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Coping Strategies and Perceived Support in Adolescents and Young Adults: Predictive Model of Self-Reported Cognitive and Mood Problems

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Abstract

The aims of this study were: to assess cognitive and mood problems, perceived social support and coping strategies in adolescence and early adulthood; to understand how coping strategies are related to age, gender and years of schooling; to identify possible stable and modifiable predictors of cognitive and mood problems adopting LISREL software. The participants were 517 adolescents and young adults (age $M = 18.95$ years, $SD = 3.2$, range: 14 - 25); 59% were female and with a mean of 13.10 years of schooling ($SD = 2.7$). Participants were enrolled in secondary schools, association groups or university in Veneto, Italy. They completed a battery of self-report questionnaires via a secure online site or in paper versions. The LISREL model was psychometrically solid and showed good fit ($\chi^2 = 15.96$, $df = 12$, $p = 0.19$, RMSEA = 0.025), explaining 26% of the variance and showing how the stable factor gender and some modifiable factors, namely certain coping strategies and friends' support, predicted cognitive and mood problems.

Keywords

Coping Strategies, Adolescents, Young Adults, Cognitive Problems, Mood Problems, Path-Analysis

1. Introduction

Adolescence and young adulthood are periods of transition in which boys and girls face many new challenges that influence their perception of everyday problems. The way adolescents and young adults deal with their developmental challenges influences their cognition and mood. Adolescents who successfully overcome their developmental chal-

lenges experience a sense of satisfaction, joy and an increase in self-confidence; those who are less successful feel sadness, distrust and suffer a decrease in self-esteem (Vianello, 2003).

Olbrich (1990) noted that adolescence can be considered a period of coping with and adapting to change. Teenagers have to invest a lot in building their own identity and tackling developmental tasks in order to adapt successfully and avoid crises. Improving their coping skills enables adolescents to perceive and react to stressors in ways that yield positive outcomes.

Although there are many definitions of coping and theoretical approaches to it, it can be defined in broad terms as a cognitive or behavioral attempt to manage situations that are perceived as stressful. Lazarus and Folkman (1984) distinguished two primary categories of coping: emotion-focused and problem-focused; these represent, respectively, attempts to alleviate the personal emotional stress induced by a stressors or attempts to alter the environment to eliminate or reduce source of stress. Emotion-focused coping includes self-preoccupation, fantasy and other conscious activities related to affect regulation, for example social support for emotional reasons and positive reappraisal. Problem-focused coping encompasses attempts to solve, reconceive, or minimize the effects of a stressful situation, for example instrumental social support and plan-based problem-solving.

1.1. Strategies for Coping with Everyday Cognitive and Mood Problems: Social Support, Coping and Socio-Demographic Situation

Adolescence is a time when social relations undergo a change: young people gradually move away from the protection of their family and look more to their peers for support and companionship. This is also the period when romantic relationships begin. Poor interpersonal relationships in adolescence and perceived lack of social support are associated with a perception of poor psychosocial wellbeing and poor quality of daily life and with high risk of developing anxiety and depression (Nilsen et al., 2012; O'Shea et al., 2014).

Possible predictive factors of a worse psychological well-being in adolescents could be: lower satisfaction with their relationships with friends and with their needs covered (Navarro et al., 2015), lower social well-being, attention problems, conduct problems and poor academic performance reported by teachers (Sijtsema et al., 2014), socioeconomic disadvantage (Wight et al., 2006).

Perceived social support from family and peers is also associated with use of positive coping strategies based on the seeking help and advice from other people. In particular, family support is positively correlated with use of problem-solving strategies such as discussion and sharing of problems, searching for information and addressing the problem with the person concerned (Cicognani, 2011). Social support is negatively correlated with maladaptive strategies such as surrender, catastrophizing, ignoring the problem and abuse of substances such as alcohol and drugs (Seiffge-Krenke, 2011). Friends' support is positively correlated with asking for help when necessary. Being

aware that help is available can discourage children from using dysfunctional coping strategies (Cicognani, 2011).

