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## Time Perspective, Coping Styles, Perceived Efficacy in Affect Regulation, and Creative Problem Solving in Adolescence and Youth

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### ABSTRACT

The study evaluated, in a sample of 230 adolescents (147 males and 83 females, mean age = 16.67) and a sample of 181 young people (21 males and 160 females, mean age = 22.57), the relationships between time perspective and the following personal skills: coping styles, perceived efficacy on affect regulation, and creative divergent problem solving. Results highlight that future time perspective increases in value from adolescence to youth, while present time perspective decreases. Future time perspective is correlated with creative problem solving and problem solving coping style in both age groups, while present time perspective is positively correlated with expression of positive emotions in both age groups. Results are discussed also for their relevance for school educational and training programs.

### La perspectiva temporal, los estilos de afrontamiento, la eficacia percibida en la regulación de las emociones y la resolución creativa de problemas en la adolescencia y en la juventud

### RESUMEN

El estudio evalúa en un grupo de 230 adolescentes (147 varones y 83 mujeres, media de edad = 16.67) y un grupo de 181 jóvenes (21 varones y 160 mujeres, media de edad = 22.57) las relaciones entre las siguientes habilidades personales: estilos de afrontamiento, eficacia percibida en la regulación de las emociones y resolución creativa de problemas en la adolescencia y la juventud. Los resultados muestran que la perspectiva temporal futura aumenta de la adolescencia a la juventud, mientras la perspectiva presente disminuye. La perspectiva temporal futura está relacionada con la resolución creativa de problemas y con el estilo de afrontamiento de la resolución de problemas en ambos grupos de edad. La perspectiva temporal presente está positivamente relacionada con la expresión de las emociones positivas en ambos grupos de edad. Se discuten los resultados en cuanto a su relevancia para los programas de educación y formación escolar.

Understanding the characteristics of healthy psychological growth in adolescence and youth is a fundamental task for psychological science. Adolescence and youth are two stages of life which have to be faced with crucial "life-tasks" that constitute the premises for adult positive development and well-being (Crocetti & Palmonari, 2011). These life-tasks are becoming nowadays very complex and hard, due to the deep changes that have come about in our post-modern society (Beck, 1992) that is characterized by a growing uncertainty about future and a stable life-career (e.g., job insecurity or precariousness, instable couple relationships). Among those factors that contribute to successful development, planning competencies and agency (the active intervention of individuals in the environment) are assumed to play a central role (Masten et al.,

2004). Time orientation, coping strategies, and social competencies are among the dimensions that define the construct of agency (Masten et al., 2004; O'Connor et al., 2010). Time perspective is a psychological construct that is assuming a growing relevance in the studies on human behaviour. It is considered the result of cognitive and affective individual factors and socio-cultural variables (e.g., groups, values, norms), belonging to a specific historical time (Sircova et al., 2015; Zambianchi & Ricci Bitti, 2012). Referring to the field theory elaborated by Lewin (1943), Zimbardo and Boyd (1999) defined time perspective as "the often nonconscious process whereby the continual flows of personal and social experiences are assigned to temporal categories that help to give order, coherence, and meaning to those events" (p. 1271).

