Psicothema

Adopted children's emotion regulation: The role of parental attitudes and communication about adoption

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Abstract

Background: Acknowledgement/rejection of adoption related differences and communication about adoption are two of the most important features of adoptive family dynamics. The present study focuses on the role played by these two variables on the adoptees' emotion regulation. **Method:** The adoptive parents of 70 school-aged children participated in the study. **Results:** Data showed that participant parents perceived their adopted children's emotion regulation as adequate. In relation to family dynamics, acknowledgment of the adoption specificities significantly predicted the emotional lability/negativity of the adoptees, simultaneously mediated by the emotional quality of and the parental satisfaction with the communication about adoption. Furthermore, there was an indirect effect of early adversity on the adopted child's emotional lability. **Conclusions:** These findings provide new insight into adopted children's emotional development, highlighting the importance of the family environment and pre-adoption experiences.

Key-words: emotion regulation, adoption, acknowledgment/rejection of differences, communication about adoption.

Resumen

Regulación emocional en adoptados: el papel de las actitudes parentales y la comunicación sobre adopción. **Antecedentes:** la aceptación/rechazo de las características específicas de la adopción y la comunicación en torno a la adopción son dos de los rasgos más relevantes de la dinámica familiar adoptiva. En este estudio se analiza la relación entre el ambiente familiar adoptivo (definido en términos de esas dos variables) y la regulación emocional de niñas y niños adoptados. **Método:** se estudió a 70 madres o padres de niños adoptados, actualmente en edad escolar. **Resultados:** los datos indican que los adoptados de esta investigación, según la percepción de sus padres, presentan adecuadas puntuaciones en regulación emocional. Respecto a la dinámica familiar, el reconocimiento de diferencias predice de forma significativa la labilidad/negatividad emocional infantil a través de la mediación simultánea de la calidad emocional de y la satisfacción parental con la comunicación sobre la adopción. Además, se observó un efecto indirecto de la adversidad temprana sobre la labilidad emocional de los adoptados. **Conclusiones:** los resultados aportan nueva información sobre el desarrollo emocional de los adoptados, destacando la importancia del entorno familiar y de las experiencias pre-adoptivas.

Palabras-clave: regulación emocional, adopción, aceptación/rechazo de diferencias, comunicación sobre la adopción.

Adoption researchers are actively challenged by the identification of the factors and processes related to the variability of psychological adjustment in adoptees (Palacios & Brodzinsky, 2010). The current paper addresses this challenge by exploring the influence of the adoptive family context on the child's emotion regulation.

Emotion regulation is related to the monitoring, evaluation and adjustment of emotional reactions (Thompson, 1994). Specifically, emotion regulation involves the awareness, understanding and acceptance of emotions and the ability to control impulsive behaviors and act accordingly when faced with negative emotions. Furthermore, it implies the competence to use strategies regulating emotional responses which are suitable for most individual goals and environment requirements (Gratz & Roemer, 2004). Emotional lability/negativity

is related to the promptness with which the child reacts to emotion-eliciting stimuli and to the difficulty in recovering from negative emotional reactions (Dunsmore, Booker, & Ollendick, 2013).

Emotion regulation research has highlighted the importance of contextual variables, especially socialization strategies within the family (Calkins & Hill, 2007). The way in which parents express emotions or respond to their children's emotions, provides opportunities for children to observe regulation practices and significantly influences their socio-emotional competence (Eisenberg, Spinrad, & Eggum, 2010; Halberstadt, 1986; Kim-Spoon, Cicchetti, & Rogosch, 2013).

One of the interesting characteristics of adoptees is the discontinuity between previous and post-adoption experiences. Normally, the former imply stimulation deficits and lack of positive interactions with attachment figures, with negative influences on the understanding of the child's own and others' emotions, as well as on emotion expression and regulation (Eisenberg, Cumberland, & Spinrad, 1998). Consequently, late adoption, with prolonged exposure to adversity, has been identified as an important risk factor (Palacios & Sánchez-Sandoval, 2005).

