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The role of coping strategies and self-efficacy as predictors of life satisfaction in a sample of parents of children with autism spectrum disorder

Bárbara Luque Salas[1], Virginia Yáñez Rodríguez[1], Carmen Tabernero Urbieta[2] and Esther Cuadrado[1]
[1] University of Córdoba and [2] University of Salamanca

Abstract

Background: This research aims to understand the role of coping strategies and self-efficacy expectations as predictors of life satisfaction in a sample of parents of boys and girls diagnosed with autistic spectrum disorder. **Methods:** A total of 129 parents (64 men and 65 women) answered a questionnaire on life-satisfaction, coping strategies and self-efficacy scales. **Results:** Using a regression model, results show that the age of the child is associated with a lower level of satisfaction in parents. The results show that self-efficacy is the variable that best explains the level of satisfaction in mothers, while the use of problem solving explains a higher level of satisfaction in fathers. Men and women show similar levels of life satisfaction; however significant differences were found in coping strategies where women demonstrated higher expressing emotions and social support strategies than men. **Conclusions:** The development of functional coping strategies and of a high level of self-efficacy represents a key tool for adapting to caring for children with autism. Our results indicated the necessity of early intervention with parents to promote coping strategies, self-efficacy and high level of life satisfaction.

Key words: Autism, self-efficacy, coping strategies, life satisfaction, parents.

Resumen

Estrategias de afrontamiento y autoeficacia como predictores de satisfacción vital en progenitores de menores con autismo. **Antecedentes:** esta investigación analiza el papel de las estrategias de afrontamiento y las expectativas de autoeficacia como predictores de la satisfacción vital en una muestra de progenitores de niños/as con autismo. **Método:** 129 progenitores (64 hombres y 65 mujeres) respondieron un cuestionario con escalas de satisfacción vital, estrategias de afrontamiento y autoeficacia. **Resultados:** utilizando un modelo de regresión encontramos que la edad del hijo/a predice menor satisfacción en los progenitores conforme avanza el tiempo. Los resultados muestran diferencias entre ambos sexos: la autoeficacia es la variable que mejor explica el nivel de satisfacción de las madres, frente al uso de resolución de problemas en los padres. Ambos muestran niveles similares de satisfacción vital; sin embargo, encontramos diferencias significativas en el uso de estrategias de afrontamiento indicando que las mujeres manejan más estrategias relacionadas con expresión emocional y apoyo social en comparación con los hombres. **Conclusiones:** el desarrollo de estrategias de afrontamiento funcionales y de una alta autoeficacia constituye una herramienta clave para la adaptación al cuidado de menores con autismo. Nuestros resultados indican la necesidad de una intervención temprana con padres y madres centrada en las estrategias de afrontamiento y autoeficacia para mejorar la satisfacción vital.

Palabras clave: Autismo, autoeficacia, afrontamiento, satisfacción vital, progenitores.

The bringing up of a child diagnosed with autism presents a huge challenge for their parents, and might lead to high levels of stress and distress as a result of their attempt to meet all the demands made by the children. Parents of children with ASD score higher on levels of stress than other groups of parents (Bonis, 2016; Eikeseth, Klintwall, Hayward, & Gale, 2015). Throughout the process, the coping strategies developed by parents represent one of the essential tools that will allow them to adapt healthily to different situations and will allow them to achieve a high level of life satisfaction (Beck, Daley, Hastings, & Stevenson, 2004; Gray, 2006).

According to many research studies (Dabrowska & Pisula, 2010), mothers are more likely to show higher levels of distress than fathers. This distress is related to the stress arising from raising the child and is the result of a greater involvement of mothers in care tasks, in which they perform a major role.

Lazarus (1999) defines coping as the ever-changing cognitive and behavioral efforts developed in order to meet specific demands (external and/or internal) that are considered to exceed or go beyond the subject's resources. This author differentiates between problem-focused strategies -which come into play in those situations that are thought to be changeable, giving rise to a series of actions aimed at altering the present circumstances- and emotion-focused strategies - which are drawn on for problems that the subject considers to be difficult to change and so the strategy

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Corresponding author: Carmen Tabernero Urbieta
Faculty of Social Sciences. Department of Social Psychology
University of Salamanca
37007 Salamanca (Spain)
e-mail: carmen.tabernero@usal.es

is aimed at their own feelings and attitudes towards the problem (Folkman & Lazarus, 1980).

