



How primary and secondary appraisals of daily stressful events influence negative and positive affect

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Título: ¿Cómo la evaluación primaria y secundaria de los eventos estresantes cotidianos influyen en el afecto negativo y positivo?

Resumen: El objetivo de este estudio fue evaluar la influencia de la evaluación primaria, secundaria y de las estrategias de afrontamiento sobre el estrés diario, teniendo en cuenta cualquier posible efecto de los cinco grandes rasgos de personalidad. Durante 10 días, una cohorte de 122 personas llenó un diario en línea en el que registraron el evento estresante más importante de cada día, su evaluación primaria y secundaria y cómo lo afrontaron. Los resultados indican que el afecto negativo está influido por una evaluación primaria alta, una evaluación secundaria limitada y una alta tasa de rechazo, sin influencia significativa de los rasgos de personalidad. El afecto positivo está influido principalmente por un menor grado de valoración primaria, una evaluación secundaria alta, por una baja tasa de rechazo y de búsqueda de apoyo social. Además, un nivel bajo de neuroticismo fue el mejor predictor del afecto positivo. Se discuten estos datos, destacando la importancia de una evaluación situacional de episodios estresantes en cada momento para no sólo comprender los efectos del estrés en la salud sino también, para desarrollar intervenciones efectivas.

Palabras clave: Afecto negativo. Afecto positivo. Evaluación primaria. Evaluación secundaria. Afrontamiento. Estrés cotidiano.

Abstract: The aim of this study was to evaluate the influence of primary and secondary appraisal, and of coping strategies, on daily stress, taking into account any possible effect of the big five personality traits. Over 10 days, a cohort of 122 people filled out an on-line diary in which they recorded the most important stressful event each day, their primary and secondary appraisal of this, and how they coped with it. The results indicate that negative affect is influenced by a high degree of primary appraisal, limited secondary appraisal and a high rate of refusal, with no significant influence of personality traits. Positive affect is mainly influenced by a lower extent of primary appraisal, more secondary appraisal, and by a low rate of refusal and of social support seeking. Moreover, a low level of neuroticism was a predictor of greater positive affect. These data are discussed, highlighting the importance of a situational assessment of stressful episodes at each moment to not only understand the effects of stress on health but also, to develop effective interventions.

Keywords: Negative affect. Positive affect. Primary appraisal. Secondary appraisal. Coping. Daily stress.

Introduction

Stress was defined by Lazarus & Folkman (1984) as the state produced by the perception that the demands of a specific situation exceed the resources available. This definition has had an important effect, shifting the evaluation of stress from the objective description of events to their perception (Segerstrom & O'Connor, 2012). Even more, the conservation of resources theory (Hobfoll, 1989) stated that stress occurs when resources are threatened with loss, lost, or there is a failure to gain resources. An important consequence of these approaches has been to identify the strategies to cope with stress as the main mediators of how a stressful event affects individuals (Folkman & Lazarus, 1988), which has in turn led to a large number of research studies aimed at defining, classifying and evaluating coping strategies, that include both actions aimed at reducing demands, as maintaining or increasing resources (Hobfoll et al., 1994; Skinner et al., 2003).

The process by which the imbalance between demands and resources can be evaluated has been described in some detail by Lazarus and his collaborators (Lazarus & Folkman, 1984; Smith & Lazarus, 1993). As such, a distinction was made between primary and secondary appraisal: the former refers to the perception of the seriousness and the im-

portance of the situation that is qualitatively categorized as a threat, a challenge or a loss; whereas secondary appraisal refers to both the assessment of what can be done when faced with a stressful situation, regardless of its nature (threat, challenge or loss), and to the extent of an individual's belief in their ability to use these resources. This distinction is consistent with the proposed constructs of outcome expectancy and self-efficacy (Bandura, 1997). Therefore, when considering stress, it is crucial to evaluate the degree of imbalance between demands and resources, which requires the accurate and specific measurement of both primary and secondary appraisals. However, measuring the perception of stressful situations has not been subject to as much study as has the measurement of coping. The widely used Perceived Stress Scale (PSS) is a questionnaire containing items that refer to the severity of the stressful situation and the perceived ability to cope with it (Cohen et al., 1983). However, this scale does not provide an independent evaluation of the two types of appraisals and moreover, it refers to global perceived stress in the last month without differentiating between specific episodes.

