

Propiedades Psicométricas del inventario de Resiliencia para Mujeres embarazadas Mexicanas.

Psychometric Properties of the Resilience Inventory for Pregnant Mexican Women

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Resumen

La resiliencia ha estado relacionada a la salud mental durante el período perinatal. Sin embargo, hasta donde sabemos, no hay instrumentos para medir la resiliencia que hayan sido validados en esta población. El propósito de este estudio fue examinar las propiedades psicométricas del Inventario de Resiliencia en mujeres embarazadas mexicanas. Se evaluó una muestra de 280 mujeres usando el Inventario de Resiliencia, el Cuestionario de Salud del Paciente y un cuestionario de situaciones de estrés. El coeficiente de confiabilidad del Inventario de Resiliencia fue de 0.88 para la escala completa. El análisis factorial exploratorio resultó en una estructura de resiliencia de tres factores (capacidad personal, religiosidad y actitud positiva) para mujeres embarazadas. La validez consistente fue respaldada por correlaciones negativas con síntomas prenatales depresivos y situaciones de estrés. El Inventario de Resiliencia podría ser potencialmente una medida fiable válida. Es necesario continuar explorando el rol de la resiliencia en el período perinatal e identificar los factores que la determinan.

Palabras claves: Resiliencia, embarazo, propiedades psicométricas, depresión

Abstract

Resilience has been related to mental health during the perinatal period. However, to our knowledge, there are no instruments for measuring resilience that have been validated in this population. The purpose of this study was to examine the psychometric properties of the Resilience Inventory in Mexican pregnant women. A sample of 280 women was evaluated using the Resilience Inventory, Patient Health Questionnaire and a stressful life events questionnaire. The reliability coefficient of the Resilience Inventory was 0.88 for the complete scale. Exploratory factor analysis resulted in a three-factor structure of resilience (personal competence, religiosity and positive attitude) for pregnant women. Concurrent validity was supported by negative correlations with prenatal depressive symptoms and stressful life events. The Resilience Inventory could potentially be a valid reliable measure. It is necessary to continue exploring the role of resilience in the perinatal period and identify the factors that shape it.

Keywords: Resilience, pregnancy, psychometric properties, depression

Introduction

Resilience is defined as the ability to adapt positively or recover mental health despite experiences involving significant adversity, stress or trauma (Herrman et al., 2011). Resilience is not a directly observable phenomenon: it involves an inference based on individual differences in response to adversity (Rutter, 2007). It is important to note that while resilience does not protect the individual from negative life events, resilient individuals appear to cope more functionally and flexibly with stressful life events (Friborg, Hjemdal, Rosenvinge, & Martinsen, 2003). Several studies have reported features commonly displayed by resilient individuals, such as optimism, high positive emotionality, spirituality, a sense of purpose in life, mastery, self-efficacy, self-esteem, empathy, religiosity, positive interpretation of negative events and the use of active coping strategies such as problem-solving and planning (Herrman et al., 2011; Shrivastava & Desousa, 2016). Throughout the life course, the experience of resilience will vary, in other words, people may be resilient to some stressful life events but not others (Rutter, 2007). Likewise, their resilience may be influenced by their culture, since this may determine the way they express their feelings and cope with adversity. Living conditions that are normative in a given sociocultural context may not be so in another context (Waller, 2001).

There is evidence that resilience plays a key role in mental health, well-being and quality of life and the way people respond to various challenges throughout life or stressful life events, such as illness, childhood trauma, accidents, job loss and divorce (Shrivastava & Desousa, 2016). Some studies have found that resilience is lower among people with mental health problems, and that high levels of resilience may prevent the development of mental health problems or help minimize their effects and severity, as is the case with depression (Edward, 2005; Ozawa et al., 2017). There is evidence that adults diagnosed with clinical depression have opposite styles of thought to those seen in resilient people, in other words, they are pessimistic and perceive their problems as permanent with no possible solutions and consider themselves unable to solve them (Shrivastava & Desousa, 2016). However, as individuals' depressive symptoms recede, their way of thinking changes and they begin to regard their problems as temporary and specific, and propose possible solutions. In other words, they begin to have resilient thoughts and behaviors (Southwick, Vythilingam, & Charney, 2005). Moreover, resilience plays an important role in reducing suicidal thoughts in depressive and anxious individuals (Shrivastava & Desousa, 2016).

