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Quality of Life and Adjustment in Youths with Asthma: The Contributions of Family Rituals
and the Family Environment

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Video abstract:

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Abstract

This cross-sectional study explored the relationships among family ritual meaning, cohesion, conflict and health-related quality of life (both specific to chronic health conditions and in general), and the emotional and behavioral problems reported by youths with asthma.

Participants included 149 Portuguese children and adolescents between the ages of 8 and 18 who had been diagnosed with asthma, and attended outpatient services at three public hospitals. The results showed that stronger family ritual meaning predicted a more positive family environment (i.e., higher cohesion levels and lower conflict levels), better health-related quality of life and fewer emotional and behavior problems in youths. Furthermore, family cohesion and conflict mediated the links between family ritual meaning and health-related quality of life, and emotional and behavioral problems. These results did not change after controlling for participant age, gender and asthma severity. The findings of this study suggest that family ritual meaning contributes to the adaptation of youths with asthma via its positive association with the family environment. The implications for multicontextual interventions with families are briefly discussed with regard to the positive role of family rituals and of their potential as a modifiable factor in families with increased health challenges.

Keywords: pediatric asthma; family ritual meaning; family environment; health-related quality of life; emotional and behavioral problems

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Asthma is the most common chronic health condition (CHC) in childhood (World Health Organization, 2008). It has a significant impact on the emotional, social and physical functions of children and adolescents; thus, it is considered a public health problem (Fiese, 2008a). In recent decades, interest has grown in assessing the psychological adjustment (Ortega, Huertas, Canino, Ramirez, & Rubio-Stipec, 2002) and quality of life (QoL) of youths with asthma (Everhart & Fiese, 2009). Researchers and clinicians agree on the importance of family-related factors to the well-being and adjustment of youths (Josie, Greenley, & Drotar, 2007). In addition, some studies show that the family contributes to the variability of asthma symptoms (e.g., Fiese, Winter, Anbar, Howell, & Poltrock, 2008). Naturally occurring family rituals have been described as protective factors for children with asthma (Markson & Fiese, 2000); however, empirical research on this topic is scarce. For example, we do not know whether the protective properties of family rituals apply to different outcomes (e.g., QoL). Furthermore, research has yet to address the processes by which family rituals are linked to positive outcomes. Therefore, the main objective of the present study was to contribute to this body of knowledge by assessing the impact of family rituals on self-reported health-related quality of life (HRQoL) and the emotional and behavioral problems of youths with asthma. Moreover, this research examines whether the family environment (as assessed by family conflict and family cohesion) is a possible avenue through which family rituals are linked to youth outcomes.

Quality of Life and Adjustment in Youths with Asthma

Although there is no known cure for asthma, its symptoms can be managed through medication and the avoidance of environmental triggers. When its symptoms are not successfully controlled, asthma is associated with numerous sleep disorders

(Fiese et al., 2008), school absenteeism, hospitalizations, emergency room visits, and limitations in leisure and school activities (Fiese, 2008a). Considering these difficulties, a growing body of research has examined whether youths with asthma are at a greater risk for problems with adjustment and have lower QoL, compared with their healthy peers. In addition, asthma in children and adolescents is consistently associated with lower QoL (Fiese, 2008a; Sawyer et al., 2001), more internalization problems (McQuaid, Kopel, & Nassau, 2001), more anxiety symptoms (Fiese et al., 2008; Ortega et al., 2002) and more depression (Wood et al., 2008), compared with their healthy counterparts.

Family Interaction Patterns

A CHC diagnosis represents a challenge for youths and their families (Kazak, Segal-Andrews, & Johnson, 1995). Most theoretical models that aim to explain CHC adaptations in childhood include family factors, such as the family environment or family members' adjustment, as utilitarian resources (Kazak, 1989; Wallander & Varni, 1989). In the case of asthma, the pioneering empirical work of Minuchin, Rosman e Baker (1978) on psychosomatic families suggested that family functioning could exacerbate asthma crises in response to emotional stimuli. Thus, a CHC is not only a physical manifestation in an individual, but also a set of reciprocal and complex effects (Kazak, 1997). In this sense, there is increasing interest in identifying the resources available to help families deal with asthma and other CHCs.

