

## **FUTURE-ORIENTED COPING: GENDER AND ADOLESCENT STAGE AS MODULATORS OF ITS USE, DISPOSITIONAL PROFILE AND RELATIONSHIP WITH EMOTIONAL ADJUSTMENT OUTCOMES**

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### **Abstract**

The aim of this study was to examine possible differences by sex and stage of adolescence in the use of proactive and preventive coping, its relationships with personality and emotional adjustment. A total of 934 Spanish adolescents participated. No differences were found by sex or stage of adolescence in the use of future-oriented coping or in its relationship with adjustment scores. The differences found were centered on the dispositional profile of future-oriented coping shown by the different subgroups. The dispositional profile of proactive coping was more complex in girls and in late adolescence. In contrast, the dispositional profile of preventive coping was more complex in boys, and the differences by stage of adolescence highlighted the different weight of the personality dimensions involved. These findings point to the importance of developing programs adapted according to sex and stage of adolescence to train adolescents in the use of future-oriented coping skills and to improve their mental health.

**KEY WORDS:** *future-oriented coping, gender, stage of adolescence, personality, adjustment.*

### **Resumen**

El objetivo de este estudio es examinar las posibles diferencias por sexo y etapa de la adolescencia en el uso del afrontamiento proactivo y preventivo, sus relaciones con personalidad y ajuste emocional. Participaron 934 adolescentes españoles. No se encontraron diferencias por sexo o etapa de la adolescencia en el uso del afrontamiento orientado al futuro ni en su relación con los resultados de ajuste. Las diferencias encontradas se centraron en el perfil disposicional del afrontamiento orientado al futuro mostrado por los distintos subgrupos. El perfil disposicional del afrontamiento proactivo fue más complejo en las chicas y en la adolescencia tardía. Por el contrario, el perfil disposicional de afrontamiento preventivo fue más complejo en los chicos y las diferencias por etapa de la adolescencia pusieron de manifiesto el distinto peso de las dimensiones de personalidad implicadas. Estos hallazgos señalan la importancia del desarrollo de

programas adaptados según el sexo y la etapa de la adolescencia, para entrenar a los adolescentes en el uso de habilidades de afrontamiento orientadas al futuro y mejorar su salud mental.

PALABRAS CLAVE: *afrontamiento orientado al futuro, sexo, etapa de la adolescencia, personalidad, ajuste.*

## Introduction

Adolescence has traditionally been considered a period of high vulnerability to stress due to the many changes and demands that adolescents face (Seiffge-Krenke et al., 2009; Steinberg & Morris, 2001; Sturman & Moghaddam, 2011). Increased exposure to stress and perceived stress itself can contribute to the development of internalizing problems in the adolescent such as depression or anxiety (Duffy et al., 2019; Klaufus et al., 2022), affecting their mental adjustment, quality of life and psychological wellbeing (Alderman et al., 2019; Cunsolo, 2017). Specifically, a recent study found that adolescents reporting moderate perceived stress were twice as likely to develop a mental disorder, and those who reported high perceived stress were six times more likely to it (Lindholdt et al., 2022). Several international institutions (the World Health Organization, the Office of Adolescent Health of the US Department of Health and Human Services, the Society for Adolescent Health and Medicine, etc.) have called for a closer study of the health needs of adolescents to optimize the gradual development towards adult autonomy and individual decision making (Alderman et al., 2019), preventing as far as possible the increase of adolescent mental health problems (Duffy et al., 2019). In fact, the psychological impact of COVID-19, which shows a negative relation with age (Ausín et al., 2022), has nearly doubled the prevalence of mental health problems among adolescents (Ravens-Sieberer et al., 2022).

In stress management, coping is a key variable to take into account. Traditionally, models have stressed the reactive nature of coping (Schwarzer, 2001; Schwarzer & Taubert, 2002). However, recent research considers that coping is not only limited to past or current stressful events but also to those that have not yet occurred, implementing strategies to deal with them as well. Currently, two main conceptualizations stand out within the field of future-oriented coping: preventive coping and proactive coping. Preventive coping involves building up resources to minimize negative outcomes (as efforts to address a threat), whereas proactive coping involves developing resources to tackle challenges (reframing stressors as challenges) and pursue personal growth (Greenglass, 2002; Greenglass et al., 1999; Schwarzer, 2001).

To the extent that it contributes to accumulating coping resources and enhancing one's potential and opportunities for personal growth, future-oriented coping can be crucial in managing the challenges faced by the adolescents (Drummond & Brough, 2016a; Serrano et al., 2021).