Resilience is a multifactorial concept in which risk factors and protective factors interrelate (Aguar & Acle-Tomasini, 2012; Fraser, Kirby & Smokowski, 2004). Risk factors include stressors or environmental conditions that increase the likelihood that a person will experience psychological distress or problems adapting to their environment (Jessor, Van Den Bos, Vanderryn, Coasta & Turbin, 1995). According to Rutter (2000), risk factors do not act in isolation, but tend to be cumulative and stable, magnifying the negative consequences associated with them. Conversely, protective factors are those that reduce the negative consequences of exposure to risks and/or stress (Rutter, 2007). The relationship between risk factors and protectors is complex since it does not always occur in the same way in all the events in which the resilience of a person is at stake. In other words, what may act as a protective factor

at a specific point in a person's life may fail to do so at another time (Aguar & Acle-Tomasini, 2012).

The transition to motherhood can be one of the most complex, vulnerable stages in women's lives (Nelson, 2003). Although being a mother can be a highly rewarding experience, it is inevitably an exhausting process that can exact a high toll on their mental health (Luthar & Cicciolla, 2015). During pregnancy, women undergo a series of physical, psychological and economic changes and readjustments in various areas of their lives (such as work, family relationships, and the couple relationship). Some of these changes may involve high demands and constitute a major source of stress (Nelson, 2003).

In addition to this process of adaptation to their new role and responsibilities as mothers, some women may also experience other stressful life events. In Latin America, several studies have highlighted the role of certain factors that may negatively impact the mental health of pregnant women, including precarious jobs, pregnancies with little or no access to health services, unsafe housing, low educational attainment, absence of one's partner in the home and/or problems with one's partner, unwanted pregnancy, lack of social support, substance abuse and conflicting feelings regarding motherhood (Arcos et al., 2011; Fisher et al., 2012; Lara, Navarrete & Nieto, 2016; Matijasevich et al., 2009). In addition to these factors, in Mexico, cultural factors such as the traditional female role have also been found (Lara et al., 2016; Seedat et al., 2009).

Studies have also explored the impact of stressors such as natural disasters (Harville, Xiong, Buekens, Pridjian, & Elkind-Hirsch, 2010), intimate partner violence (Lam et al., 2008; Rodriguez et al., 2008), preeclampsia (Mautner et al., 2013), and the role of resilience as a protective factor for prenatal depression. In general terms, these studies find that in the presence of stressful life events, a high level of resilience was beneficial to women, whereas low resilience had negative effects on their mental health.

Resilience has also been studied in relation to postpartum depression (Schachman & Lindsey, 2013; Sexton, Hamilton, McGinnis, Rosenblum, & Muzik, 2015) and the quality of life of mothers with a history of childhood maltreatment (Irwin, Beechly, Rosenblum, & Muzik, 2016). In general, these studies find that resilience is associated with reduced psychopathology, improved wellbeing and quality of life in women. Even though resilience seems to be a key component for an individual's coping skills during times of adversity or stressful life events, little is known about the relationship between perinatal depression and resilience.

Interest in resilience and mental health has led to the development of instruments to measure this construct (Gaxiola, Frias, Hurtado, Salcido, & Figueroa, 2011; Windle, Bennett, Noyes, 2011). A review study on resilience measurement, which included 15 self-report questionnaires for use in general and clinical populations (children, adolescents/youth, working age adults and older adults), failed to find a gold standard. All these measurements lacked certain data on psychometric properties (Windle et al., 2011). The authors recognize the complexity of evaluating the concept of resilience since it may be culturally and contextually dependent. In other words, a person's culture may impact the way they express their feelings and the resources they have for coping with adversity. At the same

time, they also observed that most scales focus on evaluating personal agency, and although this is a fundamental resource for coping with adversity, so are the availability of family and community resources, which can act as facilitators of resilience. Accordingly, they suggest evaluating resilience from a multidimensional perspective, which would make it possible to reflect the complexity of the concept.

To our knowledge, there are no instruments for measuring resilience that have been validated in pregnant women. The challenges faced during pregnancy may differ from those at other times in life and little is known about the continuities and discontinuities in resilience throughout life and whether the factors that promote resilience also change (Cosco, Kauschal, Richards, Kuh Stafford, 2016). Resilience should therefore also be examined in pregnant women. Identifying the factors involved in resilience may help to explain why some women positively adapt to the stressors related to changes that occur in pregnancy.