Numerous studies have investigated gender and age differences in the use of coping strategies; however, the findings are not clear when it comes to adolescents and young adults. A review of the most recent studies of the coping strategies used by teenagers and young adults concluded that the most common strategies were problem solving, seeking support inside or outside the family, thinking about the positive aspects of situations and seeking solace in religion (Seiffge-Krenke, 2011). Many studies have shown that girls are more likely to seek the support of family and friends in solving problems whereas boys are more likely to use more action strategies, such as engaging in physical activities or other recreational activities (Frydenberg & Lewis, 1991). More girls than boys use strategies such as discussing problems with parents; asking friends or others for help; thinking about the problem and the solution; accepting that there will always be problems; venting their aggression, anger and despair; withdrawing from situations perceived as unchangeable (Cicognani, 2011) and enjoying distractions (Casas et al., 2007). The boys preferred the use of control strategies focusing on materialistic values and competencies, while girls were more focused on the interpersonal relationship values (Casas et al., 2007). Female adolescents were shown to use maladaptive coping styles more frequently than male adolescents (Hampel & Petermann, 2005; Al-Bahrani et al., 2013).

As we could see, these conflicting findings on girls positive and negative coping strategies adoption highlight a gap in the literature. In what measure girls adopted functional or dysfunctional strategies and which factors could contribute to their utilizations?

What about their reported cognitive and mood problems? With this study we tried to clarify this point. At this purpose, Health Behaviour in School-aged Children Study was a project to collect data every four years on the well-being and health behaviour of Italian boys and girls aged 11, 13 and 15 (HBSC Study-2010) (Lazzeri et al., 2013). In this National project, girls and young women reported more cognitive problems due to their greater lability of mood.

Coping strategies change and mature across the lifespan owing to changes in cognitive, social and behavioral skills and the emergence of different stressors (Frydenberg, 1997). Unfortunately, the results of research on age-related changes in coping are ambiguous. Some studies stressed that the maladaptive strategies increased (i.e. Hampel & Petermann, 2005), while other studies underscored the adoption of more sophisticated strategies (i.e. Al-Bahrani et al., 2013). Probably these differences can be due to the fact the ages of the samples are not homogeneous. Hampel & Petermann (2005) found an increase in the use of resignation, rumination, self-criticism and aggression, with increasing age in children and adolescents between 8 and 14. In the study of Al-Bahrani et al. (2013), the use of adaptive or maladaptive coping styles in adolescents with a mean age of 15.75 (SD = 2.08) increased with age. As the number and complexity of stressful events with which one is required to cope increases, coping strategies also im-

prove. In particular, there is an increase in use of strategies to reduce tension, such as the use of alcohol and drugs and the use of formal thought (because abstract processing and cognitive skills improve). However, there are no changes in the use of problem solving, research, social support or in ability to give instructions on how to solve the problem: these strategies are acquired in childhood and use of them remains stable over time.

Adolescents with a mean age of 15 years old use active coping strategies most frequently, followed by thinking about possible solutions; dysfunctional coping strategies are used much less often (Seiffge-Krenke et al., 2011). The tendency not to worry about problems decreases with age in an Italian sample of 14 - 19 years old adolescents, while the ability to reflect and find solutions or compromise increases, especially after the age of fifteen (Cicognani, 2011). In the study of Casas et al. (2007) on adolescents aged 12 - 16 years old, the younger ones score higher on measures of materialistic values, whereas older ones place more value on interpersonal relationships.

1.2. Aims and Predictions

The first aim was to describe self-reported cognitive and mood problems, use of coping strategies and perceptions of social support in adolescents and young adults living in Veneto, Italy. The second aim was to show how these coping strategies are related to age, gender and years of schooling. The third aim was to identify stable (socio-demographic) and modifiable (coping, social support) predictors of self-reported cognitive and mood problems in adolescents testing a path-analysis model adopting LISREL software.