Although scarce, the existing research on coping strategies in adolescence and mental health show a positive association of future-oriented coping with health, wellbeing, life satisfaction, self-control of negative behaviours and academic

motivation (Johnson et al., 2014; Larasati et al., 2021; McDermott et al., 2019; Ripoll-Núñez et al., 2019; Serrano et al., 2021). Also, a negative association has been pointed out between future-oriented coping and maladjustment, depression and suicidal behaviour (Larasati et al., 2021; Serrano et al., 2021).

Furthermore, the dispositional aspects of future-oriented coping are emphasized in its conceptualization since this type of coping does not seem to be related to a specific situation, but a tendency to act ahead of time (Drummond & Brough, 2016b; Gan, et al., 2010; Ptacek, et al., 2006). Thus, future-oriented coping can be even better understood in the context of personality dimensions than any other conceptualization of coping (Hambrick & McCord, 2010). The few studies that have addressed this issue in adolescence confirm the close association between personality dimensions and future-oriented coping. While the relationship between this type of coping and responsibility is the most notable (Drummond & Brough, 2016a; Fickova, 2009; Hambrick & McCord, 2010), the relationship between future-oriented coping and personality extends to virtually all basic dimensions and personality facets. At the same time, research also shows the distinct dispositional profile that characterizes preventive versus proactive coping (Straud, et al., 2015; Serrano et al., 2021).

In the search for possible modulating variables that increase the understanding of coping use and functioning, previous studies on reactive coping in adolescence have explored the role played by variables such as age and gender (Eschenbeck et al., 2018; Graves et al., 2021). The differences found in the use of coping strategies could explain, for example, why women report greater psychological distress and symptoms of depression and anxiety than men (Breslau et al., 2017; Essau et al., 2010; Mazure & Maciejewski, 2003; Zhang et al., 2015). This issue has been much less explored in the case of future-oriented coping and the few existing studies have focused exclusively on adult population, where results are inconsistent. For instance, Sollár and Sollárová (2009) did not find differences in the use of proactive and preventive coping between women and men, while Bagana, Negovan and Vanea (2011) reported greater use of proactive coping in women compared to men. In adolescents, Fickova (2009) found a bigger use of preventive coping in girls. To the best of our knowledge, no study has examined possible age and gender differences neither in the dispositional profile of future-oriented coping nor in its relationship to adjustment outcomes.

Given the aforementioned, this study aims to explore possible differences by gender and stage of adolescence in the use of future-oriented coping, and its relationships with personality (domains and facets) and with emotional adjustment (subjective wellbeing, anxiety and depression).

## Method

### Participants

The sample includes 934 Spanish adolescents. Participant ages ranged from 13-18 years ( $M= 14.84$ ,  $SD= 1.21$ ). 482 participants were females, 450 males, and 2 did not specify gender. The early adolescent subgroup (age range 13-14 years old) included 379 participants and the late adolescent subgroup (age range 15-18 years old) included 554. Regarding high school level, 26.7% were in 2nd, 29% in 3rd, 31.3% in 4th grade of high school, and 13.1% were in 1st grade of A-levels.

### Instruments

- a) *Junior version of the Spanish NEO Personality Inventory-Revised (JS-NEO; Ortet et al., 2012)*. The JS-NEO was used to measure the Five Factor Model (FFM) domains and facets. This scale contains 154 items, with a 5-point answer scale ranging from 0 (never) to 4 (always). The Cronbach's alpha values for the personality domain showed satisfactory reliability ( $\alpha_N= .80$ ;  $\alpha_A= .70$ ;  $\alpha_C= .85$ ;  $\alpha_E= .73$ ), even though the value for Openness was slightly low ( $\alpha_O= .63$ ). All the alpha coefficients for 22 of the 30 facets were at least 0.60 (range  $\alpha= .60-0.80$ ). However, seven facets (anxiety, angry-hostility, opening to feelings, compliance, tender-mindedness, competence, dutifulness) from JS-NEO obtained low-reliability values (range  $\alpha= .50-.59$ ). These results were similar to those found in previous studies (Alonso & Romero, 2019).
- b) *Proactive Coping Inventory (PCI; Greenglass et al., 1999)*, Spanish version by Serrano et al. (2021), Spanish version of Serrano et al. (2021). The PCI measures coping strategies by assessing whether they are proactive (14 items) or preventive (9 items). Each item is scored on a scale of 1 to 4 (1= not at all true; 4= completely true). Both subscales showed adequate internal reliability ( $\alpha_{\text{proactive}}= .83$ ;  $\alpha_{\text{preventive}}= .74$ ).
- c) *Subjective Happiness Scale (SHS; Lyubomirsky & Lepper, 1999)*, Spanish version by Extremera et al. (2009) The SHS was used to measure the levels of happiness in a comprehensive and global sense. It comprehends four items rated on a 7-point Likert scale. Its internal consistency was satisfactory ( $\alpha= .79$ ).
- d) *Beck Depression Inventory-II (BDI-II; Beck, Steer, & Brown, 1996)*, Spanish version by Sanz & Vázquez (2011). The BDI-II is a self-report instrument that assesses depressive symptomatology and consist of 21 items with a 4-point answer scale (from 0= none to 3= severe). The total score showed good internal consistency ( $\alpha= .91$ ).
- e) *Beck Anxiety Inventory (BAI; Beck et al., 1988)*, Spanish version by Sanz, 2011). The BAI assesses the physiological symptomatology of anxiety and includes 21 items with a 4-point answer scale (from 0= not applicable at all to 3= totally applicable). Its internal consistency was satisfactory ( $\alpha= .92$ ).