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Time perspective, according to [Zimbardo and Boyd \(1999\)](#), is used in encoding, storing, and recalling experienced events, as well as in forming expectations, goals, contingencies, and imaginative scenarios and exerts a dynamic influence on many important judgments, decisions, and actions. Zimbardo and his colleagues designated five fundamental time dimensions: past-positive (a positive evaluation of the past, perceived as bearing the values and experiences that are associated with happiness); past-negative (which reflects a negative and traumatic view of the past, with not yet elaborated events); present-hedonistic (an orientation toward present enjoyment, pleasure without sacrificing today for rewards tomorrow); present-fatalistic (a belief that the future is predestined and uninfluenced by human actions that leave individuals without hope for managing the present effectively); and future (efforts to plan for achieving future objectives). Another new approach to the psychology of time is represented by the concept of “mental time travel” ([Suddendorf & Corballis, 1997](#)). The theory of mental time travel considers three thinking perspectives, namely those of future thinking, past thinking, and present thinking. [Lieberman and Trope \(1998\)](#) and [Suddendorf and Corballis \(1997\)](#) maintain that having a distant temporal perspective increases creative thinking: according to this theory, individual variation in future thinking manifests itself as speculative thinking, creative problem solving, and the perception of new environmental opportunities. Several studies have demonstrated the influence of time perspective on individual personality variables. [Bandura \(1997\)](#) has established that a high future-time perspective orientation during adolescence and youth is generally associated to a high self-esteem and to a high individual agency. [Malmberg \(2002\)](#) and [Katra \(2002\)](#) emphasized that young people who possess a high future orientation have high success expectations, a strong sense of control over life-events and seek social support to deal with daily stressors. Adolescents who have a positive self-concept and trust their abilities are more internal in their beliefs concerning the future and have a higher level of optimism ([Nurmi, 1989](#); [Trommsdorff, 1994](#)). Several studies have confirmed the role of time perspective in positive functioning and risk behaviours in adolescents and young people: those who are future-oriented are less likely involved in risky behaviours ([Keough, Zimbardo, & Boyd, 1999](#); [Zambianchi, Ricci Bitti, & Gremigni, 2010](#); [Zimbardo, Keough, & Boyd, 1997](#)), while those who are present-oriented are more likely to be involved in several risky activities. Adolescents and young people who are future-oriented show a higher level of psychological well-being than those who are present-oriented ([Worrell, McKay, & Andretta, 2015](#); [Zambianchi & Ricci Bitti, 2012](#)). Present-oriented time perspective is associated with a large social network and with satisfactory friendships ([Holman & Zimbardo, 2009](#)).

A successful transition into adulthood is laid down during prior years, but in our post-modern society it is becoming a difficult and complex task ([Beck, 1992](#)). In order to better navigate this complex and unpredictable society ([Leccardi, 2005](#)), planning skills, the ability to create new and original solutions, and the ability to express inner emotions to deal with fundamental life-tasks (as entering the workforce, leaving home, create satisfying relationships) are individual factors of growing relevance for a positive outcome in this stage of life. This set of individual skills and ability could be influenced by time orientation. The relevance of time perspective orientation to personality characteristics is a theme already examined by research ([Muro et al., 2015](#); [Zimbardo & Boyd, 1999](#)), but few studies have evaluated the relationships between temporal orientation and the presence and utilization of individual strategies and competencies such as affect regulation, creative-divergent problem solving, and coping strategies ([Brannen & Nielsen, 2002](#)). This study has the purpose to explore these relationships. Adolescence and youth are both stages of life where life projects grow in importance: a future-time orientation could be beneficial for realizing these projects. At the same time, emotional

and social competencies could be associated with an emphasis on present time, defined as “enjoyment time” to spend with friends and acquaintances ([Zimbardo & Boyd, 1999](#)).

### **Affective Regulation and Creative Divergent Problem Solving Perceived Self-efficacy**

According to [Bandura \(2001\)](#), individuals are active agents whose capacities for self-regulation allow them a vast degree of control over their experiences and life-course. The notion of agency refers to a human ability to interact constructively with the environment in order to create favourable conditions for development and to influence the outcome of a situation. Among the mechanism of personal agency, one of the most central is people's beliefs about their abilities to exercise control over the events that affect their lives. Self-efficacy beliefs function as an important set of determinants of human motivations, affect, and action. [Caprara et al. \(1999\)](#) and [Caprara, Steca, Gerbino, Padello, and Vecchio \(2006\)](#) have documented the longitudinal and positive relations between self-efficacy and later adolescent's adjustment. [Vecchio, Gerbino, Pastorelli, Del Bove, and Caprara \(2007\)](#) illustrated the role of academic, social, and self-regulatory self-efficacy beliefs in predicting life satisfaction in late adolescence. The common distinction between positive and negative affect and emotions has generated two different constructs: one related to perceived efficacy in regulating negative emotions and the other related to the ability in expressing positive feelings and emotions ([Caprara & Gerbino, 2001](#)). Self-efficacy in expressing positive emotions has been associated with empathy and well-being, while self-efficacy in regulating negative emotions has been negatively correlated to later depression and shyness, both in adolescence and young adulthood ([Caprara et al., 2006](#)).