Frequently, the level of life satisfaction in parents of children with autism is seriously threatened, especially for mothers (Benjak, 2011; Bourke-Taylor, Howie, & Law, 2010). The daily challenges of caring are many and affect the parent's health and ability to manage the needs of the child and family (Bekhet, Johnson, & Zauszniewski, 2012; Bonis, 2016). If we take into account the numerous risk factors these families face (overload levels, vulnerable to emotional disorders, stress, discomfort, depression, worse mental and physical health) (Seguí, Ortiz-Tallo, & De Diego, 2008), then the development of a strong sense of self-efficacy can be a variable that protects them from the demands of the environment (Poslawsky et al., 2015). Self-efficacy is defined as the belief or confidence an individual has in their personal ability or efficacy to properly handle a wide range of challenges that happen in daily life (Bandura, 1997). There is also a more specific construct that is closely related to this one: specific self-efficacy for coping with stress. Specific self-efficacy for coping with stress is defined as the belief in one's personal resources to handle stressful situations in an effective and competent way (Godoy et al., 2008).

The first objective is to evaluate the degree to which fathers and mothers who maintain functional coping strategies show a higher level of life satisfaction (O1). There are numerous studies that show how care for children with autism causes high levels of stress to their parents (Bekhet et al., 2012; Bonis, 2016; Dabrowska & Pisula, 2010; Eikeseth et al., 2015; Pottie & Ingram, 2008; Tehee, Honan, & Hevey, 2009). Frequently, stressors don't cause poor or dysfunctional functioning *per se*; rather, the coping strategies that the person chooses mediate in this relationship and influence the adaptation to the stressor directly or indirectly (Abbeduto et al., 2004; Tehee et al., 2009).

Tobin, Holroyd, Reynolds and Wigal (1989) developed one of the most widely used classifications, where they distinguish between problem-focused coping *versus* emotion-focused coping and functional coping *versus* dysfunctional coping.

The second objective is to evaluate in the degree to which parents who develop high levels of self-efficacy show higher life satisfaction (O2). Bandura (1997) points out that those self-efficacy expectations determine the beginning and maintenance of coping behaviors despite the obstacles and difficulties present in daily life. The development of a high sense of self-efficacy in parents of children with autism is a key aspect for successful care because it works as a mediator between daily stressors and the level of personal satisfaction (Jones & Prinz, 2005; Lightsey & Sweeney, 2008; Weiss et al., 2013).

Self-efficacy expectations develop as a consequence of a process through which parents acquire a higher sense of control, since they become aware of their ability to make decisions and changes in the present aimed at having a better future (King et al., 2005; Kuhn & Carter, 2006; Stainton & Besser, 1998).

The third objective is to evaluate the degree to which mothers tend to use appropriate coping strategies and emotion-focused strategies to a larger extent than fathers (O3). Gray (2002, 2003, 2006) found in his research studies that women tend to experience higher levels of stress than men, even if the number of objective stressful events is similar in both cases, which means that the impact of the events is stronger in the case of women (Matud, 2004). With regard to coping skills, some authors state that there are more similarities than differences, and that differences are frequently small and not related to gender but to the nature of the stressor or to other contextual factors. Nevertheless, there are a high number of research studies analyzing the differences in coping strategies of women and men. However, they haven't reached a clear or consistent conclusion (Hastings et al., 2005; Pottie & Ingram, 2008; Woodman & Hauser-Cram, 2012). More specifically, Tehee et al. (2009) state that, generally, women use more useful coping strategies than men, both problem- and emotion-focused.

The present study seeks to research the coping strategies used by parents of children with autism as well as the relationship between these strategies and the life satisfaction experienced by parents. Furthermore, we research the relationship between self-efficacy expectations and parents' life satisfaction.

Methods

Participants

The study population consisted of 129 mothers and fathers of boys and girls diagnosed with the autistic spectrum disorder by the Mental Health Unit of Córdoba (Spain). In terms of gender, number of men and women were similar (see Table 1). We analyzed the influence that socio-demographic variables had on the rest of the variables we studied.