Adoptive family dynamics, the relationships within the family and the way in which adoption related tasks are dealt with are important factors for the adopted child's recovery and development (Brodzinsky & Pinderhughes, 2002). As suggested by Tarroja (2015), adoptees' experiences should be considered in the context of their adoptive family dynamics rather than related to their adoption status per se.

Despite the popularity of emotion regulation in psychological research (Cole, Martin, & Dennis, 2004) and the association between early experiences, emotion regulation and psychological adjustment (Eisenberg et al., 2010), emotion regulation in adoptees has not been empirically analyzed. In this paper, this important psychological construct is addressed in relation to two specific features of adoptive families considered of special relevance in adoption research: acknowledgment/rejection of adoption related differences and communication about adoption.

Kirk's pioneering work (1964) recognized the breach between parents rejecting and acknowledging adoption related differences, suggesting that these different attitudes predict adoptive family dynamics and the adopted child's development. Whereas the rejection of differences denies adoption specificities and the adoptees' specific needs, the acceptance of differences implies the acknowledgment of these same specificities and needs, although an exaggerated acknowledgment or insistence of adoption specificities (i.e., exclusive focus on differences) can create a dysfunctional family environment (Brodzinsky, 1987).

Communication about the adoptees' origins and adoptive identity has also been recognized as one of the most specific processes of adoptive families' dynamics. It directly reflects the way in which adopters acknowledge/reject adoption related differences and their ability to address the adoptees' needs, with emotionally attuned communication about adoption (Brodzinsky, 2006) playing a critical role. Abundant research has shown that this style of communication promotes better self-esteem, fewer problem behaviors and better psychological development (e.g., Barbosa-Ducharne, Ferreira, & Soares, 2012; Brodzinsky, 2006). Although the role of satisfaction with communication about adoption has not been directly analyzed, data related to satisfaction with open adoption showed that what most contributes to the adolescent's behavior is not the type of contact, but rather the adoptive family's satisfaction with this contact (Grotevant, Rueter, Von Korff, & González, 2011).

The main purpose of this study is to analyze the way in which the adoptive family's acknowledgement/rejection of adoption related differences and communication about adoption influences adopted children's emotion regulation. Specific goals are to: (a) study the adopted children's emotion regulation and explore the relationship with early adversity (measured in terms of time in the birth family, length of institutionalization and age at adoption); (b) study adoptive family dynamics, exploring the relationship between the acknowledgement/rejection of adoption related differences and communication about adoption; and (c) identify the predictors of the adopted child's emotion regulation.

Method

Participants

The adoptive parents of 70 school-aged Portuguese children participated in this study. Families were selected from the National Adoption Database and the selection process was made in terms of (a) age of adoptees ranging from 8 to 10 years, and (b) at least a year after adoptive placement. All potential participants were firstly contacted by the local adoption agency and those who agreed to participate were approached by the research team. At the time of data collection, this sample represented 40% of the whole population of adoptees with the set target age in the geographical area ($N = 176$).

In two-parent families (90%), the parent who spent more time with the child was defined as the cooperating participant. Thus, the participants of this study included 50 mothers (71.4%) and 20 fathers (28.6%) aged 35-56 ($M = 45.80$, $SD = 4.90$) with 12.91 years of schooling ($SD = 4.90$, range 4–23). The children were 8 to 10 years at the time of study ($M = 8.96$, $SD = 0.79$) and had spent 2.50 to 9.40 years at their adoptive homes ($M = 5.81$, $SD = 1.95$). Their average age at adoption was 3.19 years ($SD = 1.98$, range 0.30–7.00). Thirty-five (50%) were adopted before the age of 3 years; 26 (37.1%) were adopted between 3-5 years; nine (12.9%) were adopted at the age of 6 or older. Before adoption, these children had spent, on average, 14.74 months in the birth family ($SD = 18.46$, range 0.00–72.00) and had been in institutions from three to 66 months ($M = 23.70$, $SD = 14.90$).

