of resilience and a lack of a background theory capable of explaining both its components and the underlying processes (Charney, 2004). These rates, while confirming that resilience does not function uniformly and automatically and vary across different populations, in response to contextual variables (Tusaie & Dyer, 2004) also evidence a need for a theoretically and empirically grounded definition, operationalization and normalization of the construct.

Resilience has been described in literature as an individual's capacity for maintenance, recovery or improvement in mental health following life challenges (Ryff, Singer, Dienberg Love, & Essex, 1998), successful adaptation following

exposure to stressful life events (Werner, 1982, 1989, 1993), an individual's capacity for transformation and change (Lifton, 1988, 1993) and as a self-righting force within everyone that drives him/her to pursue self actualization, altruism, wisdom, and harmonium with a spiritual source of strengths (Richardson et al., 1990; Richardson, 2002). Clearly, what is meant by psychological resilience is ways too different and vague and can be criticized for being too amorphous (Neill & Dias, 2001). These definitions focus on aggregating various domains and characteristics weakly correlated with outcomes, so that a global definition of resilience becomes useless in research and practice applications. On the other hand, if we identify in Relational Competence Theory (RCT, L'Abate, 1994, 1995) a theoretical model that emphasizes collaborative exchanges, emotions and developmental contexts and can explain its components, specificities and processes during developmental transitions, changes over time, crisis and prolonged challenges, and across different contexts and populations, then such a global, overall definition of resilience as relational and competence-based will overcome any issue of construct definition and operationalization while offering innovative perspectives and inquiries about its outcomes.

## **The construct of Resilience**

A metatheory of resilience has been presented by Richardson (2002) as three waves of research inquiry: 1) the identification of resilient qualities characterized by the phenomenological identification of developmental assets and protective factors, 2) the description of resilience as a disruptive and re-integrative process for accessing resilient qualities, and a 3) postmodern and multidisciplinary view of resilience as the force that drives a person to grow though adversity. Resilience research has evolved from its first simplistic attempts to describe resilient qualities to uncover the process of attaining those qualities (Connor & Zhang, 2006), to understand its components and developmental dynamics. Block and Block (1980) originally defined

psychological resilience as a resourceful adaptation to changing circumstances and environmental contingencies, an analysis of the goodness of fit between situational demands and behavioral possibility, and a flexible invocation of the available repertoire of problem-solving strategies.

Recently the mechanism by which resilient people achieve superior coping abilities and flexibility and resourcefully adapt to negative circumstances as been identified in a complex knowledge and understanding of positive emotions that involve the interaction of automatic and controlled processes (Tugade & Fredrickson, 2007). Automatically accessible emotions require minimal cognitive resources to be activated as they eventually become triggered in those same environments without conscious thought or intent depending on the frequent and consistent pairing of internal responses with external events. Thus, while traditional coping is reactive, resilience is proactive and future oriented (Tugade & Fredrickson, 2004; Tugade et. al, 2004)

Moreover, Storm and Storm (1987) found that the representation of emotional experiences, discretely or globally, varies individually by degrees and can be differentiated on the basis of social relevance (interpersonal or non-interpersonal) and distinctly categorized based on appraisal theme, behaviors and subjective experiences. This suggest that resilience is dynamic across developmental stages, relational, contextual, and also attributional in nature, as it depends ultimately on the meaning a person gives to his/her experience and his/her reaction to that experience.

Recent evidences (Bonanno, 2011) are moving toward an individual-differences model of resilience that accounts for substantial individual variation in response to potentially traumatic events, which can be defined by prototypical and empirically derived outcome trajectories while others have also demonstrated evidences of a heritable and physiological component of resilience, such as higher biological levels of dopamine, neuropeptide Y, testosterone, and higher functionality of 5-HT and benzodiazepine receptors (Charney, 2004; Gervai et al., 2005) and Dopamine receptor D4 in young adults (Das et al. 2011).

Hence, resilience today is still not adequately theorized and needs further empirical validations. As leading psychologist Bonanno and his colleagues Moskowitz, Papa, and Folkman (2005) argued, “the study of resilience is still nascent; there is an imperative need to replicate and extend evidence for resilience in a wider range of populations using broader methods and measures” (p. 3).

## **Resilience as a personality trait: its psychological characteristics**

Research on resilience has found several global factors within the individual that seem to promote positive development generally and different ways in which individuals adapt to all challenges of their environment (Waaktaar, T. & Torgersen S., 2010). Masten (2001) has examined converging findings from variable-focused to person-focused investigation on children growing up in disadvantaged or adverse conditions and suggested that resilience is common, it arises from the normative functions of human adaptation systems, and it's made of ordinary rather than extraordinary processes. Similarly, Bonanno (2004) has challenged the assumption that resilience is rare by reviewing evidence that resilience represents a distinct trajectory from the process of recovery, is common, and that there are multiple and sometimes unexpected pathways to resilience.

Whether resilience has to be considered an adaptive ability in face of actual stressing experience or rather a personal characteristic describable within a personality profile is still unclear and greatly influences the operationalization of the construct and the choice of a specific assessment scale to measure it. Robins & Rutter (1996) have investigated the relationship between the Five Factor model (FFM, Costa & McCrae, 1992) and the resilient typology and found the Resilient type to score above average on all five dimensions. Similarly, Waaktaar & Torgersen (2010) confirmed that the resilience scale RS (Wagnild & Young, 1993) and Ego-Resilience (Block & Kremer, 1996) were as good as the FFM at explaining variance in caring relationships, high expectations and meaningful relationships in the family

and social environment indicating that resilience implies the mobilization of positive resources in such circumstances as stated in process-oriented resilience models (Wyman et al., 2000).

One critical aspect of resilience that has been emphasized in recent literature at the individual level is its improvisational nature, the “willingness to pursue action experimentally” (Barrett, 2004, p. 95). Resilient people are said to “improvise solutions from thin air” (Coutu, 2002, p. 55), regain balance and keep going despite adversity and misfortune and find meaning amidst confusion and tumult. They are self-confident and understand their own strengths and abilities, do not feel a pressure to conform but take pleasure in being unique and will ‘go it alone’ if necessary. Resilient individuals have confidence in their ability to persevere because they have done so before and anticipate rather than fear change and challenges. They experience the same difficulties and stressors as everyone else; they are not immune or hardened to stress, but they have learned how to deal with life’s inevitable difficulties and re-establish the equilibrium and this ability sets them apart (Coutu, 2002).

Segerstrom (1998) explored the effects of dispositional and situational optimism on mood and immune changes in response to stress finding only partial accountability for the relationships. Similarly, a community survey by Connor and Davidson (2003) evaluated the relationships between spirituality, resilience, anger, health status, and post-traumatic symptoms in survivors of violent trauma. Using multivariate regression models, resilience was associated with health status and post-traumatic symptom severity only. There are evidences of individual differences in the complexity of information processing, as potential moderators of the dynamic interplay between positive and negative emotions (Davis, Zautra & Smith, 2005), Trait levels of emotional understanding in promoting affective differentiation are not straightforward but could play a role in resilience (Davis et. al., 2004)

Many researchers in the field of resilience have focused on factors within the person, like temperament or personality. Suzanne Kobasa (1979), for example, has developed the notion of “*hardiness*,” which is thought to protect one from the

harmful effects of stress as individuals high in hardiness easily commit themselves to what they are doing, believe that they at least partially control events, and regard change a normal challenge or impetus to further development (Kobasa & Puccetti, 1983, p.840). On the other hand, “*learned helplessness*” (Seligman, 1975) is the result when individuals believe or expect their responses will not influence the future probability of environmental outcomes, and render people more vulnerable to stress and depression (McCann & Pearlman, 1990).

### **Sense of control**

In addition to the importance of hardiness and self-esteem, stress is most clearly buffered by the sense of control, a personality attribute (Cohen & Edwards, 1986). A model of development (Jordan, 1987) suggests that power/control modes are gender-related and imply different coping strategies and complex context-person interactions. More recently, researchers have noted that emotion-focused coping is adaptive in situations where individuals actually have little control, and problem focused coping is useful where they can effect change. In general, where the possibility of changing things is unrealistic, because of lack of power, the emotion-based coping strategies may be more successful (Lazarus & Folkman, 1984).

### **Ego-resilience**

Ego-control (EC) refers to the inhibition/expression of impulse and ego-resiliency (ER) to the dynamic capacity to contextually modify individual’s level of ego-control in response to situational disadvantages (Block, J., 2002; Block & Block, 1980). EC refers to a meta-dimension of impulse inhibition/expression and ER refers to a meta-dimension of the dynamic capacity to contextually modify individual’s level of control in response to situational demands and disadvantages (Letzring, Block, and

Funder, 2004). Highly ego-resilient individuals are characteristically able to modify their level of control, either up or down, according to the situational context. Individuals with a low level of ego-resiliency are restricted to the same level of impulse containment or expression regardless of situational demands. However, higher levels of control are not monotonically advantageous and adaptive under all conditions. According to Block theorizing, ego-resiliency is the ability to adapt one's level of control temporarily up or down as circumstances dictate (Block, 2002; Block & Block, 1980) and as a result of this adaptive flexibility, individuals with a high level of ego resilience are more likely to experience positive affect, have higher levels of self-confidence and show better psychological adjustment than individuals with a low level of ego resilience (Block & Kremen, 1996; Klohnen, 1996). When confronted by stressful circumstances, individuals with a low level of resiliency may act in a still and perseverant manner or chaotically and diffusely, but in either case, the resulting behavior is maladaptive (Block & Kremen, 1996). ER has also been found to positively correlate with several other favorable characteristics, such as having a wide range of interests and a high aspiration level, being interesting, cheerful, expressive, and assertive, and valuing intellectual and cognitive matters. ER has been found negatively related to characteristics such as being self-defeating, emotionally bland, and giving up when frustrated. Among females, ER scale scores are positively related to the Big Five personality traits of extraversion, agreeableness, conscientiousness, and openness, and negatively related to neuroticism. Among males, ER was positively related to extraversion and openness, only. Moreover, ER is positively related to several measures of well-being and negatively related to several indicators of psychopathology from the MMPI-2 (Letzring, Block, and Funder, 2004).

Ego resilience refers to the ability to adapt flexibly and with elasticity to changing circumstances (Dugan & Coles, 1989). It is a personality trait referring to an individual's character in response to changing situations (Block & Block, 1980). Resilience, is conceptually distinct and the two terms differ on two major dimensions (Luthar, 1991, 2000): ego-resiliency is a personality characteristic of the individual,

whereas resilience is a dynamic developmental process, the first does not presuppose exposure to substantial adversity, whereas resilience does, by definition.

### **Self-esteem, Self-worth and interpersonal relationships**

High self-esteem predicts personal resilience but also predicts antisocial reactions to various threats, such as failure and uncertainty. Despite evidences that high self-esteem is associated with personal and relational resilience (Murray, Holmes, MacDonald, & Ellsworth, 1998; Stinson et al., 2008; Trzesniewski et al., 2006), research also persistently reveals an antisocial side. People with high self-esteem, in fact, after experiencing threat, tend to become antagonistic and self-righteously dismissive of others holding different perspectives (Heatherton & Vohs, 2000; McGregor, Nail, Marigold, & Kang, 2005; Park & Crocker, 2005; Vohs & Heatherton, 2001). McGregor, Nash and Inzlicht (2009) found that people with high self-esteem tend to react to threat with neural activity characteristic of approach-motivation. Their results show that individuals with high self-esteem react similarly to various threats with diverse outcomes (hostility, idealism, self-enhancement, meaning-seeking) which share the common denominator of approach motivation. Such states is associated with attenuated startle-reflex, less negative reactions to aversive stimuli, more happiness and meaning, and less depression and negative affect in general (Drake & Myers, 2006; Elliot, 2008; Gianotti et al., 2009; Jackson et al., 2003; Urry et al., 2004). However, approach motivated states also constrict attention and intention to personal goals (Gable & Harmon-Jones, 2008; McGregor et al., 2007) and could decrease sensitivity to others' perspectives. The approach-motivation-related phenomenon, indeed, is associated with impaired perspective-taking and objectification of others in service of personal goals (Keltner, Gruenfeld, & Anderson, 2003).

Self-concept is partly derived from standpoints of others around the self as perceptions about the self are gathered from others' opinions. It is thus imperative to

examine how self-concept is affected by relationships with others. Hinde, Finkenauer and Auhagen (2001) argued that relationship processes occur in the individual's mind with the individual having his/her own view of the relationship as well as a shared one. This view is affected by one's self-concept and therefore it is a critical factor for understanding the dynamics of relationships. The balance of personal perceptions of self and others' perceptions, congruency, is constantly sought and can affect one's behavior in an attempt to confirm one's self-image.

## **Hardiness**

The construct of hardiness refers to a set of attitudes toward life characterized by an orientation toward deriving meaning, growth, and value from stressful life events (Bartone, 1995; Bonanno, 2004; Maddi et al., 2006; Kobasa, 1979). Hardiness has been shown to predict lower levels of illness and to moderate the association between stressful life events and illness (Kobasa, Maddi, & Kahn, 1982). Specifically, hardiness consists of three dimensions: commitment to persevering through stressful events, a sense of control over the outcomes of such events, and openness to learning and growing from challenges (Maddi et al., 2006).

Psychological hardiness is a personality style first introduced by Kobasa (1979) and described as a pattern of personality characteristics. Recent literature suggests that hardiness is a key "pathway to resilience" (Maddi & Khoshaba, 2005). The way hardiness fosters resilience appears to be a combination of cognitive and behavioral mechanisms, and biophysical processes as the "personality style" of hardiness encourage effective mental and behavioral coping, building and utilizing social support, and engagement in effective self-care and health practices.

Personality undoubtedly does play a role in resilience to trauma; however, personality rarely explains 10% of the actual variance in people's behavior across situations. It is more accurate, therefore, to conceive of personality as one of many

potential contributors to resilient outcomes (Bonanno & Mancini, 2012). Measures that assess personal characteristics provide a useful summary of resources that may increase the likelihood of resilience and support positive adaptation. It will be, thus, more semantically accurate to refer to them as “resilience resource” (Smith et al., 2008).

## **Resilience as a dynamic process**

The first paradigm shift from viewing resilience as a trait to viewing resilience as a state or a process (Luthar et al., 2000) occurred when scholars defined resilience as developable (Luthans et al., 2006; Spreitzer et al., 2005). The interaction between trait-like factors such as self-esteem and relational factors, such as relationships networks, need to be examined to understand *how* and *why* certain individuals are, more or less prone to seek help and cultivate positive, resilience-enhancing relationships. Some scholars have argued that “resilience is more process than product” (Walsh & Pianta, 1998, p. 411) and therefore focus on the interactions between relationships and context. These interactions are the protective factors that enable an individual to excel, even in challenging circumstances and the dynamic process by which learning and development occur through positive interactions with others (e.g., Miller & Stiver, 1977).

This approach to studying resilience runs parallel to the coping literature, which also invokes the idea of adapting to and, moreover, growing from stress and crisis (Holohan, Moos, & Schaefer, 1996; Harland et al., 2005). Both kinds of research focus on the process, strategies and protective factors involved in bouncing back and then examine outcomes that indicate improved health and competence (Garmezy & Tellegen, 1984). Unfortunately, as Harland and colleagues (2005) concluded, “despite the fact that resilience and coping are generally defined in an

outcome-focused fashion, these literatures do not actually use scales that tap into resilience itself as an outcome in empirical research” (p. 3).

Contemporary research has progressed beyond descriptive issued to focus on understanding the underlying processes by which both vulnerability and protective factors exert their influence (Gucciardi et al., 2011).

## Secure attachment style

Attachment theory proposes that a biologically based system of behaviors regulates proximity between an infant and caregiver with the goal of increasing the infant's survival in the face of external threats (Bowlby, 1969). These interactions between infant and care-giver are internalized forming enduring cognitive schemas, or “internal working models” of expectations of care that remain into adulthood (Bowlby, 1969; Hazan & Shaver, 1987; Bartholomew & Horowitz, 1991). Expectations and responses to interpersonal situations learned in these early relationships provide a template for relatively stable and enduring patterns of interpersonal behavior which are known as the adult attachment style (Ainsworth et al., 1978; Hazan & Shaver, 1987). It is believed that the adult attachment style remains linked to the psychological and biological systems that regulate threat (stressor) appraisal, response and recovery (Bowlby, 1969). Individuals high in attachment anxiety are hyper-reactive to threats, tend to report greater levels of perceived stress, and also are much more likely to ruminate over the event (Shaver & Mikulincer, 2007). Those high in attachment avoidance are more likely to employ defensive regulation mechanisms, such as repression, to allow them to control unpleasant emotionally stressful situations (Shaver & Mikulincer, 2007). The normal function of attachment is to regulate distress, however, insecurely attached individuals are not able to regulate their emotions internally and to develop strategies to reduce or manage any distress experienced (Shaver & Mikulincer,

2007). Secure attachment experiences, on the other hand, help the child to manage trauma and anxiety with some degree of trust and believe in positive outcomes because the child have seen him/herself as lovable, worthy and effective, and others as available, loving, interested and responsive. In adulthood, secure attachment is particularly important in enabling the parent to provide emotional stability for the child (Atwool, 2006; Axford, 2007; Grunert, 2009).

Attachment style is a very significant component of adult personality that plays a major role not only in close relationships but in a wide range of spheres of functioning (Bernier & Dozier, 2002; Jackson, 2006; Laible et. al, 2000, 2004). The quality of attachment contribute to variations in biological stress responses, thereby affecting health risk and act as a source of resilience in the face of adversity (Fraley & Shaver, 1998; Fraley, Fazzari, Bonanno, & Dekel, 2006; Mikulincer & Shaver, 2004).

## **Resilience as an outcome**

A second paradigm shift revolves around the association between resilience and positive outcomes in many literatures (Linsley, 2003, 2004). Some scholars have turned their attention to the factors that lead to positive outcomes, to “pathways to resilience” (Luthans et al., 2004) as a strategy for psychologically fortifying individuals against risks (Luthans et al., 2002, 2006), developing interventions for individuals in tough circumstances (Luthar, 1999; Masten, 2001), and adding meaning to people’s lives (Spreitzer et al., 2005) developing and cultivating developmental networks that are strong in terms of psychosocial support. The only logical way to understand the process leading to resilience requires a clear definition of adversity and a clear, conceptually defensible outcome in response to that adversity (Bonanno, 2004; Luthar et al., 2000). According to Bonanno (2011) resilience is, in fact, a stable trajectory of healthy functioning in response to a clearly defined event, rather than a personality characteristic, the absence of

psychopathology or an average levels of psychological adjustment. Using the term resilience to define the non-pathological state is a conceptual redundancy and in a simple binary model of pathology versus non-pathology, insights and fine-grained distinctions rare lost. Placing all trauma exposed persons not showing pathology into a single resilience category is incorrect as in samples with repeated assessments over time is possible to map prototypical patterns of individual variation in coping with the stress of extreme adversity (Bonanno, 2011) Moreover, resilience needs to be measured concurrently with outcomes, that is after a PTE had already occurred, as the use of retrospective data makes it impossible to determine the course of a resilient person's functioning across time (Bonanno, 2005; Lalande & Bonanno, 2011). Thus, resilience scales used in the absence of an actual acute stressor event narrow the research to personality variables divorced from the actual context of coping with extreme adversity (Bonanno, 2004). Complete stress resistance appears relatively rare, but transient stress associated with a stable trajectory of healthy functioning, or resilience, is typically the most common outcome observed (Bonanno, 2011).

## Posttraumatic Growth

Resilience research can be placed within three interrelated, cutting-edge trends in psychology: positive psychology, health and well-being, and post-traumatic growth (Linsley, 2004). Positive adaptation outcomes to psychological trauma has been explored by the literature on posttraumatic growth and Linsley (2003) has proposed the role of three dimensions, the recognition and management of uncertainty, the integration of acceptance and cognition; and the recognition and acceptance of human limitation (wisdom), as both processes and outcomes of traumatic adaptation. His review of empirical studies (Linsley, 2004) have also documented positive growth following trauma and adversity associated with cognitive appraisal variables, problem-solving abilities, coping, and positive affect, independently from socio-demographic and psychological distress variables.

Posttraumatic growth (PTG) is defined as a positive psychological change experienced as a result of struggling with highly challenging life circumstances (Tedeschi & Calhoun, 2004) and has been found to be a major personal resource following trauma, especially in health contexts. Findings support the idea that sustained posttraumatic growth is required to support resilience processes (Helgeson, Reynolds, & Tomich, 2006; Tedeschi & Calhoun, 2004).

Exposure to potentially traumatic events can lead to both posttraumatic growth and posttraumatic stress, and recently researchers have started investigating the commonalities and differences in the pathways through which they occur. Park, Aldwin, Fenster and Snyder (2008) found that although posttraumatic growth and posttraumatic stress symptoms were moderately positively related, the pathways from coping and emotions to the outcomes differed suggesting that emotions are both outcomes of and motivators for coping and that patterns of coping and emotions relate differentially to posttraumatic stress and posttraumatic growth. In fact, positive coping and anger were more strongly related to posttraumatic growth than to posttraumatic stress, and pathways of negative coping and feeling depressed were

more strongly related to stress than to growth. Janoff- Bulmanam (1992, 2006) has proposed the model of psychological preparedness, which coincide with the inoculation model, in which exposure to moderate stress serves as protection against subsequent stressors. However, the fact that PTG can positively correlate with both PTSD and resilience need further exploration. Shuettler and Boals (2011) found that PTSD symptoms were best predicted by visceral reactions to the events, event centrality, avoidant coping and a negative perspective of event, while PTG was best predicted by event centrality, problem-focused coping, and a positive perspective. Differential path, thus, characterized PTSD and PTG.

Kleim and Ehlers (2009) found, in two studies of assault survivors, significant curvilinear associations between PTG and posttraumatic stress disorder. Survivors with no or high growth levels reported fewer PTSD symptoms than those who reported moderate growth. Moreover, non-Caucasian ethnicity, religiousness, traumatic fear, shame, and ruminative thinking style, predicted growth. Posttraumatic growth seems thus most relevant in trauma survivors who attach enduring significance to the trauma and show initial distress. Moderate levels of PTG did not seem to ameliorate post trauma psychopathology.

### Physiological Processes

Although evidences appears to support a separable affect model (Cacioppo et al., 2000), as discussed earlier, there are some studies that show a certain degree of relatedness between them. Testosterone replacement therapy in men was found to relate to increased PA and reduced NA (Wang et al., 1996). Recent evidence on the brain neurohormone oxytocin has shown that it is involved in positive pro-social behaviors, such as maternal nursing and bonding, in human females and even in virgin laboratory rats. However, it has also been shown that individuals who maintain higher levels of oxytocin during an induced stressful situation exhibit higher oxytocin release, which is, in turn, related to a coincident suppression of stress-related cortisol (Turner, Altemus, Enos, Cooper, & McGuiness, 1999; Unvas-Moberg, 1997, 1998). These results suggest that this particular neurohormone is connected to both more positive (relaxation) and less negative (stress) response systems. Mapping individual differences across events shows that the minimal response to a PTE is neither exceptional nor pathological but is resilience.

Recent studies have also demonstrated evidences of a heritable component of resilience, such as higher biological levels of dopamine, neuropeptide Y, testosterone, and higher functionality of 5-HT and benzodiazepine receptors (Charney, 2004; Gervai et al., 2005) while other (Das, Cherbuin, Tan, Anstey, & Easteal, 2011) have found that the Dopamine receptor D4 (DRD4-exonIII-VNTR) moderates the effect of Childhood Adversities on Emotional Resilience in young adults.

## Family Resilience

Few empirical researches on family resilience exist given limitations in measuring the construct. Family resilience functioning has often been inferred from individual members or defined by their judgment, while assessing family competence (Patterson, 2002) it is a fundamental prerequisite for the conceptualization of family-level outcomes. Coyle (2006) family resilience model conceptualizes family functioning as both a protective factor and a mechanism that leads to resilience, rather than an outcome, and supports seeking the views of multiple family members in describing family processes, using the five family functioning variables measured by the FAM III. Coyle (2006) in his studies on within-family protective factors, indicates the importance of assessing ethnic and cultural influences when identifying family resilience processes. Similarly, McCubbin (1996, 1997) has suggested the investigations of a cross section of families from different social class, representing different ethnic groups, at different stages of the family life cycle, and who also have been exposed to a cluster of risk factors known to increase the vulnerability of families.

A family resilience approach aimed to identify and strength key interactional processes that enable families to withstand and rebound from life challenges and transitions was proposed by Walsh (2006). Being a family is not a static configuration, but a constantly evolving process requiring constant action and maintenance (Walsh 2005, 2007). Families are neither strong nor troubles by default, but will go through stages of strengths and instability, thus family resilience is an inherent property of families that can be nurtured and mobilized by approaches ranging from family therapy to social policy (Walsh, 1998).

In unstable times, some families lose sight of their strengths (Silberberg, 2001) but when these strengths are identified, they can become the foundation for continued growth and positive change (Stinnet & DeFrain, 1995; DeFrain, 1999).

Hong and others (2004) tested the theoretical framework for family resilience developed by Walsh (1996, 2002, 2003) using empirical data in a second order confirmatory factor analysis (CFA) tapping belief systems, organizational patterns, and communication/problem solving criteria, they developed and validated an empirically based construct of family resilience. Moreover, using the structural equation modeling (SEM), they examine the potential mediating and moderating impact of family resilience on physical child abuse and adolescent dysfunctions.

Finally, Merrell and others (2011) recently validated on a sample of 2356 parents of children and adolescents age 5-18 the Social-Emotional Assets and Resilience Scale (SEARS-P), parent form. This strength-based 39 item measure includes both narrow and broad factors of social-emotional functioning (Self-regulation/Responsibility, Social Competence and Empathy), multiple informant versions and strong validity.

The strengths perspective accepts and acknowledges the resilience of people, their ability to endure extreme hardship and to survive seemingly insurmountable problems. In 1999 the Family Action Center developed an Australian Inventory of Family Strengths, aim to determine which qualities Australian families perceived as family strengths, and the language families used to describe these qualities (Silberberg, 2001). Quantitative and qualitative findings were incorporated into the framework, named the *Australian Family Strengths Template*, which is founded on eight strengths: communication, sharing activities, affection, support, acceptance, commitment, resilience.

Over the past two decades, family research has focused on addressing the central and complex issues of determining what protective and recovery factors are critical to family adjustment and adaptation in the face of specific risks, cluster of risks as well as family crisis situations. The nature of family protective and recovery factors has thus become a central concept of family resilience, and has played a critical role in promoting the family's ability to maintain its established patterns of functioning after being challenged by crises (McCubbin, 1997).

According to McCubbin (1997), resilience apply to family system as *elasticity* (maintaining established patterns of functioning after being challenged) and *buoyancy* (quick recovering from a crisis or transitional event) and the protective factors sustained over all stages of the family cycle are *family accord* (important at couple and childbearing/school-age stages), *health* (emerges at the couple, empty nest and retirement stages), *support network* (vital at the childbearing/school-age and teenage/young adult stages of the family cycle) and *shared values around the use of leisure time* (important to the couple stage).

However, a second line of inquiry focuses on recovery factors that distinctly differ from protective factors depending on the context. Self-esteem, self-confidence, recreation orientation, family organization and optimism have been identified as having a direct relationship to promoting wellness in families managing long-term care of chronically ill children, while self reliance, family meanings, and family schema seem the more prominent for healthy functioning in the face of war traumas of war and prolonged absence of a family member.

Although both assessments and interventions on families have been redirected from identifying the cause of problems to amplifying existing and potential competencies (Walsh, 2002), the focus has remained the search, conceptualization, measurement and validation of factors operative in family systems in the effort to isolate common denominators that appear in those families able to survive adverse situation and aversive condition (McCubbin, 1997). Only longitudinal process-focus and multi-disciplinary studies and cross-cultural approaches that account for a more comprehensive and broader repertoire of resources, capabilities and dynamics to adjust and adapt to life's normative and non-normative changes can make family resilience research possible.

## Relational Resilience

Research has proved demonstrated that patterns of resilience exists at the individual and family level (Beckett, 2000) and can be examined through relational processes. In the wide literature on resilience, from child development to education to organizational behavior, relationships have been highlighted as an important positive factor and a resource for resilience. Similarly, research on social support has long suggested that close relationships reduce the stress associated with adverse events (Gottlieb, 1983) and scholars have noted the connection between supportive interpersonal relationships and positive attitudes associated with resilience (Maddi & Khoshaba, 2005). However, research also need to show *how* and *when* relationships are important in building resilience and relational competence.

Simply growing enhancing positive relationships does not seem enough and mostly scholars has focus on the presence or absence of close significant others, peers, teachers, family, or counselors (Masten et al., 1999), rarely examining the specific kinds of support provided by those relationships and their quality. Scholars have written extensively about the lasting influence of beginnings showing that people who experience a high degree of connectivity develop a capacity for exploring and creating new things (Losada & Heaphy, 2004). Such relationships are expansive and can fuel a desire for further connectivity (Miller & Stiver, 1977) and the connection between supportive interpersonal relationships and positive attitudes is associated with resilience (Maddi & Khoshaba, 2005). Highly positive early-life relationships encourage positive ways of interacting that yield positive returns to future interactions as well. Individuals experiencing positive emotions report more overlap between their concept of themselves and their concept of their best friend (Waugh & Fredrickson, 2006; Waugh, Hejmadi, Otake, & Fredrickson, 2006), and become more imaginative and attentive regarding things they could do for friends.

Positive emotions can increase trust (Dunn & Schweitzer, 2005), and may underlie the creation of a wide variety of bonds and interdependence opportunities

(Cohn & Fredrickson, 2006; Gable, Reis, Impett, & Asher, 2004). This broadened social attention takes the form of enhanced attention to others and reduced distinctions between self and other, or between different groups.

Research on child development has focused on the lasting benefits of having strong early relationships with kin, teachers, role models, and peers. The evidence from this work indicates that the mechanism at play is the socio-emotional support that such relationships provide which enable others to later adapt, overcome hardships, and excel despite the odds (Werner, 1993). Social support has been identified as one of the best predictors of psychological resilience (Blum, 1998) as the perceived presence of a supportive social network seem to enhance a person's capacity to deal with life's challenges (Heatherton & Nichols, 1994; Wagnild & Young, 1993). Kram (1985) found that psychosocial support was related to resilience, which itself has been associated with the restoration of self-efficacy (Luthans et al., 2006). Increasing amounts of psychosocial support over time were associated with greater hardiness, perceived ability to manage stress, and expectations for success. Psychosocial support is indeed a mechanism that significantly influences resilience but the multiplicity of help-providers and combinations of support provided over time need to be considered, especially its socio-emotional and instrumental nature, and how such differentiated support is important with regard to different kinds of resilience-related outcomes.