### *Procedure*

20 schools from the Valencia and Castilla-La Mancha Communities were contacted via email, and 7 of them were interested in participating. Informed consent was obtained from parents, and students agreed to participate anonymously and voluntarily. The questionnaires were administered in subgroups and completed on a paper-and-pencil survey under the supervision of a collaborator. The study received approval from the University Committee of Ethics on Human Research (Ref: H1542116174900). According to Tabachnick and Fidell (2007), if more than 20% of a participant's data were missing on a given scale, the data for that scale were removed from the data analysis. Otherwise, the missing data were completed following the instructions provided by the scale authors. Where indications by the authors were not available, the "average imputation" method was used.

### *Data analysis*

Possible differences in the use of future-oriented coping as a function of gender and stage of adolescence were explored by analysis of variance (ANOVA). Correlation and regression analyses were used to explore the relationships between proactive and preventive coping and psychological adjustment and personality (domains and facets) as a function of gender and adolescent stage. Statistical analyses were conducted using SPSS software (version 23).

The specific data used for the analyses presented in this paper has been made available to the journal of publication. It is also available under request contacting the corresponding author.

## **Results**

### *Descriptive, differential and correlational analyses*

Descriptive statistics and correlations of the sample are shown in Table 1. The ANOVA results showed no differences in proactive or preventive coping either as a function of gender ( $F = .78, p = .38, F = .01, p = .98$ , respectively) or stage of adolescence ( $F = .81, p = .37, F = .58, p = .45$ , respectively).

All personality domains and almost all facets correlated positively (except Neuroticism and its facets, which correlated negatively) with the two types of future-oriented coping, regardless of gender and stage of adolescence (Table 1).

In addition, proactive and preventive coping styles correlated positively with subjective well-being and negatively with depression in all subgroups (male/female and early/late adolescence). Only proactive coping correlated negatively with anxiety in all subgroups (Table 1).

**Table 1**  
Descriptive statistics and correlations between proactive and preventive coping and personality domains and facets, and subjective wellbeing, depression, and anxiety by sex and age

Variables	M (SD)	α	Proactive coping				Preventive coping						
			Total Sample	Female	Male	Early adolescence	Late adolescence	Total Sample	Female	Male	Early adolescence	Late adolescence	
Proactive coping	41.78 (6.63)	0.83	--	--	--	--	--	--	--	--	--	--	--
Preventive coping	25.89 (4.66)	0.74	0.51***	.49**	.53**	.54**	.49**	.47**	.18***	.19**	.18**	.18**	.18**
Subjective wellbeing	20.20 (5.02)	0.79	.47***	.48**	.44**	.47**	.47**	.44**	.18***	.17**	.19**	.18**	.18**
Anxiety	18.17 (12.60)	0.92	-.22***	-.26**	-.17**	-.19**	-.24**	-.19**	-.04	-.06	-.01	-.07	-.01
Depression	11.46 (9.47)	0.91	-.42***	-.45**	-.38**	-.40**	-.44**	-.38**	-.19***	-.19**	-.19**	-.26**	-.14**
Neuroticism	56.35 (16.10)	0.80	0.54***	-.55**	-.55**	-.53**	-.55**	-.55**	0.25***	-.28**	-.25**	-.31**	-.22**
N1: Anxiety	9.85 (3.42)	0.52	-.029***	-.27***	-.31***	-.18***	-.35***	-.31***	-.07*	-.05	-.10*	-.07	-.07
N2: Angry hostility	9.47 (3.61)	0.50	-.022***	-.23***	-.21***	-.26***	-.20***	-.21***	-.022***	-.28***	-.16***	-.30***	-.16***
N3: Depression	8.49 (4.73)	0.80	-.051***	-.54***	-.49***	-.50***	-.52***	-.49***	-.017**	-.20***	-.15***	-.22	-.15***
N4: Self-consciousness	10.04 (3.97)	0.62	-.038**	-.38***	-.39***	-.36***	-.40***	-.39***	-.07*	-.05	-.10*	-.07	-.07
N5: Impulsiveness	11.26 (3.28)	0.62	-.023**	-.25***	-.21***	-.25***	-.22***	-.21***	-.031**	-.36***	-.25***	-.33***	-.29***
N6: Vulnerability	7.24 (3.58)	0.66	-.062**	-.62***	-.62***	-.58***	-.64***	-.62***	-.027**	-.26***	-.30***	-.32***	-.25***
Extraversion	72.85 (14.10)	0.73	0.53***	.51**	.56**	.53**	.54**	.53**	0.15***	.12*	.19**	.13*	.17**
E1: Warmth	13.87 (3.57)	0.64	0.32***	.26***	.40***	.37***	.30***	.40***	0.10**	.07	.14**	.12*	.09*
E2: Gregariousness	10.32 (3.13)	0.62	0.18***	.18***	.18***	.17*	.24**	.18***	0.03	.01	.05	.01	.06
E3: Assertiveness	10.60 (3.67)	0.63	0.45***	.47***	.45***	.44***	.47***	.45***	0.10**	.07	.15**	.08	.12**
E4: Activity	11.38 (3.14)	0.66	0.31***	.34***	.26**	.29***	.33***	.26**	0.09**	.09*	.08	.06	.12**
E5: Excitement seeking	12.03 (4.13)	0.60	0.27***	.23***	.33***	.25***	.30***	.25***	0.05	.03	.08	.01	.08
E6: Positive emotions	14.65 (3.97)	0.77	0.51***	.51***	.50***	.57***	.47***	.50***	0.20***	.18***	.23***	.23***	.19***