In order to assess the association between anticipatory cognitive appraisal and the physiological responses of the hypothalamus–pituitary–adrenal (HPA) axis to acute stress, a questionnaire was developed called the Primary Appraisal Secondary Appraisal Scale (PASA: Gaab et al. 2005). This scale is derived from the theoretical constructs proposed by Lazarus and Folkman (Lazarus & Folkman, 1984) and it is comprised of four sub-scales: Threat, Challenge, Outcome Expectancy, and Self-efficacy. The first two address issues

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related to primary appraisal and the latter two, those focusing on secondary appraisal. Finally, an overall score for perceived stress can also be calculated from PASA by subtracting the secondary appraisal score from that for primary appraisal. However, a subscale assessing loss was not included as it focuses on assessing anticipatory appreciation. This scale was applied in the anticipatory phase of the Trier Social Stress Test (Kirschbaum et al., 1993) and it was found that the PASA scores were associated with the cortisol produced during the test. By contrast, personality measures or retrospective measures of perceived stress were not significantly associated with the cortisol produced. These results, along with those obtained elsewhere (Wirtz et al., 2006), provide very clear evidence supporting the hypothesis that the main driver of stress responses in experimental situations is the anticipatory and specific cognitive assessment. However, it is necessary to confirm this in natural contexts, such as that of daily stress.

Daily stress is conformed by the set of irritating or disturbing events that occur in the individual's daily interaction with his/her environment (Kanner et al., 1981). There is an extensive literature on the daily stress paradigm, which uses specific intensive longitudinal methods to examine individual differences in the time patterning of events and reactions (Almeida, 2013; Bolger et al., 1989; Tennen & Affleck, 2002). Given that daily stress is not something that can be identified at a specific moment but rather, it develops and shifts over time, it is particularly appropriate to study this phenomenon using specific methodologies, such as ecological momentary assessment. This approach involves capturing real time psychological data using different mobile devices, regardless of the individual's location (Bolger et al., 2003). These longitudinal methods differ fundamentally from the retrospective methods that involve the use of questionnaires to assess the main stressful events that occur during a given period of time, as well as their consequences and the strategy used to cope with them. However, retrospective methods are easily influenced by recall biases and thus, they are not always recommended to assess daily stress.

In a 14-day study on daily stress, primary and secondary appraisal was seen to influence positive and negative affect (Gartland, O'Connor, Lawton, & Bristow, 2014). In this case, primary and secondary appraisal was evaluated by adapting the 10-item scale proposed by Schneider (2008), in which seven items are devoted to the severity of the stressful event and three items are dedicated to the ability to cope. However, this scale is less specific than the aforementioned PASA questionnaire. The results indicated that primary appraisal was related to the degree of negative affect and that the ratio between primary and secondary appraisals predicted the extent of positive affect. It was also found that the personality trait "conscientiousness" moderates the influence of primary and secondary appraisal on positive affect, yet not that on negative affect. These data support the idea that primary and secondary appraisals predict the affective state produced by daily stressful events (hassles) but in addition,

they highlight the importance of a personality trait (i.e.: conscientiousness). It is well established that neuroticism can explain the effects of daily stress, as it favors a more negative interpretation of stressful events (Carver & Connor-Smith, 2010). However, since only conscientiousness and not neuroticism or other personality traits was recorded in this study, it remains unclear whether it is the personality trait that most strongly influences the affective state.

Finally, the role of coping strategies must be considered, which have traditionally been considered the main mediator between stressful events and emotional states, as indicated above (Folkman & Lazarus, 1988; Taylor & Stanton, 2007), although significantly, the coping strategy employed depends mainly on the primary and secondary appraisals. Another 14-day study on daily stress found that the type of coping employed in response to daily stressors initially depends on the primary and secondary appraisals, as evaluated using the PASA scale, and subsequently on the traits of neuroticism, openness, extraversion and conscientiousness (Ferrer et al., 2021). Moreover, it should be noted that elsewhere coping was also associated with personality traits (Gomà-i-Freixanet et al., 2021). In short, there are some studies on the relationship between personality, appraisal and affective state and others that relate coping and personality or coping and affective state. However, we have not found studies that contemplate all these variables at the same time with a momentary ecological evaluation methodology.

Based on the above, the aim of this work was looking how primary and secondary appraisals, along with coping strategies and personality traits, can predict positive and negative affect in daily stress.