In terms of the characteristics of the patients with autism, 85% were boys and in the 3-14 age range ($M = 7.46$, $SD = 3.07$), while girls were in the 3-12 age range ($M = 6.95$, $SD = 3.15$). All of them had been diagnosed by specialists (Autism Diagnostic Observation Schedule and Diagnostic Interview Autism, following standards ICD-10, International Statistical Classification of Diseases and Related Health Problems) from the above-mentioned unit whose diagnosis was one of the following: autistic disorder, Asperger's syndrome or pervasive developmental disorder not otherwise specified (PDD-NOS).

Procedure

Before the study began, the Ethics Committee of the Unit Child and Adolescent Mental Health approved the ethical viability of this

Table 1
Information related to demographic characteristics of participants (means, standard deviations, percentages)

	Variables	Data
Participants 129	Men	49.5%
	Women	50.4%
Age	Men	$M = 41.62$; $SD = 5.42$
	Women	$M = 39.50$; $SD = 4.85$
Levels of education	University degree	38%
	GCSEs	29.5%
	Vocational qualification	25.5%
	Obtained levels	7%
Occupation	Employees	43.4%
	Self-employed	28.7%
	Housewives	18.6%
	No response	9.3%
Family	Married	94%
	Others	6%

research. Families were selected through the specialists treating the patients diagnosed with autism. Fathers and mothers were invited to participate in a meeting in the unit; they were told the aim of the research study and those willing to participate received an envelope with the three questionnaires in duplicate. Those parents participating in the study signed an informed consent stating that they were taking part voluntarily and that they were fully aware of the possibility of dropping out if they wished to. They completed the questionnaire autonomously in the presence of medical staff. It took an average of 20 minutes to complete the questionnaire.

Instruments

Satisfaction With Life Scale (SWLS; Diener et al., 1985; Diener, Inglehart, & Tay, 2012; validated Spanish version by Vázquez, Duque, & Hervás, 2013). Parents' level of satisfaction was measured through the SWLS. The SWLS is a five-item scale that measures life satisfaction; participants must indicate their level of agreement / disagreement with each of the statements using a 7-point Likert scale (ranging from 1 = strongly disagree to 7 = strongly agree). Previous research obtained a high reliability coefficient, ranging from 0.80 to 0.96 (Diener et al., 1985; Vázquez et al., 2013), in their Spanish validation study, obtained an alpha of .88. The reliability value obtained in the present study is shown in Table 2.

Coping Strategy Inventory (CSI; Tobin et al., 1989; Spanish adaptation by Cano, Rodríguez, & García, 2007). We used this inventory to evaluate which strategies parents use, and to what extent, when caring for their children. The scale consists of 40 items; parents answer these items using a 5-point Likert scale (ranging from 0 = fully disagree to 4 = fully agree). As in Tobin et al. (1989), we evaluated the reliability of the inventory for each of the eight factors in which coping strategies are structured: problem solving, self-criticism, expressing emotions, wishful thinking, social support, cognitive restructuring, problem avoidance, and social withdrawal. The reliability values are shown in Table 2. The factors that explain the different coping strategies showed adequate levels of reliability (greater than 0.70), similar to those shown in the original scales (Tobin et al., 1989). There were only two factors which showed lower reliability (*problem avoidance* and *cognitive restructuring*), which is a reason why the results in both scales should be considered with caution. Something similar happens in the reliability recorded in Cano et al. (2007) for the problem avoidance strategy (α = .63).

Coping with Stress Self-Efficacy Scale [CSSES, Godoy et al. (2008)]. This was used to measure self-efficacy expectations demonstrated by parents regarding the care of their children. It is an eight-item tool and answers were given using a 5-point Likert scale (ranging from 1 = totally disagree to 5 = totally agree). The scale measures self-efficacy for coping with stress directly, with higher scores indicating a higher level of confidence in personal skills to cope with stress. Previous studies produced a Cronbach's alpha of 0.75 (Godoy et al., 2008). The reliability value obtained in the present study is shown in Table 2.