It is important to consider the cultural context in which a woman experiences motherhood, since this will inevitably be permeated by a series of socio-cultural beliefs and expectations (Sánchez-Bringas, 2009). In Mexico, a traditional cultural construction of motherhood persists, with femininity constantly being equated with motherhood (Di Girolamo & Salgado de Snyder, 2008, Rocha & Cruz del Castillo, 2013). The cultural roles established for Mexican women, such as being a "good wife" and a "good mother," imply meeting the needs of their partners and children before their own needs, which creates constant stress, fatigue and worry (Salgado de Snyder, Diaz & Ojeda, 2000). Moreover, Mexican mothers shoulder the main burden of raising children (Rocha & Cruz del Castillo, 2013). Some studies have shown that women's emotional distress is closely linked to the greater number of responsibilities and obligations assigned to their gender (Salgado et al., 2000). It is therefore important to identify the strengths and resources of Mexican pregnant women, since they may be prone to experiencing mental health problems due to the multiple demands of motherhood and the attendant sociocultural expectations.

In view of this evidence, the purpose of this study is to examine the psychometric properties of the Resilience Inventory (RESI) (Gaxiola et al., 2011) in a sample of Mexican pregnant women. In this study, the variables of prenatal depressive symptoms and stressful life events will be used as the concurrent validity indicators of RESI. The RESI was developed in Mexico to measure resilient traits in mothers of children ages 6 to 11. It showed adequate psychometric properties in this sample. RESI was designed to measure features commonly found in resilient individuals in general but not specifically in mothers of young children. The authors defined resilience as the ability to exhibit adaptive behaviors to risk conditions, which combines a set of individual attributes acquired through psychological development with protective factors in their environment. RESI includes the following dimensions of resilience: positive attitude, sense of humor, perseverance, religiosity, self-efficacy, optimism and goal orientation (Gaxiola et al., 2011).

Methods

Participants

A convenience sample of 280 pregnant Mexican women was used in a secondary analysis of data originally collected as part of a research study on perinatal depression (Lara et al., 2015; Lara et al., 2016). The mean age of participants was 28.9 (SD= 6.2) years, while the mean number of years of schooling was 12.70 (SD= 3.8) years. The majority of participants were in a couple relationship (n= 223; 79.6%), 56.1% (n= 157) were multiparous and 50.4% (n= 141) had a low family income.

Instruments

Demographic and obstetric data included age, educational attainment, marital status, parity and monthly family income. For the purposes of the current study, the monthly family income reported was classified into two categories: 1) low income (\leq \$5246 Mexican pesos) and 2) medium and high income ($>$ \$ 5246 Mexican pesos).

The Resilience Inventory (RESI) (Gaxiola et al., 2011) was developed and administered in Spanish. It contains 16 items covering seven dimensions of resilience: positive attitude, sense of humor, perseverance, religiosity, self-efficacy, optimism and goal orientation. The instrument uses a Likert-type scale, from 1 (not at all) to 5 (completely), with higher scores indicating more traits associated with resilient people. In the absence of a pre-established cutoff point, the median minus one standard deviation (54) was used to determine high vs. low resilience traits.

The Patient Health Questionnaire (PHQ-9) (Spitzer, Kroenke, & Williams, 1999) is a nine-item depression module from the full PHQ, specifically developed for use in primary care. The PHQ-9 has proved its usefulness as an assessment tool for the diagnosis of depression with acceptable reliability, validity, sensitivity, and specificity. A score of ≥ 10 indicates risk of depression (Kroenke, Spitzer, & Williams, 2001). This scale has been previously used with perinatal Mexican women (Lara et al., 2015; Lara et al., 2016).

Stressful life events. A short form of 12 items including potential stressors (e.g. illness, financial problems, accidents, job loss, intimate partner violence, etc.) was taken from the 23 original items adapted for Mexico (Lara et al., 2016) from Holmes and Rahe's instrument (Holmes & Rahe, 1967). These twelve items were selected from those that produced the greatest stress or were most common in perinatal Mexican women. The scale evaluates the occurrence of each event over the past six months as well as the perceived degree of stress they produced (0= not present; 1= present but produced no stress, 2 = produced little stress, 3 = produced moderate stress, 4 = produced great stress). This scale has been previously used with perinatal Mexican women (Lara et al., 2016).