Dealing with stable predictors we presumed that gender, current age and years of schooling could impact on coping strategies and on cognitive and mood problems.

We predicted that girls would make greater use of strategies that depended on seeking emotional support and help significant others than boys (Lazarus & Folkman, 1984; Cicognani, 2011; Frydenberg & Lewis, 1991) and that they would report better friendships and romantic relationships (Nilsen et al., 2013; Kenny et al., 2013). Boys are thought to use more action and control strategies, such as increased use of substances (Hampel & Petermann, 2005; Seiffge-Krenke, 1995). We wanted also to understand in what measure girls adopted functional or dysfunctional strategies and which factors could contribute to their use. We predicted also that girls and young women would report more cognitive problems in their everyday functioning due to their greater lability of mood (HBSC Study-2010) (Lazzeri et al., 2013), while males would declare less ones (Al-Bahrani et al., 2013).

We wanted to understand if the propensity to use maladaptive strategies would increase or decrease with increasing age, basing on the contrasting results in the literature. Whilst, we predicted that increasing age the use of strategies linked to the ability cognitively to restructure the problem or to capacity for self-reflection would increase (Cicognani, 2011).

Possible modifiable predictors that we presumed will impact on less reported cogni-

tive and mood problems were the good perceived social support, specifically from friends. At this purpose, we presumed that there would be a progressive shift from relationships with parents to relationship with peers and sexual partners (Kenny et al., 2013).

We predicted that a good social support (Cicognani, 2011; Noor & Alwi, 2013) and use of adaptive coping strategies (Al-Bahrani et al., 2013) would protect against mood and cognitive problems, with a perceived general well-being.

To the best of our knowledge this is the first study to explore self-reported cognitive and mood problems in adolescents and young adults and thus addresses a gap in the field of coping strategies and well-being in adolescence.

2. Methods

2.1. Participants

The participants were 517 adolescents and young adults with a mean age of 18.95 years ($SD = 3.2$, range: 14 - 25 years), 59% female, mostly single (60%). The mean number of years of schooling for the sample was 13.10 ($SD = 2.7$, range: 8 - 18 years), most (88%) perceived the economic situation of their parents to be medium-high and young adult workers made up about 18% of the sample. We contacted a total of 631 adolescents and young adults, 114 declined, so that the response rate was 82%. **Table 1** shows socio-demographic information for the participants. We didn't find any difference in socio-demographic variables between those who participated and those who did not.

2.2. Procedure

Data collection took place between 2010 and 2013 following the ethics panel of Padua University Research. Younger participants (14 - 18 years-olds) were recruited from secondary schools and youth groups (Recreational Catholic Association; Scouts) in Veneto, specifically in the cities of Verona, Jesolo (Venice) and Padua. Adolescents with no history of life-threatening or chronic illness or injury (e.g., diabetes, severe asthma, cancer), and no learning or sensory problems or other pathology were asked to participate to this study. Older participants (aged 19 - 25 years) were recruited from the university faculties of Padua.

In the secondary schools we sought approval from school coordinators and the head-teacher before presenting the project, entitled 'Psycho-social wellbeing in adolescents and young adults' to students and their families. The consent form was signed by parents at home and given back to the researchers. The questionnaires were completed on paper and returned in stamped addressed envelopes or completed electronically at a secure online site during the following two weeks.

2.3. Instruments

2.3.1. Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1990)

Social support was measured using the MSPSS (Zimet et al., 1990) which consists of 12

Table 1. Socio-demographic characteristics of the participants.