Family rituals.

Several authors have emphasized that family rituals, such as celebrations (e.g., Christmas), traditions (e.g., birthday parties), and standard family interactions (e.g., family dinners) are one of the ways that families organize, adjust and balance (eg. Fiese, 2006a). Essentially, families use rituals to maintain a sense of stability in the

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face of life's demands (Fiese, 2006a; Wolin & Bennett, 1984). In terms of organized group behavior, these events include practical and symbolic components that promote family identity and provide a sense of belonging (Fiese, 1992; Fiese et al., 2002).

Family rituals transmit lasting values, family attitudes and objectives (Imber-Black & Roberts, 1989); they promote unity, strengthen relationships (Meske, Sanders, Meredith, & Abbott, 1994) and stimulate communication and positive interaction between family members (Fiese, 2008b). Family rituals benefit individuals and families at different developmental stages. Several studies have established a relationship between investing in family rituals and positive outcomes in school-age children, such as academic success (Fiese et al., 2002). Adolescence studies suggest that youths appreciate family rituals (Eaker & Walters, 2002). Greater family investment in these events is positively correlated with better social skills (Fiese & Wamboldt, 2000), integration, identity, sense of belonging, and self-esteem (Fiese, 1992), lower attendance of psychological/psychiatric support (Compañ, Moreno, Ruiz, & Pascual, 2002); and self-reported well-being in adolescents (Crespo, Kielpikowski, Pryor, & Jose, 2011).

The literature also suggests that family rituals play important roles in families in which one of the members has health conditions. For instance, Markson and Fiese (2000) considered that family rituals are a resource for maintaining the health of the family and its members.

Family relational environment: Cohesion and conflict.

A positive family environment has well-established relationships with a range of positive outcomes in children and adolescents. Research conducted with youths with asthma reveals positive correlations between family cohesion and clinical improvement (Reichenberg & Broberg, 2005) and between family cohesion and well-

being (Vinson, 2002). Furthermore, there are correlations between low family cohesion, and behavioral problems (Soliday, Kool, & Lande, 2001), higher levels of family conflict and externalization problems (Hamlett, Pellegrini, & Katz, 1992). Some authors suggest that cohesive families find it easier to prevent illness and adhere to treatment (Reichenberg & Broberg, 2005). In addition, maternal criticism (an expression of family conflict) is associated with increases in the frequency and severity of asthma attacks (Schobinger, Florin, Reichbauer, Lindeman, & Zimmer, 1993) and higher probabilities of hospitalizations, which may serve as a chronic stressor, and prevent treatment compliance in children and adolescents (Wamboldt, Wamboldt, Gavin, Roesler, & Brugman, 1995). Thus, criticism compromises efficient communication, supervision and responsibility sharing (Schobinger et al., 1993).

Study Overview

A mediation hypothesis.

The literature suggests that family rituals are embedded in the family environment (Fiese et al., 2002; Imber-Black, 2002). For example, family rituals and cohesion have a bidirectional relationship (i.e., they influence each other over time; Crespo, Kielikowski, et al., 2011). Thus, one of the ways in which family rituals are associated with well-being and adjustment might be through their contribution to a more positive family environment. Family rituals might promote positive family environments by fostering stability and security within families (Bossard & Boll, 1950; Fiese, 1992). In a review, Fiese and colleagues (2002) stated that threats to cohesion occur when family rituals are interrupted (Fiese, 2006a). When children and adolescents see family members involved in joint activities that take place in a predictable space and time (e.g., family dinners), they are likely to feel secure and perceive their family environment as more cohesive, and less fraught with conflict.