Data analysis

Statistical analyses were performed with the software package SPSS Statistics 20.0. First, descriptive analyses (means and standard deviations) were performed to show the participant's demographic characteristics. Secondly, correlational analyses were performed to evaluate the relationship between the different coping strategies and self-efficacy expectations with the level of parent's life satisfaction. Following that, several comparative *t* test were performed to evaluate the differences between fathers and mothers in all study variables. And finally, multiple regression models were performed to estimate the weight of demographic variables (p. e., age or time since diagnosis), coping strategies and self-efficacy to explain life satisfaction.

Table 2
Means, standard deviations, reliability coefficients and correlations among all study variables: life satisfaction, self-efficacy and coping strategies (** $p<.01$; * $p<.05$; # $p<.09$). Data sample of men (below the diagonal) and data sample of women (above the diagonal)

Variables	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
1. Life Satisfaction	α= .82	.54**	.56**	.22#	.33**	.51**	-.39**	-.41**	.02	-.45**
2. Self-Efficacy	.42**	α= .76	.39**	-.03	.13	.29*	-.39**	-.30*	.08	-.37**
Coping - Functional										
3. Problems Solving	.29*	.44**	α= .86	.28*	.50**	.50**	-.56**	-.26*	-.03	-.46**
4. Expressing emotions	-.27*	-.26*	.20	α= .85	.49**	.21#	.01	.02	.01	-.44**
5. Social support	.04	.27*	.50**	.45**	α= .77	.48**	-.22#	-.02	.06	-.40**
6. Cognitive restructuring	.18	.39**	.35**	.23#	.39**	α= .69	-.40**	-.34**	.38**	-.42**
Coping - Dysfunctional										
7. Self-criticism	-.38**	-.36**	.01	.45**	.05	-.13	α= .90	.48**	-.29*	.55**
8. Wishful Thinking	-.32**	-.23#	.22#	.28*	.10	-.04	.37**	α= .91	-.21#	.35**
9. Problem Avoidance	.16	.31*	.07	-.04	.03	.36**	-.12	-.07	α= .57	-.11
10. Social Withdrawal	-.09	-.22#	-.11	-.22#	-.33**	-.16	.41**	.27**	.06	α= .72
Mean (Males)	4.98	2.48	2.92	1.23	1.60	2.34	1.02	1.96	1.41	1.07
SD (Males)	0.84	0.71	0.77	0.80	0.81	0.81	0.96	1.27	0.93	0.93
α	.80	.79	.88	.86	.76	.65	.90	.91	.70	.73
Mean (Females)	4.85	2.26	3.11	1.82	1.93	2.24	.95	2.06	1.08	0.84
SD (Females)	1.01	0.63	0.76	0.83	0.88	0.82	0.94	1.30	0.69	0.77
α	.85	.72	.84	.80	.78	.70	.91	.90	.31	.71

Results

Relationship between all studied variables

Out of all the socio-demographic variables of the study, only the age of parents correlate with coping strategies; there was a decrease in social support strategies (r = -.25; p<.001) and in cognitive restructuring strategies (r = -.18; p<.05) as the age of the parents increased.

As we can observe in Table 2, we performed a bivariate correlated analysis in order to find the relationship between satisfaction, coping strategies and self-efficacy expectations. In women, we found significant positive correlations between life satisfaction and the use of the following functional coping strategies: problem solving, social support and cognitive restructuring, the correlation was marginal for expressing emotions. While in men, we found significant correlations between life satisfaction and problem solving (positive) and expressing emotions (negative). We also found that high self-efficacy expectations correlate with higher life satisfaction in both genders.

Moreover, Table 2 shows significant negative correlations between satisfaction and three out of the four dysfunctional coping strategies (self-criticism, wishful thinking and social withdrawal), the relationship between life satisfaction and social withdrawal is negative and significant only for women.

When the relationship between the different coping strategies assessed in the Coping Strategies Inventory (CSI) was analyzed, we found the significant positive correlations that we expected between all the functional coping strategies (both emotion- and problem-focused) in both genders. If we take into account secondary subscales (problem-focused coping and emotion-focused coping) and tertiary subscales (functional and dysfunctional coping), then we found positive correlations between problem-focused functional coping strategies (problem solving and cognitive restructuring), between emotion-focused functional strategies (expressing emotions and social support) and between emotion-focused dysfunctional coping strategies (self-criticism and social withdrawal).