		Frequencies	%	Mean	SD
Gender	Male	212	41.0		
	Female	305	59.0		
	Total	517	100		
Current age	14 - 17.9 years old	285	39.7	18.95	3.2
	18 - 22 years old	102	35.2		
	22.01 - 25 years old	130	25.1		
	Total	517	100		
Education	8 years of schooling	270	52.2	13.10	2.7
	13 years of schooling	169	32.7		
	16 years of schooling	46	8.9		
	18 years of schooling	32	6.2		
	Total	517	100		
N° of siblings	No sibling	141	27.3		
	1 sibling	279	54.0		
	≥2 siblings	97	18.7		
	Total	517	100		
Employment N = 92	Looking for a job	25	27.2		
	Part time	40	43.5		
	Full time	27	29.3		
	Total	92	100		
Job hours/weekly N = 75	≥50	2	2.7		
	40 - 49	18	24.0		
	30 - 39	10	13.3		
	20 - 29	9	12		
	10 - 19	13	17.3		
	0 - 9	23	30.7		
	Total	75	100		
Romantic relationship	Engaged	195	37.7		
	Single	310	60		
	Not reported	12	2.3		
	Total	517	100		
Economic situation perceived	Low	59	11.4		
	Medium	201	38.9		
	High	254	49.1		
	Not reported	3	0.6		
	Total	517	100		
Home situation	Rent home	28	5.4		
	Home ownership with mortgage	124	24		
	Home ownership without mortgage	336	65		
	Other	27	5.2		
	Not reported	2	0.4		
Total	517	100			
Mother's age				50.19	4.99
Father's age				52.94	5.53
North-East city	Jesolo	101	19.5		
	Padua	303	58.6		
	Verona	113	21.9		
	Total	517	100		

items that measure instrumental and emotional social support provided by family, friends and a significant other. Responses are given using a seven-point Likert scale ranging from 1 (not at all) to 7 (very much). A score of 12 denotes low social support and a score of 84 a high level of social support. Participants were asked to indicate the amount of social support they received. The authors of the scale reported that it has good reliability (Cronbach's alpha: 0.85 - 0.95) and test-retest reliability of $r = 0.85$. The questionnaire was also found to have construct validity, as determined by factor analysis in two separate studies (Bruwer et al., 2008; Clara et al., 2003) and content validity (Zimet et al., 1990). Internal consistency in our sample was 0.91 for the total score, 0.92 for significant other, 0.85 for friends and 0.90 for family.

2.3.2. Problems Scale (Derived from the CCSS Battery, <https://ccss.stjude.org/tools-and-documents/questionnaires.html>)

The Problems Scale was used to assess cognitive and mood problems. It is a 25-item, self-report questionnaire and was used recently in other Italian studies (Tremolada et al., 2012; Tremolada et al., 2013). Respondents are asked to report the impact of certain cognitive and mood problems on their functioning over the last 2 weeks using a three-point Likert scale ranging from 1 (never a problem) to 3 (often a problem). Five scales were identified: Memory (5 items; alpha = 0.78); Mental Disorganization (8 items; alpha = 0.82); Labile Mood (3 items; alpha = 0.75); Impulsivity (4 items, alpha = 0.73); Concentration (5 items; alpha = 0.67) (Tremolada et al., 2013). The Problems Scale is derived from the Childhood Cancer Survivor Study battery and its wider purpose is to assess the frequency of cognitive and mood problems. We assessed the internal coherence of these scales in our sample and these results are shown in **Table 2**.

2.3.3. The Brief COPE (Carver, 1997)

It was used to assess coping. This is a brief measure of coping that assesses several responses known to be related to effective and ineffective coping. It is a shorter form of a previously published measure called the COPE inventory (Carver et al., 1989) which has proved useful in health-related research.

Respondents are asked to indicate what they generally do and feel when they experience particular stressful events using a four-point Likert scale ranging from 1 (I haven't been doing this at all) to 4 (I've been doing this a lot) when they are.

The Brief COPE consists of 14 scales, each of which assesses the degree to which a respondent utilizes a specific coping strategy. The internal coherence of these scales in

Table 2. Alpha coefficients and descriptive frequencies of problem global scale and subscales.