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These associations suggest a meditational model in which family rituals are linked to perceptions of higher cohesion and lower conflict, which in turn are linked to better HRQoL and fewer adjustment problems.

This hypothesis has been previously tested to some degree: Crespo, Kielpikowski, et al. (2011) reported that parents' family ritual meaning is connected to child and adolescent well-being via shared perceptions of cohesion. The present study of 149 Portuguese youths with asthma advances that research in several ways. First, we tested the proposed meditational model using youth reports of the meaning of family rituals. Second, we assessed youth perceptions of cohesion and conflict (allowing for the control of the influence of each of these variables), and we examined three outcomes: generic HRQoL, emotional and behavioral problems, and HRQoL specific to CHCs. The last assessment allowed us to analyze the specific challenges associated with having a CHC.

Hypotheses.

We had four major hypotheses: H1. Family ritual meaning is positively related to family cohesion and negatively related to family conflict. H2. Higher levels of family ritual meaning and family cohesion are associated with better HRQoL¹ and fewer emotional and behavioral problems. H3. Higher levels of family conflict are related to poorer HRQoL and more emotional and behavioral problems. H4. Family ritual meaning is related to better HRQoL and fewer emotional and behavioral problems via increased family cohesion, and decreased family conflict.

Method

Participants

¹ For the sake of simplicity, we use the term HRQoL for both specific CHCs and CHCs in general.

The participants included 149 children and adolescents diagnosed with asthma. The majority of the children were male (61.1%), and their ages ranged from 8 to 18 ($M = 12.20$; $SD = 2.46$); most of the participants (137) were between 9 and 16 years old. According to clinical assessments of their disease severity, 51.0% of the participants had Level 1 asthma (intermittent), 30.2% of the participants had Level 2 (mild persistent), 15.4% of the participants had Level 3 (moderate persistent), and 2.7% of the participants had Level 4 (severe persistent). According to the classification of Simões (1994) for the Portuguese context (1994), most of the children had a low socioeconomic status (SES; 57.7%); 31.5% had a medium SES; and 10.7% had a high SES. This distribution was consistent with profiles of public health service users in Portugal.

Procedure

The sample was collected at the outpatient services of three Portuguese public hospitals between March and December 2010. The children and adolescents included in this study (1) were aged between 8 and 18 years; (2) had been clinically diagnosed with asthma by a physician using the international classification system (ICD-10); and (3) had been ill for at least one year. Formal authorizations to collect data were obtained from the ethics committees of the participating institutions. Informed consent forms were obtained from youths between 14 and 18 years old and from the parents of younger children. The youths completed the assessment protocols in a room provided for this purpose in the presence of a research assistant. The children's clinician assessed asthma severity according to the recommendations of the Global Initiative for Asthma (GINA, 2008).

Measures

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Family ritual meaning.

Family ritual meaning was assessed with the Portuguese version of the Family Ritual Questionnaire subscales for dinner time and annual celebrations (Fiese & Kline, 1993; Portuguese version: Crespo, Davide, Costa, & Fletcher, 2008). The participating youths answered 10 items presented in a forced-choice format. Each subscale is composed of five items that assess family ritual meaning for each setting. For example, the first pair of descriptions for the dinner setting was “Some families regularly eat dinner together” and “Other families rarely eat dinner together”. The third pair of descriptions for annual celebrations was “In some families, annual celebrations have special meaning for the family” and “In other families, annual celebrations are times of strong feelings and emotions”. The participants were asked to first choose the description that best represented their family, then to decide whether that description was *really true* or *sort of true*. The four possible answers were scored using a four-point Likert scale. Higher scores indicate stronger perceptions of family ritual meaning.

Family cohesion and Family conflict.