Development of psychological resilience can be seen as analogous to the immunization process (Rutter, 1993). Specifically, increasing amounts of psychosocial support should provide individuals with the emotional support necessary to withstand and grow from tensions. As Luthans and colleagues (2006, p. 31) suggested, "resilience is what allows people to keep trying and to restore their self-efficacy after it has been challenged." Further, if a developmental network increases in strength (the amount of support provided), the individual will benefit from the development of skills and knowledge that will help him/ her explore new possibilities and solutions to challenges.

## **Social Networks and Social Support**

Developing a variety of supportive relationship and sources of pleasure could prove invaluable in sustaining an individual through a major health crisis (Davis, Zautra & Smith, 2004). Cummings and Higgins (2005) have examined the dynamics of developmental networks looking at how network density changes and influences outcomes over time. In general, social network research has been cross sectional, examining how certain already existing network structures impact certain kinds of outcomes (Dobrow & Higgins, 2005), rather than how they evolve over time (Gulati & Gargiulo, 1999), and such change influences resilience. Social networks are indeed dynamic not only with respect to the amount of people in it but also the support provided. With respect to the capacity for resilience, in particular, social networks not to wane or stagnate, but rather strengthen over time, despite the direction of the change. Relational resources, by creating a psychologically safe environment, enable individuals take risks and to explore new solutions and new selves (Spreitzer et al., 2005; Edmondson, 1999; Roberts, Dutton, Spreitzer, Heaphy, & Quinn, 2005).

Social networks can build resilience and thus aid adaptation to unexpected changes (Newman & Dale, 2005), but not all social networks are created equal. Diversity enlarge the scope of vision necessary to proactively make decisions that optimize future choices. Members of a network are bound together by diverse ties, strong and weak or “bonding” and “bridging” (Putnam, 2000; Woolcock 2001). The outcomes of adaptive behaviors will in the end depend on the nature of the social capital present and the structure and network dynamics that will either facilitate or constrain the ability to gather information and innovate. Social ties can as well imprison in maladaptive situations or facilitate undesirable behaviors (Borgatti & Foster, 2003), as a densely developed social capital network can make excessive claims on its members and restrict individual freedom (Portes, 1998). However, because bridging networks brings new and potentially novel information and

bonding networks provides the resilience needed to absorb the benefit of the bridging capital, the two capitals are complementary (Newman & Dale, 2005). Thus a better understanding of the positive and negative aspects of social networks can give insight on the process of building resilience. Innovations can shift the use of resources from one base to another, allowing to abandon behaviors problematic or unsustainable and leading to a proactive behavior and the practice to eliminate unknown negative scenarios through avoidance and fundamental changes in behavior (Newman & Dale, 2005).

The impact of change in psychosocial support over time on resilience is substantial. Relationships do indeed change over time and the direction of this change, in terms of quality of the relationship, type of support, influence resilience. (Granovetter, 1973; Haines 1992). Not just positive relationships are important especially in childhood and young adult lives but how, and when socio-emotional and/or instrumental support is provided, considering the multiplicity of providers.

### **Building relationships in the workplace**

Today, the study of resilience has been extended from the fields of psychology, to organizational behavior, human resources management, and leadership (Gianesini, 2010). In particular, resilience has been considered as a critical component of psychological capital and strategic responses to crises (Luthans, Vogelgesang, & Lester, 2006; Gittell, Cameron, Lim, & Rivas, 2006). The recent work of positive organizational scholars stresses the “social embeddedness” of professional lives (Spreitzer et al., 2005) by studying how developmental relationships influence resilience (Spreitzer, Sutcliffe, Dutton, Sonenshein, & Grant, 2005; Luthans et al., 2006; Harland, Harrison, Jones, & Reiter-Palmon, 2005). According to positive organizational theorists, positive connections are both a source of protection and a resource that can promote positive kinds of behaviors at work such as exploration and heedful relating (Spreitzer et al., 2005). In these respects, positive relationships are likely to be capacity-enhancing, particularly if they are based upon mutual respect and trust (Dutton, 2003; Fletcher, 1996). As Sutcliffe and Vogus (2003, p. 255) propose, “Organizations can increase their effectiveness by developing the capability of resilience.”

### ***Mentoring***

Mentoring is a positive relationship with a senior individual within an employing organization that provides both career support and psychosocial support (Kram, 1985). Studies have found that mentoring is associated with beneficial outcomes such as promotion and career advancement (Whitely, Dougherty & Dreher, 1991; Zey, 1984; Dreher et al. 1990). Over the years, distinctions have emerged in the literature between “mentors” who provide high amounts of both career and psychosocial support, “sponsors” who primarily provide career support (Thomas &

Kram, 1988), “friends” who primarily provide psychosocial support, and “allies” who provide low amounts of both psychosocial and career support (Cummings & Higgins, 2005; Higgins, 2005, 2007). Mentoring could thus be considered as a “developmental network”, a full and potentially interconnected set of individuals who provide psychosocial and career support to an individual at any one point in time (Higgins & Kram, 2001). Developmental networks as content-specific networks are generally small in size, about five people (Podolny & Baron, 1997). Studies have examined how network characteristics and development influence individual outcomes such as organizational commitment, work satisfaction, clarity of professional identity, and career advancement (Dobrow & Higgins, 2005; Higgins, 2001; Higgins & Thomas, 2001) and consequently how the dynamics of organizational networks influence resilience. High amounts of early career support, such as mentoring, sponsorship, and coaching (Kram, 1985), buffer and protect from stressors and are related to long-term career outcomes such as organizational commitment (Higgins & Thomas, 2001), indicator of the ability to overcome challenges and adapt.

**Is resilience as personality trait, a dynamic process, or an adaptive outcome?**

Resilience had been proved to be developable capacity or competence, that can be strengthened and learned (Luthar, Cicchetti, & Becker, 2000; Maddi & Khoshaba, 2005), thus more of a state than a personality trait, as early childhood studies proposed, and far more common than originally believed (Bonanno, 2004; Masten, 2001). Recent conceptualizations on the impact of life events suggest that resilience may refer to bouncing back even from positive events requiring adjustment, in addition to or instead of negative events (Bonanno, 2004; Zautra 2004; Congard, 2011). Moreover, Luthans and colleagues (2006), distinguish between “pure risks,” which are factors that lead to unwanted outcomes when they occur but have otherwise no negative effects, and “pure assets,” which are factors that lead to positive outcomes when they occur with no positive effect if they don’t (Kraemer, et al., 1977). In terms of the empirical research on resilience, a great deal of attention has been paid to the strategies individuals use when they face challenges, viewing it as a predictor, and less to the actual outcomes, measured in time, of such resilient strategies.

Resilience is a process of adapting well to trauma, threats, stressful events and life changes that varies depending on personal characteristics, social relations, coping strategies, emotion regulation mechanisms as well as physical, biological and genetics factors. It represents a challenge to comprehensively conceptualize it and to develop a systematic theoretical model compatible with longitudinal assessment measures of its outcomes. However data strongly suggest that resilience entails qualities involving relational competence and managing of negative and positive affect, The foundation for future research and empirical studies should, thus, be further examining the relationship between these constructs, their underlying structures, and a refining of resilience measures that account for changes in resilience levels parallel to changes in well-being outcomes as trauma/changes related effects.

## Chapter 1.6 Adjustment to life events

Researchers have long been interested in life events and how individuals and environments affect each other, and describe and explain behavior and individual differences. A life event is indicative of or requires a significant change in the ongoing life patterns of the individual. According to Settersten and Mayer (1997), "a life event is a significant occurrence involving a relatively abrupt change that may produce serious and long lasting effects". It refers to the happening itself and the transitions that will occur because of the happenings in a variety of domains (family, health, and work) which could be age relevant (school, marriage and retirement), history graded (war and depression), or non normative (illness and divorce). Most life events are in fact transitions between major roles, age grades, status gains and losses.

These turning *points* are life events with a special impact that produces a lasting shift in the life course trajectory, not just a temporary detour. Their significance usually becomes obvious only as time passes and the individual lives (Wheaton & Gotlib, 1997). Rutter (1996) identified three types of life events that serve as turning points (Rutter, 1996): those that either close or open opportunities, events that make a lasting change on the person's environment and events that change a person's self concept, beliefs and expectations. However, life events are a very subjective experience depending upon the individual's assessment of their importance and pleasant (*Eustress*) or unpleasant (*Dystress*) impact (Selye, 1974). Some life events simply act to help maintain the internal steady state or to keep the individual interested in undertaking appropriate activities (*Neustress*) (Auto, 1995). Although literature suggests that life events play an important role in the precipitation and relapse of psychiatric disorders, the relationship is not straightforward. The relationship between stress and illness varies with pre-existing vulnerability factors such as differences in social support system, skills, attitudes, beliefs, and personality characteristics.

In recent times there has been a considerable focus on the positive responses to adverse or traumatic events as implicit within the conceptualization of resilience, which requires two central conditions: the exposure to significant risk or adversity and the attainment of a positive adjustment or competence (Gucciardi, 2011). Typically, “negative life events are circumstances known to be statistically associated to adjustment difficulties” (Luthar & Cicchetti, 2000, p. 858). Headey & Wearing (1989) looked at stability and change in life-events scores in four waves of an Australian Quality of Life Panel Study (N=942, ages 18-65) and found surprising the extent to which favorable and adverse events kept happening to the same people, suggesting that although some events may be wholly exogenous other events perhaps depend on stable person characteristics and so tend to be repeated. However, life events during a 2-year period have significant effects on subjective well being (SWB) over and above the effects of personality and age.

### **Dynamic equilibrium model of SWB**

Their *dynamic equilibrium model of SWB* rested on the idea that, as life-events scores and levels of SWB are fairly stable over time, it is reasonable to think of each person as having his or her own normal equilibrium levels of favorable and adverse events and normal equilibrium level of SWB. Exposure to one or more events does not always dictate the occurrence of negative outcomes (Gucciardi et al. 2011). Zautra (2003) reviewed the evidence across a range of studies and found little support for belief that positive events would lower psychological distress. Although these events promote greater positive emotion, they are typically uncorrelated with scales that assess anxiety and depressive symptoms.

Several studies have dispute the role of stressful life events in the development and course of depression, suggesting that life events are important with increasing age, but require interaction with predisposing factors (Ohaeri & Otote, 2002). Life events tend to drop in normal controls as age increases (Salsani &

Silvestone, 2003; Silvestone & Salsani, 2003), but depressed patients start from a lower baseline but reach a higher stress level which they retain for the greatest part of their lives. Fountoulakis et al. (2006) found subgroups of depressive patients, male atypical, to be characterized by the presence of a high load of stressful life events, in comparison to controls and other patients. Other authors reported life stress to be associated principally with cognitive-affective symptoms, but not with somatic symptoms. Sense of control and social support acted as mediators in the linkage between life events and depressive symptoms (Chou & Chi, 2001).

However, social ties can enhance well-being through sharing positive experiences, a process Langston (1994) has referred to as “capitalization.” Gable, Reis, Impetti, and Asher (2004) have shown that sharing amplifies the effects of these events on well-being, particularly when others respond with enthusiasm and happiness to the good news. Within processes of daily life, negative life events may reveal personality differences while personal capacities and social ties sustain positive affective responses to events.

## **Assessing life events**

Establishing the psychometric soundness of life events self-report inventories, in terms of validity, is extremely difficult (Norris & Hamblen, 2004). Failure to report events that actually happened is problematic for establishing a measure of PTE exposure but what is essential to evaluate is the temporal stability of the measure (Gray and Slagle, 2006). Hepp, Gamma, Milos et. al (2006) have investigated the prevalence and consistency of reported exposure to PTEs over time in a large and representative community-based sample and found that reports of exposure to potentially traumatic events (PTEs) are highly unreliable across different types of trauma. Similarly, Lalange and Bonanno (2011) sought to advance research on the accuracy of memory for PTEs by assessing multiple PTEs over a 4-year period using a prospective design. They assessed the accuracy of retrospective recall by asking

participants to estimate how frequently they had reported each of the events over the previous 4 years to document the actual occurrence of the PTEs and to compare these data directly with retrospective recall. Measuring life events at repeated intervals over a multiple-year period, they were able to assess frequency recall for multiple PTEs. Their results provided strong evidence that PTEs are remembered more accurately than non-traumatic events. Moreover, recall frequency for non-traumatic events was unrelated to distress at the time of recall and or self-enhancement. By contrast, the recalled frequency of PTEs was influenced by the interaction of both factors.

The selection of a PTE measure should adequately address the type of events likely to be experienced by the population being sampled. Researchers and clinicians should scrutinize the item content to be sure there is adequate coverage of experiences for the age group and the gender selected. There is no existing measure that existence inquires incidents that a clinician or researcher may want to investigate; therefore different life events need to be assessed for specific populations or purposes (Gray & Slager, 2006).

### **Life events checklists**

Measurement issues, associated with the assessment of risk or adversity relate to the identification of an absolute level of risk from normative data, as well as validity of measures, measurement confounds, heterogeneity of risk, and distinction between chronic and acute incidents (Luthar & Cushing, 1999). This approach involves the integration of multiple indexes of adjustment determined at various stages or contexts.

The method of self-report assessment of life events proposed by Rahe has proved to be reliable and stable cross-culturally (Rahe et al., 1974, 1999). He registered all

events and attributed to them an impact score empirically derived. The *Social Readjustment Rating Scale* (SRRS) created by Homles and Rahe (1967) rank a list of 43 events that can cause stress in order of their LCU (Life Change Unit), starting with the most high risk to the lowest. These units can then be summed for a total score of recent life events. Positive and negative events can be summed separately, or they can be scored on the same scale using positive and negative numbers. By adding the LCU points for each event happened in the past 12 months, a total score is obtained indicating a 80% chance of illness developing which could become a serious health risk (LCU score over 300), a 51% chance with an LCU score between 150 and 300, and a 35% chance with an LCU score less than 150.

The *Life Experiences Survey* (Sarason, Johnson, & Siegel, 1978) is a self-report of positive and negative events experienced over the previous year, and the perceived stress associated with those events. The original instrument includes 60 items divided into two sections, 50 life changes common to adult individuals in a wide variety of situations and 10 items that are for students only. Most of the items were based on existing life stress measures, in particular the Social Readjustment Rating Scale developed by Holmes and Rahe (1967). However, in the LES respondents are asked to rate each life event experienced on a 7-point scale ranging from -3 (extremely negative) to +3 (extremely positive). The item is coded as 0 if it didn't occur. Every event that occurred is coded as one "life change unit." These units can then be summed for a total score of recent life events. Positive and negative events can be summed separately, or they can be scored on the same scale using positive and negative numbers. Sarason, Johnson, & Siegel, (1978) found that positive and negative life change scores exhibit different patterns of relationships with other measures like anxiety and depression.

The *Inventory of Small Life Events* (ISLE) includes measures of positive and negative interpersonal events (Zautra, Guarnaccia, & Dohrenwend, 1986; Zautra, Schultz & Reich, 2000), to assess daily positive experiences and daily exposure to

stressors. Participants provide frequency counts of the occurrence of 44 overall events (26 positive and 18 negative) from the four domains of the ISLE: (1) friends and acquaintances; (2) spouse or live-in partner; (3) family members; and (4) co-workers. To examine these scores at the between- and within-person levels independently, the daily positive event and negative event scores are transformed into mean scores and person-centered daily change scores, constructed by subtracting each person's mean from her/his daily scores across all daily observations. To estimate responsiveness to events, it is also possible to assess appraisals of stress and positive benefit from the daily events by asking participants to rate the overall level of stressfulness for the stressors and overall level of enjoyment for the positive events. These methods link enjoyment and perceived stress to everyday events within each domain, and provide ratings of daily stress and enjoyment that are focused on individuals' responses to actual events (Davis et al., 2006).

## Chapter 1.7 The assessment of Resilience

The theoretical and methodological difficulties in defining resilience as a process, an outcome and a dynamic state in face of adversity lead to many potential problems concerning its assessment (Lecomte, 2002). Resilience itself is a complex construct not easily reducible to any single trait or process and its complex relationship with posttraumatic growth complicates the determination of its direction and effect. Although it is crucial to establish the presence of resilience and thus to be able to measure it (Connor, 2006), and despite the fact that numerous clinical scales have been developed to assess resilience or some aspects of it, none today has gained wide acceptance or established primacy and has fully accounted for its complexity. Defining the mechanisms of resilience and measuring resilience processes has been challenging and distinguishing between individual and family resilience have lead to a proliferation of instruments measuring the construct in a dichotomous way. Every empirical study has relied on assessment procedures for describing and qualifying the constructs of interest (Merrel, Felver-Gant & Tom, 2011).

Social emotional assessment has been historically tied to child psychopathology, often neglecting the assessment of positive social-emotional assets or competencies (Merrell, 2008). Today strength-based assessment of children and adolescents is an important emerging area as the measurement of assets, resources and factors that increase positive outcomes offer the advantage of empowering children, individuals and families, and promote optimism while enhancing professional collaboration (Merrel, Felver-Gant & Tom, 2011). Several instruments for use with adults, adolescents and children are available and published with adequate psychometric properties. However, the majority consists of a single informant, have a limited external and internal validity and focus on relatively narrow constructs related to resilience, thus limiting their ability to capture any important super ordinate construct. Moreover, the association of resilience scales to adjustment is commonly measured using cross-sectional data, in which case

assumptions about causal relations between measures are impossible to test (Bonanno, 2011). Finally, measure of resilience have primarily focus on protective factors or resources within the individual rather than assessing the processes involved in positive adaptation to significant adversity or competence (Ahern, Kiehl, Sole & Byers, 2006).

The still ongoing debate regarding definitions of resilience (Gucciardi et al. 2011) reflects on assessment issues. Implicit within resilience conceptualization are two central conditions: exposure to significant risk or adversity and positive adjustment or /competence. The first refers to a range of factors faced by individuals either in isolation or as accumulation of life events which typically are measured as acute or chronic negative life events or specific and distinct risk indices (Gucciardi et al., 2011). Their assessment relates to the identification of absolute level of high risk, from normative data, as well as the validity of measures and measurement confounds, heterogeneity of risk items, and distinction between chronic and acute incidents (Luthar & Cushung, 1999). The second, positive adaptation or competence, involves displaying normal functioning and reaching developmentally salient tasks (Luthar, 2006). Its measurement includes multiple items, checklists, absence/presence of psychopathology and multiple indices of adjustment.

Resilience is clearly a multidimensional construct that varies with context, time, age, gender, social support, family environment and culture of origin as well as individual capacities and competences. However, resilience scales that assess multi-dimensional aspects of resilience are rare.

## **Resilience Measures**

Unlike instruments that rely on theoretical definitions, many of the Resilience scale available in literature are derived from interviews with resilient individuals, but are still considered by many to be the most accurate instrument to measure resilience currently available.

### **Resilience Scale for Adults (RSA)**

Friborg and others (2003) have proposed and validated a multi-dimensional scale for measuring the presence of five protective resources that promote adult resilience: personal competence, social competence, family coherence, social support and personal structure. Their Resilience Scale for Adults (RSA) was supported by positive correlations with the Sense of Coherence scale (SOC) and negatively with the Hopkins Symptom Checklist (HSCL). Jowkar et al. (2010) supported the convergent validity of the RSA and the original five factors by showing positive association with other resilience scale like the CD-RISC in a sample of Iranian adults..

### **Connord-Davidson Resilience Scale (CD-RISC and CD-RISC2)**

Similarly, Connor and Davidson (2003) have developed a measure of resilience individual traits and dispositions. The CD-RISC, that has sound psychometric properties, distinguishes between greater and less resilience and demonstrates that resilience is modifiable and can improve with treatment. The focus of this scale is on personal resources deemed appropriate for positive adaptation to adversity (Gucciardi et al. 2011). The five factors model comprises personal competence, high

standards, tenacity, trust in one's instinct, tolerance of negative affects, strengthening effect of stress, positive acceptance of change, secure relationships, control, and spiritual influences. Carli et al. (2010) in a study on 1265 males detained in Italian penitentiaries found the risk for suicide ideation, suicide attempt and self-mutilation significantly increased by higher depression and decrease by higher resiliency measured using the CD-RISC in its Italian validated version. Moreover, the suicide attempters were likely to be victims of violent life events and were less resilient than the non-attempters. Resilience thus was a protective factor from suicidal behavior, even in the presence of antecedent depression and victimization by violent life events. In their study Sarchiapone et al. (2009) found resilience at 20 years to be a moderator between life time violent life events and attempted suicide and effective in the context of previous depression. However, Gucciardi et al. (2011) examined the age-related invariance of the measurement model and found that resilient qualities maintain their structure and meaning across age when measured using the CD-RISC10 but support only for a 10-item unidimensional model.

### **Resilience Scale (R-S14)**

The Resilience Scale (Wagnild & Young, 1993) is among those that has received strong reliability and validity and has been used successfully for over fifteen years by thousands of researchers all over the world, despite the fact that it was developed from reviewing related literature and then validated via interviews with 24 American women who were judged to have successfully adapted to major life events. The internal consistency of the RS can be regarded as established and range from .76 to .91 (Wagnild & Young, 1993) There are also reports on the Russian, Spanish and Swedish versions. The scale has sound psychometric properties, and the 14-item version has been conceptualized as a one-dimension scale. Resnick and Inguito (2011) provided additional support for the psychometric properties of the Resilience

Scale on two independent samples of older Caucasian women age 80-90, widowed, single or divorced and with three on average comorbid medical problems. However, they found a poor fit for items 3-6, 9, 11, 20, 22 and 25 indicating that additional items are needed to differentiate those who are particularly resilient.

Van Schaick (2011) explored the role of religion involvement in childhood and adolescence in predicting resilience and well-being (Ryff, 1989) in early adulthood in a sample of 431 college freshmen. Both hypothesis that family involvement in religious activities lead to resilience and well-being and that resilience mediate the relationship between religiousness and well-being were not supported. Although religiousness was not significantly predictive of psychological well-being, resilience significantly predicted psychological well-being.

McCay et al. (2011) found using a mixed-methods approach, a sample of 70 homeless, age 16-24 to have high levels of mental health symptoms but moderately high levels of resilience ( $M=130.27$ ;  $SD=25.54$ ) on the Resilience Scale (Wagnild & Young, 1993) and self-esteem. The findings revealed that these youth, the majority of whom were victims of abuse and were sleeping in shelters, regarded leaving home as an important first step in taking care of themselves and gaining self-respect, forming relationships with peers and learning to manage obstacles. Self-esteem and resilience were significantly negatively correlated with indicators of emotional acute distress.

## **Resilience Attitude Scale (RAS)**

The Resiliency Attitudes Scale, a 72-item psychometric test which measures the degree of protective mechanisms in the process of negotiating risk situations (Rutter, 1990), was developed by Biscoe and Harris (Biscoe & Harris, 1994). Protective mechanisms are described as the ability to use internal and external resources successfully in resolving stage-salient developmental issues. They are mechanisms that moderate a person's reaction to stressful situations or chronic adversity in order

to produce a more successful outcome than would normally be present (Werner, 1993). These mechanisms are defined as the presence of one or more of the seven resiliency skills: insight, independence, relationship, initiative, creativity and humour, morality, and general resiliency (Biscoe & Harris, 1994). The RAS has demonstrated reliability and internal consistency in repeated clinical treatment settings (Biscoe & Harris 1994).

## **Cultural differences**

In a sample of 404 Albanian and Bulgarian immigrants and 376 Greeks citizens, Efrosyni and Kalantzi-Azizi (2008) examined relationships among acculturation, psychological resilience, social support and symptoms of depression and distress and found very high scores of depression and distress in immigrants related to a lower score in the Resilience Scale. Choowattanapakorn et al. (2010) compared the level of resilience in Sweden and Thailand on a sample of 422 and 200 respectively adults 60 years and older using the Resilience Scale. Despite different background characteristics, the mean score were almost the same (144 for Swedish and 146 for Thai participants. Amrita and Arora (2010) investigated gender differences in the perception of academic adversity and resilience in a sample of 560 Indian late adolescents, age 17-20 and found significant gender differences, with males reporting more resilience than females and a different use of resilience resources, reflected in internal asset scores and measured with the resilience Scale (Mampane, 2005). In their sample, 200 individuals experienced high adversity of which 115 reported high and 85 low scores on resilience, with females reporting more academic adversity.

***Relational Answer Questionnaire (RAQ)***

Relational Competence was assessed by the *Relational Answer Questionnaire* (RAQ; Cusinato & Corsi, 2005), a 73-item, 7 factor standardized instrument measuring the level of functionality in a relational context. The adequacy of the relational answer determines relational competence and is defined as a balanced level and use of all 5 major components of the ERAAwC model within relational competence theory (L'Abate, 2005). For three of the 5 components (*Emotionality, Rationality, Activity, Awareness, and Context*) the authors have recently proposed 2 additional subscales (E2 & Aw2) grasping different aspects of *emotionality* and *awareness*. If the scores for each component are too high or too low, or the scores are not distributed among the components in a balanced way, the relational answer may be inadequate and dysfunctional. Its reliability and concurrent validity has been well established in previous studies (L'Abate et. al, 2010; L'Abate & Cusinato, 2011; Gianesini, Cusinato, & Colesso, 2010; Gianesini, 2009, 2010) as well as its positive correlation with measures of resilience and emotion regulations.

***Positive and Negative Affect Schedule (PANAS)***

The Positive and Negative Affect Schedule (PANAS) measures positive and negative constructs as both states and traits. Used as a psychometric scale, the PANAS can show relations between positive and negative affect with personality stats and traits. Ten descriptors are used for each PA scale and NA to define their meanings. The authors (Watson, Clark, & Tellegen, 1984, 1988) have used the scale to measure affect at this moment, today, the past few days, the past week, the past few weeks, the past year, and generally. They reported evidences for the validity of the measures and that general distress and dysfunction, depression, and state anxiety more highly correlated with the Negative Affect scale (positive correlations) than the Positive Affect scale (negative correlations). PANAS treats both variables, Positive

affect scale (PA; 10 items) and Negative affect scale (NA; 10 items), as separate dimensions rather than bipolar ends of the same scale. The PANAS, which has shown excellent psychometric properties, is the most frequently used instrument to assess positive and negative affect in individuals. The PA scale of PANAS reflects the extent to which a person feels enthusiastic, excited, active, and determined, whereas the NA scale reflects subjective distress that subsumes a broad range of aversive affects including fear, nervousness, guilt, and shame.

Studies show that demographic variables have only very modest influences on PANAS scores and the PANAS exhibited measurement invariance across demographic subgroups (Crawford & Henry, 2004). The PANAS has also shown to be effective at differentiating between depression and anxiety in clinical samples and it possesses adequate psychometric properties drawn general population.

Watson et al. (1999) argued that the dimension of PA and NA represent the subjective components of the more general behavioral system of approach and avoidance, the behavioral inhibition system (BIS) and the behavioral engagement system (BES).

## Chapter 1.8 Final Discussion and conclusions

### Laughing or crying in the face of adversities?

According to Bonanno et al. (2005), positive emotion and its expression are both signs of resilience and successful coping with adverse life events. Showing genuine laughter and smiling, rather than crying, is a healthy response to a loss or stressor event. Non genuine laughing, however, could be a predictor of less successful social adjustment due to difficulties regulating emotions in social situations, which could contribute to long term adjustment problems.

During times of pain and stress when positive and negative affect are strongly related, the ability to continue to laugh and experience pleasure may leave less room for the powerful negative emotions that can seem so overwhelming. However, during times of low pain and stress when positive and negative affect represent separate dimensions, the ability to enhance positive emotions could serve to “broaden and build” the resources for coping with flare-ups of pain and increase overall life satisfaction (Fredrickson, 1998). The more positive emotions an individual experiences, the more likely is to have healthy heart rhythms that make him/her more adaptive to different situations, in both a psychological and physical sense.

Experiencing positive emotions (Fredrickson, 2007) like joy, contentment and gratitude, boost health and wellbeing. Positive emotions are mind and body events as they not only improve the way we learn and make decisions, but also our immunity, our cardiovascular health, and our emotional connection to others, which in turn boosts aspects of our physical health. Experiencing positive emotions, however, is more than just being free of negative emotions. L’Abate (2011) believes, in fact, that sincere and non-manipulative crying shared with loved ones produces intimacy and improves intimate relationships. Hurt feelings, defined as unpleasant, painful, and

harmfully subjective affects experienced from objectively aversive or negatively perceived life events, not only can be alleviated and may even dissipate by sharing them with intimates but they create intimacy in a process that implies and involves mutuality or reciprocity and lead to social support. Only when feelings emerge and are shared they transform themselves into emotions. How individuals evoke positive emotions in different context, both positive and negative, and how do they respond to positive and negative emotions within interpersonal interactions elicit positive responses in other people thus encouraging social affiliation and making social resources available for coping with adversities.

In this work we have investigated what are the mechanisms that may link positive emotion expression to well being. The experience of stress during adversity is related to a loss of resources and the positive emotional response in face of adversity both promote and imply a higher level of material, individual and relational resources, including a better ability to modulate emotional responses and expressions, which is a fundamental component of resilience.

Moreover, crying is merely an expression of release of emotions and a connection to humanity, it can be done in forms of anger, sadness, physical injury, overtiredness, need but also in happiness, surprise, sympathy, empathy, and sentimentality and thus involve positive and/or negative emotions (Bonanno, 1999) It is the stimuli and response on which perceptions are built, repeated, compounded, and developed. The knowledge, skills, and abilities necessary, regardless of environment, to regulate emotional expression allow the individual to act and react, and disassociate if necessary. The skills to be able to read a situation and act either into or out of it, allow to handle situations and conflicts directly correlate to the individual's feelings of security, and his/her future reactions to similar exposure.

Only when feelings emerge and are shared they transform themselves into emotions. (L'Abate, 2011). In sociology theory of self-identification through perception theorized that individuals identify themselves by how they perceive another to look at them, react to what they say, react to their presence, and therefore this is how and where individuals place themselves with in or on the outsides of the

culture in which we they are raised (Scott & Marshall, 2005). How an individual was treated and how he/she experienced her/himself in the relationship (Garfat, 2010) are the two important steps in perception, the action and the reaction. Emotions are based on what individuals make them; they can vary person to person, society to society, and culture to culture. They develop and change based upon need and the response or reaction of others but above all they have the ability to connect humans and give them the knowledge and skills to experience a situation and be resilient regardless of the degree of adversity.