Problem Scales	N item	Alpha	Mean	SD	Confidence Interval
Global cognitive and mood problems	25	0.85	1.57	0.31	0 - 2.52
Memory	5	0.67	1.47	0.43	0 - 3
Mental disorganization	8	0.68	1.56	0.37	0 - 2.88
Labile mood and Impulsivity	7	0.70	1.66	0.40	0 - 3
Concentration	5	0.61	1.55	0.41	0 - 3

our sample was as follows: active coping ($\alpha = 0.72$); planning ($\alpha = 0.70$); positive re-framing ($\alpha = 0.70$); acceptance ($\alpha = 0.59$); humor ($\alpha = 0.88$); religion ($\alpha = 0.91$); using emotional support ($\alpha = 0.85$); using instrumental support ($\alpha = 0.89$); self-distraction ($\alpha = 0.54$); denial ($\alpha = 0.70$); venting ($\alpha = 0.70$); substance use ($\alpha = 0.90$); behavioral dis-engagement ($\alpha = 0.74$); self-blame ($\alpha = 0.76$). All the scales comprise two items; total scores for each scale thus range from 2 (minimum) to 8 (maximum). Higher scores indicate greater use of the coping strategy concerned.

Total scale scores are calculated by summing the contributing items. None of the items are reverse scored. There is no overall score, only scale scores. Several studies (Monzania et al., 2015) have collapsed the coping scales into various broader categories of coping style (i.e. maladaptive vs. adaptive coping styles, or problem-focused vs. emotion-focused coping styles); however the test developers have not specified rules for doing this and leave this to the user's discretion.

2.4. Statistical Analysis

We used descriptive statistics to assess all the scores derived from the questionnaires after assessing internal coherence. We ran preliminary Pearson correlations to investigate the associations between demographic variables and global cognitive and mood problems score, coping strategies and perceived support. The cognitive and mood problems was considered as a global scale where all the problems of adolescents and young people were reported. There was no significant difference in the self-reporting frequencies of cognitive and mood problems so we decided to consider them in a global dimension. ANCOVA models were calculated to assess how the fixed factors, namely gender and age (three groups: 14 - 17.9 years old; 18 - 21.9 years; 22 - 25 years), together with the covariate, years of schooling, influenced the use of the different coping strategies. We preferred to use ANCOVAs and not Hierarchical Regression Analyses because the independent variables gender and age were categorical. The three age groups were splitted following the schooling level they were attending in Italy, respectively second level of secondary school (14 - 17.9 years old), first level degree (18 - 21.9 years) and second level degree (22 - 25 years). Variables which correlation analysis suggested strongly association were included in the multivariable model which was calculated using LISREL software according to the maximum-likelihood (ML) method with the significance level set at $p < 0.05$. We must emphasize that using LISREL we tested the saturated model which included all of the relationships between investigated variables.

3. Results

3.1. Perceived Social Support, Cognitive and Mood Problems and Coping Strategies

The descriptive statistics on cognitive and mood problems are shown in **Table 2**. We contacted a total of 631 adolescents and young adults, 114 declined, so that the valid response rate was 82%. Labile mood and impulsivity were the most frequently reported problems, followed by mental disorganization and concentration and, finally, memory

problems.

Adolescents' and young adults' reported average levels of global perceived social support ($M = 3.60$; $SD = 0.64$; range: 0 - 5). They reported receiving most support from a significant other ($M = 3.70$; $SD = 1.09$; $CI = 0 - 5$), followed by family ($M = 3.60$; $SD = 0.84$; $CI = 0 - 5$) and then friends ($M = 3.50$; $SD = 0.91$; $CI = 0 - 5$). The relationship with a significant other (best friend or romantic partner) emerged as the best source of support although the family was also recognized as an important source of support.

In descending order of frequency, the adaptive coping strategies used by adolescents and young adults were as follows: active coping ($M = 2.03$; $SD = 0.62$; $CI = 0-3$), planning ($M = 2.02$; $SD = 0.63$; $CI = 0 - 3$), instrumental support ($M = 1.80$; $SD = 0.82$; $CI = 0 - 3$), emotional support ($M = 1.76$; $SD = 0.81$; $CI = 0 - 3$), positive reframing ($M = 1.49$; $SD = 0.71$; $CI = 0 - 3$), humor ($M = 1.17$; $SD = 0.86$; $CI = 0 - 3$), acceptance ($M = 1.10$; $SD = 0.59$; $CI = 0 - 3$) and religion ($M = 0.61$; $SD = 0.83$; $CI = 0 - 3$).