Family cohesion and family conflict were assessed with two subscales from the Family Environment Scale (Moos & Moos, 1986; Portuguese version: Matos & Fontaine, 1992). The two nine-item subscales of Cohesion and Conflict assess family relationship perceptions (e.g., “Family members help and support one another” and “Family members spend a lot of time together and pay attention to each other” for cohesion; “People in my family often criticize one another” and “Sometimes people in my family physically hurt each other” for conflict). The participants responded using a Likert scale ranging from one (*completely disagree*) to six (*completely agree*).

Health-related quality of life (CHCs)

The DISABKIDS Chronic Generic Module was used to measure the participants' subjective perception of their HRQoL (European DISABKIDS Group, 2006; Portuguese version: Carona, Bullinger, & Canavarro, 2011). This instrument assesses HRQoL in children and adolescents between 8 and 16 years old with CHCs. The participants answered 37 items, including “Are you able to play or do things with other children (e.g., play sports)?” and “Do you feel tired because of your condition?” with regard to the past four weeks using a Likert scale ranging from one (*never*) to five (*always*).

Health-related quality of life (generic)

The KIDSCREEN-10 measured the perception of HRQoL in children and adolescents aged between 8 and 18 (Ravens-Sieberer et al., 2010; Portuguese version: Gaspar & Matos, 2008). The KIDSCREEN-10 has a broad scope and can be administered to both healthy and chronically ill children. This self-report questionnaire has 10 items that collect information regarding last week (e.g., “Were you able to perform activities that you enjoy in your free time?” and “Have you felt sad?”). It uses a five-point Likert scale ranging from one (*never/ not at all*) to five (*always/ extremely*).

Emotional and behavioral problems.

Emotional and behavioral problems were assessed using the child version of the Strengths and Difficulties Questionnaire (SDQ; Goodman, 2001; Portuguese version: Fleitlich, Loureiro, Fonseca, & Gaspar, 2005). This Likert-type scale has responses that range from zero to two (*not true, somewhat true* or *very true*). This study used four subscales of the SDQ; the sum of the 20 subscale items (e.g., “I’m very concerned”, “I’m always distracted, and I have difficulty concentrating”) assess general psychopathology.

Asthma severity.

Clinicians assessed asthma severity according to the Global Initiative for Asthma Program guidelines (GINA, 2008). Based on the degree of airflow limitation and lung function variability, asthma severity was divided into four categories: *intermittent, mild persistent, moderate persistent or severe persistent*. Due to the low frequencies of participants in each asthma severity group, this variable was dichotomized into intermittent ($n=76$) versus persistent (mild, moderate and severe persistent; $n=72$) categories and dummy coded to permit correlational analyses. Severity information was missing for one case.

Results**Descriptive Analyses and Correlations**

Table 1 presents the means, standard deviations, Cronbach's alphas, and Pearson correlations of the study variables. We performed two MANOVAs to assess gender differences: one with the family variables and another one with the outcome measures as dependent variables. Using gender as a fixed factor and age as a covariate, we did not find group differences. Family ritual meaning was positively correlated with family cohesion and HRQoL. Conversely, family ritual meaning was negatively correlated with both family conflict and emotional and behavioral problems. Family cohesion was positively correlated with HRQoL and negatively associated with emotional and behavioral problems. Family conflict was negatively correlated with HRQoL and positively correlated with emotional and behavioral problems. Asthma severity was negatively correlated with HRQoL (CHC) and positively correlated with emotional and behavioral problems.