In recent years interest in positive emotions has grown, thanks to a change in focus from negative to positive (Seligman & Csikszentmihalyi, 2000). It is acknowledged that stressful life events may affect psychological and physical health and there is a growing interest in humor and in the role it plays helping to relax, improve relationships with others, and reduce negative emotions

Martin and Lefcourt (1986) first aimed at finding a relationship between psychological adaptation and the use of humor, endeavoring to confirm the belief that people with a greater sense of humor are less prone to developing symptoms such as distress, anxiety and depression and are more able to face stressful events., due to the fact that people who suffer from psychological distress through humor can learn to increase their self-efficiency, transform their mood in a positive one and find constructive solutions to their problems. Smiling and laughing in front of the adversity could be helpful in restructuring a situation and humor can help with both emotion-focused and problem-focused coping strategies. Humor has also a positive role in cognitive appraisal of threatening, stressful, situations and function as a coping strategy. It is a cognitive-affective shift or a restructuring of the situation with a concomitant release of emotion associated with the perceived threat (Dixon 1980; Martin et al. 1993) and reduction in physiological arousal (Shurcliff 1968). Remaining positive and optimistic is more easily accomplished with humor and laughter, which help people to see the brighter side and to foster more creative and effective in problem-solving. Moreover, a hearty laugh relieves physical tension and stress, decreases stress hormones and increases immune cells and infection-fighting

antibodies, triggers the release of endorphins, and protects the heart improving the function of blood vessels and increases blood flow (Fry, 2001).

Both positive and negative life events bring significant changes in people's life, family composition, status and interactions. Significant permanent life changes elicit both positive (excitement, novelty) and negative (fear, worries) or mixed emotions in the context of required adjustment, depending on the degree of control over the situation (Fitzpatrick & Kostina-Ritchey, 2011). However, positive emotions have a better interpersonal function as "*positive states do more than propel us out of sadness; they also reconnect us to those around us. Laughter in particular, has a contagious effect on other people, it makes other people feel better and pulls them towards us, in a way rewarding them for having bothered to stay with us through the painful moments*" (Bonanno, 2009, p. 199). While the function of sadness is to turn our attention inward, promote deeper and more effective reflection, become more detail-oriented, accurate in evaluating our abilities and performances, and less biased toward others, laughter it's an intrapersonal essential tool that help us accept and accommodate to the loss. Individuals evoke positive emotions in different context, both positive and negative, to cope more adaptively with unexpected challenges. Emotions are short-terms reactions to immediate demands, and their usefulness depends on its context.

## Interventions

Over the years, the importance of providing on time, preventive, comprehensive, and individualized services to individuals and family have been widely recognized and prevention strategies have evolved from risk-focused to resource-focused and finally process-focused. Competence and resilience enhancement programs following the different operationalizations of the construct has thus shifted their attention from initially building a singular or a set of skills, to more developmental, ecological and multi-causal models and finally to prevention initiatives process-focused.

Many conventional therapeutic approaches depend on the assumptions that affect states are unidimensional, that negative affective states such as depression and psychological distress should be the focus of the intervention, and that the underlying structure of affect states is fixed and does not change. Treatments based on a unidimensional model first identify the source of distress and then apply techniques that will maximize the person's chances of recovery (Reich, Zautra, & Davis, 2003). Redirecting clinical practice to manipulate affect relationships, in contrast, appears to be a more fruitful avenue for investigation (Reich, Zautra, And Davis, 2003).

Effective programmatic and intervention efforts need a conceptual and practice-based model that integrated fields and is sensitive to specific community context (Strask, 2005). Successful resilience intervention, in fact, involves a balanced emphasis on both contextual and environmental risk and personal or family processes as a resource. Key relational and family processes that facilitate strengths and outcomes need to be used to empower families and build resilience. Rather than looking at the family or social network structure and stability with pathologizing frame of reference, it is better to support individuals in all types of relationships, and help them fulfill parental functions competently, resolve disputes constructively and ensure community attachment (Kinnear, 2002) in their ride along with the ups and downs of life (Joinking, 2003).

In spite of adversity, individuals and families have valuable knowledge to share (Tusaie & Dyer, 2004) and that the potential for change and function above the norm exists across the life course. The full potential of intervention can only be realized integrating knowledge of normal development, relational competence and resilience. Relationships are the foundation of human adaptation and development, forming the basis for both social and cognitive competence from childhood on (Masten & Coatsworth, 1998).

Early interventions targeting indiscriminately at people immediately after exposure to a PTE, like traditional grief programs, are not only ineffective but also may exacerbate trauma reactions by interfering with natural recovery processes. In fact, for most people, intrinsic recovery processes will restore equilibrium relatively soon after exposure without treatment (Bonanno & Mancini, 2012). An appropriate assessment of individual and relational resources, and a diagnosis of genuine dysfunction, observed longitudinally over time, is central before referrals for treatment.

As the ability to experience positive emotions in the context of stress is adaptive, then interventions designed to bolster individuals' capacity for seeing the complexity of emotions inherent in everyday stressful situations may prove to be beneficial. Zautra (2003) cited evidence that mindfulness-based approaches to stress reduction may offer a means of broadening emotional awareness and thus help to sustain positive emotional engagement under stressful conditions. In addition, interventions that facilitate the processing of emotions with greater complexity might also foster adaptive coping and adjustment to chronic stress and illness (Reich et al., 2003).

## Conclusions

This research aimed to make an innovative and advanced contribution to the field with an integrated, theoretically and empirically grounded understanding of resilience that may be used to develop preventative intervention models in various contexts. Specifically, this work has proposed that the construct of resilience can be better understood as relational competence and redefined as relational resilience. Multiple patterns of resilience exist, that can be demonstrated at the relational level and examined through key relational processes that facilitate these strengths and can be used to empower individual, families and communities on their own resources. Although each individual possesses the potential for resilience, interplay between the individual and the broader environment is responsible for its level (L'Abate, 2010).

The volumes of studies on resilience has grown in the last few years as the topic is relevant to a number of fields of study including education, business, mental health, medicine, psychology, and social welfare (O'Neal, 1999) and the construct can be considered applicable at the individual, family, group or organisational level. In fact, in the past 20 years numerous models of resilience have been proposed that emphasise ecological and psychological contexts and has classified resilience either as predictor of good outcome in high-risk groups, moderator able to enhance or reduce the effect of adversity, or pattern of recovery from trauma (Masten, Best & Garmezy, 1990). To these changes in the operational definition of the construct has corresponded a proliferation of assessment measures sometimes misused (Bonanno, 2011). Personality models or a combination of personality measures, in fact, only accounts for a moderate amount of variance in resilience and subjective well being (Costa & McCrae, 1992). Other variables, including demographic variables, social networks and life events need to be adequately included (Headey & Wearing, 1989).

Contemporary resilience research has progressed beyond descriptive issues to the underlying processes, like self regulatory systems for modulating emotion, arousal and behaviour, identification and capitalization of support structures, and

reduction of the likelihood of a stress response (Gucciardi et al., 2011). Displaying emotions, either positive or negative, elicits positive responses in other people thus encouraging social affiliation and making social resources available for coping with adversities, as long as they somehow alternate each other in a wavelike manner (Bonanno, 2009). When negative emotion, like sadness, become too strong, overwhelming, pernicious and dysfunctional they cause withdraw from the world, a lost of focus in life, and confusion about personal identity (Bonanno, 2009). If hurts offset joys psychopathology emerges (L'Abate, 2011). Only when feelings emerge and are shared they transform themselves into emotions, facilitating close relationships, connections and bonds which are inner resources, culturally different and contextually adaptive (L'Abate, 2009; Bonanno, 2009).

The experience of stress during adversity is a loss of resources, but reflecting and recalibrating to reality, moving in and out of sadness, by switching to more positive states of mind, by finding joy and laughter within pain, and making sense out of it, allow individuals to gradually return to a state of equilibrium and resources restoration. Resilient individuals have the ability to use avoidance and distraction as coping strategies, and a broader flexibility to adjust to the shifting demands of different situation (Bonanno, 2011). Thus emotions are fundamentally functional (Ekman, 1992, 1993; Frijda, 1986; Lazarus, 1991; Tooby & Cosmides, 1990). A positive emotional response in face of adversity does not necessarily imply a higher level of material, individual and relational resources, but simply a more flexible way to modulate emotional responses and expressions, and the use a broader repertoire of behavioral strategies, sometimes even less than perfectly healthy (Bonanno, 2011).

The *experience* of affect clarifies the kind of response that may be needed and motivates, while the *expression* of emotion communicates information and needs and influences and regulates the behavior of others. While traditional theories emphasized unrestricted expression of negative emotions, greater expression of negative emotion is often predictive of poor long-term functioning (Keltner & Bonanno 1997; Seery et al., 2007). Emotions are useful and efficient but ephemeral,

as they serve their adaptive functions quickly (Bonanno, Goorin, & Coifman, 2008). When prolonged, in fact, emotions are maladaptive and undermine support.

The experience of emotion always occurs in an environmental context. In a safe and predictable environment, individuals are able to process information from multiple sources, including emotional inputs, to develop an adaptive response. This complex processing demands substantial resources but provides the individual with a rich and nuanced assessment of environmental demands and emotions which allows him/her maximal flexibility and an optimal response at any given moment. During times of stress and uncertainty, the need to process information rapidly takes over complex, time-consuming processing of differentiated evaluation of stimuli. The individual's attention narrows on the immediate demands and potential threats to well-being and judgments become more simplified and rapid, to quickly alleviate the discomfort of the situation. In such contexts, negative information are preferentially process at the expense of positive and PA and NA fuse to become a simple bipolar dimension reflected in a high inverse relationship between the two (Devis, Zautra & Smith, 2004).

The ability to sustain affective differentiation are skills related to emotion regulation and a number of aspects of emotion regulation play an important role in resilience, including the ability to identify, understand, process, and express one's emotions. Social engagement derives from needs that arise from both affective systems, as individuals seek contact for both enjoyment and alleviation of suffering (Davis, Zautra & Smith, 2004). This focus on relational competence, developmental relationships and psychosocial support, offer a potentially useful relational developmental and perspective on resilience. An adequate perspective on resilience, in fact, requires considering multiple processes that may vary over time. Most forms of stress are not simply a short-term, single stimulus, but a complex set of changing conditions with a past history and a future course (Rutter, 1987).

A methodologically sounds study of resilience should consequently meet numerous criteria: a clear operationalization and a subjective evaluation of aversive events and their temporal bounds; a multidimensional information processing

assessment of individual emotional and relational resources and longitudinal measurement of outcomes obtained at multiple points in time and explicitly categorized.

From a practical perspective, interventions should emphasize the development of capabilities, knowledge and relationships. Emphasizing psychosocial support and the capacity to build relationships is worthy more consideration, above and beyond other form of support and training, even in the workplace (Gianesini, 2010). Individual, families and organizational life are socially embedded, and this paper have provided evidences that certain kinds of resources provided by developmental networks are critical to building resilience in every context. Social support does wane and strengthening networks is critical in developing resilience at every stage of development. Overall, the ability to build relationships, relational competence, and the strength and dynamics of positive relationships and psychosocial support is fundamental. Because resilience is a natural results for individuals with resources (Bonanno, 2004), it cannot be directly "taught" through specialized programs however, relational competence can.

The full potential for interventions can only be realized integrating knowledge of normal development of competence, psychopathology and resilience (Masten & Coatswoth,1998) and by competently fulfilling relational functions and building resilience (Kinnear, 2002). Investigating resilience as a relational construct may result in specific intervention strategies aimed at assisting both individual and families in managing the turbulences and transitions of their life stages as well as unexpected potentially traumatic events.

## **Part 2: Empirical Evidences.**

## Empirical Evidences

Our research plan has explored the theoretical contribute of Relational Competence theory (Relational Competence Theory, RCT, L'Abate, 1994), the Broaden-and Built Theory (Tugade & Fredrickson, 2007), the Dynamic Model of Affect (Zautra, 2004), the Coping and Emotion Flexibility paradigm (Bonanno, 2011) and the Multiple trajectories of outcome approach (Bonanno, 2008) to resilience research proposing a conceptualization of resilience as “relational”. We empirically examined its interpersonal, emotional and cognitive components, the processes that promote and reduce resilience, and the heterogeneity of responses (outcomes) to potential trauma across several studies, samples, measures and methodologies:

- 1) The influence of emotional and relational resources on parenting quality (N=324)
- 2) Resilience and its shielding effect on relationship quality and life satisfaction (N = 318)
- 3) Relational Resilience and Pro-social behavior in adults (N = 339),
- 4) The effects of Resilience on substance abuse and treatment (N= 429)

Using a quantitative descriptive research design, the theoretical definition of resilience was translated from different models into structural equations (LISREL) based on Model<sup>1</sup> ERAAwC of Relational Competence Theory (L'Abate & Cusinato, 2010) to evaluate the relationships among constructs associated with resilience and their link with wellness, competence and healthy outcomes following various potentially traumatic life events. Findings provided support for a relational resilience model and a competence-base approach and results demonstrated that patterns of resilience can be examined trough relational processes, particularly emotional and cognitive and can be redefined as relational resilience in light of a Theory (RCT, L'Abate 2011 ) that makes its definitions, characteristics, domains, and assessment measures more consistent.

Specifically, results confirmed that resilience: it is a process that varies across gender lines and changes throughout particular lifespan stages; its relational and

contextual dimensions explain both functional and dysfunctional behavior; it is defined by positive and negative emotions and positive and negative life events; it implies the ability to flexibly regulate emotional expression and within the heterogeneity of responses to potentially traumatic events, it represents a stable trajectory of healthy adjustment over time.

## 2.1 - STUDY1: The influence of emotional and relational resources on parenting quality

In this first study we were interested in the underlying dynamics of the mediating processes between Relational Competence (RAQ, Relational Answer Questionnaire, L'Abate & Cusinato, 2010), Emotional Competence (Toronto Alexithymia Scale , TAS-20, Parker, Taylor, & Bagby, 2003) and Resilience (CD-RISC2, Connor & Davidson, 2003) on Parenting styles (Gottman et al., 1997) in the context of family economic hardship. A resilience approach aims to identify and strength key interactional processes that enable families to withstand and rebound from life challenges and transitions (Walsh, 2006). As most forms of stress are not simply a short-term, single stimulus, but a complex set of changing conditions with a past history and a future course (Rutter, 1987), a developmental perspective of resilience involve considering multiple processes that may vary over time. Data from a sample of 324 parents recruited at elementary schools in Switzerland (Ticino Canton) were analyzed trough multiple regression and structural equation modeling. Findings showed that emotional and relational competence are characteristics of functional parenting (emotion coach style) and mediate the potential negative effect of work instability. Emotion expression was found to facilitates action and strengthen resilience, which had only an indirect effect on parenting styles through the components of relational competence. As children's adaptation to crisis events and disruptive transitions is influenced by the meanings of experience which are mediated by parental mastery and competence (Walsh, 2006), implications for prevention efforts and clinical interventions to strengthen parental emotional and relational competence were discussed.

*This study has been published as chapter 14 "Alexithymia dimensions and Emotional Perceived Parenting Styles" in L'abate L., & Cusinato, M. (2011). Advances in Relational Competence Theory. With special attention to Alexithymia. Nova: New York.*

## Introduction

Affect regulation in children, which is assumed to be based on optimal parenting, can become disrupted by inadequate parenting as well as traumatic experiences (Koiman et al., 2010). A recent study on the relation between perceived parenting style, sexual and physical abuse, Alexithymia, dissociation, anxiety and depression found that maternal and parental styles were moderately correlated with Alexithymia and depression, while optimal parenting of one of the parents had a buffering effect on the degree of Alexithymia but not on the severity of other forms of affect dysregulation (Kooiman et al. 2010). Similarly, De Panfilis et al. (2008) investigated the mediating effect of Alexithymia features on the effect of perceived adverse parenting during childhood and personality disorders in adulthood. Their results indicated that, although altered parental bonding (excessive maternal protection) may enhance the risk of PD, its effect was completely mediated by the alexithymic feature *difficulties describing feelings to others* (DDF) after controlling for gender, age, educational level, type, severity and age of onset of axis I disorders. Moreover, De Rick & Vanheule (2006) examined the relationship between Alexithymia, adult attachment and perceived parenting in a clinical sample of alcoholic inpatients, testing whether difference between high and low scoring group on trait Alexithymia could be predicted on the basis of attachment style and perceived parenting. They found that of the three dimension of Alexithymia (affective, cognitive and social) the cognitive component especially was predicted by the avoidant attachment style and a lack of warmth perceived in the relationship to the father.

Few researches were, on the other hand, conducted on whether emotional and relational competence has a moderating effect on parenting, shielding its quality from negative influences. Parent's ways of interacting with the children are not a separate set of capabilities, but part of the fundamental identity of the person which is affected by his/her psychological resources (Leinonen, Solartau & Punamak, 2002). Therefore, the impact of risk factors such as economic hardship on parenting quality might be expected to be dependent on the relational and emotional resources

(i.e. competences) of each parent. We examined the mediating paths between economic hardship, emotional and relational competence, resilience and parenting.

The model attempted to explain economic hardship and parenting quality, singling out three nodal points: emotional competence, relational competence and resilience. We were interested in seeing whether relational competence, which is negatively correlated to affect dysfunction (Alexithymia) and implies emotional competence, is powerful enough to moderate the effect of economic hardship on parenting. Subsequently we explored how and whether the three dimensions of Alexithymia (affective, cognitive and social) are meaningfully linked to the five relational competence dimensions of Relational Competence Theory (ERAAwC model, L'Abate, 1990) and Gottman's (1997) four parenting styles. Finally, we analyzed the mediating and moderating effects of psychological resilience on parenting styles and its relation with emotional and relational competences

### **Gottman's Emotional Parenting Styles & Alexithymia**

Emotional functioning is based on Emotional Competence, which involves a wide range of skills including the ability to detect one's own emotional state, an effective analysis of their causes, and consequences (Meerum et al., 1989; Saarni, 1999). In social contexts, the use of adaptive emotion regulation strategies facilitate interpersonal interactions and is associated with healthier pattern of physical and psychologically functioning (John & Gross, 2004). The type of parenting children receives play an important role in their social development, health and problematic behavior (Lagacé-Séguin & d'Entremont, 2006). Gottman (1997) proposed that parents who internalize versus those who express the "emotional" knowledge of themselves and their children exhibit distinct parenting characteristics: *Emotion Coach*, *Dismissing*, *Disapproving*, and *Laissez Faire*.

### **Parenting Styles.**

Alexithymia describes problems in affect regulations, such as difficulties with recognizing, processing and regulating emotions. Generally, health problems are more pronounced in alexithymic people whose emotion regulation system has been challenged by strain life events. According to Lazarus (2006), emotions can impair or facilitate psychological adaptation, the accuracy of judgment and task performance. The adaptive function of emotions deals with attention to environmental stimuli, internal clues about the interaction with the environment, priming bodily responses and communication (Schultz et al., 2005). The attenuated or inappropriately modulate expression of positive and negative emotions indicate a lack of behavioral responsiveness to change in the emotional environment, called emotion context-insensibility (Rottember & Gotlib, 2004).

These themes could be used to understand the relationship between emotion expression and social impairment. In many contexts, this emotional impoverishment, or lack of emotional competence, may violate other's expectations about the interaction as a lack of emotional-expressive reciprocity and may frustrate, disrupt and erode interpersonal coordination and relationship quality (Rottember & Vaughan, 2008). Moreover, rigid and unchanging emotional behavior in social interactions could frustrate the other person desire for dynamic feedback on their own performance and the state of their relationship.

### **Participants and procedure**

A non-clinical sample of parents ( $n = 324$ ) with children age 3 to 10 was recruited in two school districts in Switzerland (Ticino Canton) with a participation rate of 40.5%. A total of 800 questionnaire were distributed (400 in each school) to the children, through their teachers, in a single envelope. Each envelope contained: a) the authorization from the school principal and the deadline for returning the questionnaire (13 days later), b)

informed consent, c) instructions, and d) two questionnaires, one for each parent, in two additional envelopes. The parents, who agreed to participate in the study, returned the envelopes to their children's teacher. The researchers collected all returned questionnaires at the school principal office. All material was presented in Italian language.

## Measures

**Relational Competence.** Parents' individual level of functionality in a relational context was assessed with the Relational Answer Questionnaire (RAQ, version 2001, Cusinato & Corsi, 2005; Cusinato & Colesso, 2009). This 66 item, 7 factor scale measures the adequacy of the relational answer defined as a balanced level and use of all five components of Model<sup>1</sup> ERAAwC. If the scores for each component are too high or too low, or the scores are not distributed among the components in a balanced way, the relational answer may be inadequate and dysfunctional. Its reliability and concurrent validity has been well established in previous studies (L'Abate et. al, 2010; L'Abate & Cusinato, 2011; Giancesini, Cusinato & Colesso, 2010; Giancesini 2011). The reliability of the RAQ subscales in this study was all acceptable, ranging from .76 to .80. ( $E_{\text{feeling}}, \alpha = .80$ ;  $E_{\text{expressed}}, \alpha = .78$ ;  $R, \alpha = .86$ ;  $A, \alpha = .77$ ;  $A_{\text{wrelational}}, \alpha = .77$ ;  $A_{\text{wfeedback}}, \alpha = .77$ ;  $C, \alpha = .76$ ).

**Alexithymia.** Parents' difficulties in experiencing, identifying and expressing feelings were measure with the Toronto Alexithymia Scale (TAS-20, Parker, Taylor, & Bagby, 2003). The 20 item, 3 factor scale has been translated, validated and used in Italian language in previous studies (L'Abate et. Al, 2010; L'Abate & Cusinato, 2011) and yielded reliability coefficients ranging from .63 to .79. Emotional functioning involves a wide range of adaptive emotion regulation strategies and skills, including the ability to detect one's own emotional state, an effective analysis of their causes, and consequences (Meerum et al., 1989; Saarni, 1999) which in social contexts facilitate interpersonal interactions and is associated with healthier pattern of physical and

psychologically functioning (John & Gross, 2004) both in parents and their children. The overall scale reliability for the TAS-20 this study was .70, the alpha for the three subscales were respectively: TAS<sub>identifying</sub>, difficulties in identifying feelings,  $\alpha = .78$ ; TAS<sub>describing</sub>, difficulties verbalizing feelings,  $\alpha = .74$ ; TAS<sub>escaping</sub>, externally oriented style of thinking,  $\alpha = .60$ .

**Parenting styles.** The Emotion-Related Parenting Styles Self-Test (ERPS), an Italian adaptation (Cusinato et al., 2005) of Gottman's parenting's styles (Gottman, Declaire, & Goleman, 1997) was used to have parents evaluate their perceived emotional responsiveness, warmth and support toward their children. The types of parenting children receive, and especially the lack of affection in the child-parent bond, play an important role in their social development, health and problematic behavior (Lagacé-Sèguin & d'Entremont, 2006). The Emotion-related Parenting Styles Self-Test is a 54-item, 4 factor scale measuring four distinct parenting characteristics: ERPS<sub>emotion coach</sub>, ERPS<sub>dismissing</sub>, ERPS<sub>laissez-faire</sub>, ERPS<sub>disapproving</sub> according to the categorization proposed by Gottman (1997) on parents who internalize versus those who express and exhibit the emotional knowledge of themselves and their children. The scale is a revision of a previous Parenting Style Questionnaire by Cusinato et al. (2005) that evaluated on a 5 step Likert scale 40 items derived from the 81 originally proposed by Gottman (1997) on a true-false scale. The Parenting Style Questionnaire (PSQ), culturally and linguistically adapted to the Italian population, was validated on a sample of 872 participants from the north-east of Italy with a reliability coefficient ranging from .62 to .70. It has also been used, in a 43-item version, in a subsequent study on 402 parents (Cusinato & Maino, 2008) with a Cronbach alpha ranging from .67 to .91. The alpha coefficient for the four subscales in this study ranged from .62 to .75, indicating acceptable reliability (ERPS<sub>disapproving</sub>  $\alpha = .75$ , ERPS<sub>emotion coach</sub>  $\alpha = .75$ , ERPS<sub>dismissing</sub>  $\alpha = .74$ , and ERPS<sub>laissez-faire</sub>  $\alpha = .62$ ).

**Resilience.** The 2 items version of the Connor-Davidson Resilience Scale (CD-RIS2, Vaishnavi, Connor and Davidson, 2008) was used in this study to assess psychological resilience yielding an alpha coefficient of .67. In the two item version (CD-RISC2,  $\alpha = .78$ ), items 1 and 8 were selected by the authors as they etymologically capture the essence of resilience. The authors' items choice was arbitrary and not empirically based and the sample used to validate the scale was clinical. The reliability of the CD-RISC in its 25-item original version ( $\alpha = .89$ ), translated into Italian has been established in previous studies (Gianesini, 2011; Sarchiapone et al. 2009) with a coefficient alpha of .94 and .80 respectively.

## Results

Demographic characteristics of the sample are summarized in Table 2.1.1. Parents' age ranged from 26 to 66 ( $M = 41.1$ ,  $SD = 5.3$ ), 123 fathers (38%) and 201 mothers (62%). The mean age for fathers was 43.1 ( $SD=5.7$ , range 29-66) and for mothers 39.8 ( $SD=4.6$ , range 26-52). The highest proportion of the participants (84.9%) were married, a small portion (5.9%) were cohabiting, and the remaining divorced currently single (3.7%), divorced and remarried (3.1%), divorced and cohabiting (1.3%) or single parents (1.2%).

Parents' education ranged from primary school (0.3%) to middle school (4.0%) and graduate school (21.3%), with 33.3% having a high school diploma and 41.0% a vocational degree. A very low percentage of parents were unemployed (1.2%), 23.8% were housewife, 9.3% had a blue collar job, 4.6% was self-employed, while the majority (35.5%) has a white collar job or were business owners, managers or CEO (25.3%).

**Table 2.1.1.** Demographic Characteristic of the sample (N=324).

	Range % (n)	Mean	SD
<i>Age</i>	26-66	41.1	5.3
Fathers	29-66	43.1	5.7
Mothers	26-52	39.8	4.6
<i>Gender</i>			
Female	62%(201)		
Male	38% (123)		
<i>Marital status</i>			
Married	84.9% (275)		
Cohabiting	5.9% (19)		
Divorced Single	3.7% (12)		
Divorced Remarried	3.1% (10)		
Divorced Cohabiting	1.2%(4)		
Single	1.2%(4)		
<i>Education</i>			
Elementary school	0.3% (1)		
Middle school	4.0% (13)		
Vocational	41.0% (133)		
High school	33.4% (108)		
Some College	13.3% (43)		
College degree	8.0% (26)		
<i>Work</i>			
Manager/CEO	25.3% (82)		
Self-employed	4.6% (16)		
White collar	35.5% (115)		
Blue collar	9.3% (30)		
Unemployed	1.2% (4)		
Housewife	23.8% (77)		

Their children's characteristics are summarized in Table 2.1.2. Children's age ranged from 1 to 40 ( $M = 8.5$ ;  $SD = 4.5$ ), with 53.3% males and 46.7% females. The number of children for household ranged from 1 to 4. The majority of parents (60.3%) had 2 children, 21.5% only 1 child, while 14.3% had 3 children and 3.8% up to 4 children. The mean and standard deviation of children's age were similar: 9.77 for the *first*

*child* ( $SD = 4.43$ , range 2-40), 7.17 for the *second* ( $SD=4.38$ , range 1-37), 7.56 for the *third* ( $SD = 4.17$ , range 1-18), 7 for the *forth* ( $SD=3.32$ , range 1-11)

**Table 2.1.2.** Children's Characteristics in the sample (N = 476)

Position	Male	Female	M(age)	SD	Range
1st child	52.8% (171)	47.2% (153)	9.77	4.43	2-40
2 <sup>nd</sup> child	49.5% (151)	50.5% ( )	7.17	4.38	1-37
3 <sup>rd</sup> child	33.3% (20)	66.7% (40)	7.56	4.17	1-18
4 <sup>th</sup> child	81.8% (2)	18.2% (7)	7.00	3.32	1-11
Total	53.3% (253)	46.7% (222)	8.48	4.55	1-40

The gender distribution for the first child 52.8% and 47.2% (M=171, F=153), for the second 49.5% and 40.5% (males 150, females 102), for the third 33.3% and 66.7% (males 20, females 40), and for the fourth 18.2% and 81.8% (2 males, 7 females). The descriptive statistics for all variables of interest and scores are reported in Table 2.1.3.

The mean scores for the five dimensions of the ERAAwC model in the whole sample were: 47.8 ( $SD = 8.45$ ) for *Emotionality* ( $E_{feeling}$ ); and 37.9 ( $SD = 5.61$ ) for *Emotionality* ( $E_{expressed}$ ); 36.93 ( $SD = 5.71$ ) for *Rationality*; 41.06 ( $SD=8.34$ ) for *Action*; 38.65 ( $SD = 5.17$ ) for *Awareness* ( $Aw_{relational}$ ) and 21.64 ( $SD = 4.0$ ) for *Awareness* ( $Aw_{feedback}$ ) and 32.22 ( $SD = 6.14$ ) for *Context*. The highest scores are found for the *Emotionality* ( $E_{feeling}$ ), *Action* and *Awareness* ( $Aw_{feedback}$ ) dimensions, although all five components resulted quite balanced.

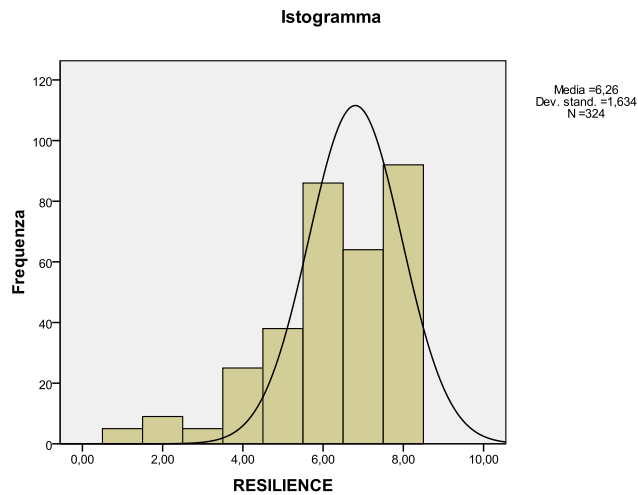
**Table 2.1.3.** Descriptive statistics for Relational Competence (ERAAwC), Resilience (CD-RISC2), Alexithymia (TAS<sub>identifying</sub>, TAS<sub>describing</sub>, TAS<sub>escaping</sub> and TAS-20) and Perceived parenting styles (ERPS)

	Mean	SD	Possible Range
E <sub>feeling</sub>	47.80	8.45	10-50
E <sub>expressed</sub>	37.39	5.61	10-50
Rationality	36.93	5.71	10-50
<u>A</u>	41.06	8.34	10-50
AW <sub>relational</sub>	38.65	5.71	10-50
AW <sub>feedback</sub>	21.64	4.00	6-30
<u>C</u>	32.22	6.14	10-50
CD-RISC2	6.25	1.63	0-8
TAS <sub>identifying</sub>	13.36	5.25	7-35
TAS <sub>describing</sub>	11.85	4.27	5-25
TAS <sub>escaping</sub>	18.20	4.7	8-40
TAS-20	43.42	11.3	20-100
ERPS <sub>dismissing</sub>	38.97	5.91	14-56
ERPS <sub>emotion coach</sub>	22.97	4.88	14-56
ERPS <sub>disapproving</sub>	31.67	4.99	13-52
ERPS <sub>laissez-faire</sub>	39.20	5.62	13-52

The mean score for Resilience on the CD-RISC2 was 6.25 (SD = 1.63) (Figure 2.1.3), consistent with the mean CD-RISC2 of 6.91 found in the general population by Vaishnavi, Connor, and Davidson (2008). Its distribution appears skewed toward higher scores (Table 2.1.5).