The hypothesis set out in this study was that the main predictor of the emotional state in response to situations of daily stress is the primary appraisal, understood as an assessment of whether an event poses a threat, challenge or a loss for a negative emotional dimension. By contrast, the secondary appraisal, understood as the expectation of the results and self-efficacy, is a predictor of the positive emotional state. Personality traits may influence these primary and secondary appraisals, yet the direct effects of these primary and secondary appraisals are more significant than the direct effects of the personality traits. In terms of coping strategies, while they certainly influence the affective state since they are chosen depending on how the situation is appraised, the direct effects of primary and secondary appraisals on these states are also likely to be stronger than those of coping. To test this hypothesis, we have assessed daily stress over a two week period, recording both the primary and secondary appraisals, and the coping strategies employed in response to the main stressor each day. This study was carried out on a cohort representative of the general population and in which the different personality traits included in the "Big Five" model have also been evaluated (Costa & McCrae, 1992).

Methods

Sample

This study was carried out on a cohort of 122 individuals, 42 men (34.4%) and 80 women (65.6%). The mean age of the participants was 42.7 years of age (range: 26-64 years old), with a standard deviation of 7.9 years.

Procedure

The study population was drawn from 345 people selected randomly from an Opt-in panel representative of the general Spanish population. The 345 panelists selected were asked to provide their signed informed consent, where they committed to answering a 10 minute online diary before going to sleep over 10 days. As a result, 148 questionnaires were completed initially and 141 volunteers agreed to participate in the study. Every day during the 10 days of the study the participants received a message mid-way through the afternoon that contained a link to the online diary and that reminded them to fill it out before going to sleep. A total of 122 participants filled out the diary every day for the 10 days of the study and received 25 euros as compensation for their participation in the study.

Measurement instruments

Initial questionnaire: The initial questionnaire was completed online and it collected sociodemographic data together with the baseline responses to the online versions of the following instruments:

Perceived Stress Scale (PSS: Cohen et al., 1983), which assesses the level of stress perceived over the previous month. The Spanish version was used here (Remor, 2006), which consists of 14 items that are responded using a 5-point Likert scale. The internal consistency of the PSS in this study was 0.89 (Cronbach's α).

The *NEO Five-Factor Inventory (NEO-FFI)* that assesses Neuroticism, Extraversion, Openness, Agreeableness and Conscientiousness (Costa & McCrae, 1999). The Spanish version was used in this study, in which each scale contains 12 items assessed using a five-point Likert scale. In this study, the NEO-FFI reliability values (Cronbach's α) were 0.89 (Neuroticism), 0.86 (Extraversion), 0.77 (Openness), 0.67 (Agreeableness) and 0.83 (Conscientiousness).

Daily diary

In the *electronic diary*, the participants were first asked about their emotional state at the time of answering the questionnaire using the Positive and Negative Affect Schedule (PANAS), which assesses both the individual's positive and negative affective status (Watson, Clark, & Tellegen, 1988). The Spanish version of this scale was used (López-Gómez, Hervás & Vázquez, 2015), which is composed of 10

items assessing negative affect and 10 items assessing positive affect using a 5-point Likert scale format for the responses. The participants were then asked to recall the main events that had occurred during the day using the Day Reconstruction Method (Kahneman et al., 2004) to reduce the bias of daily retrospective reporting. Subsequently, participants were asked to answer the three following questionnaires focusing on the most important event they had experienced during the day: The Daily Inventory of Stressful Events, the PASA Scale, and the Mo-Cope.

The *Daily Inventory of Stressful Events* (Almeida et al., 2002). This is a classification of daily stressors that distributes them into the following categories: 1 - I had a discussion or disagreement with someone; 2 - I wanted to protest at something that happened to me, but I decided to let it pass to avoid a disagreement; 3 - Something happened to me at work or with my studies; 4 - Something happened to me at home; 5 - I felt discriminated against because of my physical appearance, skin color, age or gender; 6 - Something happened to a close family member or friend that affected me; 7 - Something else happened to me not included in the previous statements. The discomfort caused by the most important event was assessed using a 7-point Likert-type scale.

The *PASA Scale* (Gaab et al., 2005). In this study, we used the Spanish version of this scale (Edo et al., 2021), which includes an additional subscale as part of the primary appraisal that assesses loss and that allows an event that has already occurred to be appraised as a loss. This scale is composed of 20 items: 10 items addressing primary appraisal, or the degree to which a stressor is considered as a threat, challenge or loss; and 10 items focusing on secondary appraisal, the degree to which the event can be controlled. When applying these scales on the first day of this study, a Cronbach's $\alpha = 0.81$ was obtained for the Primary Appraisal Scale and a Cronbach's $\alpha = 0.79$ for the Secondary Appraisal Scale.