Procedure

The women were recruited from two institutions in Mexico City: a hospital that provides comprehensive medical care for state workers and their dependents, and a community health care center offering prenatal and other medical care for the local population. The inclusion criteria were: 1) ≥ 20 years; 2)

≥ 26 weeks pregnant; 3) not having a bipolar condition; and 4) living in the metropolitan area of Mexico City. Eligible women who agreed to participate signed a written consent form. This study was approved by the Institutional Review Board (IRB) of the Ramón de la Fuente National Institute of Psychiatry.

Data Analyses

Descriptive statistics were used for demographic characteristics and RESI item frequencies. Cronbach's alpha coefficient was used to assess reliability for each factor and the whole scale. In order to examine the construct validity of the RESI, a confirmatory factor analysis was conducted followed by an exploratory factorial analysis with oblimin rotation. Concurrent validity was assessed using Pearson's correlations between prenatal depressive symptoms and stressful life events with the RESI total and its factors. Statistical analyses were performed using SPSS 21.

Results

Few resilience traits were observed in 13.9% (n= 39) (RESI ≤ 54), 20.4% (n= 57) of the women reported prenatal depressive symptoms (PHQ-9 ≥10), and 21.1% (59) had experienced stressful life events in the past six months.

Table 1 shows the mean and standard deviation scores of each item in the RESI. As can be seen, item 9-I have goals and aspirations in life, had the highest mean (4.45, SD= 0.75) while item 7 -My religious beliefs give my life meaning, had the lowest mean (3.21, SD= 1.28).

Table 1. Mean and Standard Deviation Scores of Each of the Resilience Inventory (RESI) items (N= 280).

	X	SD
Total RESI	63.7	9.1
1. I see the positive side of life and the things that happen to me	3.90	0.87
2. I maintain my sense of humor even in the most difficult situations	3.52	1.08
3. I constantly try to improve my life	4.16	0.79
4. I try to be with people from whom I can learn positive things	4.19	0.89
5. I try to learn something positive even from the problems I face	4.20	0.89
6. I try to be happy despite my problems	4.20	0.83
7. My religious beliefs give my life meaning	3.21	1.28
8. I am able to smile despite the problems I have	3.90	0.99
9. I have goals and aspirations in life	4.45	0.75
10. I think the future will be better than the present	4.25	0.87
11. I feel capable of solving or overcoming the problems in my life	4.16	0.83

12. I am sure of myself in what I do	3.83	0.92
13. My religious faith helps me overcome my problems	3.48	1.29
14. I strive to get what I want	4.05	0.88
15. I do my best to achieve my life goals and aspirations	4.15	0.78
16. I think I will usually succeed in what I do	4.08	0.80

Reliability

Cronbach's alpha coefficient of the RESI was 0.88 for the complete scale. Cronbach's alpha coefficient did not increase with the removal of any of the items from the instrument.

Construct validity

The initial confirmatory factor analysis to assess whether our data replicated the original seven-factor structure of the RESI showed that only three factors had an eigenvalue of more than one. An exploratory factor analysis with oblimin rotation was subsequently conducted, reducing the number to three factors (Table 2). These factors explained 58.8% of the total variance. Factor 1 contributed 39.9% of the variance and consisted of 10 items comprising five dimensions from the original model: goal orientation, positive attitude, self-efficacy, optimism and perseverance. Factor 2 accounted for 10.3% of the variance and comprised two items from one dimension (religiosity). Lastly, Factor 3 contributed 8.5% of the variance and consisted of four items comprising two dimensions from the original model: sense of humor and positive attitude. The factor loading of all items was higher than 0.35 in the corresponding factors.

Conversely, regarding the reliability for each of these factors, Cronbach's alpha coefficient was 0.88 for Factor 1, 0.93 for Factor 2, and 0.75 for Factor 3. Cronbach's alpha coefficient did not increase with the removal of any of the items.

Table 2. Exploratory Factor Analysis (Oblimin Rotation) of the RESI (N= 280).