The capacity to deal effectively with the challenges posed by contemporary post-modern society is related to the possession of complex abilities such as problem solving, critical thinking, and creative thinking. As suggested by [Miles \(2007\)](#), creativity is not simply about the production of a creative end-product, but is tied in with the broader aspects of everyday life, while [Craft \(2003\)](#) refers to “life-wide creativity” and the fact that creativity operates as a “fundamental attribute to enable adaptation and responses in a fast-changing world” (p. 114). Perceived efficacy in problem solving utilising creative, divergent thinking can help the emerging adult and the younger generation as a whole to hypothesize, create, and anticipate future perspectives and to respond to important developmental tasks, such as job search or to proactively participate in the social context ([Zambianchi, 2016](#)).

Future time perspective has been shown to be positively correlated with formal operational thinking ([Daltrey, 1982](#)). Acquiring formal operations during adolescence enables a person to formulate hypotheses and mentally explore many possible courses of action ([Giovannelli & Sansavini, 2007](#)). This ability increases during the stage of emerging adulthood ([Yang, Wan, & Chiou, 2010](#)). We hypothesize that emerging adults possess higher scores on future time perspective than adolescents and that problem-solving coping styles and creative problem solving thinking show a positive correlation with future time perspective. On the contrary, present time perspective was associated in previous studies with positive relations with others and with a large social network ([Holman & Zimbardo, 2009](#)), then we argue that present time perspective could be positively associated with the efficacy in the expression of positive emotions.

### **Coping Styles**

[Lazarus \(1993\)](#) defined coping as the changing cognitive and behavioural efforts to manage psychological stress: in the process-

oriented approach to coping put forth by Folkman and Lazarus (1985), coping is seen as a response to demands in stressful situations. Skinner and Zimmer-Gembeck (2007), and Cicognani (2011) highlighted the role of coping strategies in positive and adaptive outcome in adolescence, defining them as part of a complex adaptive system that include stress, resilience, and competence and that can produce positive overall functioning.

Research on adolescents has emphasized a three-dimensional model of coping: active coping (e.g., seeking social support), internal coping (e.g., planning strategies and try to solve the problem), and withdrawal (e.g., avoid the problem and distraction) (Seiffge-Krenke, 2009). The active and internal coping are considered adaptive ways of coping; in contrast, withdrawal can be adaptive when a situation is perceived by adolescents as not under control but inadequate if used over longer times. Benight et al. (1997) in a study on the relations between coping strategies and positive adjustment found that the use of active coping strategies is associated with high competencies, health, and positive functioning. On the contrary, avoidant coping is associated with fewer competencies and depression (Nolen-Hoeksema, Girgus, & Seligman, 1991). Seiffge-Krenke (2009) points out that little work was done on how changes in cognitive processing, temperament, and ability to regulate emotions influence the adolescent's choice of coping. After the stage of adolescence, young adults have to deal with crucial life-tasks, as entering the work force, leaving home, and creating a new family (Arnett, 2004). The possession of adequate and constructive coping styles can play a crucial role in dealing with these life-tasks. Having a future-oriented time perspective could be associated with a more frequent use of active problem solving coping, since future time perspective is regarded as a cognitive frame for ideas, projects, and scenarios that young generations are devoted to realize. On the contrary, a present-oriented time perspective could favour the avoidance of real questions and problems, a dysfunctional coping style (Blomgreen, Svahn, Astrom, & Ronnlund, 2016).

### Aims and Hypotheses

The general purpose of the study was to assess the relationships between time perspective, coping styles, affect regulation, and creative divergent thinking in a sample of adolescents and another sample of young people. Based on the literature (e.g., Giovanelli & Sansavini, 2007; Holman & Zimbardo, 2009; Ryan, 2009; Zimbardo & Boyd, 1999) we firstly hypothesize that time perspective changes from adolescence to youth due to the cognitive development that takes place. Perceived efficacy in emotion regulation, creative thinking, and coping styles changes also from adolescence to youth.