Mediation Analyses

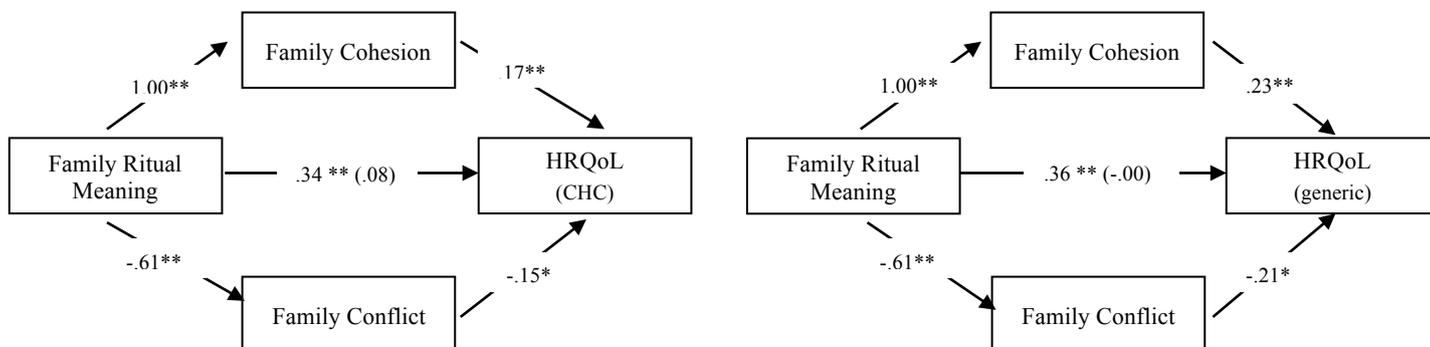
To test our mediation hypothesis, we used Preacher and Hayes's (2008) test of indirect effects. We used the SPSS version of Preacher and Hayes's macro and interpreted the bootstrap data by determining whether the 95% bias-corrected and accelerated confidence intervals (BCa 95% CI) contained zero. The analyses and bootstrap estimates were based on 5,000 simulations. We tested three multiple mediator models. Family ritual meaning was the independent variable, family cohesion and family conflict were simultaneous mediators and, gender and age were included as covariates for all analyses. We then included each of the outcomes, HRQoL and emotional and behavioral problems, one at a time. The results showed that family cohesion and conflict significantly mediated the three relationships examined (see Figures 1 and 2).

Table 1
Descriptive statistics and the matrix of intercorrelations between study variables

Variables	1	2	3	4	5	6	7	Mean	SD	α
1. Family ritual meaning								3.29	.50	.71
2. Family cohesion	.58**							4.96	.89	.87
3. Family conflict	-.40**	-.70**						2.29	.80	.71
4. HRQoL (CHC)	.38**	.53**	-.45**					4.26	.47	.92
5. HRQoL (generic)	.33**	.57**	-.54**	.66**				4.26	.57	.82
6. Emotional and behavioral problems	-.27**	-.51**	.43**	-.53**	-.54**			2.60	1.27	.75
7. Age	-.10	-.21**	.29**	-.02	-.19*	-.00		12.20	2.46	
8. Gender	-.14	.07	.01	-.17*	-.12	.03	.00			
9. Asthma severity (dichotomized)	.05	-.01	-.09	-.18*	-.10	.18*	-.11			

* $p < .05$; ** $p < .01$

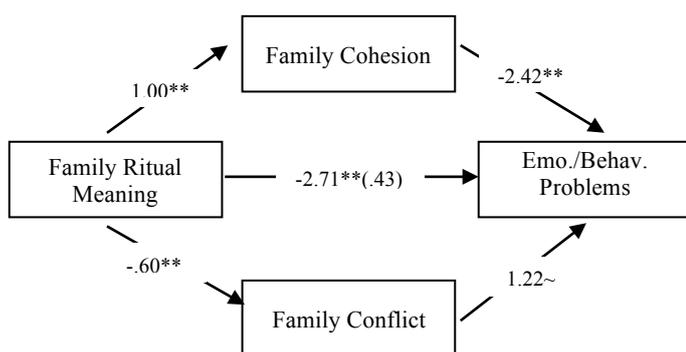
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Note. The values inside parentheses represent the independent variable's direct effect on the dependent variable after controlling for the mediators.