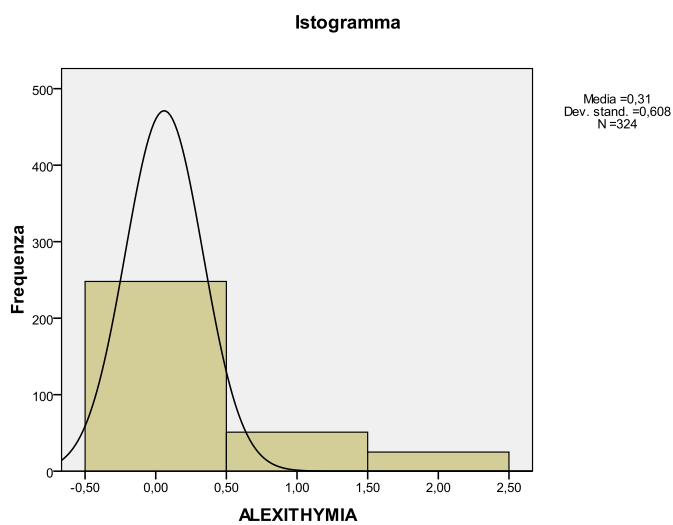
As for Alexithymia, which is a normally distributed dimensional phenomenon, the cutoff score (61) for classifying subjects provided the opportunity to study its incidence in the sample. 7.7% (25) of the parents in the sample were Alexithymic, 15.7% (51) were classified as possible Alexithymic and the majority, 76.5% (248), as non Alexithymia (Figure 2.1.3).

**Figure 2.1.1.** Resilience scores distribution (N=324)



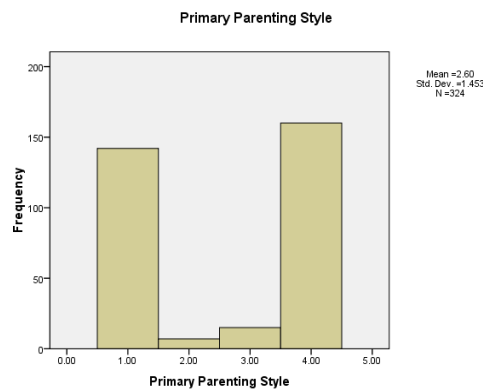
However, the Alexithymia frequency (Figure 2.1.1) in the sample was much below the rate of 12.8% showed by Salminen et al. (1999) in a sample of 1,285 working-age subjects and the rate of 10.3% found by Kokkonen et al (2001) in a population cohort of 5,028 young adults.

**Figure 2.1.2.** Alexithymia scores distribution (N = 324)



Parents in the sample preferred (the highest score on the four subscales) the *disapproving* (49.1%) parenting style, followed by *dismissing* (43.8%) and *laissez-faire* (4.9%) while the *emotion coach* only accounted for a 2.2% of the parents (Figure 2.1.2). This results also include equal scores in more than one subscale and are confirmed by the frequency of the less used parenting style (lowest score on the four subscales) which resulted to be the *emotion coach* (91.1%), followed by the *disapproving* (5.2%), *dismissing* (2.2%) and *laissez-faire* (1.5%).

**Figure 2.1.3.** Perceived Emotional Parenting Styles distribution



1=*dismissing*, 2=*emotion coach*, 3= *laissez-faire*, 4=*disapproving*

### Perceived Emotional Parenting Styles and Socio-demographic Variables

The means, standard deviations and difference between fathers and mothers for the variable in the study indicate that in the sample fathers are older than mothers ( $r = -.30$ ;  $p < .01$ ), and the older the parents, the higher the mean age of their children ( $r = .43$ ;  $p < .01$ ). Men has better qualified jobs than women ( $r = .40$ ;  $p < .01$ ), and the

highest the educational level, the higher the professional occupation. ( $r = -.23$ ;  $p < .01$ ). A t-test analysis run to evaluate gender differences in parenting styles (Table 2.1.4) showed a significant difference for the *dismissing* and *emotion coach* style between groups, hence men seem to prefer a *disapproving* or *dismissing* parenting style while women tend to adopt an *emotion coaching* style.

**Table 2.1.4.** Gender differences (1=male; 2=female) in Parenting Styles

	<i>t</i>	<i>g.l.</i>	<i>p</i>	Mean diff.	Cohen's <i>d</i>
ERPS <i>disapproving</i>	3.41	322	0.001	2.27	0.39
ERPS <i>emotion coach</i>	-4.51	322	0.000	-2.45	-0.52
ERPS <i>laissez-faire</i>	-0.53	322	0.596	-0.29	-0.06
ERPS <i>dismissing</i>	4.27	322	0.000	2.54	0.49

$d < .20$  no effect;  $.20 \leq d < .50$  small effect;  $.50 \leq d < .80$  medium effect;  $d \geq .80$  large effect

To explore the relation between parenting styles and education, the sample was divided into three groups: elementary and middle school (1), high school (2) and college (3) to analyze the means and the variance for the four subscales of the ERPS, in relation to the educational level (Table 2.1.5).

**Table 2.1.5.** Perceived Parenting Styles (ERPS) and Education<sup>1</sup>

	Education	<i>N</i>	<i>Mean</i>	<i>DS</i>
ERPS <i>disapproving</i>	1	147	31.88	5.88
	2	107	31.28	5.66
	3	69	28.81	5.90
ERPS <i>emotion coach</i>	1	147	46.21	4.99
	2	107	48.00	4.63
	3	69	47.30	4.82
ERPS <i>laissez-faire</i>	1	147	31.96	4.90
	2	107	32.89	4.81
	3	69	31.17	4.82
ERPS <i>dismissing</i>	1	147	28.71	5.25
	2	107	28.22	5.13
	3	69	26.19	5.52

(1 = elementary/middle school; 2 = high school; 3 = college)

Significant differences were found, but with a small effect, between groups for the *disapproving*, *dismissing* and *emotion coach* parenting styles (Table 2.1.6). The majority of *disapproving* and *dismissing* parents have completed elementary or middle school, while *emotion coach* parents have at least finished high school. These findings suggest that education does influence the quality of parenting, the higher the level the more likely the parent is to listen to the child, to empathize with soothing words and affection, to offer guidance on regulating emotions, to set limits and teach acceptable expression of emotions and problem-solving skills.

**Table 2.1.6.** ANOVA Perceived Parenting Styles and Education

	g.l.	<i>F</i>	<i>p</i>	$\eta^2_{\text{partial}}$
ERPS <i>disapproving</i>	322	6,70	0.001	0.04
ERPS <i>emotion coach</i>	322	4,41	0.013	0.03
ERPS <i>laissez-faire</i>	322	2,72	0.067	0.02
ERPS <i>dismissing</i>	322	5,53	0.004	0.03

$\eta^2 < .06$  small;  $.06 \leq \eta^2 < .14$  medium;  $\eta^2 \geq .14$  large

No significant differences were found between age and parenting style when the sample was divided into two groups (below or above 40) and the mean differences analyzed, as shown in Table 2.1.7.

**Table 2.1.7.** T-test Perceived Parenting Styles and Age

	<i>t</i>	g.l.	<i>p</i>	Mean diff.
ERPS <i>disapproving</i>	-0.91	322	0.363	-0.60
ERPS <i>emotion coach</i>	0.57	322	0.569	0.31
ERPS <i>laissez-faire</i>	-0.43	322	0.670	-0.23
ERPS <i>dismissing</i>	-1.64	322	0.102	-0.97

### Alexithymia and Perceived Emotional Parenting styles

In line with previous research (Gottman & DeClaire, 1997; Gottman, Katz, & Hooven, 1996; Schwartz, Thigpen, & Montgomery, 2006) and the hypothesis of the study, the correlations between Parenting Styles and Alexithymia (Table 2.1.8) were all significant except for *emotion coach* and TAS<sub>identifying</sub>.

The *disapproving* parenting style was positively correlated with TAS<sub>identifying</sub> ( $r = .26^{**}$ ), TAS<sub>describing</sub> ( $r = .29^{**}$ ) and TAS<sub>escaping</sub> ( $r = .46^{**}$ ), to indicate that parents with difficulties in identifying and describing emotions are more likely to judge and criticize the child's emotional expression. This parent's thinking is mostly externally oriented (TAS<sub>escaping</sub>) with restricted imagination and concrete, realistic, logical thinking, often to the exclusion of emotional responses to problems. The correlation between *disapproving* and the overall TAS-20 scores is also positive ( $r = .42^{**}$ ).

The *emotion coach* parenting style inversely correlates with two subscales of the TAS-20, TAS<sub>describing</sub> ( $r = -.23^{**}$ ), TAS<sub>escaping</sub> ( $r = -.38^{**}$ ) and the overall TAS score (TAS-20,  $r = -.28^{**}$ ) as this type of parents is sensitive to the child's emotional states, respects the child's emotions even when they are subtle, and is not confused or anxious about the child's emotional expression.

The *dismissing* parenting style positively correlates with all three subscale (TAS<sub>describing</sub>,  $r = .21^{**}$ ; TAS<sub>describing</sub>,  $r = .29^{**}$ ; TAS<sub>escaping</sub>,  $r = .38^{**}$ ) and the overall score of the TAS-20 ( $r = .37$ ). These findings confirm that this type of parents lack awareness of emotions in self and others minimizes the child's feelings, downplaying the events that led to the emotion, feels uncertain about what to do with the child's emotions and sees the child's emotions as a demand to fix things.

Finally, the *laissez-faire* parenting style correlates positively with all subscales of the TAS-20 (TAS<sub>describing</sub>,  $r = .21^{**}$ ; TAS<sub>describing</sub>,  $r = .18^{**}$ ; T<sub>3</sub>,  $r = .14^{**}$ ) and its overall score ( $r = .23^{**}$ ) indicating that all dimensions of Alexithymia contribute to the parenting attitude to freely accept all emotional expression from the child, and to manage negative emotions as just a matter of release.

**Table 2.1.8.** Correlations between ERPS and TAS-20

	TAS <sub>describing</sub>	TAS <sub>describing</sub>	TAS <sub>escaping</sub>	TAS-20
ERPS <i>disapproving</i>	.26**	.29**	.46**	.42**
<b>ERPS</b> <i>emotion coach</i>		-.23**	-.38**	-.28**
ERPS <i>dismissing</i>	.21**	.29**	.38**	.37**
ERPS <i>laissez-faire</i>	.21**	.18**	.14**	.23**

## Resilience and Perceived Emotional Parenting Styles

As expected, the *disapproving* ( $r = -.14^*$ ), and *dismissing* ( $r = -.12^*$ ) parenting style were significantly and inversely correlate with Resilience, while the *emotion coach* parenting style was positively correlated with it ( $r = .17$ ). No significant correlation was found between the *laissez-faire* parenting style and resilience (Table 2.1.9). These findings suggest that parents, who fear being out-of-control emotionally, tend to focus more on how to get over emotions than on their meaning, and believe negative emotions are harmful, show lower level of Resilience. This seem to further confirm that emotion regulation and emotion-focused coping strategies enhance the development of more appropriate parenting styles, that may facilitate resilience in both parents and children.

**Table 2.1.9.** Correlations between ERPS and Resilience (CD-RISC)

ERPS:	CD-RISC
ERPS <i>disapproving</i>	-.14*
<b>ERPS <i>emotion coach</i></b>	<b>.17**</b>
ERPS <i>dismissing</i>	-.12*
ERPS <i>laissez-faire</i>	

### Relational Competence and Perceived Emotional Parenting styles

The dimensions of the Information Processing model<sup>1</sup> ERAAwC resulted correlated to parenting styles in the direction expected (Table 2.1.10). The *disapproving* style was inversely correlated with both subscales of *Emotionality* ( $E_{feeling}$ ,  $r = -.21^{**}$  and  $E_{expressed}$ ,  $r = -.22^{**}$ ) suggesting that inadequate or inappropriate access to and regulation of emotions in a relational context, as in Alexithymia, is reflected in an ineffective and less-responsive parenting. The correlation with Action (A) resulted positive ( $r = .16^{**}$ ), as *disapproving* parents revolve around issues of control, productivity and conformity to behavioral standards. This type of parenting, in fact, shows a greater tendency to respond to relational stimuli especially with actions and words. Finally, *disapproving* parenting style and self-*Awareness* ( $A_{w_{relational}}$ ) were inversely correlated ( $r = -.17^{**}$ ) to prove that this type of parent not only lack awareness of emotions in self and others but is also unaware of his own relational answer. These findings further confirm the existing literature (Gottman & DeClaire, 1997) also with respect to Alexithymia, as this type of parent privileges externally oriented thinking, with focus on reality, facts and tangible events.

*Emotion Coach* parenting style, on the other hand, positively correlates with both  $E_{feeling}$  ( $r = .26^{**}$ ) and  $E_{expressed}$  ( $r = .28^{**}$ ), suggesting that an individual able to trust her own feeling and regulate her own emotions is a parent not confused or anxious about her own child’s emotional expression of positive and negative

feelings. This is the only parenting style positively correlated with Rationality (R,  $r = .20^{**}$ ) to indicate that the cognitive component, a proper emotion regulation, acceptable expression of emotions, and problem-solving, is fundamental to a relational answer. The *emotion coach* parenting style, in fact, also correlate positively with *Action* (A,  $r = .14^{**}$ ) and *Awareness* ( $Aw_1$ ,  $r = .30^{**}$  and  $Aw_2$ ,  $r = .30^{**}$ ). This type of parent can elaborate on her behavior and the consequences of her actions, can learn from past relational experiences and correct her relational answer after feedback.

Finally, *dismissing* parenting style correlates negatively with *Emotionality* ( $E_{feeling}$ ,  $r = -.26^{**}$  and  $E_{expressed}$ ,  $r = -.23^{**}$ ) and *Awareness* ( $r = -.13^*$ ) and positively only with *Action* ( $r = .12^*$ ), while *laissez-faire* inversely correlate with expressed emotions  $E_{expressed}$  ( $r = -.13^*$ ).

No significant correlations were found between perceived emotional parenting styles and Context, as the former are not directly influenced by contextual factors.

**Table 2.1.10.** Correlations between ERPS and ERAAwC

ERPS	$E_{feeling}$	$E_{expressed}$	<u>R</u>	<u>A</u>	$Aw_{relational}$	$Aw_{feedback}$	<u>C</u>
ERPS <i>disapproving</i>	-.21**	-.22**		.16**	-.17**		
ERPS <i>emotion coach</i>	.26**	.28**	.20**	.14**	.30**	.30**	
ERPS <i>dismissing</i>	-.26**	-.23**		.12*	-.13*		
ERPS <i>laissez-faire</i>		-.13*					

$p < .05$ ; \*\*  $p < .01$

Context, in fact, is processed affectively, intellectually, and at various levels of awareness (L'Abate, 2009) and its influence on perceived emotional parenting styles is not direct but rather mediated by *emotionality*, *rationality* and *awareness*

according to model<sup>1</sup> ERAAwC. A denial of context may indicate rigid relational boundaries, with a minimum overlap and a maximum separation among the five components. On the other extreme, over intrusion of context indicates permeable boundaries. The construct of context implies a certain temporal stability to evaluate how resources are utilized.

The overall findings suggest that parenting is a complex social competence whose important elements of both *responsiveness* and *demandingness* (Maccoby & Martin, 1983) seem based on emotional recognition and expression, self-regulation and behavioral control, recognition of child autonomy, awareness and context sensitivity, as accounted by Relational Competence. Significant gender differences are reports in Table 2.1.11.

**Table 2.1.11** Gender differences in perceived parenting styles ERPS, ERAAwC components and Alexithymia features (TAS-20).

	<i>FATHERS</i> ( <i>n</i> =123)	<i>MOTHERS</i> ( <i>n</i> =201)	<i>F</i>	<i>Sig.</i>
<i>DISMISSING</i>	<i>M</i> =40,29 <i>SD</i> =5,03	<i>M</i> =37,41 <i>SD</i> =6,09	4,75	,000
<i>EMOTION COACH</i>	<i>M</i> =22,04 <i>SD</i> =4,48	<i>M</i> =24,49 <i>SD</i> =5,15	5,13	,000
<i>DISAPPROVING</i>	<i>M</i> =39,84 <i>SD</i> =5,68	<i>M</i> =37,56 <i>SD</i> =6,02	,624	,001
<i>EMOTIONALITY</i> <i>Expressed</i>	<i>M</i> =38,83 <i>SD</i> =7,54	<i>M</i> =42,42 <i>SD</i> =8,53	1,92	,000
<i>EMOTIONALITY</i> <i>Experienced</i>	<i>M</i> =42,83 <i>SD</i> =8,04	<i>M</i> =50,89 <i>SD</i> =7,15	2,47	,000
<i>TAS-20 Constricted imaginal</i> <i>processes</i>	<i>M</i> =19,91 <i>SD</i> =4,58	<i>M</i> =17,15 <i>SD</i> =4,46	,048	,000
<i>TAS-20 Difficulty in</i> <i>describing feelings</i>	<i>M</i> =12,86 <i>SD</i> =4,20	<i>M</i> =11,23 <i>SD</i> =4,20	,092	,001

## Structural equation modeling for Relational Competence and Parenting styles

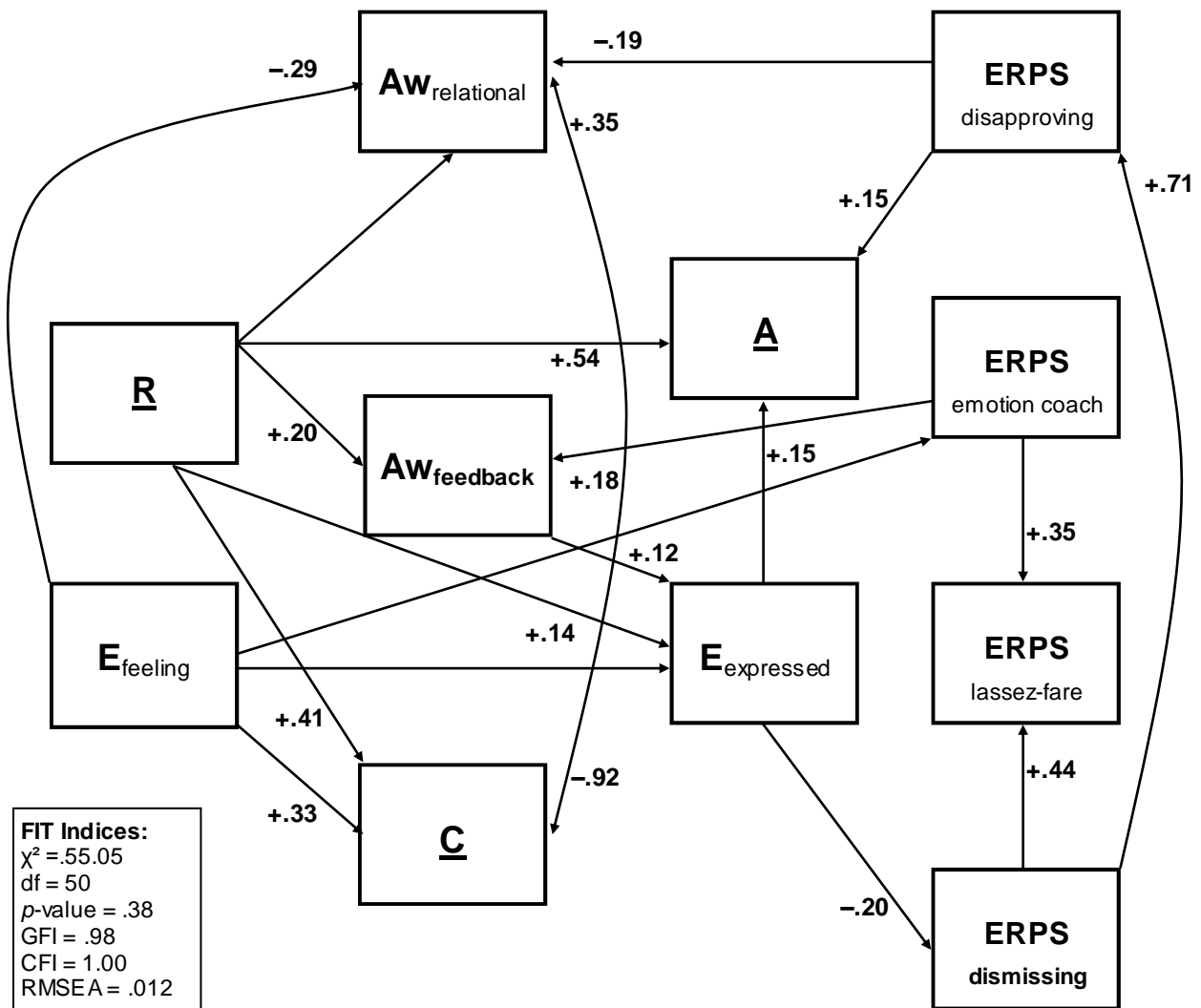
The interaction effects and the independent contribution of the five components of the Relational Competence on the dependent variables, perceived emotional parenting styles, were tested with structural equation modeling (Figure 2.1.4) using LISREL.

The best fit model shows that the *emotion coach* parenting style is significantly influenced by *Awareness* ( $A_{w_{\text{relational}}}$ ) and *Emotionality* ( $E_{\text{feeling}}$ ) and moderated by *Awareness* as feedback ( $A_{w_{\text{feedback}}}$ ). The *disapproving parenting* style is positively moderated by *Action* ( $A$ ) but negatively by *Awareness* ( $A_w$ ), while the *dismissing parenting* style is negatively influenced by expressed *Emotionality* ( $E_{\text{expressed}}$ ). Considering the influences on the perceived emotional styles, *emotion coach* parenting appeared linked to the least functional *laissez-faire* which is influenced by the *dismissing parenting* style that reinforces the *disapproving* style. Because parenting styles are a typology, differences styles in parenting represents distinct tendencies towards children emotions. The higher is the score in any of the scale the more the tendency toward that style. However, there is a considerable amount of overlap between them (Gottman, 1997).

The behavior of *dismissing* and *disapproving* parents have much in common and have the same effects on children, who have not the chance to experience their emotions and deal with them effectively and will grow up unprepared to face life's challenges. *Laissez-faire* parents, on the other hand, are filled with empathy and acceptance of their children's emotions but are over permissive and their unconditional acceptance will let the children get away with inappropriate or unfitted expressions of emotions. Thus in the end their children, as the children of *disapproving* and *dismissing* parents, will lack emotional intelligence and will be unequipped for the future (Gottman, 1997). In some way *emotion coaching* parents are not different from *laissez-faire* parents, as both appear to accept their children's feelings unconditionally, without ignoring, denying or belittling their children's

emotional expression. However, *emotion coaching* parents go beyond acceptance to set limits on how to regulate feelings, find appropriate outlets and solve problems.

**Figure 2.1.4.** Relational Competence (ERAAwC) and Parenting Styles (ERPS) Model



As previously noted, there is no direct link between *Context* and perceived parenting styles as contexts are processed affectively, intellectually, and at various levels of awareness and therefore mediated by *Emotionality*, *Rationality* and *Awareness*. Contexts represent the subjective meaning of where an individual has spent a great deal of time in interactions with others, and where an inevitable emotional attachment has developed. The construct of context implies a certain temporal stability to evaluate the utilization of resources and the positive and negative experiences that determines how the individual feels about a particular setting. Therefore, the meaning of context is defined by whether it implies important relationships, but the level of RC in different settings determines how the individual perceives that context. Settings, and the resources exchanged in social interactions, can be used to distinguish superior, from adequate, to mediocre, or inadequate functioning (L'Abate, 2009).

Finally, the model confirm that the dimensions of *Emotionality* and *Awareness* are fundamental elements for functional parenting (*emotion coach*) and define parenting quality thus confirming that relational competence includes and accounts for emotional intelligence and for an adequate relational style with children. Emotional reactions are triggered when an individual encounter a meaningful relational stimuli (Rottember & Vaughan, 2008), are regulated by the other components of the model and expressed during social interactions. Attitude toward emotional expression may vary depending on what emotion is expressed (Gottman, 1997) and families may hold different family members to different standards. However, parents that have strong awareness of their own and their children's emotions, even those considered negative, and know how to regulate them posses a creative and energizing force, a key human skill, called emotional intelligence.

## Discussion

As expected, Relational Competence was associated to functional parenting styles. *Emotionality* and *Awareness* seemed to be the foundation of functional parenting probably because strong emotions have a powerful influence on activating automatic cognitive processes and behaviors that are likely to undermine parenting practices. Parents who are able to identify both their own and their child's emotions by bringing emotional awareness to the interaction will be able to make conscious choices about how to respond, rather than react, to those experiences (Dishion, Burraston, & Li, 2003; Dishion et al. 2001).

Relational competence can reflect the parents' willingness and ability to endure strong emotions through de-centering, noting that feelings are just feelings, thus allowing them to be more fully present with their child (Ahern, Kiehl, Sole, & Bywers, 2006). The emotional awareness that emerges in the social context of parent-child relationships has important implications for understanding healthy parent-child relationships and for improving family-focused preventive interventions. Parents who can remain aware and accepting of their child's needs and emotions can create a family context that allows for more enduring satisfaction and enjoyment in the parent-child relationship and can develop higher quality relationships with their children and more often avoid cycles of maladaptive parenting styles (Duncan, L., Coatsworth, J., and Greenberg, M. (2009).

## Conclusion

Beyond the Emotionality element of Relational Competence whose fundamental role in this study had been confirmed, functional parenting also need to account for a full attention to emotional awareness, and a certain degree of self-regulation necessarily required in the relationship context. It involves that in functional parenting the impulse to display negative affect, anger, or hostility is felt

( $E_{\text{feeling}}$ ) and expressed ( $E_{\text{expressed}}$ ), but the relationally competent parent can pause before reacting in parenting interactions ( $R$ ) and behaviors ( $A$ ). The ways in which parents respond to their own and child's emotions and express such emotions have an important socializing effect (Eisenberg et al. 1998). Parents who are tolerant and supportive and do not dismiss or meet their child's displays of negative affect with their own promote more emotionally and socially competent youth (Eisenberg et al. 1998; Katz et al. 1999). They learn to trust their feelings, regulate their own emotions, solve-problems, have high self-esteem and go along well with others. The effective and relationally competent parents promote empathizing and encourage the expression of emotions strengthening the bond with their children (Gottman et al. 1997).

The model of relationally competent parenting comprises the five interrelated elements described in Model<sup>1</sup> ERAAwC, but also reflects the different intra-psychic and interpersonal processes within the dynamic parent-child relationship. When parents bring their relational competence in the parent-child interactions, they cultivate an enhanced capacity for a balanced, emotionally responsive, and adequately demanding parenting that consistently will recognize the child autonomy. Relational competence enhances an affective parent-child relationship, characterized not only by greater trust and emotional sharing, but also by flexibility and responsiveness within the dynamic exchanges of parent-child relations. This leads to a decreased level of parenting stress, wiser use of parenting strategies, and in return to greater children well-being. For this reason relationally competent parenting can be seen as a psychological resource in stress and coping processes (Lazarus & Folkman, 1984; Folkman 1997) as it enhances the use of more adaptive coping avoiding potentially disruptive influences from contextual or parenting-related stress. The central role of emotion expression in adaptation has been investigated by many psychologists (Ekman, 1993; Fridlund, 1992) interested in connecting impaired social functioning to clinical disorders (Keltner & Kring, 1998; Rottember & Johnson, 2007) mostly depression. Depressed individuals, in facts, express emotions inflexibility and in way that are appropriate to environmental contexts that

dynamically change. The attenuated or inappropriately modulate expression of positive and negative emotions indicate a lack of behavioral responsiveness to change in the emotional environment, called emotion context-insensibility (Rottember & Gotlib, 2004). In many contexts, this emotional impoverishment, or lack of emotional and relational competence, may violate other's expectations about the interaction and the emotional-expressive reciprocity and may frustrate, disrupt and erode interpersonal coordination and relationship quality (Rottember & Vaughan, 2008). Rigid and unchanging emotional behavior in social interactions could frustrate the other person desire for dynamic feedback on their own performance and the state of their relationship. Emotion coaching is a framework for emotional communication between parents and children that teach them to handle problems effectively and to form strong, healthy relationships. They learn to experience fewer negative and more positive feelings, be better able to soothe themselves, bounce back from distress and carry on productive activity.

The results of this study also indicate that psychological resilience is significantly accounted for by Relational Competence in parents, and is specifically influenced by expressed *Emotionality* ( $E_{\text{expressed}}$ ), which facilitates *Action* ( $\underline{A}$ ), and greatly influenced by *Awareness* ( $Aw_{\text{relational}}$  and  $Aw_{\text{feedback}}$ ), thus it involves learning processes over a life-time from continued interactions with intimates and non-intimate others.

### **Limits and Future Research**

In this study we investigated the personal and individual characteristics and resources of each parent. Further research is needed to explore the couple's relational (relationship quality, stability and satisfaction) and circumstantial (number of siblings, age of parents, age of first transition to parenthood, age difference among children, co-parenting) moderating effects on parenting quality and their interactions (Cowan, 1991). Moreover, as children's developmental stages may moderate the

influences of parental styles particularly in early childhood and adolescence, further research (in progress) is also needed to investigate those influences. Finally, other dimensions of Alexithymia should be explained by the components of Model<sup>1</sup> ERAAwC, and predicted by resilience levels assessed with different measures. Further research is specifically necessary to investigate the role of *Rationality* and *Context* in enhancing and developing appropriate parenting styles paying greater attention to the interaction between internal and external circumstances and refining the specific predictions about how input variables influence components.