- Future time perspective was expected to increase from adolescence to youth while present time perspective was expected to decrease from adolescence to youth.
- Perceived efficacy in emotion regulation, problem solving, and social support coping styles was expected to be higher in the young than in the adolescents.
- Future time perspective was expected to be positively correlated with perceived efficacy in creative thinking and problem solving coping styles and negatively correlated with avoidant coping styles.
- Present time perspective was expected to be positively correlated with perceived efficacy in the expression of positive emotions and negatively correlated with perceived efficacy in creative thinking and problem solving coping styles.
- Age was expected to influence the relationships between time perspective and these individual variables. Future time perspective was expected to exert a more influential role in the young than in adolescents in creative thinking, problem solving coping; present time perspective was expected to exert a more detrimental role in youth for avoidant coping styles.

## Method

### Participants

A sample of 230 adolescents (147 males, 83 females, mean age 16.67,  $SD = 0.76$ ), and a sample of 181 young people (21 males and 160 females, mean age = 22.57,  $SD = 5.5$ ) took part in the study. Adolescents were recruited in high schools through the presentation of the research project to the headmaster, teachers, and parents that gave written consent. Adolescents filled in the questionnaires in their classrooms. The compilation took about an hour and did not present any problem. The young-adults were recruited from the University of Bologna, Italy. They filled in the questionnaires during lessons. The compilation took about an hour and did not present any problems.

### Measures

The self-reported measures were the following:

*Zimbardo Time Perspective Inventory* (ZTPI; D'Alessio, Guarino, De Pascalis, & Zimbardo, 2003; Zimbardo & Boyd, 1999). We used a short version with two time dimensions: present (9 items,  $\alpha = .61$ ), that evaluates how much individuals enjoy relationships with friends and act impulsively taking risks (e.g., "I feel that it is more important to enjoy what you are doing than to get work done on time") and future (13 items,  $\alpha = .60$ ), that evaluates how much individuals are able to delay gratifications and to make plans in order to attain more relevant future objectives (e.g., "I believe that a person's day should be planned ahead each morning"), with a score ranging from 1 (*completely false*) to 5 (*completely true*). We chose the short form with only two time dimensions because of the salience of present and future time for the youngest generations.

*Questionnaire on perceived efficacy in affective self-regulation* (APEP-APEN; Caprara & Gerbino, 2001). It is composed by 15 items ( $\alpha = .80$ ) to assess the perceived ability to manage and express enthusiasm and enjoyment (7 items,  $\alpha = .95$ ; e.g., "I can show that I like a person whom I am attracted to") and to regulate negative affect like anger or rejection (8 items,  $\alpha = .76$ ; e.g., "I can remain in stressful situations") with a score ranging from 1 (*not well at all*) to 4 (*very well*).

*Questionnaire on perceived efficacy in creative problem solving* (APSP; Pastorelli, Vecchio & Boda, 2001). This evaluates the ability to generate new and creative solutions to solve problems or to generate new ideas and consists of 14 items ( $\alpha = .75$ ; e.g., "I can identify alternative, positive solutions to deal with problems") with a score ranging from 1 (*not well at all*) to 4 (*very well*).

*Westbrook Coping Scale* (Ravenna & Zani, 1996; Westbrook, 1979). The Italian questionnaire is a shortened version of the original scale, which evaluates the strategies used to deal with not particularly severe problems that we often encounter in everyday life. It consists of 20 items and evaluates four different coping styles: active coping (considers all aspects of a problem and try to solve it,  $\alpha = .71$ ); social support seeking coping (shares concerns with others,  $\alpha = .83$ ); avoidance coping (avoids difficult situations as much as possible and seeks distractions,  $\alpha = .76$ ); emotional coping (expression of negative emotional states and rumination,  $\alpha = .24$ ). This fourth scale (emotional coping) was deleted from our analyses because of its low Cronbach alpha.

### Statistical Analyses

We firstly computed means, standard deviations, skewness, and kurtosis of all measures of the overall sample; then, a MANOVA model tested the influence of age (two age groups: adolescence and youth) on time perspective and the individual variables. Being the variable "expression of positive emotions" almost close to the non-