The *MoCope 10-item coping questionnaire* (Ferrer et al., 2021; Rovira et al., 2016). This scale consists of 10 items specifically designed to be used in momentary ecological evaluation and that are grouped into the following four categories, defined only by their functional properties: Problem-focused coping (2 items); Emotion-focused coping (3 items); Support seeking (2 items); and Refusal (3 items). These items were assessed using a 5-point Likert-type response scale and as this scale is designed to measure the variation over time, no correlation between items is assumed.

Statistical analysis

In order to examine the influence of personality traits, primary and secondary appraisal, and coping strategies on positive and negative affect, multilevel multiple regression analysis were conducted, using the Mixed Models procedure in the SPSS software (IBM, 2019). Each model included 10 observations nested within individuals, following a two-level hierarchical structure: Level 1, representing the within-

person variation, conformed by the repeated daily assessment that recorded the primary and secondary appraisal, and the coping strategies (problem-focused coping, emotion-focused coping, support seeking and refusal); and Level 2, representing the between-person variability, conformed by the individual's variables, such as gender and personality traits (Neuroticism, Extraversion, Agreeableness, Openness and Conscientiousness). Level 1 predictors were group mean-centered and these centered scores represent the deviation of each momentary score from the person's generalized tendency.

Two separate modeling analyses were performed, using different dependent variables: one for predicting negative affect, and another for predicting positive affect. The fitting for all of these modelling analyses commenced by establishing the simplest regression model, a random intercept model without explanatory variables, and it went from a parsimonious to more complex models, as recommended by Hox (2010).

After the random intercept model (Model 1) was assessed, primary appraisal and secondary appraisal were introduced as fixed effects (Model 2) and then problem-focused coping, emotion-focused coping, support seeking and refusal were introduced as fixed effects (Model 3). Finally, gender and the traits of Neuroticism, Extraversion, Agreeableness, Openness and Conscientiousness were introduced as fixed effects (Model 4). In addition, further models were tested to evaluate the random effects.

A Restricted Maximum Likelihood estimation was used to test the adjustment of each model, and models were compared according to the change in the logarithm of the Restricted Maximum Likelihood ($-2LL$ change). The significance of the $-2LL$ was calculated based on a Chi Squared Distribution. The choice of the final model for each modeling analysis was made according to the last significant change in $-2LL$.

Results

The aggregate descriptive statistics of the positive and negative affect, the primary and secondary appraisals, as well as the problem-focused, emotion-focused, social support seeking and refusal strategies are shown in Table 1. These aggregate data reflect the central trends for the aforementioned variables without considering any temporal variability. It should be noted from this data that the most common type

of coping is emotion-focused, followed by problem-focused coping, while seeking support and refusal are the least frequent.

Table 1
Aggregate mean and standard deviation (SD) of the quantitative variables for level 1 ($n=122$).

Variables	Mean	SD
Negative affect	11.09	1.61
Positive affect	14.81	4.74
Primary Appraisal	18.79	5.32
Secondary Appraisal	20.50	3.80
Problem-focused Coping	5.19	1.22
Emotion-focused Coping	7.35	1.98
Social Support Seeking	2.93	1.46
Refusal	2.30	1.42

Negative affect

The results of the four exploratory models tested for Negative Affect are shown in Table 2, left part. The intra-class correlation coefficients of negative affect showed that 64.2% of the variation was at the moment level (level 1), whereas 35.8% was at the participant level (level 2). The multi-level analysis demonstrated that model 2, which included the variables of primary and secondary appraisal as fixed effects, showed a significant $-2LL$ change (489.96**), as did model 3 that added problem-focused and emotion-focused coping, social support seeking and refusal as fixed effects (41.03**). Likewise, a significant change in $-2LL$ (164.01**) was also detected in model 4 that added gender and the five personality traits. Model 4 shows that Primary appraisal fixed effect positively influences negative affect, whereas secondary appraisal fixed effect influences it negatively. Related to coping strategies, only refusal coping fixed effect had a significant positive influence on negative affect (0.07*), while no personality trait showed a significant effect.

No cross-level interactions were found between variables from level 1 and 2, and no acceptable adjustment indicators were obtained from the analysis of the additional models in which the random effects of the predictor variables were introduced and thus, they were discarded.

