

Original article

Coping strategies and emotion regulation in adolescents: Adequacy and gender differences

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Keywords:Emotion regulation
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The aims of this study were to analyze which coping strategies are more adequate and which are less adequate during adolescence and to examine any gender differences observed in this respect. Participants were 762 adolescents aged between 16 and 18. To assess coping strategies, an adaptation of the *Responses to Stress Questionnaire* was used. To assess whether or not the coping strategies used were adequate, three indexes were used: decrease in anxiety, satisfaction with oneself and improvement in relationships. The correlational analyses revealed significant positive correlations between the three indexes and the coping strategies generally considered to be positive, and significant negative correlations between the indexes and coping strategies generally considered to be negative. The results also revealed that girls and boys tend to use different coping strategies. These results are consistent with those found in previous studies.

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Estrategias de afrontamiento y de regulación emocional en adolescentes: adecuación de las mismas y diferencias de género**RESUMEN**

Palabras clave:
Regulación emocional
Afrontamiento
Diferencias de género
Adolescencia

Los objetivos de este trabajo fueron analizar qué formas de afrontamiento son más adecuadas y cuáles menos adecuadas en la adolescencia y analizar las diferencias de género al respecto. En el estudio participaron 762 adolescentes de edades comprendidas entre los 16 y los 18 años. Para evaluar las estrategias de afrontamiento se utilizó una adaptación del *Responses to Stress Questionnaire*. Para evaluar la adecuación de las estrategias de afrontamiento se utilizaron 3 índices: disminución de la ansiedad, satisfacción con uno/a mismo/a y mejora de las relaciones. Los análisis mostraron correlaciones significativas positivas entre los 3 índices y las estrategias de afrontamiento habitualmente consideradas positivas y correlaciones significativas negativas entre los índices y las estrategias de afrontamiento habitualmente consideradas negativas. Por otro lado, los resultados mostraron que las chicas y los chicos difieren en las estrategias de afrontamiento. Estos resultados son coherentes con lo encontrado en estudios previos.

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Interest in the study of coping and emotion regulation has increased considerably over recent years (Gross & Thompson, 2009; Koole, 2010) and numerous studies have been carried out in this field (García-Sánchez & Font-Guiteras, 2008; Godoy-Izquierdo et al., 2008; Kring & Sloan, 2010; Neipp, López-Roig, Terol, & Pastor-Mira, 2008).

Although the terms coping and emotion regulation refer to very similar concepts, there are some differences between them. In general, coping refers to a series of "thoughts and actions that enable people to handle difficult situations" (Stone, Helder, & Schneider, 1988, p. 183). Coping therefore refers to the efforts made to handle excessive or stressful internal and environmental demands in the best possible manner (reducing, minimizing, tolerating or controlling). Lazarus and Folkman (1986/1984) define coping as the "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as

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taxing or exceeding the resources of a person (Lazarus & Folkman, 1986/1984, p. 200). *Emotion regulation*, on the other hand, refers not only to negative emotions, but includes the management of positive emotions also. Several authors (Cole, Michel, & O'Donnell, 1994; Thompson, 1994) agree that emotion regulation "serves to avoid, shift, transform, minimize, inhibit or intensify emotions" (Campos, Humme, Kermoian, & Campos, 1994, p. 296). Similarly, Gross and Thompson (2009) assert that emotion regulation may soften, intensify or simply maintain an emotion, depending on the individual's specific objectives. For his part, Koole (2010) defines emotion regulation as the set of processes by which people strive to redirect the spontaneous flow of their emotions.

Today, most studies carried out in this field continue to focus on negative emotions and emotional states. Positive emotions still receive much less attention, in both the development of theoretical approaches and, above all, in empirical research (Carl, Soskin, Kerns, & Barlow, 2013; Etxebarria, 2002). Even though they are not absolutely interchangeable, in this study we will use the terms coping and emotion regulation indistinctly to refer to the same general concept.

One question to which little attention has been paid and which we believe to be fundamental, is the study of the adequacy or inadequacy of diverse coping and emotion regulation strategies.

In this sense, some authors claim that, in general, one can state that some coping and emotion regulation strategies are more adequate than others. For example, Saarni (1999) argues that the ideal situation is for every individual to have a wide range of different coping strategies, mainly consisting of problem resolution methods and social support. According to this author, however, avoidance and denial are two of the least adaptive coping strategies.