**Table 1.** Means, Standard Deviations, and Variance of Adolescents, Young People, and Overall Sample

	Adolescents			Young people			Overall sample	
	<i>M</i>	<i>SD</i>	<i>V</i>	<i>M</i>	<i>SD</i>	<i>V</i>	<i>M</i>	<i>SD</i>
Present time perspective	3.08	0.51	0.12	2.66	0.46	0.13	2.89	0.53
Future time perspective	3.13	0.46	0.25	3.36	0.49	0.30	3.23	0.48
Creative problem solving	2.88	0.35	0.28	2.95	0.36	0.22	2.91	0.36
Expression of positive emotions	4.43	0.53	0.83	3.55	0.47	0.97	2.49	0.52
Regulation of negative emotions	2.55	0.50	0.68	2.43	0.54	0.50	3.49	0.51
Problem solving coping style	3.14	0.88	0.48	3.17	0.70	0.32	3.15	0.78
Social support coping style	2.77	0.91	0.26	3.04	0.98	0.21	2.90	0.96
Avoidant coping style	2.47	0.69	0.21	2.09	0.56	0.24	2.30	0.66

normality as shape, the non-parametric Mann-Whitney's *U*-test was performed. A correlational matrix (Pearson's product-moment and Spearman's correlations for expression of positive emotions) evaluated the intercorrelations between time perspective, coping styles, and perceived efficacy (on one side) and creative problem solving and emotion regulation (on the other side). To evaluate the influence of age on the intercorrelations between time perspective and these variables we ran an analysis of covariance with present and future time perspective as independent variables, coping styles, affect regulation, and creative problem solving as the dependent variables, and age as covariate. Analysis of covariance was chosen because it has the purpose to increase the precision of comparisons between groups by accounting to variation on important prognostic variables, the relationships between time perspective dimensions and the individual competencies and strategies included in the study. One of the major hypotheses of the study was indeed that the passage from adolescence to youth is characterised by an increase in value of future time perspective and that those who are more future-oriented show a higher level or use of creative strategies of problem solving and emotion regulation. Age is considered in our study the fundamental categorical variable that interact with the relationship between time perspective and these individual competencies and strategies. All statistical analyses were performed with STATISTICA7.0 (Stat soft. Inc.).

## Results

### Age Differences on Study Variables

Multivariate Analysis of Variance (MANOVA) was performed to determine age differences in the study variables. There was an overall age effect (Wilk's lambda = .74,  $F = 16.92$ ,  $p < .0001$ ). The subsequent analysis of variance (ANOVA) showed that future time perspective increases in value from adolescence to youth ( $F = 24.63$ ,  $p < .001$ ,  $\eta^2 = .09$ , Bonferroni test,  $p < .001$ ), while present time perspective decreases ( $F = 73.13$ ,  $p < .001$ ,  $\eta^2 = .15$ , Bonferroni test,  $p < .001$ ). The perceived efficacy in expression of positive emotions shows a higher score in young people than in adolescents ( $Z = -2.63$ ,  $Z \text{ adj.} = -2.66$ ,  $p < .01$ ). The efficacy in creative problem solving is higher in young people than in adolescents ( $F = 4.77$ ,  $p < .05$ , Bonferroni test,  $p < .05$ ,  $\eta^2 = .01$ ) and the efficacy in regulation of negative emotions shows a higher value in young people than in adolescents ( $F = 4.41$ ,  $p < .05$ , Bonferroni test,  $p < .05$ ,  $\eta^2 = .02$ ). For coping styles, we observe a higher score in social support seeking ( $F = 9.02$ , Bonferroni test,  $p < .01$ ,  $\eta^2 = .02$ ) and a lower score in avoidant coping in young people, compared to adolescents ( $F = 36.81$ ,  $p < .001$ , Bonferroni test,  $p < .001$ ,  $\eta^2 = .08$ ). See [Table 1-3](#) for the overall characteristics of the two samples on the studied variables.

**Table 2.** Skewness and Kurtosis of the Study Variables for Adolescents and Young People

	Adolescents		Young people	
	Skewness	Kurtosis	Skewness	Kurtosis
Present time perspective	-0.11	-.26	0.12	0.43
Future time perspective	-0.12	-.12	-0.04	-0.19
Creative problem solving	-0.11	-.38	0.07	-0.09
Expression of positive emotions	-1.10	-.82	-1.04	0.27
Regulation of negative emotions	-0.21	.25	0.18	-0.09
Problem solving coping style	0.14	-.55	0.03	-0.38
Social support coping style	0.15	-.37	0.13	-0.60
Avoidant coping style	0.30	-.36	0.97	1.58

### Correlational Analysis

The correlational matrix emphasized that future time perspective is positively correlated with creative problem solving and problem solving coping style in both samples. A positive correlation between future time perspective and perceived efficacy, and emotion regulation in adolescence and with social support coping style in the emerging adults is observed. Future time perspective is negatively correlated with avoidant coping style in the emerging adult sample. Present time perspective is positively correlated with efficacy in expression of positive emotions in both samples and with creative thinking in the adolescents. Present time perspective is positively correlated with avoidant coping style in both samples. (See [Table 4](#)).