## **2.2 STUDY2: Resilience and its shielding effect on relationship quality and life satisfaction**

In this second study we investigated whether Resilience moderates the influence of negative life events on marriage quality and life satisfaction, shielding it from negative effects. We explored the underlying relationship between adult psychological resilience (Resilience Scale, RS-14, Wagnild & Young, 1993; Connor-Davidson Resilience Scale, CD-RISC, Connor & Davidson, 2008), marriage quality (Intimacy Anxiety Scale, IAS, Descutner & Thelen, 1991; Salvo, 1998) and life satisfaction (Satisfaction with Life Scale, SLC, Diener et al., 1985) in a non-clinical sample of heterosexual couples (N = 159), age 23-78 (M = 45.4, SD = 11.2), with children and childless. We further tested whether the impact of negative life events (Life Events Scale, LES, Adapted from Holmes-Rahe Social Readjustment Rating Scale, 1967) on both relationship quality and life satisfaction could be dependent on the resilience levels of each partner and their ratio. Finally, we specifically explored whether the individual ability to share “hurt feelings” (Sharing of hurt feelings, SHF, L’Abate, 2010), that is unpleasant, painful, and harmfully subjective affects experienced from objectively aversive or negatively perceived life events, within a couple fosters intimacy, strengthens resilience and improves life satisfaction. Our results confirmed our hypotheses, but showed no direct correlation between negative life events and resilience at the individual level. However, work situation and age of first child interacted and affected Resilience unexpected ways. At the couple level, findings showed that resilience and the ability to share hurt feelings differently affect life satisfaction and intimacy for husbands and wives. Traumatic life events had a significant and negative influence on Life satisfaction and the ability to Share Hurt Feelings only for husbands.

## Introduction

Previous studies on marital quality and parenting have shown that parent's appraisal of the quality of their marriages are associated with the affective tone of the parent-child relationship and with parent's behavior toward their children. Stable personality characteristics also play a role in interpersonal relationship quality, as individuals may choose mates with similar personalities. Personality characteristics also reflect individual differences in context sensitivity and the interpretation of environmental clues (Ganiban et al., 2009). Thus, normally marriage quality and life satisfaction depends on numerous individual, relational and contextual variables. Resilience has previously been studied with reference to potentially traumatic events which can affect the individual wellbeing as well as their intimate partners. Individuals who experience potentially traumatic events, in fact, may need to reorganize their life as well as their significant relationships

We planned this study building on the assumption that resilience is a relational resource and thus need to be evaluated in both partners at the same time to account for its mediating effects on relationship quality and life satisfaction. It becomes necessary, then, to account not only for each partner's resilience in face of past and future adversities, but for the ratio of such resiliencies within the couple. Each partner's ability to preserve their own identity and wellness and, at the same time, to develop intimate relationships is a mean to ease the many difficulties of life. Considering that relationship quality and life satisfaction are functional and natural outcomes for resilient couples, in this study we tested the hypothesis 1) the impact of negative life events on relationship quality and life satisfaction depends on the resilience levels of each partner and their ratio; 2) the individual ability to share "hurt feelings" within a couple fosters intimacy, strengthens resilience and improves life satisfaction.

### **Participants and procedure**

A self-report questionnaire was administered to a non-clinical sample of heterosexual, married couples (N=159) from the Northeast part of Italy, age 27 to 64, age 23-78 (M=45.4, SD= 11.2), with at least one child (n= 127, age range 2-54, mean=21,44, SD=10,40 or childfree (n=32). In term of education, 36.5 % has a high school diploma, 23,6% a middle school diploma, and 6.4% a college degree. In terms of working situation 20.1% have a white collar job, 24.2% a blue collar; 18.9% were students, housewives or retired. We calculated the resilience levels of each partner, their ratio, the power of their difference and the differences in number of negative live events experienced by each partner.

### **Measures**

Adult psychological resilience was assessed using two scales, the Resilience Scale (RS-14, Wagnild and Young, 1993) and the Connor-Davidson Resilience Scale (CD-RISC, Connor and Davidson, 2008). Marriage quality was measured using the Intimacy Anxiety Scale (IAS, Descutner & Thelen, 1991) and the Sharing of Hurt Feeling Scale (SHR, L'Abate, 2010) measuring the participants' ability to share unpleasant, painful, and harmfully experiences thus fostering intimacy. Life satisfaction was assessed using Satisfaction with Life Scale (SLC, Diener et al. 1985). The number of negative life events, potentially traumatic, was calculated using the Life Events Scale, LES, adapted from Holmes-Rahe Social Readjustment Rating Scale (1967).

## Results

Resilience resulted significantly and positively correlated with the ability to share hurt feelings, a measure of intimacy, and life satisfaction, and negatively with fear of intimacy. The number of traumatic life events experienced by the individual was correlated significantly with the ability to share hurt feelings and negatively with fear of intimacy. Resilience also resulted significantly and positively correlated to pro-social behavior (volunteerism), work, educational level and age. Number of traumatic life events was significantly and negatively correlated to education while there was no direct relationship between negative life events and resilience.

## Individual Level of Analysis

Resilience was significantly and positively correlated with the ability to share hurt feelings (RS14=0,29\*\*) and life satisfaction (RS14=0,59\*\*, CDRISC=0,55\*\*) and negatively with fear of intimacy RS14=-0,41\*\*; CDRISC=-0,34\*\*). The number of traumatic life events experienced by the individual is correlated significantly with the ability to share hurt feelings (0,15\*\*) and negatively with fear of intimacy (-0,16\*\*) (Table 2.2.1)

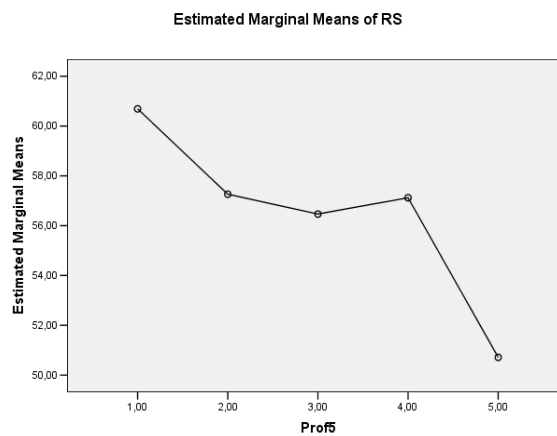
**Table 2.2.1** . Correlations between Resilience scales and measures of Marital Quality

	Sharing of Hurt Feelings	Satisfaction with Life	Fear of Intimacy
Resilience (RS-14)	0,29**	0,59**	-0,41**
Resilience (CDRISC)	0,09	0,55**	-0,34**
Traumatic Life Events (LES)	0,15**	0,12*	-0,16**

Resilience also resulted significantly and positively correlated to pro-social behavior (volunteerism), work, educational level and age. The number of traumatic life events is significantly and negatively correlated to education while there is no direct relationship between negative life events and resilience.

**Figure 2.2.1: Resilience & WORK (n=254) , RS14 Scale**

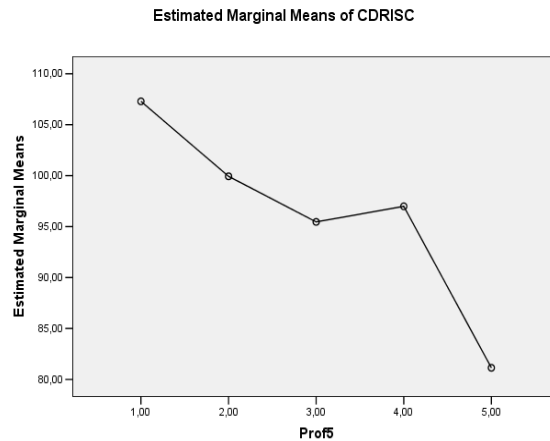
*Legenda: Occupation: 1 = CEO 2= white collar 3=blue collar 4=unemployed, student, housewife 5=retired*



The two Resilience Scales (CD-RISC & RS-14) seem to measure the same construct, although the CD-RISC scale registers a more sensitive change between white (2) and blue (3) collar workers. Professionals with responsibilities or self-employed (1) showed the higher level of Resilience, while retired individuals (5) showed the lowest.

**Figure 2.2.2: Resilience & WORK (n=254), CDRISC Scale**

*Legenda: Occupation: 1 = CEO 2= white collar 3=blue collar 4=unemployed, student, housewife 5=retired*



As both white collar workers and unemployed, student or housewives exhibit similar level of resilience, significantly lower than professional but significantly higher than retired individuals, we could assume having a sample of married couples that individuals in this category have somehow still access to resources through their partner, probably in category 1 or 2. Retirement, on the other hand, for one or both partners, seem to dramatically decrease resilience.

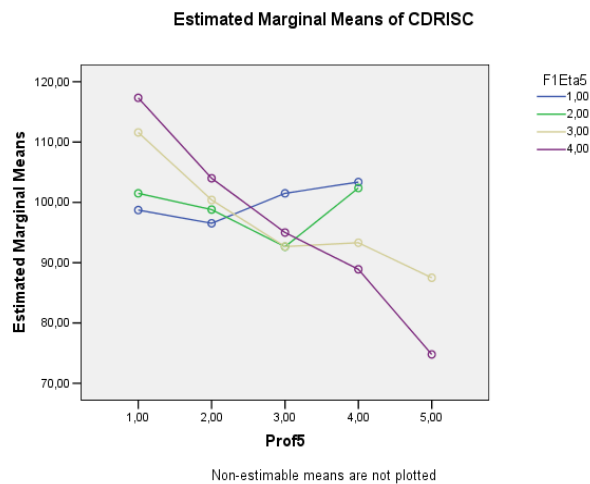
### Age of first child

Unexpectedly, the age of the first child (range 2-54,  $M=21.4$ ,  $SD=10.4$ ) significantly interacted with resilience and work. Moreover, these changes in resilience level according to the age of the first child strongly vary depending on the

occupation of the parents. The lowest level was found for parents with blue collar jobs having a teen or a young adult.

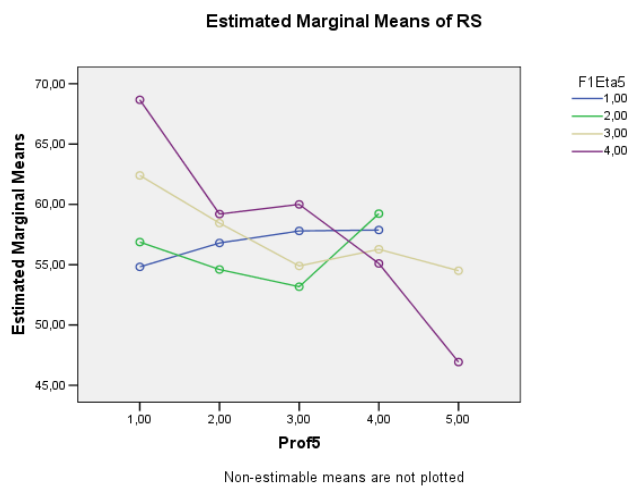
**Figure 2.2.3: Resilience, WORK & AGE of First Child (n=254) – CDRISC scale**

*Legenda: Age first child (F1eta5) : 1= 2-12 2=13-18 3=19-30 4=31-45*



**Figure 2.2.4: Resilience, WORK & AGE of First Child (n=254) – RS14 Scale**

*Legenda: Age first child (F1eta5) : 1= 2-12 2=13-18 3=19-30 4=31-45*



The age of the first child (range 2-54,  $M=21.4$ ,  $SD=10.4$ ) significantly interact with resilience and work, and in this case the two scales (CDRISC and RS-14) registered different resilience levels but similar patterns (Figure 2.2.1 and 2.2.2). When the first child of the couple is already mature adult (purple line, age 31-45) resilience levels interact with profession following the pattern previously seen. However, this pattern changes dramatically according to the child age, with resilience initial baseline levels gradually increasing with the age of the first child, thus starting with the lowest point when the child is still in childhood (blue line, age 2-12) and reaching the highest when the first child is a mature adult (purple line), as previously said. Moreover, these changes in resilience level according to the age of the first couples' child strongly vary depending on the occupation of the parents. The lowest level is found for parents with blue collar jobs having a teen (green line, age 13-18) or a young adult (golden line, age 19-30) as first child (Figure 2.2.3 and Figure 2.2.4).

## **COUPLE LEVEL**

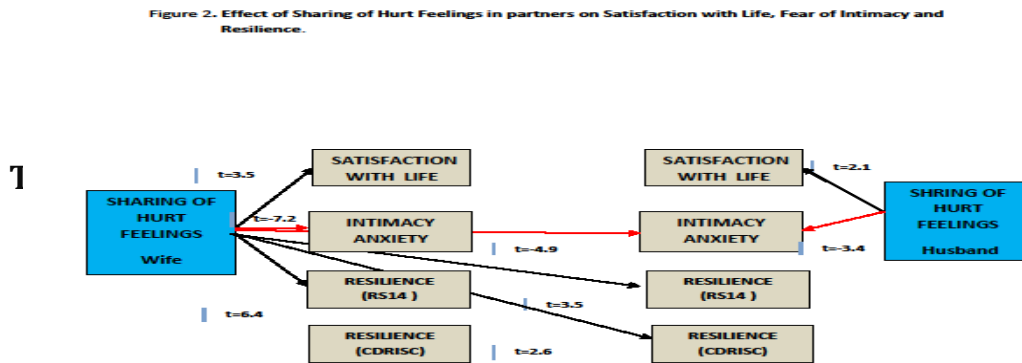
### **Resilience:**

For the CDRISC scale, husbands (51.6%) score higher than their wife compared to the RS-14 scale where wife scored higher (45%) and we found an higher percentage of balanced scored (11.9%) compared to the CDRISC scale (only 3.8%). A higher resilience imbalance, despite its direction, within the couple negatively affected life satisfaction only for the wife (-.161) and the ability to share hurt feelings and create intimacy for both partners equally (-.161). For the RS14 scale a resilience imbalance in the couple at the husband disadvantage was related to a lower life satisfaction in both partners (-.216 for wife and -.336 for husband), difficulties in sharing hurts feeling and thus creating intimacy for the husband (-.200) (Figure 2.2.5).

### Sharing of hurt feelings

Sharing of hurt feeling for wives contributed significantly to the satisfaction with life for wives ( $t = 3.543, p = .001$ ) with a significant effect at the  $p < .001$  level [ $F(2,156) = 8.971, p = .000$ ]. Sharing of hurt feeling for husbands contributed significantly to the satisfaction with life for husbands ( $t = 2.157, p = .033$ ) with significant effect at the  $p < .05$  level [ $F(2,156) = 3.756, p = .026$ ]. Sharing of hurt feeling for wives contributes significantly to decrease fear of intimacy for wives ( $t = -7.191, p = .000$ ) with a significant effect at the  $p < .001$  level [ $F(2,156) = 28.780, p = .000$ ]. Both the sharing of hurt feelings for wives ( $t = -4.927, p = .000$ ) and husbands ( $t = -3.352, p = .001$ ) contribute significantly at the  $p < .001$  level [ $F(2,156) = 22.411, p = .000$ ] to decrease the fear of intimacy for husbands. Sharing of hurt feeling for wives contributes significantly to resilience levels (RS-14 scores) for wives ( $t = 6.404, p = .000$ ) with a significant effect at the  $p < .001$  level [ $F(2,156) = 22.612, p = .000$ ]. Sharing of hurt feelings for wives contributes significantly to resilience (RS-14 scores) for husband ( $t = 3.553, p = .001$ ) with a significant effect at the  $p < .01$  level [ $F(2,156) = 7.777, p = .001$ ]. There was a non significant effect of sharing of hurt feeling for wives and sharing of hurt feeling for husbands on resilience levels (CD-RISC scores) for wives at the  $p < .10$  level [ $F(2,156) = 1.121, p = .329$ ] but sharing of hurt feelings for wives contribute significantly to resilience levels (CD-RISC scores) for husbands ( $t = 2.619, p = .010$ ) at the  $p < .01$  level [ $F(2,156) = 4.869, p = .009$ ].

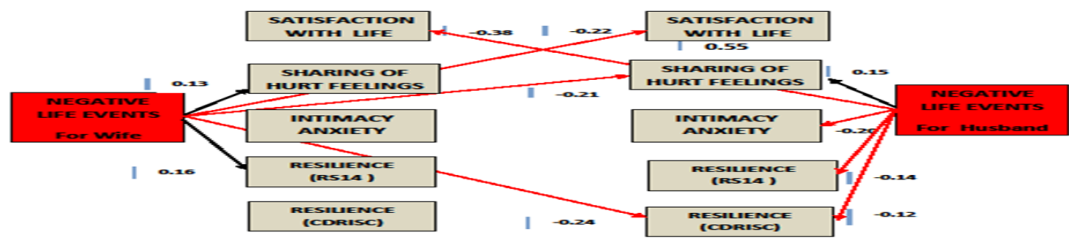
**Figure 2.2.5** Ratio of partner’s ability to share hurt feelings (SHR)



**Traumatic life events:**

The number of live events has a significant and negative influence on Life Satisfaction (-0.388) and the ability to Share Hurt Feelings (-0.215) for husbands, but not wives. Negative life events impacted relationship quality (ability to share hurt feelings, fear of intimacy and intimacy anxiety), life satisfaction and resilience levels reciprocally (Figure 2.2.6). Significant gender differences were found (more effects for husbands). The ability to share hurt feelings improves life satisfaction and decrease the fear of intimacy for both partners, fostering it, although at different degrees. The wife’s ability to share hurt feeling and fostering intimacy in the couple strengthens both her and the her husband resilience while the husband’s ability to share hurt feeling seem to have no effect on the resilience levels of either partner.

Figure 2.2.6 Different Impact of Life Events for partner's.



## Conclusions

Data confirmed that the impact of negative life events on relationship quality and life satisfaction depends on the resilience levels of each partner and their ratio. The ability to share hurt feelings within a couple improves life satisfaction for both partners only when possessed by both partners. The ability to share hurt feeling in each partner within the couple diminishes the fear of intimacy for both husbands and wives thus fostering it, although at different degrees. The wife's ability to share hurt feeling and fostering intimacy in the couple strengthens her own resilience level only when measured by the RS-14 scale and the resilience levels of her husband when measured by both the CD-RISC and the RS-14 scale. On the contrary, the husband's ability to share hurt feeling seem to have no effect on the resilience levels of either partner.

Becoming a parent is a joyous event and a normative experience that requires major life adjustments and many studies (Cowan & Cowan, 1995; Shapiro, Gottman & Carrere, 2000) have found a small but significant decline in marital satisfaction after the birth of the first child. Transition to parenthood is often accompanied by a moderate to severe crisis in the marriage (Shulz, Cowan & Cowan, 2006). Emphasizing the vulnerability of the couple relationship during the transition to parenthood is central to subsequent family relationships and children's adaptation. This study addressed the need for comprehensive programs to facilitate adjustment to parenthood during different phases of the parents' life cycle and accounting for the parents' working status. Our results provide strong evidence of the central role of intimacy and resilience in marital quality, accounting for gender-based differences, parent's working status and age of the first child.

### 2.3 Study 3: Relational Resilience and Volunteerism

As the relational and social dimension of resilience have been widely recognized in literature (Walsh, 2010), in this third study we attempted to capture the link between resilience (Connor-Davidson Resilience Scale, CD-RISC, Connor & Davidson, 2008; Resilience Attitude Scale, RAS, Biscoe & Harris, 1994) and relational competence (RAQ, Relational Answer Questionnaire, L'Abate & Cusinato, 2010) and understand their incidence in general population. Data from a sample of 339 adults age 17 to 74 ( $M = 40.7$ ,  $SD = 13.1$ ), with children or childfree, recruited at different working sites through participating companies and organizations of volunteers\*, were analyzed through multiple regression and structural equation modeling and compared on the basis of their pro-social behavior (volunteering). Results further indicated that resilience is significantly accounted for by Relational Competence and that high level of Relational Competence correspond to high levels of Resilience which involves emotional, cognitive, social and learning processes over a life-time from continued interactions with intimates and non-intimate. Results also showed a significant difference between the two groups. For *volunteers*, in fact, the ability to express emotions and increased awareness build Resilience. However, awareness can also affect negatively resilience and decrease it while it's positively influence by it. Resilience also appeared to moderate the effect of contextual influences. On the other hand, for *non-volunteers* also behavior (A) builds Resilience, which in this case is negatively influenced also by contextual influences and not only awareness. Finally, our findings confirmed that Relational Competence and Resilience in general population are high as in our sample the majority of participants (54.3 %,) were both resilient and relationally competent. This study represented a new and challenging line of inquiry on resilience focusing on its relational factors and its dependence on the context in a non clinical sample.

\*PFM S.p.A Packaging Machinery ([www.pfm.it](http://www.pfm.it)), IPERCOOP Supermarket ([www.ipercoop.adriatica.it](http://www.ipercoop.adriatica.it)), SKA Poultry Equipment ([www.ska.it](http://www.ska.it)), CSV Center for Volunteering Services ([www.csv.vicenza.it](http://www.csv.vicenza.it)), OPS Social Policies Observatory ([www.ops.provincia.vicenza.it](http://www.ops.provincia.vicenza.it)).

## Introduction

Data from a sample of 339 adults, aged 17 to 74, collected among employees of corporations and organizations of volunteers\*, were used to analyze resilience in light of the Relational Competence Theory (RCT, L' Abate, 2010). Results confirmed that resilient individuals have excellent emotional and cognitive abilities. They are aware of both their strengths and limitations, and take actions that benefit others without any expectation for later reward. They can elaborate and learn from previous relational experiences, even negative, but this process seems to both enhance and reduce their resilience. This study proves that resilience needs to be looked at not only as an individual resource (high versus low scores), but also as a relational process that varies from individual to individual, in different contexts, and in facing different challenges. The findings bring new light to the understanding of the interpersonal processes involved in the ability to withstand and rebound from adversities, the nature and components of resilience, and the mechanisms behind it, but also open new challenging questions on the optimal level of relational competence and resilience that better predict more adequate different trajectories of adjustment in face of actual adversity. Considering its dynamic, contextual, and also attributional nature, we believe that resilience needs a competence-based approach, grounded in a developmental systemic perspective that emphasizes collaborative processes, strengths, resources, and context. This article explored and empirically verified the contribute of relational competence theory to resilience research focusing on those interpersonal characteristics that support efforts to promote harmony and balance during developmental transitions, changes over time, crisis and prolonged challenges.

## Relational Resilience

Whether resilience is even best considered as a single, underlying psychological quality or a series of related, but distinct qualities remains a major theoretical and measurement issue. Current evidence suggests that the idea of overall resilience is of questionable utility. Indeed domain specificity seems more useful in research and practice applications than is a global definition of resilience (Neill & Dias, 2000). We proposed Model<sup>1</sup> ERAAwC of Relational Competence Theory (L'Abate & Cusinato, 2011), a multidimensional construct consisting of a hierarchy of specific abilities and skills (emotions, cognitions, actions, awareness, and context sensibility), as the conceptual framework for relational resilience (L'Abate & L'Abate, 2010; L'Abate, 2005, 2008; L'Abate & Cusinato, 2007; L'Abate, Cusinato, Maino, Colesso, & Scilletta, 2010). This circular, internal process serves as a basis for understanding the development of personality socialization from *E* to *C* (L'Abate, 1986, 1994, 1997) and describes an almost invariant sequence of steps in an information processing that starts with *Emotionality* (expressing and sharing feelings), progresses to *Rationality* (negotiation and problem-solving about pros and cons of possible courses of action), finds agreement or consensus about which particular course of action (*Action*) to follow, and verifies its effectiveness (*Awareness*). It takes place as a dialogue within the self and the overarching influence of *Awareness* as a change agent and the acknowledgment, denial, or ignorance of *Context*. Without the consideration of contextual influence, *Awareness* may remain a futile, redundant exercise in rumination and obsessive-compulsive thinking (L'Abate, 2009).

## Participants and procedures

The sample (N=339) was collected in the period February 19th – September 30th 2010 at different sites in the northeast part of Italy, province of Vicenza, and very

much dependent on the level of cooperation elicited by the companies and organizations, which agreed to participate to the project, on their employees and associates. The questionnaires and inform consents were distributed by hand to each employee and associate by their employers. An electronic version of the questionnaire was posted online at the Department of Applied Psychology, ([www.unipd.dpa](http://www.unipd.dpa)), the Interdisciplinary Research Center for Family Studies, ([www.dpss.psy.unipd.it/cirf](http://www.dpss.psy.unipd.it/cirf)) and a local Observatory for Social Policies, ([www.ops.provincia.vicenza.it](http://www.ops.provincia.vicenza.it)) to recruit further volunteers. The “*organizational*” subsample, consisting of data collected at participating companies had a return rate of about 45%, with 167 participants (49.3%), while the “*social*” subsample, collected online and through local volunteering agencies, represented 50.7% (172) of the overall sample.

### **Demographic Characteristics of the sample**

The demographic characteristic of the sample are reported in Table 2.3.1. Age ranged from 17 to 74 ( $M = 40.7$ ,  $SD = 13.1$ ), with 161 males (48,06%) and 174 females (52.94%). The highest proportion of the participants (61.66%) were cohabiting or married, a smaller portion (25,95) were single, and the remaining engaged (3.7%), divorced and remarried (3.1%), divorced and cohabiting (1.3%) or single (1.2%). Participants’ education ranged from primary school (0.6%) to graduate school (6.8%), with 16.8% having completed middle school, 13.6% vocational school, 18.6% some college, 13.9% having a college degree and the majority a high school diploma (39.6%). A very low percentage of participants were housewives (1.21%) or unemployed (2.4%), 4.5 % were students, 5.7% self-employed, 9.4% professionals, business owner or CEO, while the majority were white (36.6%) and blue (25.7%) collar and a 14.2% retired.

### Number of children

The number of children in the sample ranged from 0 to 5 ( $M=1.18$ ,  $SD=1.07$ ), their age ranged from 1 to 41 ( $M = 8.5$ ;  $SD = 4.5$ ), 53.3% were males and 46.7% females. The majority of parents (34%,  $n=90$ ) had no children, 21.2% ( $n=72$ ) had 1 child, 20.6% ( $n=70$ ) had 2 children, while 9.1% ( $n=31$ ) had 3, and only a 0.5% ( $n=1$ ) had 4 and 5 children.

**Table 2.3.1. Demographic Characteristics of the sample (N=339).**

	Range	Mean, SD
<i>Age</i>	26-66	41.1 , 5.3
Men	29-66	43.1 , 5.7
Women	26-52	39.8 , 4.6
<i>Gender</i>		
Female	62%	
Male	38%	
<i>Marital status</i>		
Married	84.9%	
Cohabiting	5.9%	
Divorced Single	3.7%	
Divorced Remarried	3.1%	
Divorced Cohabiting	1.2%	
Single	1.2%	
<i>Education</i>		
Elementary school	0.3%	
Middle school	4.0%	
Vocational	41.0%	
High school	33.4%	
Some College	13.3%	
College degree	8.0%	
<i>Work</i>		
Manager/CEO	25.3%	
Self-employed	4.6%	
White collar	35.5%	
Blue collar	9.3%	
Unemployed	1.2%	
Housewife	23.8%	

The mean and standard deviation for children's age were: 18.13 for the *first child* ( $SD = 11.56$ , range 1-41), 16.42 for the *second* ( $SD = 10.05$ , range 1-43), 15.21 for the *third* ( $SD = 10.04$ , range 2-36), 11.66 for the *fourth* ( $SD = 12.66$ , range 2-26), 4 for the *fifth* ( $SD = 2.82$ , range 2-6)..

The sample seems representative of an adult non-clinical population, for gender, age, employment status, education and number of children; however it resulted someone privileged in term of marriage stability as the majority of the subjects reported to be at their first marriage or cohabiting.

## Measures

The questionnaire items were first recoded, and then the total resiliency scores for RS-14, RAS and RAQ were computed by adding up responses to each item included in the scale to obtain the respondent's raw score. The RAS Resiliency index (RI) was computed by multiplying the total score obtained adding the scores of the 72 items, by 10 and then dividing it by 36.

## Scales internal consistency

Cronbach's alpha was used to determine the internal consistency of the overall scales, which yielded a satisfactory reliability for the Resilience Scale (RS,  $\alpha = .87$ ) and the Relational Answer Questionnaire (RAQ,  $\alpha = .87$ ). The reliability for all RAQ subscales in this study was acceptable, ranging from .76 to .80. ( $\mathbf{E}_{\text{feeling}}$ ,  $\alpha = .80$ ;  $\mathbf{E}_{\text{expressed}}$ ,  $\alpha = .78$ ;  $\mathbf{R}_{\text{relational}}$ ,  $\alpha = .86$ ;  $\mathbf{A}_{\text{performance}}$ ,  $\alpha = .77$ ;  $\mathbf{A}_{\text{wrelational}}$ ,  $\alpha = .77$ ;  $\mathbf{A}_{\text{wfeedback}}$ ,  $\alpha = .77$ ;  $\mathbf{C}_{\text{sensitiveness}}$ ,  $\alpha = .76$ ). The internal consistency of the Resilience Attitude Scale for the overall scale (RAS,  $\alpha = .64$ ) was not satisfactory so we used

the *General Resilience* subscale (.74). Due to the low internal consistency of the RAS scale, however, we didn't include it in our SEM analysis.

**Results: Descriptive statistics**

Descriptive statistics for all variable of interest are reported in Tables 2.3.2 and Table 2.3.3 The mean scores for the dimensions of model<sup>1</sup> ERAAwC in the sample were: 46.6 (*SD* = 4.56) for **E<sub>feeling</sub>** and 38.7 (*SD* = 3.7) for **E<sub>expressed</sub>**; 32.86 (*SD*= 3.38) for **R<sub>relational</sub>**; 29.94 (*SD* = 3.52) for **A<sub>performance</sub>**; 30.73(*SD* =3.80) for **Aw<sub>relational</sub>** and 21.32 (*SD* = 2.63) for **Aw<sub>feedback</sub>** and 30.49 (*SD* = 3.70) for **C<sub>sensitiveness</sub>** . The highest scores were found for *Emotionality* (**E<sub>feeling</sub>** and **E<sub>expressed</sub>** ), *Awareness* (**Aw<sub>relational</sub>**) and *Context* dimensions, the lowest score for **Aw<sub>feedback</sub>** and **A<sub>performance</sub>** although all five components appeared balanced.