Dispersion of the individual slopes of negative affect were plotted as a function of the significant predictors (Figure 1, left panels), in order to facilitate the visual detection of the generic trend (fixed effects) along with potential deviations from the fixed effect pattern by a group of individuals.

Table 2
Fixed effects of the predictors of negative and positive affect.

Parameters	Negative affect				Positive affect			
	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
Fixed effects								
Intercept	11.09** (0.15)	11.08** (0.15)	11.08** (0.15)	10.65** (0.148)	14.75** (0.43)	14.75** (0.43)	14.74** (0.43)	10.75* (0.48)
Level 1 (day)								
Primary Appraisal		0.09** (0.01)	0.09** (0.01)	0.09** (0.01)		-0.07** (0.01)	-0.06** (0.01)	-0.05** (0.01)
Secondary Appraisal		-0.03** (0.01)	-0.03** (0.01)	-0.03* (0.01)		0.10** (0.02)	0.11** (0.02)	0.11** (0.02)
Problem-focused coping			0.01 (0.03)	0.01 (0.03)			-0.03 (0.06)	-0.04 (0.06)
Emotion-focused coping			-0.04 (0.03)	-0.03 (0.03)			0.06 (0.05)	0.04 (0.05)
Social Support seeking			0.02 (0.03)	0.02 (0.03)			-0.09 (0.05)	-0.10* (0.05)
Refusal			0.07* (0.03)	0.07* (0.03)			-0.13* (0.05)	-0.13* (0.05)
Level 2 (person)								
Gender				0.25 (0.34)				-0.24 (0.99)
Neuroticism				0.03 (0.02)				-0.15* (0.06)
Conscientiousness				-0.04 (0.03)				0.02 (0.08)
Extraversion				-0.02 (0.02)				0.01 (0.06)
Openness				0.04 (0.02)				0.07 (0.07)
Agreeableness				0.01 (0.03)				0.13 (0.09)
Random effects								
Residual	3.95** (0.17)	3.11** (0.14)	3.13** (0.13)	3.13** (0.14)	11.67** (0.50)	10.84** (0.48)	10.75** (0.48)	10.54** (0.48)
Intercept	2.20** (0.33)	2.26** (0.32)	2.26** (0.33)	2.13** (0.33)	20.99** (2.83)	21.20** (2.87)	21.22** (2.87)	19.53** (2.78)
-2LL	5360.550	4870.590	4829.560	4665.640	6806.860	6423.670	6341.84	6084.950
df		2	4	6		2	4	6
-2LL change		489.96**	41.03**	164.01**		383.19**	81.84**	256.89**

Note: Standard error in parentheses. Df = degrees of freedom. -2LL = Logarithm of the Restricted Maximum Likelihood. * $p < .05$. ** $p < .01$.