Self-efficacy expectations correlate positively with problem solving and cognitive restructuring and negatively with self-criticism, wishful thinking and social withdrawal in both genders. Self-efficacy expectations correlate positively with social support and problem avoidance and negatively with expressing emotions in male sample.

Gender differences

No difference in life satisfaction is shown with regard to gender. However, we find significant gender differences regarding coping strategies. These differences are shown in Figure 1 and can be found between expressing emotions (t (127) = 4.08; p<.001; Cohen's d = .72), and social support (t (127) = 2.19; p < .05; Cohen's d = .39), which are used by women to a larger extent. However, self-efficacy expectations are marginally higher in fathers (t (127) = 1.81; p<.07; Cohen's d = .32) than mothers, and the problem avoidance strategies are used significantly more by fathers than mothers (t (127) = 2.29; p<.05; Cohen's d = .40).

Explicative model: Coping strategies and self-efficacy as explicative variables of satisfaction

We performed a hierarchical multiple regression analysis and progressively added the influence of each of the variables we studied as predictors of satisfaction; results are shown in Table 3.

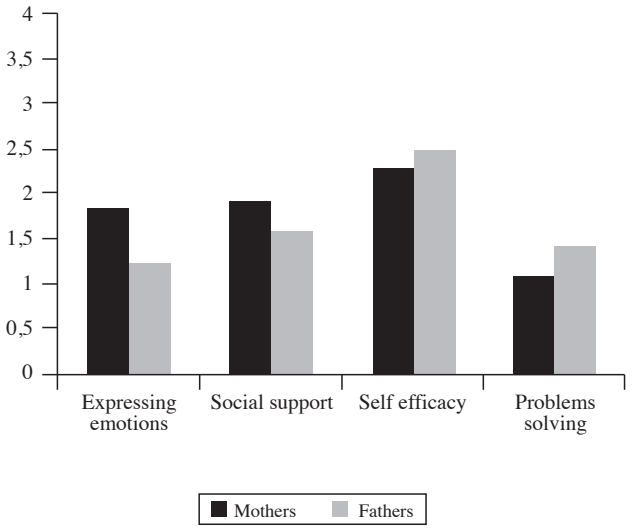

Figure 1. Gender differences in coping strategies -a) expressing emotions, b) social support, c) problems avoidance- and d) self-efficacy expectations of fathers and mothers of children with autism disorder

Table 3
Regression models to explain life satisfaction from sociodemographic variables, self-efficacy and coping strategies

Variables	Model 1	Model 2	Model 3	Model 4
	R^2adj. = .025** ΔR^2= .04 F_{change} = 2.63 β	R^2adj.= .24** ΔR^2= .26** F_{change} = 14.55** β	R^2adj. = .30 ΔR^2= .34** F_{change} = 8.88** β	R^2adj.= .35 ΔR^2= .41** F_{change} = 7.25** β
Sociodemographics				
Child age	-.23 *	-.18*	-. 16 *	-.12
Time since diagnosis	.13	-04	. 06	.04
Self-efficacy		.47**	.32 **	.26**
Coping Functional				
Problem solving			.26**	.25**
Expressing emotion			-.03	.02
Social support			-.07	-.05
Cognit. restructuring			.17*	.12
Coping Dysfunctional				
Self-criticism				-.11
Wishful thinking				-.23**
Problem avoidance				-.03
Social withdrawal				.03

(R^2adj.= adjusted regression coefficient for each regression model; β = standardized regression coefficients)
(** p<.01; * p<.05)

In model 1, socio-demographic variables (age of the child and time since diagnosis) were entered; where the age of the child works as a negative predictor of satisfaction. In model 2, in this case, self-efficacy acts as a significant predictor variable of satisfaction. In model 3, when functional coping strategies were added, we found that problem solving and cognitive restructuring positively predict satisfaction. In model 4, we considered dysfunctional coping strategies, finding that wishful thinking significantly predicts a lower level of satisfaction in parents.

Given the differences between genders regarding coping strategies and self-efficacy, we repeated model 4 for both samples: self-efficacy is the variable that best explains the level of satisfaction in mothers (β = .33; p<.001), while the use of problem solving explains a higher level of satisfaction in fathers (β = .33; p<.001).