Item	Factors		
	1	2	3
15. I do my best to achieve my life goals and aspirations (GO)	0.78		
4. I try to be with people from whom I can learn positive things (PA)	0.77		
11. I feel capable of solving or overcoming the problems in my life (SE)	0.76		
16. I think I will usually succeed in what I do (O)	0.76		
14. I strive to get what I want (P)	0.72		
9. I have goals and aspirations in life (GO)	0.67		
12. I am sure of myself in what I do (SE)	0.65		

10. I think the future will be better than the present (O)	0.63
3. I constantly try to improve my life (P)	0.51
5. I try to learn something positive even from the problems I face (PA)	0.37
7. My religious beliefs give my life meaning (R)	0.96
13. My religious faith helps me overcome my problems (R)	0.95
2. I maintain my sense of humor even in the most difficult situations (SH)	0.90
8. I am able to smile despite the problems I have (SH)	0.75
6. I try to be happy despite my problems (PA)	0.65
1. I see the positive side of life and the things that happen to me (PA)	0.43

Factors of RESI: P= Perseverance, O= Optimism, SE= Self-efficacy, GO= Goal orientation,

PA= Positive Attitude, R= Religiosity, SH= Sense of humor.

Concurrent validity

Pearson's correlations were calculated between the RESI total score and for each factor between prenatal depressive symptoms and stressful life events (Table 3). Significant negative correlations were found between the total RESI score, Factor 1 and Factor 3 and prenatal depressive symptoms ($r = -0.27, p < 0.01$; $r = -0.27, p < 0.01$; $r = -0.24, p < 0.01$, respectively). Conversely, significant negative correlations were found between the total RESI score and Factor 1 and stressful life events ($r = -0.19, p < 0.01$; $r = -0.24, p < 0.01$, respectively).

Table 3. Correlation of total RESI score and its factors with prenatal depressive symptoms and stressful life events (N= 280).

	Prenatal Depressive Symptoms		Stressful life events	
		p		p
Total RESI	-0.27	0.00	-0.19	0.00
Factor 1	-0.27	0.00	-0.24	0.00
Factor 2	-0.08	0.17	0.00	0.98
Factor 3	-0.24	0.00	-0.10	0.08

Discussion

The purpose of this study was to examine the psychometric properties of the Resilience Inventory, RESI, in a sample of pregnant Mexican women. To our knowledge, this is the first study to examine an instrument to measure resilience in pregnant women. The results show that RESI has good internal consistency ($\alpha = 0.88$), though Cronbach's alpha coefficient was slightly lower than that reported in the original study ($\alpha = 0.93$) (Gaxiola et al., 2011).

The factor structure of RESI in this sample was completely different from the one proposed by Gaxiola et al (2011) assessed

in mothers of children ages 6 to 11, since confirmatory factor analysis failed to replicate the original seven-factor structure. Three factors emerged in our sample. Factor 1, which can be called Personal Competence, comprised items from the five dimensions in the original RESI: goal orientation, positive attitude, self-efficacy, optimism and perseverance. These items reflect prenatal women's ability to make decisions, set goals and persevere, as well as their perception of being competent at problem-solving. Other resilience scales include a similar factor (Windle et al., 2011). For example, in older adults, Wagnild and Young (1993) also identified a personal competence factor that include features such as self-reliance, determination, perseverance and independence, while Friberg et al's scale (2003) includes a personal competence factor with aspects of self-efficacy and determination in the clinical and general population.

Of the three factors that emerged in our sample, only Factor 2, Religiosity, was similar to that described by Gaxiola et al. (2011). Previous research has found that religious practices can help people cope with adversity and reduce the likelihood of developing depressive symptoms (Ozawa et al., 2017; Southwick et al., 2005). It is known that religious practices provide coping strategies for dealing with the multiple demands and stressors of motherhood during the postpartum period (Edge & Rogers, 2005). In this respect, Mexican culture is characterized by having a strong religious tradition, with 99.7% of the Mexican population reporting that they profess a religion (INEGI, 2010).

Items in Factor 3, called Positive Attitude, are a combination of two of Gaxiola et al's dimensions: sense of humor and positive attitude. Both dimensions have been associated with greater life satisfaction and increased psychological well-being (Southwick et al., 2005). They reflect an acceptance of life and the individual's ability to see the positive side of things. Women with a positive attitude toward the future are satisfied with their lives and have a low risk of developing mood disorders (Kaźmierczak, Gierszewska, Mieczkowska, Gebuza, & Banaszkiwicz, 2015). According to Grote and Bledsoe (2007), women who are optimistic or hopeful prenatally are less likely to develop postpartum depression. At the same time, it has been suggested that women with negative attitudes during pregnancy are at a greater risk of developing mood disorders after childbirth (Kaźmierczak et al., 2015).