Positive affect

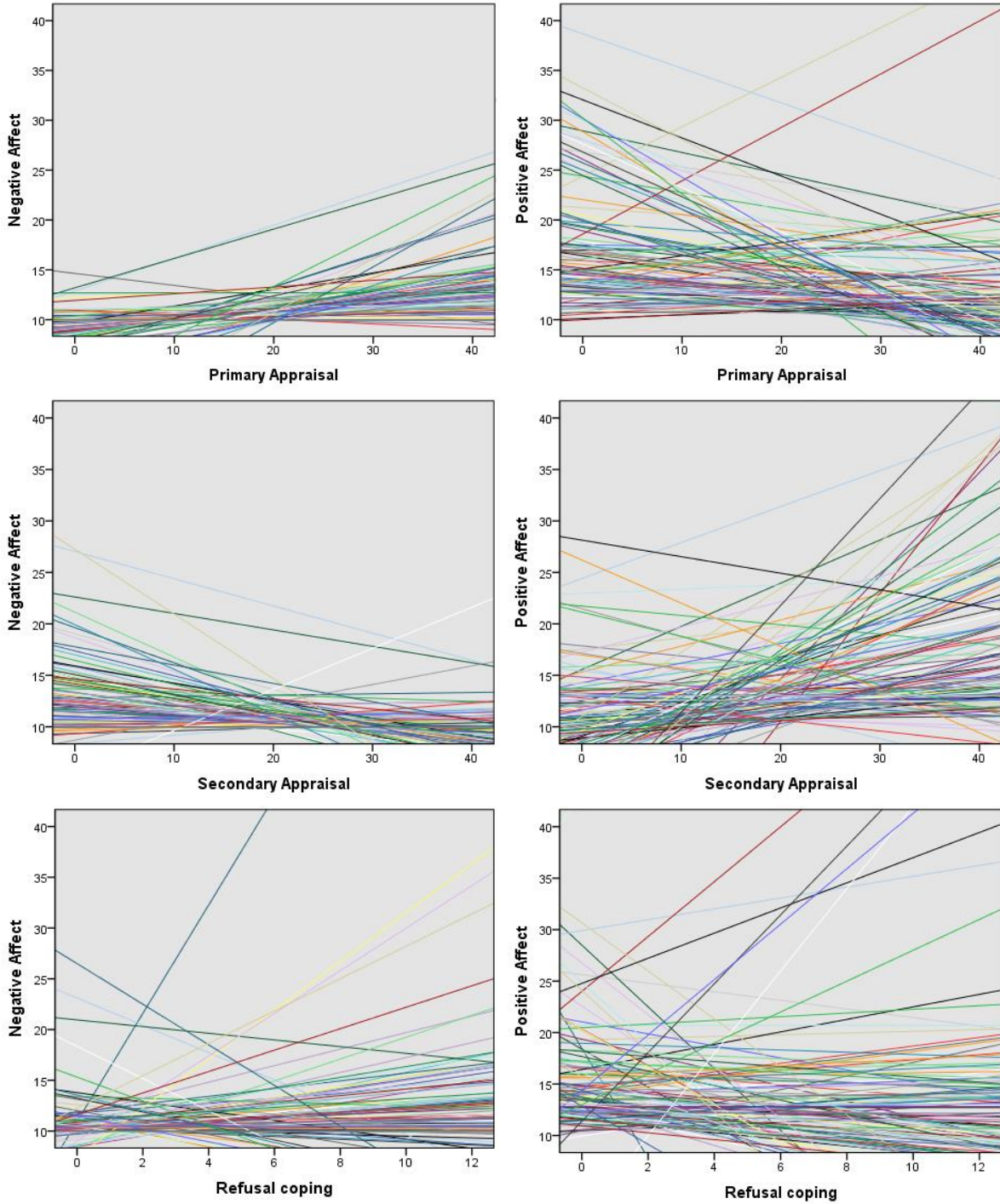
The results of the four exploratory models tested for Positive Affect are shown in Table 2, right part. The intra-class correlation coefficients of positive affect showed that 35.7% of the variation was at the moment level (level 1), while 64.3% was at the participant level (level 2). The multi-level analysis demonstrated that model 2 (-2LL = 6.423.67), which included the primary and secondary appraisal variables as fixed effects, produced a significant change in -2LL (383.19**). Model 3 added problem-focused and emotion-focused coping, social support seeking and refusal as fixed effects, producing a significant change in -2LL (81.84**), and model 4 introduced gender and the five personality traits and it also demonstrated a significant change in -2LL (256.89**). Model 4 shows that primary appraisal negatively

influenced positive affect (-0.07**). Also positive affect was positively influenced by secondary appraisal (0.10**). Refusal (-0.13*) and Social Support Seeking (-0.10*) had a significant negative influence on positive affect. Neuroticism (-0.15*) also had a significantly negative influence on positive affect.

No cross-level interactions were found between variables from level 1 and 2, and no acceptable adjustment indicators were obtained from analyzing the models in which the random effects of the predictor variables were introduced, and thus, they were discarded.

Dispersion of the individual slopes of positive affect were plotted as a function of the significant predictors (Figure 1, right panels) in order to facilitate the visual detection of the generic trend (fixed effects) along with potential deviations from the fixed effect pattern by a group of individuals.

Figure 1
 Individual slopes of negative (left panels) and positive affect (right panels) as a function of the primary appraisal (upper panels), of the secondary appraisal (middle panels) and of refusal (lower panels).



Note: Each slope represents the relationship between the predictors (primary appraisal, secondary appraisal, and refusal coping) and the negative or positive affect respectively, for each participant.