Table 1 (continued)

Variables	M (SD)	α	Proactive coping				Preventive coping				
			Total Sample	Female	Male	Early adolescence	Late adolescence	Total Sample	Female	Male	Early adolescence
Conscientiousness	69.96 (17.23)	0.85	0.54***	.57**	.59**	.50**	.57**	.56**	.59**	.58**	.57**
C1: Competence	11.60 (3.47)	0.56	0.53***	.54***	.55***	.50***	.55***	.47***	.55***	.51***	.47***
C2: Order	12.42 (4.74)	0.75	0.34***	.34***	.35***	.30***	.37***	.35***	.29***	.33***	.31***
C3: Dutifulness	13.69 (3.40)	0.57	0.42***	.41***	.46***	.38***	.44***	.46***	.46***	.45***	.45***
C4: Achievement striving	11.91 (3.92)	0.76	0.53***	.52***	.56***	.50***	.55***	.48***	.51***	.48***	.50***
C5: Self-discipline	10.32 (3.98)	0.69	0.40***	.38***	.44***	.37***	.42***	.38***	.45***	.44***	.39***
C6: Deliberation	10.02 (3.86)	0.73	0.26***	.25***	.27***	.23***	.28***	.48***	.43***	.42***	.47***
Agreeableness	74.46 (13.19)	0.70	0.14***	.15**	.14**	.13*	.14**	.23**	.11*	.22**	.13**
A1: Trust	11.72 (3.35)	0.63	0.28***	.27***	.29***	.31***	.26***	.23***	.13**	.20***	.17***
A2: Straightforwardness	12.43 (3.61)	0.63	0.12**	.15***	.10*	.08	.14**	.15***	.08	.18***	.07
A3: Altruism	13.16 (3.31)	0.61	0.22***	.23***	.23***	.20***	.23***	.21***	.12*	.22***	.13**
A4: Compliance	10.11 (3.62)	0.54	0.12***	.13***	.11***	.13***	.11*	.27***	.15***	.32***	.15***
A5: Modesty	11.83 (3.67)	0.64	-0.32***	-.33***	-.31***	-.31***	-.33***	-.12*	-.19***	-.11*	-.18***
A6: Tender-mindedness	15.21 (3.20)	0.59	0.16**	.15***	.19***	.14**	.17***	.11*	.16***	-.04	.18***
Openness	74.56 (13.67)	0.63	0.29***	.28**	.34**	.34**	.25**	.25**	.23**	.22**	.24**
O1: Fantasy	11.30 (3.97)	0.68	-0.02	-.02	.00	.08	-.07	-.03	-.07	-.02	-.07
O2: Aesthetics	9.87 (4.90)	0.73	0.10**	.09*	.14**	.12*	.09*	.18***	.22***	.13**	.22***
O3: Feelings	12.87 (3.14)	0.52	0.28***	.29***	.30***	.29***	.28***	.21***	.21***	.21***	.21***
O4: Actions	14.53 (3.53)	0.69	0.45***	.44***	.47***	.42***	.48***	.20***	.23***	.14**	.26***
O5: Ideas	10.60 (3.86)	0.63	0.19***	.16***	.23***	.23***	.17***	.30***	.28***	.34***	.26***
O6: Values	15.40 (3.42)	0.63	0.08*	.08	.10*	.13**	.04	.01	-.04	-.01	-.01

Note: \*\*\*p<.001; \*\*p<.01; \*p<.05.