Reported use of maladaptive coping strategies was as follows: venting ($M = 1.56$; $SD = 0.83$; $CI = 0 - 3$), self-distraction ($M = 1.37$; $SD = 0.68$; $CI = 0 - 3$), self-blame ($M = 1.36$; $SD = 0.79$; $CI = 0 - 3$), denial ($M = 0.71$; $SD = 0.74$; $CI = 0 - 3$), behavioral disengagement ($M = 0.51$; $SD = 0.64$; $CI = 0 - 5.5$) and substance use ($M = 0.34$; $SD = 0.66$; $CI = 0 - 3$).

3.2. Coping Strategies by Age, Gender and Years of Schooling

Table 3 presents the results of ANCOVA, showing how coping strategies were related to age, gender and years of schooling.

Venting, religion and emotional and instrumental support were mostly used by girls and young women, whereas humor was mostly used by boys and young men. In both adolescents and young adults having completed more years of schooling was associated with greater use of venting, behavioral disengagement, active coping and planning. Self-distraction and humor were used more frequently by young adults than adolescents, who instead made more use of active coping.

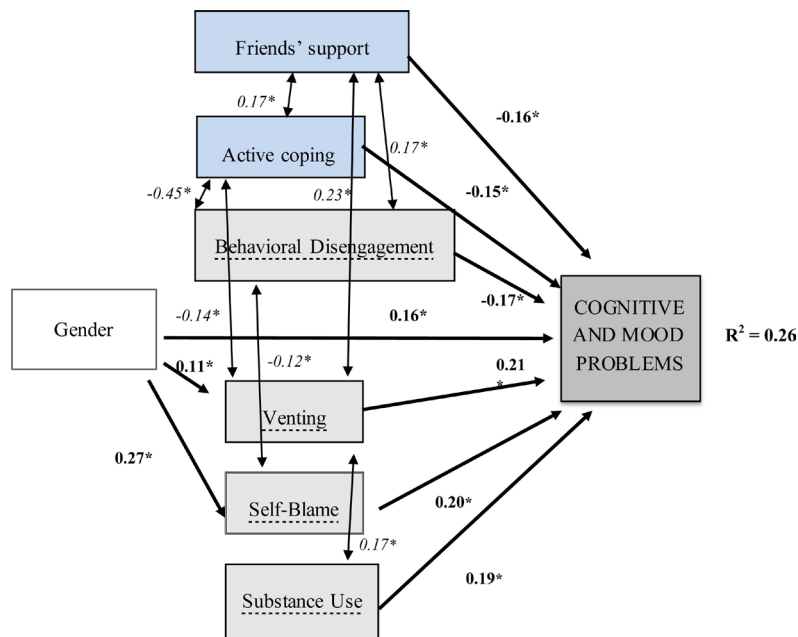
3.3. LISREL Model Predicting Cognitive and Mood Problems

Based on the results of the ANCOVA and Pearson's correlation analyses and information obtained from the most recent literature we defined a hypothetical model for confirmatory path analysis in which the direct and indirect effects of the main predictors of cognitive and mood problems were assessed simultaneously. Years of schooling was preliminarily inserted in the model but it didn't obtain a significative correlation and fit values, so it was erased. Also significant other support was not included in the model, even if participants reported a higher significant frequency of it, because the friend's support showed more significative association and it was preferred. This model of the relationships between investigated variables was based on the preliminary statistical analyses and was confirmed using LISREL; it is shown in **Figure 1**.