**Table 3.** Confidence Intervals for the Study Variables

	Adolescents		Young people	
	-95%	+95%	-95%	+95%
Present time perspective	3.01	3.14	2.59	2.72
Future time perspective	3.07	3.19	3.29	3.43
Creative problem solving	2.83	2.93	2.90	3.01
Expression of positive emotions	3.36	3.50	3.48	3.62
Regulation of negative emotions	2.48	2.61	2.35	2.51
Problem solving coping style	3.04	3.25	3.07	3.28
Social support coping style	2.66	2.89	2.90	3.19
Avoidant coping style	2.38	2.56	2.01	2.17

### Covariance Analysis

The analysis of covariance evidenced a significant age-effect in the intercorrelations between future time perspective and regulation of negative emotions ( $MS = 1.37$ ,  $F = 5.09$ ,  $p < .05$ ,  $\eta^2 = .01$ ), expression of positive emotions ( $MS = 1.11$ ,  $F = 4.33$ ,  $p < .05$ ,  $\eta^2 = .02$ ), social support coping ( $MS = 4.95$ ,  $F = 5.59$ ,  $p < .01$ ,  $\eta^2 = .03$ ), avoidant coping ( $MS = 11.42$ ,  $F = 28.64$ ,  $p < .001$ ,  $\eta^2 = .09$ ). A significant age-effect was observed in the intercorrelations between present-time perspective

**Table 4.** Correlations between Time Perspective and the Other Study Variables

	Expression of positive emotions		Regulation of negative emotions		Creative problem solving		Avoidant coping		Social support coping		Problem solving coping	
Present time perspective	.16*	.19**	-.08	.07	.14*	.02	.23**	.19**	.07	-.09	-.11	.12
Future time perspective	.08	.10	.19*	-.09	.26**	.27**	-.04	-.19**	.07	.15*	.32***	.34***

Note. In each column, first number in each row corresponds to Adolescents and second number corresponds to Young people.

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

and creative thinking/problem solving ( $MS = 9.90$ ,  $F = 6.96$ ,  $p < .001$ ,  $\eta^2 = .01$ ), regulation of negative emotions ( $MS = 1.29$ ,  $F = 4.77$ ,  $p < .05$ ,  $\eta^2 = .01$ ), expression of positive emotions ( $MS = 3.79$ ,  $F = 15.17$ ,  $p < .001$ ,  $\eta^2 = .05$ ), social support coping ( $MS = 7.22$ ,  $F = 8.04$ ,  $p < .01$ ,  $\eta^2 = .05$ ), avoidant coping ( $MS = 6.57$ ,  $F = 16.91$ ,  $p < .001$ ,  $\eta^2 = .05$ ).

## Discussion and Conclusions

The study analysed the relationships between time perspective and individual factors as coping styles, affect regulation, and creative problem solving self-efficacy in adolescence and youth. Age differences were also evaluated.

As hypothesized, future time perspective increases from adolescence to youth, while present time perspective decreases in value. Future time perspective has been shown to be correlated positively with formal thinking (Daltrey, 1982), cognitive abilities that increase progressively during adolescence, enabling individuals to formulate hypotheses and mentally explore many possible courses of action. The perceived efficacy in creative thinking increases from adolescence to youth, perhaps due to this cognitive development, as demonstrated in other studies (Yang et al., 2010); the perceived self-efficacy in the expression of positive emotions shows a higher value in young people compared to adolescents, as other research has documented (Ryan, 2009). Avoidant coping style decreases in value in the young, pointing out the usefulness of more developed ways of coping and a higher level of ego maturity in this stage of life, which represents the transition to adulthood (Arnett, 2004).