* $p < .05$; ** $p < .01$

Figure 1. Model depicting the mediating effects of family cohesion and family conflict on the links between family ritual meaning and HRQoL



Note. The values inside parentheses represent the independent variable's direct effect on the dependent variable after controlling for the mediators.

* $p < .05$; ** $p < .01$; ~ $p = .06$

Figure 2. Model depicting the mediating effects of family cohesion and family conflict on the links between family ritual meaning and emotional and behavioral problems

Family cohesion (*point estimate* = .17; *CI* = .07/.31) and conflict (*point estimate* = .09; *CI* = .03/.18) mediated the relationship between family ritual meaning and HRQoL specific to CHCs; the adjusted R-square for HRQoL specific to CHCs was .31. Family cohesion (*point estimate* = .23; *CI* = .08/.41) and conflict (*point estimate* = .13, *CI* = .04/.25) mediated the relationship between family ritual meaning and generic HRQoL; the adjusted R-square for generic HRQoL was .35. Finally, family cohesion (*point estimate* = -2.41; *CI* = -4.08/-1.25) and conflict (*point estimate* = -.73; *CI* = -1.72/-.05) mediated the relationship between family ritual meaning and emotional and behavioral problems; the adjusted R-square for emotional and behavioral problems was .26. We conducted identical analysis to control asthma severity, and the results remained unchanged. Finally, we tested six alternative models, considering, at each time, cohesion and conflict as independent variables, family ritual meaning as the mediator variable and maintaining the three outcomes. We found that only one of these mediations was significant: family conflict was linked to HRQoL specific to CHCs via family ritual meaning.

Discussion

The present study had two objectives: first, to examine the associations among family ritual meaning, HRQoL and adjustment problems in a sample of youths with asthma; and second, to verify whether these relationships occur via whole-family variables, such as cohesion and conflict. The two main conclusions of our study were (1) youth perceptions of stronger family ritual meanings were associated with higher HRQoL and lower levels of emotional and behavioral problems, and (2) youth perceptions of family ritual meaning were indirectly related to both HRQoL and emotional and behavioral problems via perceptions of family cohesion and conflict.

Family Ritual Meaning: Relationships with Cohesion and Conflict

In accordance with previous studies (Crespo, Kielpikowski, et al., 2011; Fiese et al., 2002), our results showed that when youths perceive their families as promoting frequent and symbolic events, such as dinnertime and annual celebrations (H1), they also perceive their families as cohesive and report less family conflict. According to Fiese and colleagues (2002), the interruption of family rituals threatens cohesion because rituals promote communication, positive interactions, support and involvement (Kiser, Bennett, Heston, & Paavola, 2005). Furthermore, rituals strengthen family ties; thus, they contribute to a sense of union and belonging over time (Fiese, 2007). The relationship between family ritual meaning and family conflict is less studied. Dubas and Gerris (2002) found that families who engage in shared activities, such as eating together, showed less family conflict five years later. According to Compañ and colleagues (2002), family rituals may facilitate communication among family members, i.e., families coordinate schedules, make plans and promote problem solving (Dickstein, 2002), all of which contribute to lower conflict levels.

Family Influences on Youth HRQoL and Adjustment

In accordance with H2, results showed that family ritual meaning was associated with improved HRQoL in children and adolescents with asthma. Previous studies have discussed the role of family rituals in youth well-being within non-clinical (Crespo, Kielpikowski, et al., 2011; Fiese, 2006a) and clinical samples (Kiser et al., 2005; Markson & Fiese, 2000). Research on pediatric asthma has shown that a supportive and well-organized family environment predicts superior adaptation to illness (Markson & Fiese, 2000) and more positive perceptions of HRQoL (Crespo, Carona, Silva, Canavarro, & Dattilio, 2011), compared with poorly organized family