Discussion

Results confirm the relationship between the level of life satisfaction of parents of children with autism and the coping strategies developed by them throughout the child's upbringing, as well as with the level of self-efficacy expectations parents show regarding care tasks. As we expected, functional coping strategies show a greater relationship with parents' life satisfaction. Furthermore, we find some differences between genders regarding those coping strategies that are associated with higher life satisfaction: in women, the level of perceived self-efficacy is the most important variable while in men the use of problem solving is the main strategy (Folkman & Lazarus, 1980; Godoy et al., 2008).

With regard to the level of life satisfaction, we find no significant differences according to gender; there is only a small advantage to men, but it is not statistically significant. This finding was quite interesting, since previous research studies generally indicate that mothers show a significantly higher level of distress, anxiety and depression (compared with fathers) (Dabrowska & Pisula, 2010). Future studies should examine the relationship between this result and time since diagnosis, from a longitudinal perspective.

As stated by Beck et al. (2004) and Gray (2006), coping strategies evolve over the years; in this regard, our results show that, as parents get older, there is a decrease in the use of social support and cognitive restructuring strategies.

There is another result we want to emphasize: the age of the child as another significant variable related to parents' satisfaction, since life satisfaction decreases as children grow older.

As stated by Abbeduto et al. (2004), there are many difficulties these parents encounter every day. That is the reason why coping strategies are one of the variables that can protect them from developing emotional disorders. In this sense, the results of our study show a strong correlation for the women in the sample between the level of satisfaction and some functional coping strategies (social support, problem solving and cognitive restructuring). Moreover, dysfunctional coping strategies such as self-criticism, wishful thinking and social withdrawal correlate negatively with satisfaction. Numerous studies show a relationship between self-blaming and social isolation attitudes and a higher level of distress and anxiety, because those attitudes distance parents (in a behavioral and a cognitive way) from possible solutions they could find for specific problems (Kuhn & Carter, 2006; Pottie & Ingram, 2008).

Furthermore, high self-efficacy in parents correlates with greater life satisfaction (Jones & Prinz, 2005; King et al., 2005). As we expected, self-efficacy correlates positively with functional coping strategies (problem solving and cognitive restructuring) and negatively with dysfunctional strategies (self-criticism, wishful thinking and social withdrawal) (Hastings & Brown, 2002; Kuhn & Carter, 2006; Lightsey & Sweeney, 2008; Woodman & Hauser-Cram, 2012).

With respect to the differential use of different coping strategies depending on gender, we see that mothers use more emotion-focused functional coping strategies, such us social support or expressing emotions. Many studies show that women usually use emotion-focused strategies while men usually prefer problem-focused strategies (Dabrowska & Pisula, 2010). In spite of having found some distinguishing details between men and women with regard to how they cope with problems, we also see that the differences are not as marked as one might expect. Results suggest that there are indeed more similarities than differences between men and women with regard to how they face daily stress, and that differences might happen more between persons rather than between groups (Tamres, Janicki, & Helgeson, 2002; Woodman & Hauser-Cram, 2012). Understanding the challenges parents face will provide direction for intervention (Bonis, 2016).

Fathers show more self-efficacy; this might be the result of close links to their job and, therefore, being partially away from stressful caring tasks (Matud, 2004; Smith et al., 2010; Tehee et al., 2009). In the case of men, problem solving is the coping strategy that best explains the level of satisfaction. This finding has been replicated in many research studies; they all find that problem-focused coping strategies predict a higher level of adaptation and personal well-being. This kind of coping is usually associated with men, as they frequently act in a practical and rational way and pay less attention to emotional aspects, related to stressful situations (Gray, 2002, 2003).

As similarly stated by Jones and Prinz (2005), the development of a high sense of self-efficacy in women predicts higher levels of satisfaction, as it acts as mediator between daily stress and satisfaction.

In general, strategies focused on avoiding or distancing oneself from reality decrease the level of parents' well-being, since this attitude makes it difficult to be in touch with reality, which hinders the planning and resolution of difficulties arising from the care of a child with autism (Pottie & Ingram, 2008).

Despite the limitations of the present study related to a cross-sectional design with self-reported measures and a small sample size, our findings shed new light on the necessity of an early intervention with parents to promote coping strategies and self-efficacy to elevate their levels of life satisfaction. Future research should take into account the number of children (with and without ASD) and the type of family living.

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