Present time perspective shows a positive association with perceived efficacy in expression of positive emotions in both stages of life, confirming its promotional role for the development of social ties, as stated previously (Holman & Zimbardo, 2009). The ability to express gratitude, enjoyment, and other positive feelings is related to the construction of satisfactory, long lasting network of friendships and acquaintances (Caprara et al., 2006). The association between present time perspective and emotional disclosure becomes stronger in the young, confirming the relevance of this ability for long lasting relationships, such as dating relation or close friends.

Surprisingly, a present-oriented time perspective is associated with a more perceived self-efficacy in creative thinking and problem solving in adolescence (but not in youth): this result could perhaps be explained by the relevance during adolescence of the proximal life-contexts, as school and peer groups. It may be that adolescents utilize their creative ability to solve daily problems with friends, family, and teachers. On the contrary, present time perspective constitute a risk factor for constructive coping styles in both stages of life: those who are more present-oriented tend to use more frequently avoidant strategies to deal with problems and stressors, a set of coping strategies that have shown to be dysfunctional in the majority of situations (Blomgreen et al., 2016; Seiffge-Krenke, 2009).

The significant and positive relationship between creative problem solving and future time perspective that emerged in our study could be explained by the mental time travel theory (Liberman & Trope, 1998; Suddendorf & Corballis, 1997), which maintains that having a distant temporal perspective increases creative thinking. According to this theory, individual variation in future thinking manifests itself

as speculative thinking, creative problem solving, the perception of new environmental opportunities, dimensions of functioning that our study confirms; those adolescents and young people who have a future-oriented time perspective tend to utilize a more creative approach to problem solving and task-oriented coping strategies.

An unexpected result is the positive correlation between present time perspective and social support coping in the young. The covariance analysis highlighted a strong influence of age groups on it. Some crucial objectives during transition from adolescence to adulthood are seeking social support in order to share concerns, acquire new information, and create new relationships as the Socioemotional Selectivity Theory maintains (Carstensen, Isaacowitz, & Charles, 1999). Having a future-centred time perspective facilitates the construction of relationships through which young-adults can receive information and collaboration for work, family, and others life questions (Lang & Carstensen, 2002). During adolescence, there is not an equal urgency to acquire a social network that can help to navigate the complex challenges of society, as entering the workforce or creating intimate relationships: in this stage of life a “present-oriented” sociability and companionship are prevalent.

The study has several, important limits. First, it is a cross-sectional study, so it is not possible to make inferences about the evolution of time perspective and the individual constructs here evaluated. A prospective study is requested. Then, a second categorical variable, gender, was not evaluated because the two samples were unbalanced in respect to it. It may be that gender influences the relationships between time perspective and the other variables evaluated. Despite these limits, the study confirms the significant role of time perspective for positive development of adolescents and young people.

Future-oriented time perspective could be seen as a promotional factor for the development of creative and strategic skills, especially in the stage of youth, a phase of life where there is a strong emphasis on life-projects and realization of talents and potentials. Being future-oriented helps to visualize future scenarios for realizing them (Zambianchi, 2015; Zambianchi & Ricci Bitti, 2012).

A present-oriented time perspective, on the contrary, constitutes a risk-factor for the development of strategic planning skills, but a promoting factor for expressive competencies, a set of skills that foster long-lasting and intimate relationships, as another research has shown (Holman & Zimbardo, 2009; Molinari, Speltini, Passini, & Carelli, 2015). Both types of competencies are nowadays requested to deal successfully with the challenges posited by post-modern society to the youngest generations. Institutions such as school can of course play a crucial role in improving these skills during adolescence, and training programs can help the youth in acquiring them also for job employment and team work efficacy (Zambianchi, 2015). For time perspective, a promising area of investigation with potential implications for training programs is represented by the construct of Balanced Time Perspective (Boniwell & Zimbardo 2005; Wiberg, Sircova, Wiberg, & Carelli, 2012), that corresponds to the ability to switch the time focus, tuning it in accordance to the specific situation and environment (e.g., leisure time with friends or planning for work). Helping people to be more able in this “temporal tuning” could be beneficial for their positive and effective functioning in the different life domains.

## Conflict of Interest

The author of this article declares no conflict of interest.

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