In this sense, Carver, Scheier, and Weintraub (1989) argue that, in accordance with the categories they themselves propose, the following can be considered adaptive coping strategies: active coping, planning, the suppression of competing activities, restraint coping, positive reinterpretation and seeking social support for both instrumental and (to a lesser extent) emotional reasons. At the other extreme, denial, behavioral disengagement, mental disengagement, focus on and venting of emotions, and turning to alcohol and drugs as a means of disengagement have a much more doubtful value.

Other authors, however, claim that any judgment regarding the adequacy of a specific coping or emotion regulation strategy should always bear in mind the context in which it is adopted (Etxebarria, 2002; Frijda, 1986; Gross, 2014, 2015; Gross & Thompson, 2009). Thus, many coping and emotion regulation strategies may be beneficial for certain people in certain situations and harmful for others or for the same people in different situations (Etxebarria, 2002; Frijda, 1986; Gross, 2014, 2015; Gross & Thompson, 2009; Lazarus, 1966; Lazarus & Folkman, 1986/1984; Wortman & Lehman, 1985).

In this sense, what some authors propose is that in order to know whether or not a certain coping strategy is more adequate than another in a given situation, it is important to analyze the function of said strategies. In other words, it is important to analyze whether or not subjects achieve positive or negative results through the strategies they employ (Etxebarria, 2002; Frijda, 1986; Koole, 2010; Koole, Webb, & Sheeran, 2015). Koole (2010) for example, defends that the main functions of emotion regulation strategies are to satisfy hedonic needs (which are often impulsive and unconscious in nature), facilitate the attainment of goals and optimize general personal-oriented results. Thus, in relation to emotion regulation aimed at satisfying hedonic needs, Koole (2010) claims that cognitive strategies are relatively inefficient, especially in the long term. However, in relation to emotion regulation for goal-oriented reasons, attentional and cognitive strategies seem to be

more effective than bodily ones (for example: breathing or relaxation exercises). As regards strategies for person-oriented reasons, Koole concludes that bodily strategies seem to be relatively effective. For their part, Páez et al. (Company, Oriol, Oberst, & Páez, 2015; Páez, Martínez-Sánchez, Sevillano, Mendiburo, & Campos, 2012; Páez, Martínez-Sánchez, Mendiburo, Bobowik, & Sevillano, 2013) have developed a 7-item scale (the Functionality Scale) which measures the adequacy of different coping styles. In this instrument, participants are asked to rate on a 10-point scale the degree to which they believe that the different coping strategies used have helped them attain different adaptive objectives. These objectives include, for example, decreasing the intensity with which one feels certain emotions, or in other words, decreasing the activation level in order to attain a certain degree of calm and relaxation; decreasing displeasure or annoyance and increasing pleasure and gladness; and improving relations with other people.

Although, as outlined above, different theoretical approaches have been proposed in relation to the different coping and emotion regulation strategies which exist, only a few empirical studies have analyzed this question. Moreover, the majority of studies that have analyzed the effect of the different coping strategies have done so with people suffering from a certain type of illness or disorder, rather than with members of the general population (Dardas & Ahmad, 2014; Krzeczkowska, Karatzias, & Dickson, 2015; Lind, Delmar, & Nielsen, 2014; Tallman, 2013; Zambon, Moretti, & Behlau, 2014).

On the other hand, many studies have analyzed gender differences in the use of coping strategies. Research carried out in this area suggests that men are more likely than women to either cope directly with a problem or situation or deny it completely; women, on the other hand, are more likely to respond to problems emotionally, sharing it with family and friends (Stone & Neale, 1984). Based on a meta-analytic review of studies focusing on gender differences in coping strategies, Tamres, Janicki, and Helgeson (2002) concluded that women are more inclined to use strategies which include verbal expression, specifically the search for emotional support and rumination.

This present study aimed to analyze the extent to which different coping and emotion regulation strategies are associated with three health indexes, namely the reduction of anxiety, the attainment of self-satisfaction and the improvement of relations with others. Our selection of these three indexes was based on the Functionality Scale (Company et al., 2015; Páez et al., 2012, 2013) mentioned earlier. The study also aimed to determine whether or not gender differences existed in this regard.