*Regression analysis*

All personality domains (except for Agreeableness in the male subgroup) contributed with a similar weight to explain the variance in proactive coping in the different subgroups. In all cases, the variance explained exceeded 50% (range 54%-57%). Although relevant, both the variance explained (range 35%-38%) and the independent contribution of personality domains were lower in the case of preventive coping. Only Openness and Conscientiousness contributed to the prediction of preventive coping independently of gender and age, whereas Extraversion did not contribute in any of the four subgroups to its prediction. Additionally, Neuroticism and Agreeableness contributed to explaining the variance in early and late adolescence, respectively. Again, the relative weight of the different variables was quite similar in all cases (Figure 1).

Considering the personality facets, the percentage of explained variance was higher than considering the domains for both proactive (range 59%-67%) and preventive (range 40%-43%) coping in all four subgroups.

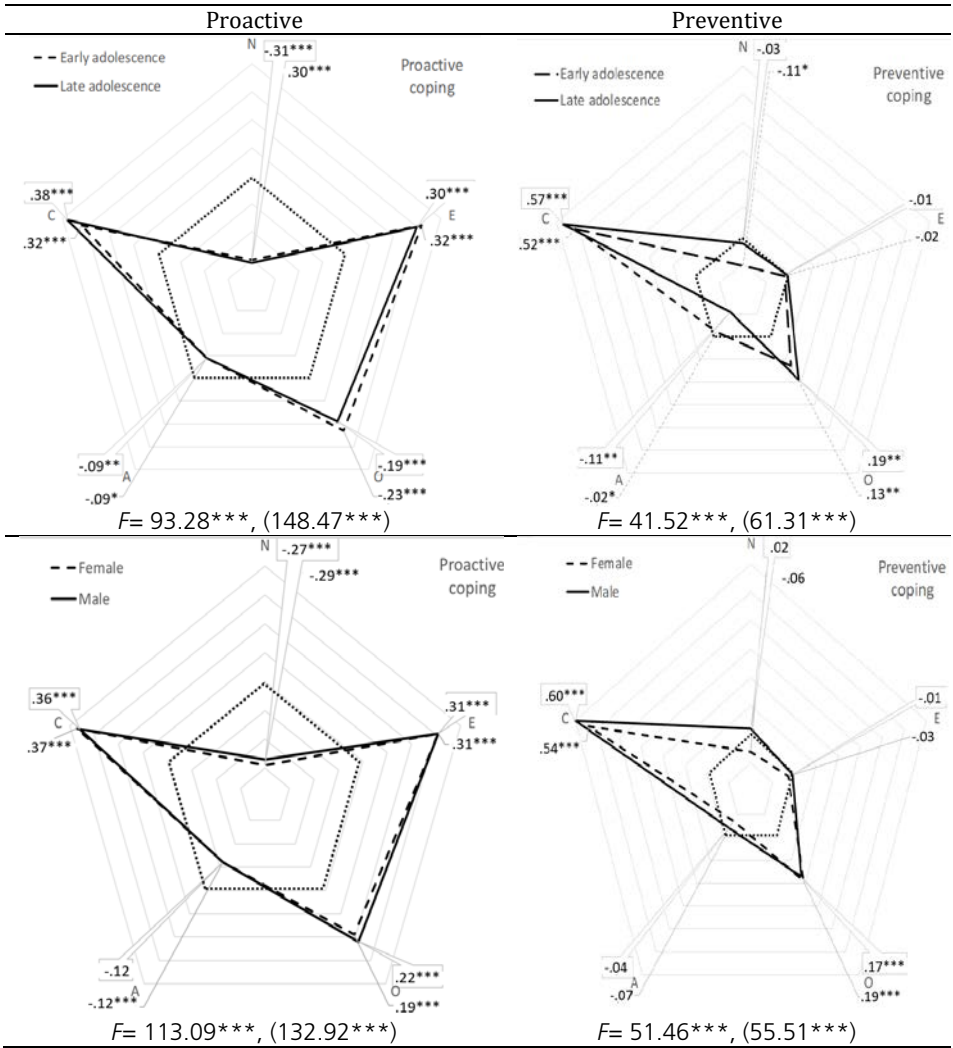
Regarding proactive coping, the common facets in the variance explanation in the four subgroups were vulnerability, positive emotions, and achievement-striving. Feelings and actions also accounted for the variance of three subgroups (female, male and late adolescence) as well as competence did for female, early and late adolescence subgroups. Other facets only explained the variance of this type of coping in some subgroups. For instance, warmth and assertiveness made contributions to the variance explained in proactive coping only in the female and late adolescence subgroups, as well as modesty did in female and early adolescence subgroups (Figure 2).