We must emphasize that using LISREL we tested the saturated model which included all of the relationships between investigated variables. In accordance with our hypo-

Table 3. Ancova analyses to identify socio-demographic factors predicting coping strategies adopted.

DV: Coping strategy scale	N	Source	df	F	P value	η_p^2	B	Estimated marginal means (Confidence interval 95%)		
Self-distraction	517	Age groups	2	3.13	0.04	0.012	0.60	14-17.9 ys old 1.22 (1.07-1.36)	18-21.9 ys old 1.46 (1.36-1.56)	22-25 ys old 1.50 (1.31-1.69)
Venting	517	Gender	2	5.17	0.02	0.010	0.62	Female 1.63 (1.53-1.73)	Male 1.46 (1.34-1.57)	
		Schooling years	1	5.16	0.02	0.010	0.62	Mean of covariate Schooling years = 13.10		
Using instrumental support	517	Gender	1	18.94	0.0001	0.036	0.99	Female 1.92 (1.83-2.02)	Male 1.61 (1.50-1.72)	
Active coping	517	Age groups	2	3.04	0.04	0.012	0.58	14-17.9 ys old 2.18 (2.05-2.32)	18-21.9 ys old 2 (1.90-2.09)	22-25 ys old 1.85 (1.68-2.02)
		Schooling years	1	9.79	0.002	0.019	0.87	Mean of covariate Schooling years = 13.10		
Planning	517	Schooling years	1	10.68	0.001	0.021	0.90	Mean of covariate Schooling years = 13.10		
Religion	517	Gender	1	9.34	0.002	0.018	0.86	Female 1.93 (1.83-2.02)	Male 1.61 (1.50-1.72)	
		Age groups	2	9.06	0.0001	0.026	0.97	14-17.9 ys old 0.91 (0.73-1.09)	18-21.9 ys old 1.40 (1.27-1.52)	22-25 ys old 1.37 (1.14-1.60)
Humor	517	Gender	1	13.3	0.0001	0.035	0.95	Female 1.09 (0.99-1.19)	Male 1.36 (1.25-1.48)	
		Schooling years	1	4.03	0.04	0.008	0.52	Mean of covariate Schooling years = 13.10		
Using emotional support	517	Gender	1	37.25	0.0001	0.068	1	Female 1.94 (1.85-2.03)	Male 1.51 (1.40-1.62)	



Legend: White box: independent stable factor; Blue boxes: Moderator modifiable positive factors; Light grey boxes: Moderator modifiable negative factors; Dark grey box: Dependent factor. Double arrow: correlations; One direction arrow: beta factors.

Figure 1. LISREL path model: standardized solution; $\chi^2 = 15.96$, $df = 12$, p -value = 0.19, RMSEA = 0.025) (* $p < 0.05$).

theses the model represented in **Figure 1** turned out to be significant. This model was psychometrically solid, displaying a good fit to the data ($\chi^2 = 15.96$, $df = 12$, p -value = 0.19, $RMSEA = 0.025$, $NNFI = 0.98$; $CFI = 0.99$). It showed that the stable factor gender and the modifiable factors coping strategies (active coping; behavioral disengagement; venting; self-blame; substance use) and friends' support predicted cognitive and mood problems. Specifically, the females adopted more venting and self-blame coping strategies and they reported more cognitive and mood problems than males. Maladaptive coping strategies (such as venting, self-blame and substance abuse) increased significantly the reported cognitive and mood problems, while active coping, behavioral disengagement and friends' support dampened them. The age didn't emerge in the model as significant variable.

Overall the model accounted for 26% of the variance in cognitive and mood problems ($R^2 = 0.26$).

4. Discussion

The studies that focused on adolescents' and young adults' cognitive and mood problems and the possible best predictors were exclusively related to the wellbeing topic and they were rather fragmentary. The aim of this study was to identify stable and modifiable factors that predict good functioning in terms of cognition and mood during this important life period.

Studies that described self-reported cognitive and mood problems are rare, so the aim is to understand the distribution of these maladaptive functioning for the first time in an Italian sample.