Differences found in the factor structure in the present study as compared to Gaxiola et al., (2011) may be related to differences in the samples: one comprising mothers of children ages 6 to 11 and the present one on pregnant women. The particular challenges mothers face during pregnancy may affect the way resilience is expressed (Lam et al., 2008; Mautner et al., 2013).

Another aspect assessed in this study was the concurrent validity of the RESI, hypothesizing that the RESI would be associated with depressive symptoms and stressful life events. The findings tallied with this hypothesis, since less resilient women displayed more depressive symptoms and greater stress associated with life events, as in other studies on pregnant women (Harville et al., 2010; Lam et al., 2008; Mautner, et al., 2013; Rodriguez et al., 2008). In a sample of postpartum women, Edge and Rogers (2005) found that women who perceived themselves as strong (strong black women) in the face of adversity regarded themselves as self-efficient in solving their

problems and used effective coping strategies for dealing with psychological distress during the perinatal period. Similar data were found by Kaźmierczak, et al. (2015), who report that feeling capable as mothers or in taking care of an infant are important factors in determining women's mental health after childbirth.

The lack of correlation between Factor 2, Religiosity and prenatal depressive symptoms and stressful life events is difficult to explain, especially since Mexican culture is characterized by having a strong religious tradition. Moreover, some studies have found that religious practices can help people cope with adversity and reduce the likelihood of developing depressive symptoms (Southwick et al., 2005). Thus, the findings of the present study can at least partly be attributed to the fact that this factor only comprises two items. Future research is required to rethink this factor, probably through the inclusion of new items.

Conversely, Positive Attitude was correlated with prenatal depressive symptoms yet not with stressful life events. The literature has shown that women with a positive attitude toward the future are satisfied with their lives and have a low risk of developing mood disorders (Kaźmierczak et al., 2015). During the perinatal period, it has also been found that positive attitude is a key aspect of mental health (Collins, Pooley, & Taylor, 2014; Grote & Bledsoe, 2007). According to Grote and Bledsoe (2007), women who are optimistic or hopeful prenatally are less likely to develop postpartum depression. At the same time, it has been suggested that women with negative attitudes during pregnancy are at a greater risk of developing mood disorders after childbirth (Kaźmierczak et al., 2015).

Our findings must be interpreted with caution. The results are based on secondary data analyses of a sample of pregnant women who attend public health institutions in Mexico City; the findings were obtained in an urban area and thus may not be generalizable to indigenous or rural communities. Another limitation is that since there is no qualitative study prior to the RESI validation, certain key factors for assessing resilience in pregnant women have been excluded from the analysis.

In conclusion, this study suggests that RESI has appropriate psychometric properties with adequate reliability, construct and concurrent validity. It shows that the construct of resilience in pregnant women may be presented as a triad of Personal Competence, Religiosity and Positive Attitude. These findings suggest that the RESI can be a useful scale for identifying women with few resilience traits who may be at risk of perinatal depression and more vulnerable to stressful life events. However, further confirmation of these results is required in prenatal women to support existing evidence of the psychometric properties of the RESI in this population. It is necessary to continue exploring the role of resilience in the perinatal period and identify the factors that shape it. Among other things, this would help explain the process of adaptation to motherhood and identify the personal resources of women that could contribute to it, in order to prevent adverse effects on their mental health and improve their quality of life during this especially vulnerable period. It is important to develop interventions that promote strengths and resources such as optimism, perseverance and positive attitude in order to improve women's mental health during the transition to motherhood. These interventions could also include certain elements that

previous studies have shown to be important for the mental health of perinatal women, including problem-solving strategies, involving one's partner and other family members in the care of one's children, promoting the empowerment of women, improving mothering skills and community strategies (Chowdhary et al., 2014; Lara, Navarro & Navarrete, 2010; Lara & Nieto, 2014).

Lastly, this study contributes to expanding the body of knowledge on mothers' and children's mental health. According to some authors, the basis of childhood resilience is the early presence of a significant person who is affectionate, gives the child confidence, and accepts and loves him or her (Manciaux, 2003). Promoting maternal resilience will therefore have a positive impact on maternal-infant bonding which, in turn, could impact on child resilience. Moreover, some authors have observed that resilient mothers tend to encourage resilient behavior in their infants (Manciaux, 2003).

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