environments. These results were expected because the family is a key element in the efficient management of asthma (Everhart & Fiese, 2009; Fiese, Wamboldt, & Anbar, 2005). A possible explanation for this is that family rituals provide the rhythm and organization of daily family life that encourages medication intake, as well as parental monitoring of asthma symptoms (Fiese, 2007). Moreover, asthma is associated with increases in life stress and unexpected crises that have the potential to generate more anxiety due to their unpredictability (Markson & Fiese, 2000; Ortega et al., 2002). Family rituals provide family stability (Fiese, 1992; Fiese et al., 2002; Markson & Fiese, 2000) and are likely to promote a sense of security in children and adolescents; thus, they are an important resource for dealing with stress related to asthma management. Youths who feel more secure and connected to their family are more likely to feel better about their lives, not only in general, but also in terms of their specific health concerns. In addition to the review by Fiese and colleagues (2002) and the research of Fiese and Wamboldt (2000), our results showed that children and adolescents in families that gather for activities with strong symbolic components, such as dinnertime and annual celebrations, presented higher emotional and behavioral adjustment levels. Family rituals are emotionally-laden gatherings, where emotional regulation strategies can be taught and developed as these occasions usually promote communication among family members (Fiese, 2006b). Thus, ritual events might offer youths with asthma opportunities to express their emotions (e.g., anxiety and sadness) and the opportunity to focus on those emotions in a safe and supportive context, thus facilitating emotional regulation (cf. Fiese, 2008b). Moreover, rituals present opportunities to shape appropriate behavior, thus providing protection against the development of behavioral problems. In this sense, our findings concur with of Kiser and colleagues (2005), who found that family rituals were

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associated with fewer behavioral problems in a sample of adolescents. Additionally, our results provide empirical evidence supporting the claims of Fiese and Wamboldt (2000), who argued that family rituals promote social and emotional skills in children.

In addition, our results showed that family environment that was perceived as cohesive positively influenced youths' perceptions of their HRQoL and psychological adjustment (H2). It is legitimate to expect that a close family environment eases the introduction of and adherence to medical treatments, which results in improved control of asthma symptoms, fewer visits to the emergency room, better quality of sleep and improvements in HRQoL. Moreover, our results complement other studies (Crespo, Carona, et al., 2011; Reichenberg & Broberg, 2005) that show that a more cohesive family environment is a protective factor for families facing the challenges of dealing with a CHC and leads families to adopt more adaptive coping strategies that can promote well-being.

As expected, youths who reported higher levels of family conflict showed lower HRQoL and more emotional and behavioral problems (H3). Fiese and colleagues (2008) demonstrated that critical interaction patterns with mothers were associated with emotional problems in children with asthma. Our results match those of Minuchin and collaborators (1978), who suggested that family environments characterized by conflict exacerbate somatic symptoms because these could be a way to avoid family conflict. Wamboldt et al. (1995) suggested that family members may become caught in a coercive family process and tend to be less involved in managing asthma or that parental criticism leads to emotional over-arousal which could directly worsen the asthma. When asthma is less controlled, youths may have more unexpected crises, which may cause them to miss classes or activities with peers.

These consequences deteriorate HRQoL and contribute to difficulties with social integration and relationships.

Family Rituals and Youth Outcomes: The Mediation of Family Cohesion and Conflict

We found that family cohesion and conflict mediated the relationship between family ritual meaning and HRQoL, and between family ritual meaning and emotional and behavioral problems (H4). These results clarified the processes through which family ritual meaning is connected to the improved adaptation of youths with asthma. When youths perceive that their families engage in meaningful rituals, they are likely to report strong feelings of belonging and perceive family members as connected and supportive of each other. In addition, families who invest more in these ritual events should have more opportunities to openly discuss their opinions and feelings. Because they open constant and rewarding communication channels, these opportunities can prevent conflict; moreover, they can be a setting for constructively solving existing problems, thereby preventing escalations or prolongations. Hence, family rituals can promote group cohesion and reduce/prevent family conflict. In turn, these consequences are linked with improved HRQoL and emotional and behavioral adjustment (H4). Similarly to other studies (e.g. Everhart & Fiese, 2009), our findings showed that severity was negatively associated with HRQoL specific to CHC, and positively associated with emotional and behavioral problems. With regard to the mediation testing, after controlling for the effect of asthma severity, results remained unaltered, indicating that these mediation processes were relatively stable across clinical characteristics in this sample.