Table 1

Correlations between the different coping strategies and the three indexes considered.

	Decrease of anxiety	Feeling happy with oneself	Improving relations
Problem solving	.19 ^b	.17 ^b	.2 ^b
Emotional regulation	.2 ^b	.18 ^b	.19 ^b
Emotional expression	.005	.04	.14 ^b
Positive thinking	.21 ^b	.35 ^b	.15 ^b
Cognitive restructuring	.21 ^b	.31 ^b	.13 ^b
Distraction	.1 ^b	.1 ^b	.02
Acceptance	.3 ^b	.4 ^b	.17 ^b
Avoidance	-.09 ^a	-.1 ^b	-.13 ^b
Denial	-.15 ^b	-.09 ^a	-.21 ^b
Wishful thinking	-.23 ^b	-.27 ^b	-.16 ^b
Rumination	-.19 ^b	-.22 ^b	-.07
Inaction	-.23 ^b	-.23 ^b	-.16 ^b
Escape	-.22 ^b	-.23 ^b	-.21 ^b

^a The correlation is significant at level .5.

^b The correlation is significant at level .01.

Table 2

Gender differences in the different coping strategies and in the three indexes considered.

	Boys			Girls			<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>		
Problem solving	2.8	.53	365	2.93	.56	359	-3.28	.001
Emotional regulation	2.61	.5	371	2.72	.49	367	-2.78	.006
Emotional expression	2.49	.64	359	2.79	.63	352	-6.31	.000
Positive thinking	2.72	.54	370	2.63	.56	347	2.14	.033
Cognitive restructuring	2.7	.49	373	2.57	.56	368	3.34	.001
Distraction	2.56	.52	373	2.57	.54	367	-44	.660
Acceptance	2.97	.62	362	2.84	.62	356	2.74	.006
Avoidance	2.3	.54	373	2.3	.54	367	-.021	.984
Denial	1.94	.56	373	1.87	.57	367	1.79	.074
Wishful thinking	2.3	.6	363	2.43	.63	355	-2.94	.003
Rumination	2.35	.64	362	2.78	.61	359	-9.11	.000
Inaction	1.98	.52	366	2.04	.52	350	-1.38	.168
Escape	2.01	.6	360	2.08	.62	353	-1.47	.142
Decrease of anxiety	3.5	1.01	377	3.36	.87	362	2.13	.034
Feeling happy with oneself	3.79	.91	377	3.35	.99	361	6.18	.000
Improving relations	3.64	.91	341	3.66	.89	335	-.209	.835

Note: Statistically significant differences are marked in bold.

Method

Sample group

The sample was obtained incidentally, from a number of different high schools in the Basque Country. Participants were 762 adolescents (50.78% boys and 49.21% girls) aged between 16 and 18. The mean age was 16.74 and the standard deviation .71. None of the students were excluded; all were included in the study.

Instruments

An adaptation of the *Responses to Stress Questionnaire* (RSQ; Connor-Smith, Compas, Wadsworth, Thomsen, & Saltzman, 2000) was used to assess coping strategies. This version consists of 47 items grouped into the following scales: Problem solving (e.g.: "I try to think of different ways to change the problem or fix the situation"); Emotional regulation (e.g.: "I keep my feelings under control when I have to, then let them out when they won't make things worse"); Emotional expression (e.g.: "I let someone know how I feel"); Positive thinking (e.g.: "I tell myself that I can get through this, or that I'll do better next time"); Cognitive restructuring (e.g.: "I think about the things I'm learning from the situation, or something good that will come from it"); Distraction (e.g.: "I imagine something really fun or exciting happening in my life"); Acceptance (e.g.: "I realize that I just have to live with things the way they are"); Avoidance (e.g.: "I try to stay away from people and things that make me feel upset or remind me of the problem"); Denial (e.g.: "I act like the problems never happened"); Wishful thinking (e.g.: "I wish someone would just come and get me out of the mess"); Rumination (e.g.: "I can't stop thinking about what I did or said"); Inaction (e.g.: "I end up just lying around or sleeping a lot") and Escape (e.g.: "I just can't get myself to face the person I'm having problems with or the situation"). Participants were asked to think of a habitual situation of anxiety and then to indicate on a 4-point scale the frequency with which they act in the way described in each item (1 = never, 4 = often). The Cronbach's alphas obtained in the different scales oscillated between .40 and .63.