The existing studies identified gender (Lazzeri et al., 2013; Al-Bahrani et al., 2013) and age (Seiffge-Krenke et al., 2011) as stable factors associated with adoption of different coping strategies that could influence psychological well-being. However, the results of research on age-related changes in coping are ambiguous. Some studies stressed that the maladaptive strategies increased (i.e. Hampel & Petermann 2005), while other studies underscored the adoption of more sophisticated strategies (i.e. Al-Bahrani et al., 2013). In the studies of gender differences, it was not clear in what measure girls adopted functional or dysfunctional strategies and which factors could contribute to their use.

Also perceived social support could be considered as a modifiable factor impacting significantly on psychological well-being in adolescents and young adults (Cicognani, 2011; Noor & Alwi, 2013), so we presumed that it could be a key element to improve their functioning.

The main findings of this study underscored that overall self-reported cognitive and mood problems were at a low level, with labile mood and impulsivity as the most frequently reported problems. Females resulted more at risk in indicating these cognitive and mood problems, probably also because they also used more maladaptive coping strategies such as venting and self-blame. Girls and young women made more use of instrumental and emotional support than boys and young men, as others have reported (Nilsen et al., 2013; Cicognani, 2011). Another important finding was that adolescents

and young adults perceived that they had good social support, particularly from their significant other (best friend or romantic partner), which confirms that in this life period peers assume an important role in people's general functioning (Kenny et al., 2013).

The preferred adaptive coping strategies were cognitive (active coping and planning), followed by emotion-focused ones such as using instrumental support and emotional support.

Maladaptive coping strategies such as venting and self-blame were also used frequently; previous research suggested that these strategies are used more frequently by girls and young women (Hampel & Petermann, 2005; Al-Bahrani et al., 2013). Our study confirmed these gender differences, but also it identified higher years of schooling as a predictor of their use.

Humor was used more by boys and young men. Self-distraction was used more by young adults (22 - 25 years old) than by adolescents. Perhaps this is a strategy influenced by the cognitive ability to restructure the or by the self-reflection competency and both these capacities increase with age (Cicognani, 2011). Active coping was used most by adolescents aged 14 - 17.9 years old with more schooling years (Seiffge-Krenke et al., 2010).

As expected, girls and young women reported more cognitive problems also influenced by their recognized characteristic of labile mood (HBSC Study-2010, Lazzeri et al., 2013). Other modifiable negative predictors of cognitive and mood problems were perceived support from friends, which has recently been recognized as an important predictor of general wellbeing in adolescence (Nilsen et al., 2013), and active coping (Seiffge-Krenke et al., 2010). The positive predictors of cognitive and mood problems were the following maladaptive coping strategies: behavioral disengagement, venting, self-blame and substance use. An unexpected proposed negative coping factor such as behavioral disengagement predicted fewer problems. Probably, this coping strategy could be functional if the young don't exceed in its use, but use it ad hoc together with the other positive coping strategies.

The important contribution of this study is that it built and tested a model of stable and modifiable predictors of problems in adolescents and young adults which covered a comprehensive set of possible predictors. Assessing social support and/or coping strategies in adolescents and young adults could indicate whether or not youth have cognitive or mood problems, especially taking into consideration also that females are more at risk and that some specific coping strategies could be used depending on the age.

It can therefore be used as the basis for clinical screening to identify individuals with poor cognitive functioning and potential mood problems. It may be useful to teach the most effective coping strategies to adolescents and their parents to improve their short- and long-term psycho-social wellbeing. Another possible approach to clinical intervention would be to assess the level of social support available to adolescents and attempt to increase this if it appears low.

The limitations of this study include the fact that the sample was drawn exclusively

from the population of the Veneto region and so the findings may not be generalizable. The findings should be replicated in other Italian regions. In future research on coping in adolescents it might be useful to use longitudinal designs or multi-method approaches; it would also be interesting to take into account personality factors, attachment style, psychological wellbeing and quality of life.

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