**Table 2.3.2. Relational Competence Scores (Model ERAAwC) (N=339)**

	<b>E<sub>feeling</sub></b>	<b>E<sub>expressed</sub></b>	<b>R<sub>relational</sub></b>	<b>A<sub>performance</sub></b>	<b>Aw<sub>relational</sub></b>	<b>Aw<sub>feedback</sub></b>	<b>C<sub>sensitiveness</sub></b>
Median	46.62	39.00	33.00	30.00	31.00	21.00	30.00
SD	4.56	3.76	3.38	3.52	3.80	2.63	3.70
Variance	20.82	14.14	11.47	12.43	14.45	6.92	13.70
Skewness	-.03	.15	-.23	.09	2.5	.15	.13
Minimum	34.00	26.00	20.00	21.00	22.63	15.00	20.00
Maximum	59.00	52.00	42.00	40.00	67.00	29.00	41.00

The mean score for Resilience on the RS-14 was 50.70 (*SD* = 6.10) while on the RAS was 251.27 (*SD* = 20.59). The mean Resiliency Index for the RAS scale was 69.79 (*SD* = 5.72), a little higher than the 65.5 reported by the scale authors (Biscoe & Harris, 1994) on a clinical sample and a little below the mean score of 71.94 (*SD*

=4.40) reported by Abdullah Haslee Sharil Lim (2003) on a sample of 615 Malaysian counselors. In that sample the RI was normally distributed with a skewness of .10 and the minimum and maximum were respectively 55.81 and 86.45 with males scoring slightly higher (72.16) than females (71.65). In our sample the minimum and maximum values for the RI were 56.94 and 86.67, for the overall RAS, 205 and 312 and for the RS-14, 28 and 65 respectively with a normal distribution. The number of participants scoring below 70 on the Resiliency Index, thus operationally considered non resilient, were 155 (45.7%) while 54.4 % (n=184) were resilient.

**Table 2.3.3.** Resilience Scores (RAS and RS-14) (N=339)

Resilience	Minimum	Maximum	Mean	SD
Resilience Index (RI)	56,94	86,67	69,79	5,72
RAS overall	205,00	312,00	251,27	20,59
RS-14	28,00	65,00	50,70	6,10

## 2 Volunteerism, Sample Type, Gender and Resilience

Resilience levels, as expected, were different for participants who involved in social *volunteering* ( $n = 196$ ) and we found a higher percentage of resilient individuals (59.7%,  $n = 117$ ) among them. Resilience levels were also different for participants in the *organizational* ( $n = 167$ ) versus *social* ( $n = 172$ ) subsample. In the organizational subsample the percentage of non-resilient adults was higher (59.9%,  $n = 100$ ) than the resilient (40.1%,  $n = 67$ ) while in the social subsample we found more resilient (68%,  $n = 117$ ) than non resilient (32.0%,  $n = 55$ ) individuals. We also found gender differences for both resilience and volunteerism. Participation in social volunteering

was higher for women (60.9%,  $n = 106$ ) than men (53.4%,  $n = 86$ ) and women were more resilient (51.3%,  $n = 174$ ) than men (47.5%,  $n = 161$ ).

### Relational Answer Factors (RAQ) & Resilience (RS-14)

To further analyze the relationship between resilience and Relational Competence, for each factor of the Model<sup>1</sup> ERAAwC we computed high and low scores considering one (1) standard deviation above the mean values for that factor as high score, and below that value as low. We then examined how resilience (RI row scores above 70) on the RAS scale were related to high/low scores on Relational Competence factors and found that the totality (100%) of participants who were Resilient also scored high on all ERAAwC factors but *Emotionality* ( $\mathbf{E}_{\text{expressed}}$ ). In fact, participants who scored high on  $\mathbf{E}_{\text{expressed}}$  resulted to be mostly non-resilient (86.4%,  $n = 159$ ), while only the remaining 13.6% ( $n = 25$ ) scored above the cutoff of 70 on the RAS scale. The mean value for resilient individuals on the Factor  $\mathbf{E}_{\text{feeling}}$  was 46.64 ( $SD = 4.51$ ), with a range 36-59 very similar to the mean and standard deviation of the whole sample but with a different range 34-59. The mean value for resilient individuals on the factor  $\mathbf{E}_{\text{expressed}}$  was 38.89 ( $SD = 3.63$ ), with a range 30-52 different from the distribution for the whole sample just in the range (26-52). Individuals scoring high on *Rationality* ( $\mathbf{R}_{\text{relational}}$ ) resulted to be all resilient (100%,  $n = 184$ ). The mean value for resilient individuals on the factor  $\mathbf{R}_{\text{relational}}$  was 32.91 ( $SD = 3.42$ ), with a range 20- 42 as for the whole sample. Individuals scoring high on *Action* ( $\mathbf{A}_{\text{performance}}$ ) also resulted resilient (100%,  $n = 184$ ) with a mean value on the factor  $\mathbf{A}_{\text{performance}}$  of 29.3 ( $SD = 3.45$ ), and a range 21-40 as in the whole sample. All individuals scoring high on *Awareness* ( $\mathbf{A}_{\text{relational}}$ ) were also resilient (100%,  $n = 184$ ). The mean value for Resilient individuals on Factor  $\mathbf{A}_{\text{performance}}$  was 31.72 ( $SD = 4.07$ ), with a range 22-67, similar to the whole sample. Individuals scoring high on  $\mathbf{A}_{\text{feedback}}$  were all resilient (100%,  $n = 184$ ). The mean value for resilient individuals

on the Factor  $A_{\text{performance}}$  was 21.92 ( $SD = 2.60$ ), with a range 15-29 similar to the whole sample. Individuals scoring high on *Context* ( $C_{\text{sensitiveness}}$ ) resulted all resilient (100%,  $n = 184$ ). The mean value for Resilient individuals on the Factor  $A_{\text{performance}}$  was 29.25 ( $SD = 3.56$ ), with a range 20-41.

### **Correlations between demographics characteristics and outcome variables.**

In this study only Resilience raw scores on the RS-14 were positively correlated to gender ( $r = 0.20$ ,  $p < .001$ ), while Resilience Attitude raw scores (RAS) were positively correlated with age ( $r = .20$ ,  $p < .001$ ), number of children ( $r = 0.18$ ,  $p < .01$ ), and negatively with sample type ( $r = -0.16$ ,  $p < .01$ ) thus indicating a higher resilience score on the RAS for the organizational subsample. The overall row RS and RAS scores were also positively correlated ( $r = 0.25$ ,  $p < .001$ ) with each other. *Sample type* (organizational vs. social) was positively significantly and positively related to Relational Competence factors *Rationality* ( $r = .24$ ) and *Action* ( $r = .11$ ), and Resilience scores (RS,  $r = .19$ ; RI,  $r = .26$ ) indicating higher scores for the social subsample but negatively to *Volunteering* ( $r = -.37$ ), thus indicating a greater participation in social volunteering among organizational workers. *Volunteering* was significantly and positively correlated with cohabiting with other members of the extended family ( $r = .13$ ) and negatively with age ( $r = -.21$ ), *education* ( $r = -.22$ ), and *number of children* ( $r = -.13$ ) indicating that individuals who are pro-socially active are younger, less educated, and with less children. Among the seven factors of Relational Competence, *Emotionality* ( $E_{\text{expressed}}$ ) correlated positively only with the overall RS-14 score ( $r = 0.17$ ). *Rationality* and *Action* resulted significantly and positively correlated to the overall RS-14 ( $r = 0.127$ ) scores. *Awareness* ( $A_{\text{w}_{\text{relational}}}$  and  $A_{\text{w}_{\text{feedback}}}$ ) were correlated with measures of Resilience. *Context* was negatively correlated with the Resilience overall scores RS-14. These results seem to indicate

that Relational Competence factors account for different aspects of resilience at various degrees and with different weights. However, *Awareness* ( $\mathbf{AW}_{\text{relational}}$  and  $\mathbf{AW}_{\text{feedback}}$ ), as expected, was the most important dimension involved in Resilience, followed by *Rationality* and expressed *Emotionality* ( $\mathbf{E}_{\text{expressed}}$ ). On the contrary, *Context* sensitivity and influence seem to decrease the individual ability to rebound from adversities.

### **T-test for equality of means**

Tests of Between-subjects Effects revealed *educational level* differences for ERAAwC factors *Rationality*, *Action* and *Awareness* ( $\mathbf{AW}_{\text{relational}}$ ), *Resilience* overall scores (RAS and RS-14) and all RAS subscales. Differences for *number of children* also emerged in ERAAwC factors *Rationality*, *Action*, *Awareness* and *Context*. Significant differences were also found for *volunteering* on factors *Emotionality* ( $\mathbf{E}_{\text{feeling}}$  and  $\mathbf{E}_{\text{expressed}}$ ), *Context*, and Resilience (RS-14). Similarly, *volunteers* differed from *non-volunteers* on Relational Competence factors *Emotionality* ( $\mathbf{E}_{\text{feeling}}$  and  $\mathbf{E}_{\text{expressed}}$ ) and *Context*, and RS-14 resilience score with higher scores for volunteers. A t-test analysis run to evaluate gender differences in Relational Competence and Resilience scores showed a positive significant difference for both RS-14 and RAS scores, and all Relational Competence factors but *Awareness* ( $\mathbf{AW}_{\text{feedback}}$ ) with higher scores for women on *Emotionality* ( $\mathbf{E}_{\text{feeling}}$ ), expressed *Emotionality* ( $\mathbf{E}_{\text{expressed}}$ ), Resilience (RAS and RS-14), and higher scores for men on ERAAwC factors *Rationality*, *Action*, *Awareness* and *Context*.

### **Structural equation Modeling**

To investigate whether the separate dimensions of relational competence make a meaningful contribution to resilience we performed two different path analysis, one

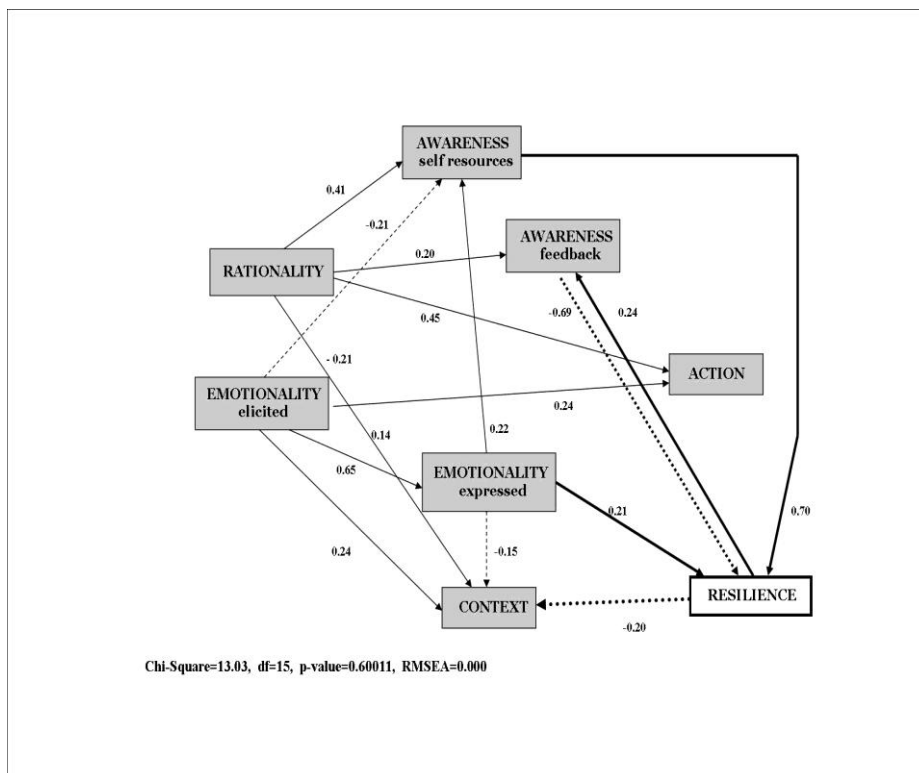
for *volunteers* and one for *non-volunteers* using LISREL. In accordance with our hypothesis, the results suggested that the components of Relational Competence capture important aspects of resilience. Specifically: Expressed *Emotionality* ( $\mathbf{E}_{\text{expressed}}$ ), *Rationality* ( $\mathbf{R}_{\text{relational}}$ ), *Action* ( $\mathbf{A}_{\text{performance}}$ ) and *Awareness* ( $\mathbf{AW}_{\text{relational}}$ ) at various degrees define Resilience while *Awareness as feedback* ( $\mathbf{AW}_{\text{feedback}}$ ) and *Contextual* influences ( $\mathbf{C}_{\text{sensitiveness}}$ ) seem to strongly moderate it. In return, resilience increases *Awareness as feedback*, while expressed *Emotionality* ( $\mathbf{E}_{\text{expressed}}$ ) influences *Action* ( $\mathbf{A}_{\text{performance}}$ ) in terms of performance. Interestingly, the information processing model ERAAwC resulted quite different for *volunteers* (Figure 2.3.1) and *non-volunteers* (Figure 2.3.2).

For *volunteers* elicited *Emotionality* ( $\mathbf{E}_{\text{feeling}}$ ) is directly and positively connected to *Action* ( $\mathbf{A}_{\text{performance}}$ ), expressed *Emotionality* ( $\mathbf{E}_{\text{expressed}}$ ) and *Context* ( $\mathbf{C}$ ). On the other hand, expressed *Emotionality* ( $\mathbf{E}_{\text{expressed}}$ ) is only positively related to *Awareness* ( $\mathbf{AW}_{\text{relational}}$ ) and resilience. There is a direct link between both *Rationality* ( $\mathbf{R}_{\text{relational}}$ ) and elicited *Emotionality* ( $\mathbf{E}_{\text{feeling}}$ ) on *Action* ( $\mathbf{A}_{\text{performance}}$ ) although the relationship is stronger for the former than the latter. Both *Awareness* ( $\mathbf{AW}_{\text{relational}}$ ) of own resources and expressed *Emotionality* ( $\mathbf{E}_{\text{expressed}}$ ) are positively connected to resilience, while *Awareness as a feedback from others* ( $\mathbf{AW}_{\text{feedback}}$ ) negatively influence resilience. Both resilience and expressed *Emotionality* ( $\mathbf{E}_{\text{expressed}}$ ) are negatively related to *Context* ( $\mathbf{C}_{\text{sensitiveness}}$ ). There is no direct link between *Action* ( $\mathbf{A}_{\text{performance}}$ ) and Resilience, neither between expressed *Emotionality* ( $\mathbf{E}_{\text{expressed}}$ ) and *Action* ( $\mathbf{A}_{\text{performance}}$ ), as in this case it is elicited *Emotionality* ( $\mathbf{E}_{\text{feeling}}$ ) that has a direct influence on both *Action* ( $\mathbf{A}_{\text{performance}}$ ) and expressed *Emotionality* ( $\mathbf{E}_{\text{expressed}}$ ).

For *non volunteers* there is no direct connection between *Rationality* ( $\mathbf{R}_{\text{relational}}$ ) and *Context* ( $\mathbf{C}_{\text{sensitiveness}}$ ) as mostly it's connected to *Awareness* (both  $\mathbf{AW}_{\text{relational}}$  and  $\mathbf{AW}_{\text{feedback}}$ ) and *Action* ( $\mathbf{A}_{\text{performance}}$ ). Expressed *Emotionality* ( $\mathbf{E}_{\text{expressed}}$ ) has no an impact on *Context* ( $\mathbf{C}_{\text{sensitiveness}}$ ) but rather on *Action* ( $\mathbf{A}_{\text{performance}}$ ), *Awareness* of own resources ( $\mathbf{AW}_{\text{relational}}$ ) and resilience. Similarly there is no direct influence of elicited *Emotionality* ( $\mathbf{E}_{\text{feeling}}$ ) on *Action* ( $\mathbf{A}_{\text{performance}}$ ) as it's mediated by expressed *Emotionality* ( $\mathbf{E}_{\text{expressed}}$ ).

There is a direct connection between *Action* ( $A_{performance}$ ) and Resilience, while the latter seem to be negatively influenced by *Context* ( $C_{sensitiveness}$ ). It's *Awareness* of self resources ( $Aw_{relational}$ ) to negatively influence *Contexts* ( $C_{sensitiveness}$ ) rather than expresses *Emotionality* ( $E_{expressed}$ ), *Awareness* ( $Aw_{feedback}$ ) as feedback also has a stronger negative influence on Resilience than for *volunteers* (-0.98 versus -0.69). Similarly *Action* ( $A_{performance}$ , 0.58) and expressed *Emotionality* ( $E_{expressed}$ , 0.76) seem more strongly connected to Resilience (0.58) in *non volunteers*.

**Figure 2.3.1.** Relational Competence factors (Model ERAAwC) and resilience (RS-14) in Volunteers (n=196).

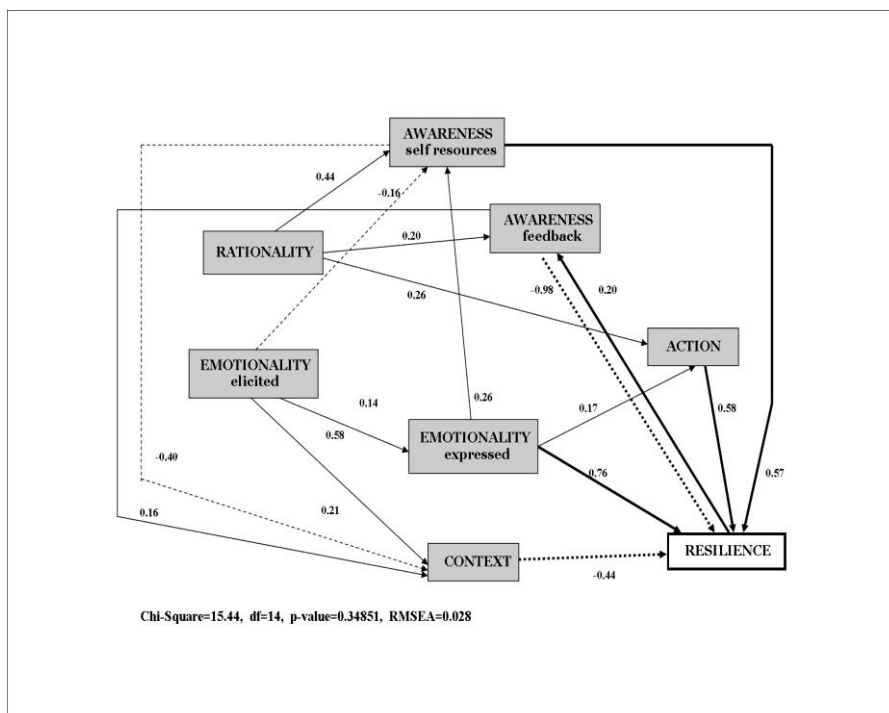


. Specifically, for *volunteers*, the first emotional response in relationship with others ( $E_{feeling}$ ) is strongly (.65) connected to the expression of such emotions ( $E_{expressed}$ ), the consequent behavior of choice ( $A_{performance}$ ) and its impact on the others ( $C_{sensitiveness}$ ). The *Awareness* of self and own resources ( $Aw_{relational}$ ) results in Resilience while the *Awareness* originated from external feedback ( $Aw_{feedback}$ ) seemed on side to

influence Resilience negatively while it was positively influence by it. Resilience appeared to moderate the effect of *Context*. *Action* ( $A_{\text{performance}}$ ) is not an influential factor in the model, while *Rationality* ( $R_{\text{relational}}$ ) guides *Awareness* ( $A_{\text{wrelational}}$ ), *Action* ( $A_{\text{performance}}$ ) and *Context* sensibility ( $C_{\text{sensitiveness}}$ )

In the case of *volunteers*, thus *Resilience* is enhanced by *Awareness* of self and own relational resources ( $A_{\text{wrelational}}$ ), sustained by the ability to express emotions ( $E_{\text{expressed}}$ ) and is primary utilized to moderate contextual influences ( $C_{\text{sensitiveness}}$ ) and increase the ability to elaborate the feedback from previous experiences. The relational dimensions *Rationality* ( $R_{\text{relational}}$ ) and *Emotionality* ( $E_{\text{feeling}}$ ) seems fundamental to individuals involved in pro-social activities as they both lead to *Action* ( $A_{\text{performance}}$ ), the first also facilitate awareness (both  $A_{\text{wrelational}}$  and  $A_{\text{wfeedback}}$ ) and the second the ability to express emotions ( $E_{\text{expressed}}$ ) and to account for contextual influences ( $C_{\text{sensitiveness}}$ ).

**Figure 2. 3.2 Relational Competence factors (Model ERAAwC) and resilience (RS-14) in NON Volunteers (n=136).**



On the other hand, for *non-volunteers*, Resilience seems to result from *Awareness* of self and own resources ( $\mathbf{Aw}_{\text{relational}}$ ), *Action* and emotion expression ( $\mathbf{E}_{\text{expressed}}$ ) but it's negatively influenced by both contextual influences ( $\mathbf{C}_{\text{sensitiveness}}$ ) and the *Awareness* as feedback ( $\mathbf{Aw}_{\text{feedback}}$ ). Thus resilience seemed to be enhanced by activity ( $\mathbf{A}_{\text{performance}}$ ), but negatively affected by feedback ( $\mathbf{Aw}_{\text{feedback}}$ ) and contextual influences ( $\mathbf{C}_{\text{sensitiveness}}$ ) and it has only the function of increasing the ability to elaborate the feedback from previous experiences. The relational dimensions *Rationality* ( $\mathbf{R}_{\text{relational}}$ ) and *Emotionality* ( $\mathbf{E}_{\text{feeling}}$ ) seems fundamental to individuals non involved in pro-social activities as they both lead to *Action* ( $\mathbf{A}_{\text{performance}}$ ), the first also facilitate awareness ( $\mathbf{Aw}_{\text{relational}}$  and  $\mathbf{Aw}_{\text{feedback}}$ ) as for *volunteers* and the second the ability to express emotions and to account for contextual influences. However, in the case of *non-volunteers*, action ( $\mathbf{A}_{\text{performance}}$ ) seems induced by the ability to express emotions ( $\mathbf{E}_{\text{expressed}}$ ) rather than the ability to experience them ( $\mathbf{E}_{\text{feeling}}$ ), and leads to Resilience.

## Conclusions

In conclusion, in *volunteers* the ability to experience emotions ( $\mathbf{E}_{\text{feeling}}$ ) it's fundamental, leads to action, even if less strongly that rationality ( $\mathbf{R}_{\text{relational}}$ ), and indirectly, through the ability to express the emotions experienced, to resilience. For *non-volunteers*, on the other hand, the relationship between the ability to experience emotions ( $\mathbf{E}_{\text{feeling}}$ ) and action ( $\mathbf{A}_{\text{performance}}$ ) is mediated by the ability to express them ( $\mathbf{E}_{\text{expressed}}$ ). In both groups, resilience emerges as the combined results of an increased ability to expressed emotions and a greater self-awareness of individual and relational resources, although at different degrees, as for *volunteers* the cognitive influence ( $\mathbf{Aw}_{\text{relational}}$ , 0.70) is higher than the emotional ( $\mathbf{E}_{\text{expressed}}$ , 0.21) while for *non-volunteers* the opposite is true ( $\mathbf{Aw}_{\text{relational}}$ , 0.57 and  $\mathbf{E}_{\text{expressed}}$ , 0.76). In both cases *awareness* from previous experiences ( $\mathbf{Aw}_{\text{feedback}}$ ) negatively affects resilience, even though such influence is stronger in *non-volunteers* (0.98 vs. 0.68) then in *volunteers*

and in return, resilience facilitates such awareness. However, while for *volunteers* it's resilience that reduces the influence of context ( $C_{\text{sensitiveness}}$ ) together with the ability to expressed emotions ( $E_{\text{expressed}}$ ), for *non-volunteers* contextual influences ( $C_{\text{sensitiveness}}$ ) are only reduced by awareness of self resources ( $A_{\text{w}_{\text{relational}}}$ ) and it is context, in fact, that negatively influence resilience (0.44). Finally, in *non-volunteers* Action ( $A_{\text{performance}}$ ) leads to resilience while we found no direct connection between action ( $A_{\text{performance}}$ ) and resilience in *volunteers*.

These qualitative differences in the ERAAwC information processing for the two groups seem to indicate that for *volunteers* both cognitive and emotional resources are involved in resilience, through awareness and the ability to express emotions, but action as overt behavior derived directly from both cognitive and emotional resources, not resilience. Resilience, in fact, has the function of enhancing the feedback from previous experiences and decreasing the influence of context. In individuals that do not help others altruistically, at least not in an organized way, both cognitive and emotional resources are involved in resilience, through awareness and the ability to express emotions, but action which also in this case derived directly from both cognitive and emotional resources, lead to resilience as well. Thus resilience in this case seems more a result of action taking (the more I do the more I am resilient), rather than an activator of action (the more resilient I am the more I do) and it's negatively influenced by contextual influences, rather than functioning as protective factors against them. These findings bring new light to the understanding of the interpersonal processes involved in the ability to face different challenges, the nature and components of resilience, and the mechanisms behind its use.

### **Limits**

Data were collected at multiple sites and in an economically privileged area of Italy. RAS items translated from English into Italian language need further validation. Only RS-14 data were used in the structural equation models, thus the study needs to be replicated including other measures of resilience.

## 2.4 Study 4: Resilience and substance abuse treatment

In this fourth study we investigated weather resilience (Resilience Scale ,RS-14,Wagnild & Young, 1993; CD-RISC, Connor & Davidson, 2003), moderate the impact of live events (LES, adapted from Holmes-Rahe Social Readjustment Rating Scale,1967) on traumatic stress (PSTD Checklist, Weathers et al, 1993) and drug abuse characteristics (type of substance, onset, latency) and treatment (type, length, outcome) in a sample of young drug addicts under treatment ( $N = 180$ ) and a control group ( $N = 249$ ). We also investigated weather positive emotions foster self-regulation by helping to reduce the deleterious physiological and emotional consequences of negative affects (Positive and Negative Affect Schedule, PANAS, Watson, Clark & Tellegen, 1988; Italian validation in Terracciano, McCrae & Costa, 2003), allow for more flexible, efficient coping during adverse experiences (PACT, Perceived Ability to Cope with Trauma scale, Bonanno, Pat-Horenczyk, & Noll, 2011) and predict better long-term adjustment after exposure to stressful life events. Results confirmed our hypothesis showing significant differences between the clinical and the control group in terms of number of live events, PSTD symptoms, trauma focus coping orientation and negative affect.

## **Introduction**

Theoretical models and empirical research suggest that negative affect plays an important role in the onset of substance abuse and may compromise successful treatment (Brigid & al., 2004; Brawn et al., 1999). We thus considered crucial to separately explore the role of positive and negative affect, and the general ability to regulate emotions and made a significant contribution to the field examining in a community-based sample of young adults and a clinical group of drug addicts under treatment not only the relationship between indicators of negative affect and drug abuse, but the role of positive AND negative emotions (PANAS, Watson, D., Clark, L. A., & Tellegen, A., 1988), potentially traumatic AND positive life events requiring life adjustments, emotion regulation and resilience on the early initiation of substance abuse, the delaying of substance abuse onset, the different trajectories of substance use, and treatment outcomes. Specifically, we concurrently evaluated actual exposure to potentially traumatic events (PTE), PTSD signs and symptoms, and the participants' perceived ability to cope with trauma (PACT, Bonanno et. al, 2011).

## **Substance abuse**

The nature of adolescents' and young adults' drug abuse is multivariate and challenging, for some of its secretive aspects (Liddle, 2010). Because multiple pathways of adjustment and deviation may unfold from any developmental milestone, failure and stressful experience, emphasis is placed on competence and resilience. Change itself is multifaceted and multi-determined and emerges from interaction among systems, people, domains, and intrapersonal and interpersonal processes. Risks and protective factors frameworks identify antecedents of dysfunction and resilience from different domains of functioning

Theoretical models and empirical research suggest that negative affect may play an important role in the onset of substance abuse. According to the negative-affect regulation model, substance use is a mean of coping, with the specific goal to reduce negative affect (Schuckit et al. 2006). There are evidences suggesting a relationship between depression (particularly sadness) and adolescent substance use (Kaplow et al., 2001; Stice et al., 2004; Windle & Windle, 2001). Pardini et al. (2004) examined the relations between different indicators of negative affect (depressed mood, fear, and anger) and the onset of alcohol use and found that anger was significantly related to alcohol-use initiation, whereas depressed mood and fear were not. This seems to suggest the existence of differential relations of specific components of negative affect (sadness, guilt, fear, and hostility) with alcohol and drug abuse. Fear, for example, has been consistently found unrelated to alcohol use (Hussong et al., 2001). Ohannessian, and Hesselbrock (2009) found sadness and fear were not significantly related to substance-use initiation. Consistent with previous research (McCreary & Sadava, 2000), hostility was found to be significantly related to marijuana.

The deviance proneness model of vulnerability (Sher, 1991) suggests that the relationship between parental alcoholism and substance use may be mediated by the offspring's temperament characteristics and delinquency may play an additional mediating role. Research showed, in fact, that adolescents who have a parent with a substance abuse disorder have an elevated risk of using alcohol of drug and developing drug addiction (Chassin et al. 2003). Children of alcoholics experience drugs at a younger age than their peers (Dawson, 2000) and adolescents who have an early onset of substance use are significantly more likely to develop a substance abuse disorder than those who initiate later (Chassin & Ritter, 2001). Thus, examining the underlying processes involved in the onset of substance abuse is of particular relevance.

A comprehensive, multidimensional assessment of drug abuse can only be obtained with a unique combination of weaknesses and assets, a contextualized

portrait of strengths and weaknesses in terms of parenting knowledge, skills, quality and beliefs and emotional connection among family members (Pardini et al. 2004).

Multiple therapeutic alliances are required to create individualized interventions that foster developmental competencies and focus on continuity.

### **Participants and procedures**

The clinical group, 180 drug addicts under treatment (80 males & 100 females), age 16-30 ( $M = 23$ ;  $SD = 2.97$  similar for both genders) was recruited at an Italian public treatment center (Ser.T). The control group with an overall 249 participants (94 males & 155 females, age 14-30 ( $M = 22$ ;  $SD = 3.19$ ) was recruited at local high schools and public events before a training intervention on the effects of drug abuse. Participants were asked to complete a paper-and-pencil questionnaire including all scales of interest and freely report the family composition listing each family member with age, gender and relationship with the participant. Drug addiction (onset, latency, age of first use, substance) and treatment (type of abuser, type of treatment, outcome) data were obtained directly from the Treatment Center Staff.