Limitations and Strengths

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The main limitation of this study is its cross-sectional nature, which did not allow us to address the direction of causality between the variables. Additional research with a wider range of asthma severity spectrums in youths should be undertaken, as the dichotomization of our sample may have obscure differences based on severity. In addition, the analyses are limited by differences in demographic variables because the sample was composed of a majority of males with a wide age range who were primarily from low- and middle-class backgrounds. Also, the present study was based on self-reports, and thus results must be interpreted with caution due to single-method response bias. With regard to the mediation results, we examined and found no consistent evidence for the alternative models (family cohesion and conflict as the independent variables and family ritual meaning as the mediator variable), which confirmed our current findings. Nonetheless, only a longitudinal study could accurately address the issue of causality on the links between the aforementioned variables. Moreover, although our mediation hypothesis was empirically supported, there might be an additional higher-order variable that explains the relationships among family ritual meaning, cohesion, conflict, and youth adaptation (cf. Crespo, Kielikowki, et al., 2011). Finally, further studies in pediatric asthma should examine the possible effect of time from diagnosis in the aforementioned mediating processes. Time from diagnosis is an important factor interacting with chronic condition severity and child/adolescent and family development as an ongoing process (see Rolland, 1987).

Among other strengths, this study included youth self-reports of family ritual meaning and overall family functioning, which improves upon past research that assessed family variables via parental reports (cf. Fiese et al., 2002, Markson & Fiese, 2000). In addition, the examined outcomes included a CHC-specific measure

alongside generic measures, such as emotional and behavioral problems and HRQoL. Taken together, these results confirm that family rituals are beneficial in terms of general adaptation and dealing with specific aspects of having a CHC.

Conclusion

The present study highlights the importance of the whole family in adapting to pediatric asthma. Specifically, the results show that there are positive associations among family ritual meaning, youth HRQoL and adjustment. These findings contribute to the growing body of knowledge that indicates how family rituals can be a potential resource for the development of a more positive family environment and, consequently, improve the health and well-being of children and adolescents with CHCs. These findings have important clinical implications. Intervention work with families addressing family rituals offers an open road, in the sense that the family rituals are already present (i.e., these events are part of families' daily lives and are naturally present in family stories; Fiese, 2006a; Imber-Black & Roberts, 1989). Finally, because rituals address the family as a whole, they present an advantageous route for therapy given the consensus that pediatric asthma is best understood and treated within the family context (Kazak, 1989). Given that the family represents a safe structure for children and adolescents, it might offer a way to help them cope with the various stressors that a CHC such as asthma engenders. Together with other empirical studies, this study's findings support the inclusion of family rituals in clinical interventions with families, specifically interventions aiming at improving HRQoL and adjustment of youths with asthma. Given the idiosyncratic nature of rituals, interventions must be targeted at each family; old and new rituals must make sense within the logic or belief system of individuals and families embedded in a specific cultural context (O' Connor & Hoorwitz, 2003). Moreover, the use of family

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rituals in intervention must consider the particular stage of family development: in families with older children and adolescents it is important that the way rituals are implemented is progressively open to change, in order to flexibly respond to the developmental changes of children and adolescents, and the family itself (Fiese, 2006a; O'Connor & Hoorwitz, 2003). Finally, at a broader contextual level, as Fiese and collaborators (2002) pointed out, it is important to acknowledge that family rituals can be a source of more positive environment and outcomes for youth, such as health-related quality of life, and, thus, facilitate ways for allowing families to consistently carry out these rituals' events.

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