Regarding preventive coping, the independent variance was explained by ideas, deliberation and achievement-striving facets in all four subgroups, whereas obedience failed to explain it in the male subgroup. Other facets only contributed to the explained variance of this criterion in particular subgroups. This was the case for depression and modesty in the male and late adolescence subgroups; assertiveness and competence in the male subgroup; actions and compliance in the early adolescence subgroup; feelings in the female subgroup; and aesthetics in the late adolescent subgroup (Figure 2).



**Figure 1**

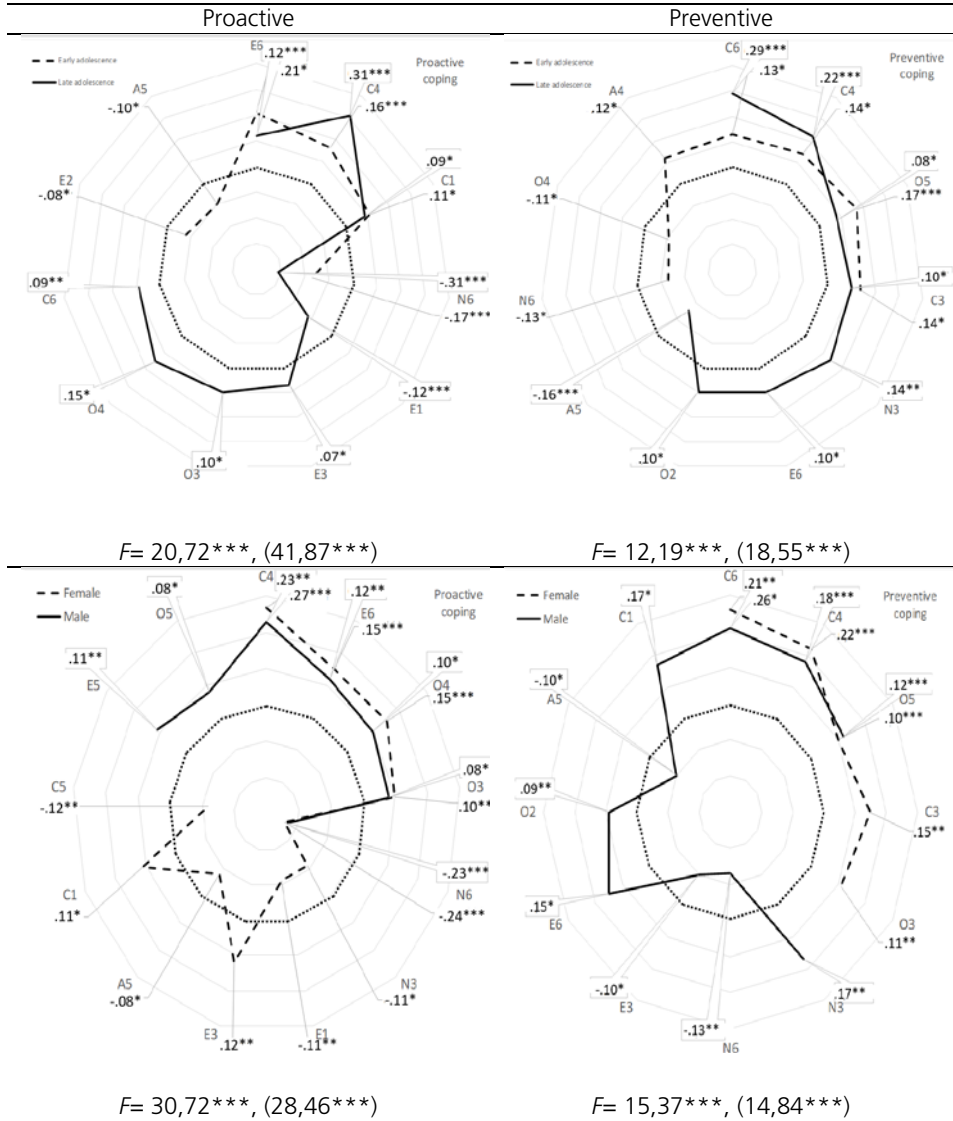
Regression analyses of the Big Five for proactive and preventive coping by sex and age