### **Demographic Characteristics of the sample**

In the *clinical group* ( $N = 180$ ) 55.5% are females ( $n = 100$ ) and 44.5% males. The majority is single 49.5% ( $n = 89$ ), 32.2% ( $n = 58$ ) engaged, 12.2% ( $n = 22$ ) in a steady cohabiting relationship and 6.1% ( $n = 11$ ) married. In terms of educational level, the majority has a high school diploma (48.3%,  $n = 87$ ) or is currently a high school student, 25.5% ( $n = 46$ ) has a Bachelor degree or is a college student and 19.4% ( $n = 35$ ) has a vocational degree. As for working status, 30% ( $n = 54$ ) works full-time, 30.5% ( $n = 55$ ) has a part-time job, 27.8% ( $n = 50$ ) is a student and 11.7% ( $n = 21$ ) is unemployed.

In the *control group* ( $N = 249$ ) 62.3% are females ( $n = 155$ ) and 37.7% are males ( $n = 94$ ). The majority is single (49.8%,  $n = 124$ ), 40.4% ( $n = 101$ ) is engaged and only a small percentage is cohabiting (5.2%,  $n = 13$ ) or married (4.4%,  $n = 11$ ). In terms of education, the majority of the sample has a high school diploma (50.4%,  $n = 126$ ) or is a high school student, a vocational degree (34%,  $n = 85$ ), or a bachelor degree (88.8%,  $n = 22$ ). As for employment, 44% ( $n = 110$ ) is a student, 39.8% ( $n = 99$ ) has a full time job, 14 % ( $n = 35$ ) has a part-time time and only 2% ( $n = 5$ ) is unemployed.

### Family composition

In the *control group* 48.4% ( $n=121$ ) of participants is part of a 4-member household, 20.8% ( $n = 52$ ) reported 3 family members, while 17.2% ( $n = 43$ ) belong to a 5-member family and only 7.2% ( $n = 18$ ) of participants indicated only another member excluding him/herself and 16.4% ( $n = 16$ ) 6 members. The mean age for fathers was 55 ( $SD = 6$ ) and for mothers 51 ( $SD = 5$ ). Data showed that 70% ( $n = 175$ ) of participants comes from intact family with no divorced parents. The majority of the participants in the control group (82%,  $n = 205$ ) reported the father as *first family member*, 70.4% ( $n = 176$ ) of participants cohabited with the father while 11.6% ( $n = 26$ ) did not. The mother was indicated *first* only by 7.2% of participants ( $n = 18$ ) and 6% ( $n = 15$ ) reported her present in the household while only for 1.2% ( $n = 3$ ) was not cohabiting with the mother. As for other family members reported in first position, 4.4% ( $n = 11$ ) indicated a generic romantic partner, 4% ( $n = 10$ ) the husband, 0.8% ( $n = 2$ ) the brother, 0.8% ( $n = 2$ ) the sister, 0.4% ( $n = 1$ ) the wife and 0.4% ( $n = 1$ ) a step-father. The mother was reported as the *second family member* by 89.6% ( $n = 208$ ) of participants although for 7.3% ( $n = 17$ ) she is not cohabiting, 2.5% ( $n = 6$ ) indicated the father, 1.7% ( $n = 4$ ) a sister or brother (1.2%,  $n = 3$ ), children (3%,  $n = 7$ ), stepfather (0.8%,  $n = 2$ ), fiancée or nephew (0.4%,  $n = 1$ ). The *third* family member reported the most was a brother (53.3%,  $n = 96$ ), sister (41.6%,

$n = 75$ ) or son (2.2%,  $n = 4$ ), while only a small percentage 1.1% ( $n = 2$ ) indicated father, fiancée or step-father in this position. As *fourth* and *fifth* family member, a sister is reported most often (45.6%,  $n = 27$ ) followed by a brother, in laws and grandmother.

In the *clinical group*, family is composed in 17.8% ( $n = 32$ ) of cases by two additional members, 31.1% ( $n = 56$ ) by 3, 36.7% ( $n = 66$ ) by 4, 11.7% ( $n = 21$ ) by 5 and 2.8% ( $n = 5$ ) by 6. The mean age for fathers is 55 ( $SD = 6$ ) and for mothers 51 ( $SD = 5$ ). Household with cohabiting parents are 49.4% ( $n = 89$ ) of the clinical group. The relationship reported *first* is the father (70.5%,  $n = 127$ ) although in 15% ( $n = 27$ ) of the cases he is not cohabiting with the participants. An intimate partners was reported as *second* (12.2%,  $n = 22$ ), followed by mother (7.8%,  $n = 14$ ), husband (5%,  $n = 9$ ), step-father (1.7%,  $n = 3$ ), grandfather (1.1%,  $n = 2$ ), wife (1.1%,  $n = 2$ ) and uncle (0.5%,  $n = 1$ ). The *second* relationship mostly reported was the mother (83.8%,  $n = 124$ ) who was not cohabiting with the participant in 8.1% ( $n = 12$ ) of the cases, followed by son (7.4%,  $n = 11$ ), brother (4%,  $n = 6$ ) or sister (3.3%,  $n = 5$ ), stepfather (0.67%,  $n = 1$ ) and grandfather (0.67%,  $n = 1$ ). As third family relationship the majority of the clinical group indicated a brother (54.2%,  $n = 51$ ) followed by a sister (42.5%,  $n = 40$ ) and rarely ( $n=1$ ) son, mother and grandmother. A brother and a sister were ranked as fourth and fifth members. The two samples significantly differ in term of family members' ranking only for the *first* and *second* position (Table 2.4.1) referring to parents.

**Table 2.4.1 Family Composition:** differences between the clinical and the control group (N=249) in family members' ranking.

Family Composition	F	Sig.
1 <sup>^</sup> Member	12.67	.00
2 <sup>^</sup> Member	16.20	.00
3 <sup>^</sup> Member	.02	.86
4 <sup>^</sup> Member	.39	.53
5 <sup>^</sup> Member	.59	.45

In the *control group*, in fact, father (*first*, 82%) and mother (*second*, 89.6%) are reported as the most important family members, mostly cohabiting with the participants, while in the *clinical group* the traditional role of the father as head of the household (*first* 79.5%) jointly with the mother (*second* 83.8%) is sometimes missing (mother *first*) and/or substituted by other close family members (partner *first*).

## Measures

To evaluate resilience levels we used two different scales: the Resilience Scale (Wagnild & Young, 1993) and the Connor and Davidson Resilience Scale (CD-RISC, Connor and Davidson, 2003). They measure, in fact, different aspect of the same construct: CD-RISC is the ideal tool for clinical samples as it evidences how resilience changes in respond to pharmacological or psychological treatment while RS evaluate the dispositional characteristic moderating negative affects caused by stress. To understand the relevance of both positive and negative affect in adaptive coping we used the Positive (PA) and Negative (NA) Affect scale (PANAS, Watson, Clark, and Tellegen, 1988). The two scales are independent (Watson & Clark, 1994; Watson, Clark & Tellegen, 1988) and factorial analysis confirmed the two main factors (PA & NA) explaining 62.8% of the variance in the situational form and 68.7% in the dispositional form. The Italian version by Terraciano, McCrae & Costa (2003) replicated the result and reliability of the original scale. Moreover, from the Holmes and Rahe (1967) Social Readjustment Rating Scale (SRRS), we selected 37 life events fitting our sample to assess both positive and negative events experienced by participants in the last 12 months. For each events in addition to its “life change unit” (LCU), indicating the risk for stress from low (> 150) to moderate (150-299) and high (>300), we also obtained a measure of positive (from +1 to +3), negative from (-1 to -3) or null (0) impact as subjectively perceived by the participants. To evaluate the effect of potentially traumatic events we adopted the PTSD Checklist

(Weathers et al, 1993) which assesses the presence of post-traumatic symptoms according to DSM-IV criteria and similarly to SCL-90 R (Derogatis, 1983) from “not at all” to “extremely”. Finally, to evaluate coping flexibility in face of potentially traumatic events we used the PACT scale (Bonanno, 2010; Bonanno & Mancini, 2008) with the subscales Trauma Focus and Forward Focus. All scales used proved to have good psychometric properties and reliability coefficients ranging from .89 to .94 (RS-14  $\alpha = .91$ ; CD-RISC  $\alpha = .94$ ; PACT  $\alpha = .90$ ; PANAS= $\alpha = .89$ ).

## Results

Data analysis revealed demographic difference between samples that need to be accounted for in terms of gender ( $F = 0.01$   $p < 0.05$ ), relationship status ( $F = 0.02$   $p < 0.05$ ), employment ( $F = 0.00$   $p < 0.001$ ), family composition ( $F = 0.00$   $p < 0.01$ ) and ranking of family members. In the clinical sample 70.5% ( $n = 127$ ) indicate the father first and 12.2% ( $n = 22$ ) the partner, while the mother is indicated second by 83.8% ( $n = 124$ ) of participants and by 7.4% ( $n = 11$ ) the son. In the control group the father (82%,  $n = 205$ ) and the mother 7.2% ( $n = 17$ ) are indicated first while she is the most reported as second family member 89.6% ( $n = 207$ ).

## Correlations

Pearson's coefficients evidenced (Table 2.4.2) substantial differences between control and clinical group. In the *clinical group* the number of life events ( $r = .37$ ,  $p < 0.01$ ) correlates positively with level of stress ( $r = .35$ ,  $p < 0.01$ ), negative emotions ( $r = .37$ ,  $p < 0.01$ ) and post-traumatic symptoms ( $r = .64$ ,  $p < 0.01$ ) while it is correlated negatively with resilience (RS-14,  $r = -.72$ ,  $p < 0.01$ ; CD-RISC,  $r = -$

.71,  $p < 0.01$ ), coping flexibility (TF,  $r = -.54$ ,  $p < 0.01$ ; FF,  $r = -.51$ ,  $p < 0.01$ ) and positive emotions (PA,  $r = -.35$ ,  $p < 0.01$ ). Moreover, we found a negative correlation between age and number of life events ( $r = -.24$ ,  $p < 0.01$ ), and age and stress ( $r = -.21$ ,  $p < 0.01$ ). Gender correlated positively with live events ( $r = .15$ ,  $p < 0.01$ ) and stress ( $r = .09$ ,  $p < 0.01$ ), indicating that men report or experience more live events and stress than women. Education positively correlated with resilience ( $r = .17$ ,  $p < 0.01$ ;  $r = .16$ ,  $p < 0.01$ ) and negatively with life events ( $r = -.21$ ,  $p < 0.01$ ), stress ( $r = -.14$ ,  $p < 0.01$ ), negative emotions ( $r = -.13$ ,  $p < 0.01$ ) and post-traumatic symptoms ( $r = -.15$ ,  $p < 0.01$ ). The number of family members correlated positively with resilience (RS-14,  $r = .21$ ,  $p < 0.01$ ; CD-RISC,  $r = .20$ ,  $p < 0.01$ ), the Forward Focus subscale of PACT ( $r = .16$ ,  $p < 0.01$ ) and positive affect (PA,  $r = .15$ ,  $p < 0.01$ ), while it correlated negatively with the Post Traumatic Checklist ( $r = -.11$ ,  $p < 0.05$ ). At this phase of the family life, young adults, family relations and education level seem to be the most important protective factor when facing potentially stressful and traumatic events.

**Table 2.4.2 Significant** Pearsons' correlations among variables ( $N = 429$ ).

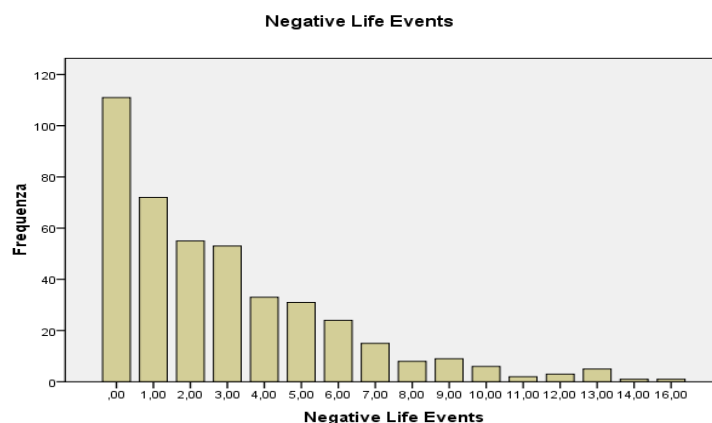
	Sample	Age	Gender	Education	Family
Potentially Traumatic Events (N.)	.37**	-.24**	.15**	-.21**	
Stress (LCU)	.35**	-.21**	.09*	-.14**	
Resilience (RS-14)	-.72**			.17**	.21**
Resilience (CD-RISC)	-.71**			.16**	.20**
Coping Forward Focus (PACT)	-.54**				.16**
Coping Trauma Focus (PACT)	-.51**				
Negative Affect (PANAS)	.37**			-.13**	
Positive Affect (PANAS)	-.35**				.15**
PTSD Checklist	.64**			.15**	-.11*

\*  $p < 0.05$  \*\*  $p < 0.01$

## Life Events

The distribution of negative life events is presented in Figure 2.4.1. As expected, the *number* of life events correlated negatively with resilience (RS-14  $r = -.22$   $p < 0.01$ ; CD-RISC  $r = -.26$   $p < 0.01$ ) and coping flexibility (FF,  $r = -.20$   $p < 0.01$ ; TF,  $r = -.10$   $p < 0.05$ ) and negatively with negative emotions ( $r = .21$   $p < 0.01$ ) and post-traumatic symptoms ( $r = .41$   $p < 0.01$ ). The subjective *impact* of live events both positive and negative, correlated positively with resilience (RS-14  $r = .30$   $p < 0.01$ ; CD-RISC  $r = .35$   $p < 0.01$ ), coping flexibility (FF  $r = .29$   $p < 0.01$ , TF  $r = .19$   $p < 0.01$ ) and positive emotions ( $r = .11$   $p < 0.05$ ) and negatively with negative emotions ( $r = -.29$   $p < 0.01$ ) and post-traumatic symptoms ( $r = -.38$   $p < 0.01$ ). *Negative life events* correlated negatively with resilience (RS-14  $r = -.31$   $p < 0.01$ ; CD-RISC  $r = -.36$   $p < 0.01$ ), coping flexibility (FF  $r = -.28$   $p < 0.01$ ; TF  $r = -.16$   $p < 0.01$ ) and positively with negative emotions ( $r = .29$   $p < 0.01$ ) and post traumatic symptoms ( $r = .48$   $p < 0.01$ ). *Positive Life Events* correlated positively with resilience (RS-14  $r = .10$   $p < 0.05$ ; CD-RISC  $r = .10$   $p < 0.05$ ) and positive emotions ( $r = .09$   $p < 0.05$ ) (Table 2.4.3).

**Figure 2.4.1** Distribution of negative life events ( $N = 429$ ).



**Table 2.4.3** Pearson’s significant correlation between Life Events and variable of interest (N = 429).

<b>LIFE EVENTS</b>	Resilience RS14	Resilience CD-RISC	Forward Focus PACT	Trauma Focus PACT	Negative Affect PANAS	Positive Affect PANAS	PTSD
IMPACT	.30**	.35**	.29**	.19**	-.29**	.11*	-.38**
NUMBER	-.22**	-.26**	-.21**	-.10*	.21**		.41**
NEGATIVE	-.31**	-.36**	-.29**	-.16**	.29**		.48**
POSITIVE	.10*	.10*				.09*	

**Differences between clinical and control group**

A t-test for independent samples showed differences between the *clinical* ( $M = -4.87$ ,  $SD = 9.88$ ) and *control* group ( $M = 0.06$ ,  $SD = 7.66$ ) in terms of number and impact of life events (*Control*:  $M = 1.94$ ,  $SD = 2.38$ ; *Clinical*:  $M = 4.16$ ,  $SD = 3.34$ ). Table 2.4.4 showed the most reported life events experienced and the differences between control and clinical group.

**Table 2.4.4** Most frequent life events and significant differences between the clinical and control group.

<b>LIFE EVENTS</b>	<b>CONTROL GROUP</b> N=249	<b>CLINICAL GROUP</b> N=180	<b>LCU</b>	<b>n</b>	<b>%</b>	<b>F</b>	<b>Sig.</b>
<b>Drug or alcohol use</b>	M=-.01 SD=.58	M=-1.1 SD=1.57	50	222	51.7	228.5 9	.000

Out standing personal achievement	M=.00 SD=.00	M=.0056 SD=.32	46	176	41	7.43	.007
<b>LIFE EVENTS</b>	<b>CONTROL GROUP</b> N=249	<b>CLINICAL GROUP</b> N=180	<b>LCU</b>	<b>n</b>	<b>%</b>	<b>F</b>	<b>Sig.</b>
Breaking up with partner	M=-.27 SD=1.13	M=-.46 SD=1.45	53	157	36.6	20.11	.000
Change in health			44	146	34	.017	
Change in peers acceptance			67	126	29.4	2.092	
Change in parents financial status	M=-.11 SD=.95	M=-.33 SD=.93	45	107	24.9	5.293	.022
Sexual difficulties	M=-.17 SD=.73	M=-.51 SD=1.01	39	105	24.5	49.19 4	.000
Failing a grade or exam			59	102	23.8	3.415	
Increased arguments with parents			47	89	20.7	2.306	.

It is important here to notice that the most frequently reported life events are age relevant and part of normative live experiences. In term of alcohol and drug abuse, 51.7% ( $n = 222$ ) of participants in both groups reported having experienced it, of which only 42 were from the control group ( $M = .23$   $SD = 1.41$ ). The impact of this specific life event has been evaluated very differently: negatively by 9.6% ( $n = 41$ ) of participants, moderately negative by 13.8% ( $n = 59$ ), null by 7.7% ( $n = 33$ ), positive by 16.6% ( $n = 71$ ), moderately positive by 2.8% ( $n = 12$ ) and very positive by 1.4% ( $n = 6$ ).

In the overall sample, 29.6% ( $n = 127$ ) exhibited a low risk for stress, 35.9% ( $n = 154$ ) a moderate risk and 34.5% ( $n = 148$ ) a high risk. In the *control group*, the majority of participants are distributed on low risk for stress 24% ( $n =$

103), 21.2% ( $n = 91$ ) on moderate while only 12.8% ( $n = 55$ ) showed high risk for stress. In the *clinical group* the situation is the opposite: only 5.6% ( $n = 24$ ) is exposed to low risk, while the majority, 63% ( $n = 63$ ) showed moderate to high level of risk (21.7%,  $n = 93$ ). The clinical and control group also significantly differ in terms of post-traumatic symptoms, with the control group showing lower value ( $M = 40.5$ ,  $SD = 13.47$ ), compared with the clinical group ( $M = 62.13$   $SD = 11.10$ ). Table 2.4.5 presents and overall summary of all differences between the two groups.

**Table 2.4.5** A summary of all differences between the clinical and control group

SOCIO-DEMOGRAPHICS VARIABLES	CONTROL GROUP N=249	CLINICAL GROUP N=180	F	Sig
<b>GENDER:</b>				
Male	37.7% ( $n = 94$ )	44.5% ( $n = 80$ )	6.24	0.01
Female	62.3% ( $n = 155$ )	55.5% ( $n = 100$ )		
<b>AGE'</b>	$M = 22$ $SD = 3.19$	$M = 23$ $SD = 2.97$		
<b>STATUS:</b>				
Single	49.8% ( $n = 124$ )	49.5% ( $n = 89$ )	5.01	0.02
Engaged	40.4% ( $n = 101$ )	32.2% ( $n = 58$ )		
Cohabiting	5.2% ( $n = 13$ )	12.2 ( $n = 22$ )		
Married	4.4% ( $n = 11$ )	6.1% ( $n = 11$ )		
<b>EDUCATION:</b>				
Middle School	1.2% ( $n = 3$ )	6.1% ( $n = 11$ )		
Vocational School	5.2% ( $n = 12$ )	19.4% ( $n = 35$ )		
High School	50.4% ( $n = 126$ )	48.3% ( $n = 87$ )		
Bachelor	34% ( $n = 85$ )	25.5% ( $n = 46$ )		
Master	8.8% ( $n = 22$ )	0.5% ( $n = 1$ )		
<b>PROFESSIONE:</b>				
Full time	39.8% ( $n = 99$ )	30% ( $n = 54$ )	41.95	0.00
Part-time	14% ( $n = 35$ )	30.5% ( $n = 55$ )		
Unemployed	2% ( $n = 5$ )	11.75 ( $n = 21$ )		
Student	44% ( $n = 110$ )	27.8% ( $n = 50$ )		
<b>NUCLEO FAMILIARE:</b>				
2 members	7.2% ( $n = 18$ )	17.8% ( $n = 32$ )	9.48	0.00
3 members	20.8% ( $n = 52$ )	31.1% ( $n = 56$ )		
4 members	48.4% ( $n = 121$ )	36.7% ( $n = 66$ )		
5 members	17.2% ( $n = 43$ )	11.7% ( $n = 21$ )		
6 members	6.4% ( $n = 16$ )	2.8% ( $n = 5$ )		
Father's age	$M = 55$ $SD = 6$	$M = 55$ $SD = 6$		
Mother's age	$M = 51$ $SD = 5$	$M = 51$ $SD = 5$		
Resilience RS-14	$M = 58.10$ $SD = 7.17$	$M = 41.97$ $SD = 8.24$		

Resilience CD-RISC	$M = 91.46$ $SD = 12.55$	$M = 65.25$ $SD = 12.99$		
Coping Trauma Focus	$M = 10.23$ $SD = 0.55$	$M = 9.56$ $SD = 0.57$		
Coping Forward Focus	$M = 3.37$ $SD = 0.65$	$M = 2.53$ $SD = 0.63$		
Positive Affect PANAS	$M = 35.47$ $SD = 36$	$M = 31.03$ $SD = 31$	10.81	0.00
Negative Affect PANAS	$M = 26.38$ $SD = 27$	$M = 32.25$ $SD = 32$		
Levels of stress risk :				
Low	$M = 26.38$ $SD = 27$ 24% ( $n = 103$ )	$M = 32.25$ $SD = 32$ 5.6% ( $n = 24$ )		
Moderate	21.2% ( $n = 91$ )	14.7% ( $n = 63$ )		
High	12.8% ( $n = 55$ )	21.7% ( $n = 93$ )		
Post Traumatic Checklist	$M = 40.5$ $SD = 13.47$	$M = 62.13$ $SD = 11.10$	12.45	0.00
Total Life Change Unit (LCU)	$M = 205.66$ $SD = 153.20$	$M = 348.16$ $SD = 200.75$	9.11	0.00
Impact of the event	$M = 0.06$ $SD = 7.66$	$M = -4.87$ $SD = 9.88$	11.55	0.00
No events	$M = 32.93$ $SD = 3.01$	$M = 30.36$ $SD = 3.71$		
Number of life events	$M = 5.07$ $SD = 3.01$	$M = 7.64$ $SD = 3.71$		
Events with no impact	$M = 0.34$ $SD = 0.73$	$M = 0.54$ $SD = 0.92$		
Positive Life events	$M = 1.78$ $SD = 2$	$M = 1.93$ $SD = 2.28$		
Negative Life Events	$M = 1.94$ $SD = 2.38$	$M = 4.16$ $SD = 3.34$	20.84	0.00
Event 22: alcohol or drug use	$M = 0.23$ $SD = 1.41$	$M = -0.76$ $SD = 1.81$	29.90	0.00

### Drug Addiction & Treatment Data

Drug addiction data were collected for the clinical sample by the treatment center staff and are summarized in Table 2.4.6. The majority of participants in the clinical sample (30.1%,  $n = 129$ ) were already under treatment, 9.8% ( $n = 42$ ) were newly admitted and 2.1% ( $n = 9$ ) were returning after being previously discharged. The majority of the sample was referred to treatment by social services (24.7%,  $n = 106$ ), 4.4% ( $n = 19$ ) by other treatment facilities, 0.9% ( $n = 4$ ) by law enforcement and 11.9% ( $n = 51$ ) had seek treatment spontaneously. The most abused substance was cocaine (18.6%,  $n = 80$ ), followed by heroin (14.5%,  $n = 62$ ), alcohol (2.6%,  $n = 11$ )

and cannabis (1.4%,  $n = 6$ ), although participants reported the use of a combination of drugs, up to 4, including opiates.

Pharmacological treatment resulted prevalent (31.2%,  $n = 134$ ), followed by psychotherapy (10.5%,  $n = 45$ ), other form of psychological support (0.4%,  $n = 2$ ) and a combination of treatments methods (19.6 %,  $n = 84$ ). Methadone was the most common substance used in pharmacological treatment (24.5%,  $n = 105$ ), followed by Naltrexone (0.7%,  $n = 3$ ) and Subutex (6.1%,  $n = 26$ ). Treatment length ranged from middle (51%) to long (36.6%), with an average of 1-2 years.

The majority of the sample (86.6%) reported their first drug use before the age of 17, while 12% between 18 and 21 and only 1.4 above the age of 21. Only 0.5 contracted HIV or hepatitis (1.2%), while the majority was in good health.

Latency was less than 5 years for the majority of clinical participants. Only 4.9% ( $n = 21$ ) reported a latency greater than 5 years, while 14% ( $n = 60$ ) between 2 and 5 years, 11.2% ( $n = 48$ ) between 1 and 2 years, and 11.9% ( $n = 51$ ) less than one year. Urine test also evidenced that 12.6% ( $n = 54$ ) of the clinical sample during treatment were NOT observing abstinence, while 19.8% ( $n = 85$ ) registered a deferred abstinence.

Different types of substance dependency were diagnosed in the clinical sample: 7.9% ( $n = 77$ ) sociopath, 13.8% ( $n = 59$ ) a traumatic, 6.3% ( $n = 27$ ) transitional and 4% ( $n = 17$ ) neurotic. In 25.9% ( $n = 111$ ) of the cases the addiction was serious (toxic), 9.3% ( $n = 40$ ) habitual, 6.3% ( $n = 27$ ) compulsive-dependent and 0.5% ( $n = 2$ ) occasional. In terms of familiarity, 34% ( $n = 146$ ) of clinical participants reported having no family history of drug abuse while 7.9% ( $n = 34$ ) reported one or more family members with an addiction problem, either a parent, brother, sister, or uncle from the father side.

**Table 2.4.6** Drug addiction data (clinical group, N=249)

<b>PATIENT</b>	
New	9.8% ( <i>n</i> = 42)
Returning	2.1% ( <i>n</i> = 9)
Current	30.1% ( <i>n</i> = 129)
<b>REFERRAL</b>	
Social services	24.7% ( <i>n</i> = 106)
Spontaneous	11.9% ( <i>n</i> = 51)
Treatment center	4.4% ( <i>n</i> = 19)
Prison	0.9% ( <i>n</i> = 4)
<b>SUBSTANCE</b>	
Cocaine	18.6% ( <i>n</i> = 80)
Heroin	14.5% ( <i>n</i> = 62)
<b>TYPE OF TREATMENT</b>	
Pharmacological	31.2% ( <i>n</i> = 134)
Psychotherapy	10.5% ( <i>n</i> = 455)
Psychological Support	14% ( <i>n</i> = 60)
<b>MEDICATION</b>	
Metadone	24.5% ( <i>n</i> = 105)
Naltrexone	3.3% ( <i>n</i> = 14)
Subutex	7% ( <i>n</i> = 30)
<b>TREATMENT LENGHTS</b>	
Long term	36.6% ( <i>n</i> = 157)
Medium term	5.1% ( <i>n</i> = 22)
<b>ASTINENZA</b>	
Astinenza protratta	9.6% ( <i>n</i> = 41)
Astinenza differita	19.8% ( <i>n</i> = 85)
Uso	12.6% ( <i>n</i> = 54)
<b>ONSET</b>	<i>M</i> = 16 <i>SD</i> = 2.64
<b>LATENCY</b>	
1 years	11.9% ( <i>n</i> = 51)
2-5 years	14% ( <i>n</i> = 60)
<b>LENGHT OF STAY AT FACILITY</b>	
24 months	5.8% ( <i>n</i> = 25)
36 months	6.1% ( <i>n</i> = 26)
48 months	5.4% ( <i>n</i> = 23)
<b>SEVERITY</b>	
Occasional	0.5% ( <i>n</i> = 2)
Habitual	9.3% ( <i>n</i> = 40)
Compulsive-dependent	6.3% ( <i>n</i> = 27)
Toxic	25.9% ( <i>n</i> = 111)
<b>FAMILIARITY</b>	
Yes	7.9% ( <i>n</i> = 34)
No	34% ( <i>n</i> = 146)

## Structural Equation Modeling

In this study we assumed that specific individual resources like resilience, emotion regulation skills and coping flexibility could determine the positive or negative appraisal of life events (either positive or negative) and their impact in term of outcome (PTSD) and represent important factors in the etiology of substance abuse and the efficacy of its treatment. According to the negative affect regulation model, the development of psychopathology, in this case drug abuse, depends on a use of individual and family resources as mediators and protective factors. Specifically, resilience is expected to be higher in individuals experimenting positive emotions in face of adversity, showing fewer post-traumatic symptoms and no substance abuse dependency requiring treatment.

To further investigate the relationship between life events and post traumatic symptoms and the moderating effects of resilience, coping flexibility, and positive and negative emotions we performed two different path analyses, one for the *control group* (Figure 2.4.2) and one for the *clinical group* (Figure 2.4.3) using LISREL. In accordance with our hypothesis, the results suggested significant differences at different levels for the two groups and two different models better fit the data for the two samples.