Discussion

The main hypothesis of this study was confirmed, since primary and secondary appraisals were seen to have direct fixed effects on both negative and positive affect, while the influence of coping or personality traits was only marginal. The degree of negative affect experienced at the end of the day is positively related to the primary appraisal of the most important stressor of the day and inversely related to the degree of secondary appraisal. Furthermore, it also depends on the degree of stressor refusal, whereas no personality trait is significantly involved in the negative affect. That is why the variance of negative affect is mostly dependent on factors related to the moment (i.e.: within individual variability) and less dependent on variables related to the individual (between individual variability). For example, we know that neuroticism has a strong influence on the discomfort caused by stress (Bolger & Schilling, 1991; Bolger & Zuckerman, 1995). In the light of the present data, this phenomenon can be interpreted as a greater propensity towards a primary appraisal, a lower tendency towards secondary appraisal and a greater degree of refusal in people with a stronger trait of neuroticism, as opposed to considering that neuroticism has a direct influence on negative affect.

The degree of positive affect experienced at the end of the day was negatively related to the influence of primary appraisal and positively related to the extent of secondary appraisal, and only neuroticism was found to be inversely related to negative affect. With regards positive affect, and in contrast to negative affect, there was greater between individual variability than within individual variability, and it is precisely the degree of neuroticism that seemed to be the individual factor that explains the general tendency to experience less positive affect, regardless of the other factors involved. As proposed previously (Gartland, O'Connor, Lawton, & Ferguson, 2014), conscientiousness was not found to be a significant predictor, probably because all personality traits and not only one were taken into consideration here. A higher degree of refusal was related to lower positive affect, consistent with the influence on negative affect. More reliance on seeking social support was also related to lower levels of positive affect. This data is intriguing and difficult to explain, although it may possibly reflect that situations in which we choose to ask for help give us less satisfaction by having failed to resolve the problem ourselves. This explanation is speculative and further research will be required to clarify this issue.

From previous studies, it is thought that when primary appraisals exceed secondary appraisals, a situation is considered a threat, whereas when the opposite occurs the situation is considered a challenge (Schneider, 2008). Our data indicate that in line with the original theory of Lazarus & Folkman (Lazarus & Folkman, 1984), primary appraisal tries to identify the situation as a threat, a challenge or a loss. A challenge does not necessarily have to be more or less stressful than a threat or a loss, which will depend on its importance

and on the secondary appraisal. The results of the present study do not support the usefulness of subtracting the secondary assessment score from the primary assessment score to obtain an indicator of perceived stress, since it is not the same when the primary appraisal exceeds the secondary appraisal as when both scores are low or as when both scores are high. In other words, it is necessary to consider the balance between primary and secondary appraisals when assessing stress, but only if a high score is attributed to the primary appraisal.

These results have a clear clinical implication. As such, it would appear not to be necessary to focus on reducing negative emotions to facilitate adaptation to situations of daily stress, since daily stress is a reaction to the real stressors that we face. Conversely, it is necessary to favor the development of realistic primary and secondary appraisals, as advocated by third generation therapies like acceptance and commitment therapy (Hayes et al., 2006). We should remember that in subjectively stressful situations, it is advisable to enhance the feeling of control and the possibilities to successfully cope with the situation, rather than minimizing the importance of the stressor (Park et al., 2004). For example, when receiving a serious diagnosis it can only poorly be managed by reducing the importance of the primary appraisal as it is a real threat, yet information regarding the actions that can be taken to confront such a diagnosis, which is the basis of the secondary appraisal, could produce a significant improvement in the affective state (Edo et al., 2012). However, although the results of this study highlight the role of appraisal in the affective consequences of stressful events, both primary and secondary appraisal have been considered as aggregate constructs, without analysing their components. It would be convenient for future research to differentiate the particular effects of threat, challenge and loss with respect to the primary appraisal as a whole and those of self-efficacy and outcome expectations with respect to the secondary appraisal, and also to determine whether there are interactions between the different components of primary and secondary appraisals.

This study has some important limitations. In the first place, the cohort studied had a higher proportion of women than men, because although a random and gender-balanced sample was invited to participate in the study, more women voluntarily agreed to participate. In second place, the size of the sample has not allowed for detailed analyzes by age range. Comparing the results of this study with another with a similar methodology but carried out with a sample of young people of both genders between 18 and 25 years old (Puigbó et al., 2019), it can be seen that while the frequency and intensity of daily stress is similar, young people show higher scores in affective state, both positive and negative, they also performed more Social Support seeking and more refusal than in the present study.

Finally, the study is based on self-report measurements that are not contrasted with objective or observational measurements. Nevertheless, the findings from this study

provide some insights that will help to design future studies aimed at deepening our understanding of the psychological processes used to assess daily stressors.

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