Notes: N= Neuroticism; E= Extraversion; O= Openness; A= Agreeableness; C= Conscientiousness. Dotted line axis indicates 0 value. Male and late adolescence values in globes and parenthesis. \*\*\* $p < .001$ ; \*\* $p < .01$ ; \* $p < .05$

**Figure 2**

Regression analyses of the big five facets on proactive and preventive coping by sex and age



Notes: E1= Warmth; E2= Gregariousness; E3= Assertiveness; E6= Positive emotions; N3= Depression; N6= Vulnerability; O2= Aesthetics; O3= Feelings; O4= Actions; O5= Ideas; A4= Compliance; A5= Modesty; C1= Competence; C3= Dutifulness; C4= Achievement-Striving; C5= Self-discipline; C6= Deliberation. Dotted line axis indicates 0 value. Male and late adolescence values in globes and parenthesis. \*\*\* $p < .001$ ; \*\* $p < .01$ ; \* $p < .05$ .

## Discussion

The main objective of the study was to explore possible differences of gender and adolescence phase in the use of future-oriented coping, as well as its association with personality (domains and facets) and different adjustment outcomes. The results showed the absence of differences according to gender and stage of adolescence in the use of both proactive coping and preventive coping. Consequently, these results do not support the greater use of proactive coping by adolescent girls found by Bagana et al. (2011), although they are consistent with those obtained by Sollár and Sollárová (2009). Regarding age-related differences, the lack of studies in the reviewed literature prevents us from comparing results.

In line with a similar previous study (Serrano et al., 2021) that analyzed early and late adolescence as well as boys and girls together, our results show that both proactive and preventive coping were positively correlated with subjective well-being and negatively correlated with depression in all subgroups (male/female and early/late adolescence). These data also go in the same direction as that found in previous research with adults (Altan-Atalay & Zeytun, 2020; Gan et al., 2007; Greenglass et al., 2006; Li & Miller, 2017). Although anxiety was expected to be related to preventive coping, only proactive coping correlated negatively with it, and did so in all subgroups. Furthermore, the association between preventive coping and adjustment indicators was smaller in all cases than the one found for proactive coping. A possible explanation for the lower association between preventive coping and psychological adjustment among adolescents may be the use of more defensive strategies based on the threat perspective involved in such coping. In contrast, the challenging perspective of proactive coping is found to be more adaptive and emphasizes the importance of building resources that enhance one's potential and opportunities for personal growth in adolescents.

The results regarding the dispositional profile of proactive and preventive coping also showed the high replication of the main bivariate associations found in the aforementioned study (Serrano et al., 2021), and this was so in each of the different subgroups established according to gender and adolescence phase. Moreover, the differences found mainly focus on the number and different weights of personality characteristics showing independent association with future-oriented coping in the different subgroups.

The five personality domains predicted proactive coping in females, both in early and late adolescence subgroups. However, consistent with the findings of Fickova (2009), Agreeableness failed to predict proactive coping in males. Partially consistent with the results obtained by Fickova (2009), only Conscientiousness and, to a much lesser degree, Openness to Experience were predictors of preventive coping in subgroups by gender. In addition to these two dimensions, Neuroticism and Agreeableness also contributed negatively to predicting this coping in early and late adolescence, respectively.

At the facet level, the basic dimensional profile of the proactive copier that was independent of gender and age was characterized by low vulnerability to stress, achievement-striving, positive emotionality, openness to feelings and actions (except to youngest adolescents), and competence (except to male adolescents). It seems

reasonable that, to the extent that it contributes to the perception of events as challenges and to positive and active appraisals of coping, openness is an important predictor of proactive coping (Carver & Connor-Smith, 2010; Penley & Tomaka 2002). However, interest in internal experiences and change situations do not define the dispositional profile of the proactive coper between 13 and 14 years of age. A possible explanation could be found in the fact that individual differences in Openness seem to increase with age (Vecchione, 2012), thus restricting its role in early adolescence. Furthermore, beliefs in one's competence to cope with demanding circumstances have been identified as inherent in future-oriented coping (Greenglass, 2002; Greenglass et al., 2006; Schwarzer, 1999). However, we did not find any independent association between competence and proactive coping in male adolescents.

As a whole, the differences found for proactive coping highlighted a more complex dispositional profile in girls vs. boys adolescents, and in late vs. early adolescence. In both cases, this profile included many of the remaining facets associated with this type of coping, when no differences are established by gender and age (Serrano et al., 2021). That would be the case, for instance, of low negative emotionality (depression) and assertiveness. The challenge appraisal on which proactive coping is based seems to also require less vulnerability to depression in adolescent girls. The greater neuroticism that typically characterizes females compared to males (Mac Giolla, & Kajonius, 2019; Weisberg et al., 2011) may be key to understanding the unique role of low negative emotionality in the dispositional profile of the proactive adolescent female coper.