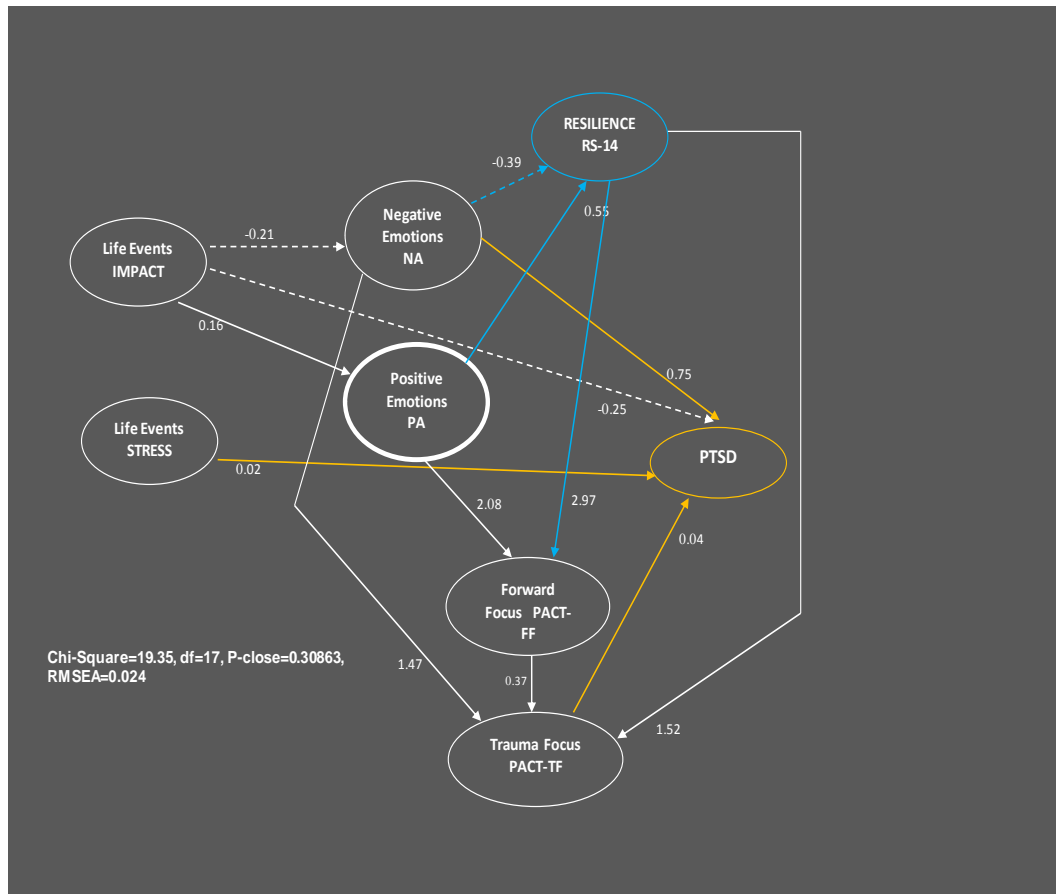
In the *clinical group*, we found a direct straightforward positive relationship between stress risk (total number of LCU), negative emotions (NA), trauma focus coping style (TF) and post traumatic symptoms (PTSD). The perceived impact of live events, however, in this group is negatively associated with negative outcomes (PTSD), indicating that a positive appraisal of life events can still diminish traumatic symptoms. As expected, positive affects (PA) increased resilience (0.55), while negative affect (NA) negatively influenced it (-0.39). Similarly, negative affect (NA) facilitated the Trauma Focus coping style (1.47) while positive affect (PA) enhanced the use of a Forward Focus strategy, with a stronger power (2.08). Resilience appeared to have no direct influence on post traumatic symptoms (PTSD), but on the

other hand fostered both coping strategies positively (TF, 1.52; FF 2.97), although at different degrees. The two coping strategies (TF & FF) were positively and reciprocally related (0.37). Results also showed that the perceived impact of life events in the *clinical group* had a direct ameliorative effect on PTSD (-0.25) and an indirect effect through NA (-0.21), thus reducing post traumatic symptoms in face of adversity and even everyday hassles.

These results seem to suggest a tripartite etiology of PTSD, proportionate to the level of stress directly caused by number and type of life events in terms of changes units (LCU) but increased by a coping style trauma oriented and decreased by the perceived impact of life events, which could also be positive. Positive emotions (PA) seem to play a central role in fostering both resilience and a coping style future oriented. However, as positive emotions (PA), coping forward focus (FF) and Resilience had no connection with PTSD, it appeared that these resources, although available, are useless in alleviating PTSD symptoms.

In the *control group*, PTSD is only determined by negative affect (NA) but reduced by the perceived impact of life events (-0.22) and resilience (-0.20). Resilience is enhanced by positive affect (PA, 1.13) and decreased by negative affect (NA, -1.23) but in this group also by a Forward Focused coping style (FF, -0.07). On the other hand, Resilience, as in the clinical group, fostered both coping strategies (TF, 2.93; FF 6.18), Trauma and Forward focused, although the second more strongly. For this group, Resilience also has an ameliorating effect on post traumatic symptoms (PTSD,-0.29) while it is positively associated to negative emotions (NA, 0.26). These results indicate that in the control group, post traumatic symptoms are not related to the number and type of life events in terms of LCU, which indeed are less in this sample, but only to negative affect (NA) which are fostered by a Trauma Focus coping style, while they are decreased by the perceived impact of the events, probably more positive, and by resilience

**Figure 2.4.2 Structural** equation graph with LISREL for the clinical group.

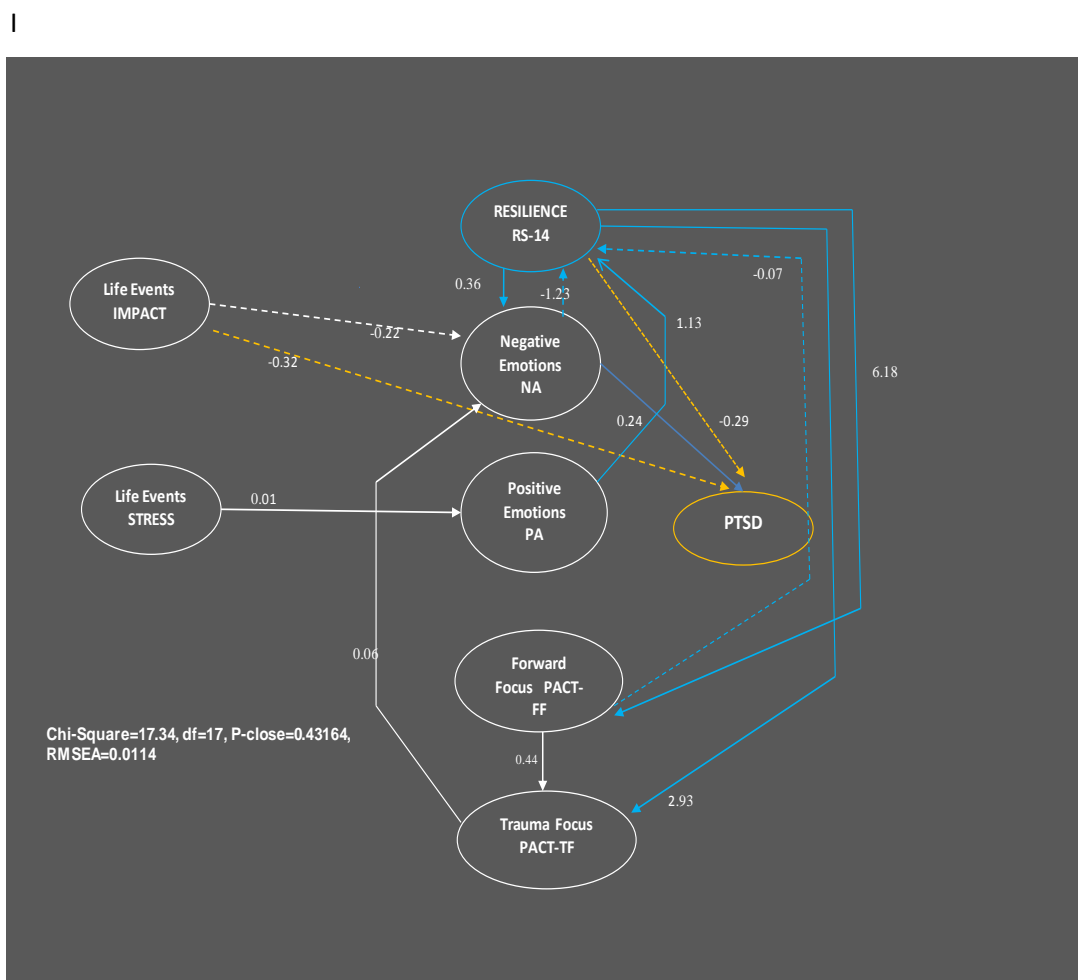


Interestingly, positive emotions derived from the number and type of life events in terms of changes unit, probably because less negative and interpreted as challenges, and in return fostered resilience. Similarly, a forward focus coping strategy fostered resilience, as positive emotions did. Negative emotions, on the other hand, reduced resilience (-1.23) but were somehow increased by resilience (0.36) in a reciprocal double loop.

In both sample PA and NA were not correlated, the risk of stress derived from the number of live events and their change units (LCU) were independent of the perceived impact of the events, whereas FF and TF were not independent subscales.

In conclusion, in the control group PTSD symptoms were fewer, and the use of positive emotions and resilience as resources seemed to facilitate adaptation to stressful events. On the contrary, in the clinical group PTSD symptoms were more frequent, the risk of stress was higher, more negative life events were reported, whose impact was also evaluated more negatively, and resilience as a resource did not moderate the process of adapting well to potentially traumatic or stressful events.

**Figure 2.4.3 Structural equation graph for the control group.**



## Conclusions

The aim of this empirical research was a better understanding of the actual relationship between life events and dysfunctional outcomes like drug addiction weighting both the potential stress derived from the events (LCU) and their perceived subjective impact. Specifically, we investigated the influence of resilience, emotion regulation (positive and negative) and coping flexibility on substance abuse and its characteristics (onset, latency, gravity) and treatment (type, length, outcome). The theoretical model applied considered life events as potentially stressful and traumatic, depending on the individual's experience and life context, and requiring life adjustments that if not met, can lead to dysfunctional behavior like drug addiction. Results showed, interestingly, that the most frequent life events reported in both samples (clinical and control) were not the highest in term of change unit (LCU) and mostly referred to "normative" life events in late adolescence and young adulthood, such as breaking up with partner or increased arguments with parents. Nevertheless, the clinical and control group differed in terms of life events appraisal (how positive or negative the events was evaluated by participants), coping flexibility, emotion regulation (the preferential use of positive vs. negative emotions) and resilience. In fact, in the control group, both negative and positive events were handled with positive emotions and a forward focus coping style, which decreased post-traumatic symptoms. In the clinical group, on the other hand, was prevalent the use of negative emotions and a trauma focus coping style, further facilitated by family risk factors.

This last study confirmed the importance of simultaneously assessing actual (and not only potential) stressors and traumatic events (age relevant and evaluated subjectively), emotion regulation skills (positive and negative), coping flexibility and relational competence. None of these components, in fact, alone can explain the complex process that lead to adaptive outcomes and resilience.



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## APPENDIX

### CD-RISC SCALE Italian version

- 1) Sono in grado di adattarmi al cambiamento
- 2) Costruisco relazioni intime e sicure
- 3) Qualche volta il destino o Dio possono aiutare
- 4) Riesco ad affrontare quello che viene
- 5) I successi passati mi forniscono la confidenza per nuove sfide
- 6) Vedo il lato umoristico delle cose
- 7) Affrontare lo stress rafforza
- 8) Tendo a riprendermi dopo una malattia o momento difficile
- 9) Le cose accadono per una ragione
- 10) Faccio sempre del mio meglio, non importa cosa
- 11) Puoi realizzare i tuoi obiettivi
- 12) Quando le cose sembrano senza speranza, non mollo
- 13) So dove andare per trovare aiuto
- 14) Sotto pressione, mi focalizzo e penso chiaramente
- 15) Preferisco assumere la direzione nella risoluzione dei problemi
- 16) Non mi faccio facilmente scoraggiare dal fallimento
- 17) Penso a me stesso come una persona forte
- 18) Prendo decisioni impopolari o difficili
- 19) Riesco a gestire sentimenti spiacevoli
- 20) Devo agire seguendo l'intuito
- 21) Sento fortemente di avere uno scopo
- 22) Sono in controllo della mia vita
- 23) Mi piacciono le sfide
- 24) Lavoro per raggiungere i miei obiettivi
- 25) Sono orgoglioso dei miei risultati

**Relational Answer Questionnaire, Ed. 2011 (italian version)**

***Scale "A" Activation***

- 1 Nel contatto con gli altri esprimo me stesso/a soprattutto quando agisco.
- 2 Nelle relazioni preferisco le azioni concrete ai progetti ideali.
- 3 Evito le persone continuamente indecise sul da farsi.
- 4 Mi sento a disagio se non posso agire.
- 5 Nei contatti personali amo più la concretezza delle azioni che i ragionamenti sottili.
- 6 Nelle relazioni per me valgono più i fatti che le parole.
- 7 Confrontandomi con gli altri, sono portato ad agire di fronte alle cose che non vanno.
- 8 Nelle relazioni evito le discussioni che non portano alla concretezza dell'agire.
- 9 Quando sono con la gente  $\xi$  per me una sofferenza stare a guardare senza agire.
- 10 Confrontandomi con le persone, mi interessa ciò che porta ad agire concretamente.

***Scale "Aw<sub>1</sub>" Meta-Awareness***

- 1 Nelle discussioni non mi rendo conto di come ragiono.
- 2 Nel rapporto con gli altri non so prevedere le mie reazioni emotive.
- 3 Sono consapevole di come mi comporto e/o rispondo alle persone con cui sono in rapporto.
- 4 Nel rispondere agli altri uso la testa e ci ragiono.
- 5 Nel rispondere agli altri rifletto bene sulle circostanze in cui mi trovo.
- 6 Nei rapporti con le persone sono consapevole di come mi sto comportando.
- 7 Nelle relazioni mi rendo pienamente conto di come rispondo agli altri.
- 8 Quando mi metto in relazione cerco di avere il pieno controllo della situazione.
- 9 Mi rendo conto di quello che sento dentro quando mi rapporto con gli altri.
- 10 Nel rapportarmi con gli altri sono consapevole di ciò che provo nei loro confronti.

**Scale "Aw<sub>2</sub>" Feedback Awareness**

- 1 L'esperienza fatta mi serve per affrontare i rapporti con le persone.
- 2 Penso spesso alle relazioni gi... vissute per gestire i rapporti con gli altri.
- 3 Gli sbagli del passato mi servono per cercare di agire meglio nei contatti con gli altri.
- 4 Le esperienze avute mi permettono di capire le aspettative degli altri.
- 5 Le relazioni vissute mi hanno insegnato ad usare la testa nelle discussioni.
- 6 Ci• che ho imparato in passato mi Š utile per gestire i rapporti attuali.

**Scale "C" Context**

- 1 Mi lascio facilmente convincere dalle altre persone.
- 2 I commenti degli altri mi toccano molto poco.
- 3 Sono influenzato dalle persone del mio ambiente.
- 4 Non mi preoccupo delle chiacchiere altrui che mi riguardano.
- 5 Non mi interessa ciò che gli altri pensano della mia persona.
- 6 Sono sensibile ai giudizi altrui.
- 7 Mi sento libero dai condizionamenti altrui.
- 8 Sono attento a ciò che le persone pensano di me.
- 9 Non mi lascio influenzare dalle pressioni altrui.
- 10 Mi preoccupo abbastanza dell'idea che gli altri hanno di me.

**Scale "E<sub>1</sub>" Base Emotionality**

- 1 Sono attento a ciò che accade alle persone con cui sono in relazione.
- 2 Mi è difficile nascondere le mie emozioni quando mi relaziono con gli altri.
- 3 Gli altri dicono che sono come un libro aperto.
- 4 Nei contatti con le persone mi commuovo facilmente fino alle lacrime.
- 5 Nelle relazioni con gli altri esprimo me stesso/a soprattutto con le espressioni emotive.

- 6 Mi commuovono i gesti di affetto delle persone con cui sono in contatto.
- 7 Le sofferenze delle persone con cui vengo a contatto mi fanno piangere.
- 8 Esprimo liberamente la mia sofferenza se mi sento ferito/a da qualcuno.
- 9 Nelle relazioni mi faccio prendere dalle emozioni.
- 10 Nelle confidenze con le persone mi vien voglia di piangere.

### ***Scale "E<sub>2</sub>" Expressed Emotionality***

- 1 Manifesto apertamente le mie emozioni.
- 2 Solitamente esprimo agli altri ciò che sento dentro.
- 3 Nei rapporti esprimo liberamente ciò che provo.
- 4 Manifesto senza difficoltà agli altri i miei stati d'animo.
- 5 Nelle relazioni non mi preoccupo di nascondere i miei sentimenti.
- 6 Dico apertamente agli altri le cose senza nascondere i miei limiti.
- 7 Non ho difficoltà ad esprimere tutto il mio affetto agli altri.
- 8 Faccio in modo che gli altri capiscano ciò che provo nei loro confronti.
- 9 Ô per me importante poter esprimere agli altri le mie emozioni.
- 10 Nei contatti con gli altri non mi interessa nascondere le mie emozioni.

### ***Scale "R" Rationality***

- 1 Nel rapporto con gli altri affronto le situazioni in modo razionale.
- 2 Nel contatto con gli altri calcolo ogni situazione con cura per evitare gli imprevisti.
- 3 Ragiono sulle difficoltà che incontro con gli altri.
- 4 Nei rapporti esamino bene le cause di ciò che va storto.
- 5 Gli altri riconoscono che sono preciso e meticoloso.
- 6 Nei rapporti con gli altri, prima di fare una scelta, soppeso i pro e i contro.
- 7 Nei rapporti con gli altri sono uno che si controlla molto.

- 8 Pondero bene le conseguenze che possono avere le mie azioni sugli altri.
- 9 Nei rapporti con gli altri rifletto sulle loro aspettative.
- 10 Riesco a trovare il modo più appropriato di rispondere alle richieste degli altri.

**Relational Answer Questionnaire, Ed. 2011**

- 1 I express myself especially when I act\_\_\_
- 2 I let myself be easily convinced by others\_\_\_
- 3 I find it difficult to hide my emotions from others\_\_\_
- 4 I deal with situations in a rational way\_\_\_
- 5 I prefer concrete actions to ideal projects\_\_\_
- 6 I feel excluded by others\_\_\_
- 7 I carefully plan every situation to avoid difficulties\_\_\_
- 8 My main need is to be logical\_\_\_
- 9 Past experiences are important for avoiding mistakes\_\_\_
- 10 Others say I am like an open book\_\_\_
- 11 I avoid people who are always undecided about what to do\_\_\_
- 12 I feel uncomfortable if I can't act\_\_\_
- 13 I seek the approval of those close to me\_\_\_
- 14 I am keener on concrete actions than subtle reasoning\_\_\_
- 15 I am easily moved to tears\_\_\_
- 16 When I make decisions I carefully consider the consequences\_\_\_
- 17 I reason a lot on the difficulties I encounter\_\_\_
- 18 I believe facts are worth more than words\_\_\_
- 19 I have no time to reflect on what I am experiencing\_\_\_
- 20 I find it difficult to deal with new situations\_\_\_
- 21 In complex situations I find it important to evaluate everything well\_\_\_
- 22 I find myself in unpleasant situations even though I don't want to\_\_\_
- 23 I express myself especially through my emotions\_\_\_
- 24 My intentions are misunderstood\_\_\_

- 25 I feel at ease with people who love reasoning above all\_\_\_
- 26 I deal calmly even with unexpected situations\_\_\_
- 27 I am influenced by people of my own environment (setting)\_\_\_
- 28 I am spontaneous with others\_\_\_
- 29 Signs of affection move me\_\_\_
- 30 When things don't work, my impulse is to act\_\_\_
- 31 I feel I own to others\_\_\_
- 32 I openly express my love to those close to me\_\_\_
- 33 People say I am someone who reasons a lot over things\_\_\_
- 34 I carefully examine the reasons why things do go wrong\_\_\_
- 35 People's suffering makes me cry\_\_\_
- 36 I hate abstract discussions not leading to action\_\_\_
- 37 In relationships with others I tend to repeat the same mistakes\_\_\_
- 38 I feel conditioned by the environment I live in\_\_\_
- 39 In new situations I feel uncertain\_\_\_
- 40 I find it difficult to match my personal needs to those of others\_\_\_
- 41 If I am contradicted I freeze and withdraw\_\_\_
- 42 Even with no clear reason (For no reason) , I get tired of people around me\_\_\_
- 43 I think others are better than me\_\_\_
- 44 Others acknowledge that I am precise and meticulous\_\_\_
- 45 I openly express my pain if I get hurt by others\_\_\_
- 46 Looking on without acting is painful to me\_\_\_
- 47 I feel guilty toward people of my own environment\_\_\_
- 48 I am interested in proposals leading to concrete actions\_\_\_
- 49 Before I make a choice I carefully weigh the pros and cons\_\_\_
- 50 I get carried away by my emotions\_\_\_

**The PANAS SCHEDULE Italian version**

Factor loadings and congruent coefficients of the Italian PANAS with the American loadings (Watson et al., 1988).

PANAS descriptor	State		Variable Congruence	Trait		Variable Congruence
	PA	NA		PA	NA	
Determined (determinato)	<b>.73</b>	.00	.99	<b>.74</b>	-.10	.99
Active (attivo)	<b>.70</b>	-.03	.99	<b>.68</b>	-.06	.99
Interested (interessato)	<b>.55</b>	-.15	.99	<b>.65</b>	-.03	.99
Attentive (attento)	<b>.63</b>	-.16	.97	<b>.65</b>	.02	.97
Enthusiastic (entusiasta)	<b>.70</b>	-.08	.99	<b>.64</b>	-.15	.99
Concentrating (concentrato)	<b>.58</b>	-.19	.99	<b>.61</b>	-.04	.99
Strong (forte)	<b>.58</b>	.03	.99	<b>.60</b>	-.22	.99
Inspired (ispirato)	<b>.66</b>	-.04	.95	<b>.59</b>	.04	.99
Excited (eccitato)	<b>.53</b>	.14	.90	<b>.58</b>	.14	.94
Proud (orgoglioso)	<b>.62</b>	.18	.99	<b>.54</b>	.09	.99
Afraid (impaurito)	-.08	<b>.73</b>	.98	-.06	<b>.75</b>	.99
Upset (turbato)	-.04	<b>.67</b>	.99	-.08	<b>.75</b>	.99
Nervous (nervoso)	-.03	<b>.78</b>	.99	.07	<b>.75</b>	.99
Jittery (agitato)	.06	<b>.80</b>	.99	.03	<b>.75</b>	.99
Scared (spaventato)	-.12	<b>.70</b>	.99	-.07	<b>.73</b>	.99
Distressed (angosciato)	-.05	<b>.69</b>	.99	-.11	<b>.73</b>	.99
Guilty (colpevole)	-.02	<b>.49</b>	.98	-.05	<b>.59</b>	.99
Ashamed (vergozna)	-.02	<b>.47</b>	.99	-.15	<b>.58</b>	.99
Irritable (irritabile)	.02	<b>.62</b>	.96	.09	<b>.56</b>	.92
Hostile (ostile)	-.01	<b>.53</b>	.99	.06	<b>.52</b>	.97
Factor/total congruence	.98	.97	.97	.98	.99	.98

Note. Italian translations are given in parentheses. PA = Positive Affect; NA = Negative Affect. Loadings over .40 are given in boldface.

**Convergent and Construct Validities for Model<sup>15</sup> Intimacy**

References	Participants	Tests <sup>(*)</sup>	Research Questions	Results
Parmigiani, 1983	N = 81 males, & N = 81 females	PAIR & WSS	Convergent validity between PAIR & WSS	Emotional Intimacy: Social Utility $t(160) = 2.37, p = .01$ ; Stress $t(160) = 3.79, p = .001$ Sexual Intimacy: Stress $t(160) = 4.10, p = .001$ Mental Intimacy: Work Variety $t(160) = 2.30, p = .05$ ; Stress $t(160) = 3.65, p = .001$ Recreational Intimacy: Social Utility $t(160) = 2.28, p = .05$ , Economic Satisfaction $t(160) = 3.17, p = .001$
Stevens & L'Abate, 1989	N = 79 undergraduates	SHS, PAIR, IRS, WIQ	Construct and convergent validity	SHS Constructs: N = 42 items for five factors with alpha (A) all significant at $p < .001$ : Private Values, (A = .68, $r = .68$ ); Vulnerability (A = .75, $r = .69$ ), Social Desirability (A = .82, $r = .66$ ); Imperfection (A = .66; $r = .49$ ), Sharing Hurts (A = .81, $r = .68$ ); Conflict Resolution (A = .48, $r = .63$ ). Concurrent validities among SHS, PAIR, IRS were also significant ( $p < .05$ or better), Among the WIQ scales only Affection reached significant ( $p < .0001$ ) correlations with the other three tests
Raveani, 1991	N = 41 nonclinical married couples: (1) $n = 41$ husbands (1); $n = 41$ wives (2)	MIQ	Construct validity	(1) Affirming respective Potentialities: Sharing of hurts $r = .52, p = .001$ (2) Affirming Respective Potentialities: Respecting Each Other's Feelings $r = .36, p = .01$ ; Sharing of Hurts $r = .45, p = .001$
Rossi, 1991	N = 164 nonclinical married couples: $n = 164$ husbands (1); $n = 164$ wives (2)	MIQ	Construct validity	(1) Communicating Personal Values: Accepting Personal Limitations $r = .38, p = .001$ ; Affirming Respective Potentialities $r = .30, p = .01$ ; Sharing of Hurts $r = .37, p = .001$ ; Forgiving of Errors $r = .31, p = .001$ Accepting of Personal Limitations: Affirming Respective Potentialities $r = .48, p = .001$ ; Sharing of Hurts $r = .31, p = .01$ ;

				<p>Forgiving of Errors <math>r = .28, p = .01</math>                  Sharing of Hurts: Forgiving of Errors <math>r = .56, p = .001</math>                  (2) Communicating Personal Values:                  Accepting Personal Limitations <math>r = .27, p = .01</math>; Sharing of Hurts <math>r = .34, p = .001</math>; Forgiving of Errors <math>r = .33, p = .001</math>                  Accepting Personal Limitations: Affirming Respective Potentialities <math>r = .44, p = .001</math>                  Sharing of Hurts: Forgiving of Errors: <math>r = .51, p = .001</math></p>
Salvo, 1998	$N = 126$ fiancés (males & females) (1); $N = 236$ non clinical husband & wives (2)	MJQr, AAQ, IASr	Convergent validity of MJQr & AAQ in (1)	<p>Sadness/Fear: Preoccupied <math>\beta = .49, t(125) = 5.63, p = .001, R^2 = .41</math>; Avoidance <math>\beta = -.22, t(125) = -3.11, p = .01, R^2 = .41</math>; Fearful <math>\beta = .22, t(125) = 2.46, p = .05, R^2 = .41</math>;                  Anger: Fearful <math>R^2 = .06, \beta = .29, t(126) = 2.73, p = .01</math>                  Closeness Pursuit: Preoccupied <math>R^2 = .13, \beta = .36, t(126) = 4.25, p = .001</math></p>
			Convergent validity of IASr & AAQ in (2)	<p>Intimacy Anxiety: Secure <math>r = -.29, p &lt; .001</math>; Preoccupied <math>r = .32, p &lt; .001</math>; Avoidance <math>r = .22, p &lt; .001</math>; Fearful <math>r = .33, p &lt; .001</math></p>
Cusinato, Aceti, & L'Abate, 1997	$N = 36$ married couples	MIQ	Construct validity through intervention	<p>Respect Each Other's Feelings: pre-test &lt; post-test, <math>p &lt; .02</math>                  Sharing of Hurts: pre-test &lt; post-test, <math>p &lt; .05</math>                  Forgiving Errors: pre-test &lt; post-test, <math>p &lt; .09</math></p>
Maino, 2004	$N = 12$ married couples: $n = 6$ experimental married couples (1); $n = 6$ control married couples (2)	MIQ, SCI, OAS	Construct validity through intervention comparing (1) & (2)	<p>Pre-test: Possible Break-up Scale <math>F(1,20) = 4.71, p = .042</math>;                  Communicating Personal Values <math>F(1,20) = 6.62, p = .018</math>;                  Respect Each Other's Feelings <math>F(1,20) = 4.86, p = .039</math>;                  Accepting Personal Limitations <math>F(1,20) = 4.43, p = .036</math>;                  Affirming Respective Potentialities <math>F(1,20) = 8.05, p = .010</math></p>
Maino, 2005	$N = 95$ married	MIQ,	Convergent	<p>SCI: Communicating Personal</p>

couples: $n=15$ couples with children – age 1- 16 – affected by infantile cerebral palsy (1); $n=40$ couples with children – age 1- 16 – affected by malformation syndrome (2); $n=$ 40 couples of healthy children (at least one aged 1-16) (3)	SCI, OAS	validity of QMI & SCI in (1)	Values $R^2 = .48$ , $F(1,28) = 25.30$ , $\beta = .69$ , $p = .001$ Emotional Detachment Scale: Sharing of hurts $R^2 = .25$ , $F(1,28) = 9.55$ , $\beta = -.50$ , $p = .004$ Possible Break-up Scale: Communicating of Personal Values $R^2 = .14$ , $F(1,28) = 4.54$ , $\beta = -.38$ , $p = .042$
		Convergent validity of MIQ & OAS in (1)	OAS: Forgiving Errors $R^2 = .71$ , $F(1,28) = 69.09$ , $\beta = .84$ , $p = .001$ ; Sharing of Hurts $R^2 = .76$ , $F(1,28) = 41.56$ , $\beta = .37$ , $p = .001$
		Convergent validity of MIQ & SCI in (2)	SCI: Affirming Respective Potentialities $R^2 = .40$ , $F(1,78) = 52.98$ , $\beta = .64$ , $p = .001$ Emotional Detachment Scale: Affirming Respective Potentialities $R^2 = .27$ , $F(1,78) = 23.82$ , $\beta = -.52$ , $p = .001$ Possible Break-up Scale: Affirming Respective Potentialities $R^2 = .12$ , $F(1,78) = 10.31$ , $\beta = -.34$ , $p = .002$
		Convergent validity of MIQ & OAS in (2)	OAS: Accepting of Personal Limitations $R^2 = .56$ , $F(1,78) = 99.08$ , $\beta = .75$ , $p = .001$ ; Respecting Personal Feelings $R^2 = .64$ , $F(1,78) = 68.88$ , $\beta = .40$ , $p = .001$ ; Sharing of Hurts $R^2 = .68$ , $F(1,78) = 53.25$ , $\beta = .28$ , $p = .001$
		Convergent validity of MIQ & SCI in (3)	SCI: Communicating Personal Values $R^2 = .14$ , $F(1,78) = 12.43$ , $\beta = .37$ , $p = .001$ Emotional Detachment Scale: Forgiving Errors $R^2 = .13$ , $F(1,78) = 12.01$ , $\beta = -.37$ , $p = .001$
		Convergent validity of MIQ & OAS in (3)	OAS: Communicating Personal Values $R^2 = .12$ , $F(1,78) = 10.18$ , $\beta = .34$ , $p = .002$ ; Sharing of Hurts $R^2 = .17$ , $F(1,78) = 7.66$ , $\beta = -.30$ , $p = .001$ ; Accepting Personal Limitations $R^2 = .23$ , $F(1,78) = 7.35$ , $\beta = .37$ , $p = .001$

*Legenda:* SCI = Stanley's Commitment Inventory; OAS = Optimistic Attitude Scale; MIQ = Marital Intimacy Questionnaire; PAIR = Personal Assessment of Intimacy in Relationships; WSS = Work Satisfaction Scales; AAQ = Adult Attachment Questionnaire; IASr = Intimacy Anxiety Scale, revised; MJQr = Marital Jealousy Questionnaire, revised.