Also, in order to assess whether the coping strategies were adequate or inadequate, based on the Functionality Scale by Páez et al. (Company et al., 2015; Páez et al., 2012, 2013), mentioned earlier, 3 questions were asked regarding the 3 aforementioned indexes (5-point scale): "Did you manage to decrease your anxiety? If so, by how much?", "Did you feel happy with yourself? If so, to what extent?" and "Did you improve your relations with others? If so, to what degree?"

Procedure

Participants were given approximately half an hour to complete the scales described above and to sign an informed consent form. In those cases in which participants were minors, the informed consent of their families was requested. In all cases, participants were reminded that the information provided was anonymous and confidential.

Results

As shown in Table 1, the correlational analyses revealed significant positive correlations between the three indexes and problem solving strategies, emotional regulation, emotional expression, positive thinking, cognitive restructuring, distraction and acceptance, and significant negative correlations between the aforementioned indexes and avoidance, denial, wishful thinking, rumination, inaction and escape strategies. As shown in Table 1, in only four of the cases were the correlations not statistically significant.

Furthermore, as shown in Table 2, gender differences were found in the use of various coping strategies, as well as in two of the three indexes used. In relation to coping strategies, girls scored significantly higher than boys in problem solving strategies, emotional regulation, emotional expression, wishful thinking and rumination. Boys, on the other hand, scored significantly higher than girls in positive thinking, cognitive restructuring and acceptance. According to the mean values obtained, the coping strategies most commonly used by girls were problem solving, acceptance, emotional expression, rumination and emotional regulation. Boys, on the other hand, tended to make more frequent use of acceptance, problem solving, positive thinking, and cognitive restructuring.

If all three indexes used are taken into account, statistically significant gender differences can be observed in decrease of anxiety and feeling happy with oneself. In both cases, boys scored higher than girls.

Conclusions

These results are consistent with those found by authors such as Carver et al. (1989) and Saarni (1999), since it is the more active and resolvent strategies, which involve a positive reinterpretation of the situation (problem solving, emotional regulation, emotional expression, positive thinking, cognitive restructuring, distraction and acceptance) which correlate significantly and positively with the three indexes considered. Furthermore, it is the more passive

coping strategies which involve focusing too much on one's own emotions (avoidance, denial, wishful thinking, rumination, inaction and escape) which correlate significantly and negatively with the three aforementioned indexes. These results enable us to conclude that, in general, some coping strategies may be more adequate than others.

In relation to gender differences in the use of coping strategies, our results reveal that both boys and girls have recourse to active, resolvent strategies such as problem solving. Acceptance, a coping strategy that is commonly considered to be positive, was also found to be used by both sexes. However, while boys tend to use strategies which involve a positive assessment of the situation (cognitive restructuring and positive thinking), girls seem to lean more toward emotional strategies, such as emotional regulation and emotional expression, as well as toward wishful thinking and rumination which, in theory at least, are considered negative (Stone & Neale, 1984; Tamres et al., 2002).

As regards gender differences in the three indexes used, our results reveal that, in general, boys tend more than girls to feel that the coping strategies used were useful. More specifically, boys tend to feel (more than girls) that said strategies have helped them reduce anxiety and feel satisfied with themselves. These results are interesting and we believe it is important to continue analyzing all these questions in greater depth.

This study has a number of limitations. Firstly, the study is limited by its cross-sectional design and cause-effect relationships cannot be established. Therefore, future studies using a longitudinal design will be required to clarify the direction of these associations. Secondly, data were collected from students using self-report questionnaires, which, in spite of being completed anonymously, could be subject to misinterpretation or to socially desirable reporting bias.

We believe it is important to continue with the empirical analysis of the adequacy of coping strategies in relation to different health indexes. Such studies will enable us to conclude that, beyond any specific or individual situation, some strategies are more positive than others, a conclusion that is of enormous value in the applied field. It is equally important to continue analyzing gender differences in this respect.

Conflict of interests

The authors declare no conflict of interest.

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