Regarding assertiveness, it is a relevant social skill for dealing with specific interpersonal demands. Consequently, its importance in the accumulation of resources that characterizes the adoption of proactive coping (Greenglass et al., 1999) seems obvious. In this sense, proactive copers are more likely to be assertive by seizing potential moments for positive gain (Rogalla, 2020). However, assertiveness was not part of the proactive coping dispositional profile of the 13-14 years old adolescent, nor the male adolescent one. It is possible to think that the association of assertiveness with proactive coping only emerges in those subgroups in which its role is more relevant. For instance, research findings (Eskin, 2003) show that assertiveness seems to be higher in older adolescents than in younger ones, and that adolescent girls are not only not less assertive than boys (contrary to certain gender stereotypes), but in some aspects of assertiveness, they seem to be even more skilled. Accordingly, it should be noted that studies finding a relationship between proactive coping and assertiveness have been conducted in adults, or at most, at the end of late adolescence (around 18 years of age), as would be the case of the study by Răban-Motounu and Vitalia (2015).

The deliberation, achievement-striving, open to ideas, and dutifulness (the latter being an exception for male adolescents) characterized the preventive coper independently of gender and age. Once again, the results showed a more complex dispositional profile in one of the subgroups established by gender, in this case, adolescent boys, and that included many of the facets (assertiveness, positive emotions, competence) found when boys and girls were explored together (Serrano et al., 2021). The differences by phase of adolescence mainly underlined the

different relative weights shown by some of the personality facets in each subgroup. Compared to early adolescence, in late adolescence, the relative weight of openness to ideas and dutifulness decreased, while that of deliberation increased considerably. Therefore, it appears that with increasing age it is a deliberative approach, more than an orientation toward the fulfilment of obligations, that is more involved in taking into account future contingencies (Carver & Connor-Smith, 2010), allowing the identification of future stressors. A particularly remarkable result in both gender and age comparisons was the positive association between preventive coping and the depression facet. Thus, it seems that in boys and in late adolescence, depressive tendencies would favour the implementation of coping oriented toward the prevention of threats. It is important to highlight that research findings have consistently shown (Drummond & Brough, 2016a; Fickova, 2009; Hambrick & McCord, 2010; Serrano et al., 2021; Straud et al., 2015) the scarce and minor role played by Neuroticism in predicting preventive coping versus proactive coping. Differentiation by gender and stage of adolescence reveals the existence of such a relationship exclusively for boys and for late adolescence. Once again, the greater Neuroticism that characterizes females (Mac Giolla, & Kajonius, 2019; Weisberg et al., 2011), as well as the greater predictive role of dutifulness regarding preventive coping in early adolescence, can be of use in understanding these results.

Finally, concerning future-oriented coping, especially in the case of proactive coping, it is noteworthy as a result of this study the greater variance explained by specific personality profiles in the late adolescence phase, indicating the greater dispositional involvement of this type of coping with increasing age.

To summarize, our study highlights important issues by gender and stage of adolescence that allow us to improve the understanding of future-oriented coping in adolescence regarding its use, dispositional profile, and association with adjustment. To date, the aspects addressed in this work have been little explored, and even less so in such a critical stage of life as it is adolescence. In fact, the paucity of previous results has limited the attempts to compare our results with previous literature.

In addition to the innovative nature of the results presented, other strengths of the study should be highlighted. These strengths consist mainly in the large sample size and the analysis of different key variables (use, dispositional profile, and relationship with emotional adjustment) in the study of future-oriented coping. In this sense, it is also noteworthy the inclusion of different adjustment indicators (which include both positive and negative affect) as well as the analysis not only of basic personality dimensions but also of more specific dimensions (domains and facets).

However, the present study is not without limitations. First, it presents a cross-sectional design that limits the establishment of causal relationships. Therefore, longitudinal studies should be carried out in order to delve deeper into the dynamic associations between variables over time. Second, despite a large number of participants, the establishment of subgroups according to gender and stage of adolescence significantly decreased the size of the subgroups compared. Finally, regarding the Limitations on Generality (Simons et al., 2017), the findings need to

be replicated in different cultural samples and in a variety of contexts to determine their robustness.

The aforementioned limitations notwithstanding, our study contributes significantly to the knowledge about future-oriented coping, personality and adjustment by gender and adolescence stage in a population that is not sufficiently well-known. The data obtained have meaningful practical implications, allowing the development of tailored programs according to gender and stage of adolescence, to train adolescents in the use of future-oriented coping skills with the ultimate aim of improving their mental health. These practical implications will facilitate building up resources that enhance one's potential and opportunities for personal growth, ensuring a good psychological adjustment in such a challenging stage as adolescence.

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