Instruments and measures

Emotion Regulation Checklist (ERC). The ERC (Shields & Cicchetti, 1997) is a 23-item adult-report measuring the perception of the child's ability to modulate his/her emotional arousal on a 4-point Likert scale (1 = *never* to 4 = *almost always*). The scale is divided into two subscales. The Emotion Regulation (ER) subscale includes eight positive items (higher scores correspond to better regulation) assessing aspects of emotion understanding, empathy and adaptive regulation (e.g. "Can say when she/he feels sad, angry or mad, fearful or afraid"). Emotional Lability/Negativity (ELN) includes 15 negative items (higher scores correspond to higher lability) assessing angry reactivity, emotional intensity, inflexibility, lability and disregulated negative affect (e.g. "Is easily frustrated"). Additionally, a composite score of a single emotion regulation criterion (Emotion Regulation Composite Score [ERCS]) was created by the authors of the scale. In previous research, the scale showed good convergent validity with similar measures (Shields & Cicchetti, 1997), as well as good reliability for ERCS and the ELN subscale (between .72 and .96), although lower for the ER subscale (between .52 and .83) (e.g., Shields & Cicchetti, 1997). Similarly, in the current sample, Cronbach's alphas were .60 (ER), .82 (ELN) and .80 (ERCS). Due to low internal consistency of the ER subscale, only the ELN subscale and ERCS were used for this study. As in other studies (e.g., Kim & Page, 2013), the ELN subscale was used as an index of emotion disregulation and the ERCS was used as an index of positive regulation (negative items were reverse-scored). The correlation between the ELN subscale and ERCS was very high and negative ($r = -.94$, $p<.001$) and the *t*-value for the paired-sample *t* test was 10.99 ($p<.001$). There is statistical basis for saying that these two scores are inversely related, but significantly different.

Acknowledgment/rejection of adoption related differences. This content was explored by means of five dichotomic questions inspired by Kirk (1964): is it necessary to develop extra competences in adoptive parenting; is it more difficult to be an adoptive parent than a non-adoptive one; do adopted children have needs that non-adoptees do not have; do adopted children

need more affection than non-adoptees; do adopted children have concerns that non-adoptees do not have. Parents who replied affirmatively were questioned about the type of competences, difficulties, needs and concerns. Scores of zero corresponded to the rejection of adoption related differences, whereas scores of one indicated greater acknowledgment of these differences.

Communication about adoption within the family. Inspired by previous research (Brodzinsky, 2006; Neil, 2003), this content was explored by means of nine items evaluated on a 7-point Likert scale: communication frequency, communication openness, parents' and children's feelings at first conversation about adoption, parents' and children's comfort in communication about adoption, parents' and children's easiness in talking about the child's past, parental satisfaction in communicating with the child. Scores close to 1 indicate less open, frequent and satisfactory communication, whereas scores close to 7 indicate the opposite.

Procedure

This research was approved by the Ethics Committee of the University and the National Board of Data Protection (3912/2013). Data were collected during home visits after obtaining the adopters' informed consent.

Data analysis

SPSS Version 23 was used for data analysis. The first step was to test the assumption of normality using the Kolmogorov–Smirnov test and the criteria of skew and kurtosis values lower than three and eight, respectively (Kline, 2005). Results revealed no normality violation. Statistical procedures included descriptive analysis, mean differences (*t* test and ANOVA with Gabriel post-hoc test), Pearson correlations, cluster analysis, regression and mediation analyses. Pearson correlations were used to analyze the relationships between variables, reduce data, check for multicollinearity, and test mediation models.

A two-step cluster analysis was employed to identify groups of families regarding the acknowledgment/rejection of adoption related differences. This method had the advantage of accepting categorical variables and was performed using the log-likelihood as the distance measure and the Schwarz's Bayesian Clustering Criterion.

Data analysis showed that adoption communication variables were closely interrelated and, in order to reduce the number of variables for analyses, some of them were aggregated to form two composite variables. *Emotionally Attuned Communication* (EAC, $\alpha = .78$) is a combination of six closely inter-correlated variables (parents' and children's feelings during first communication, comfort in communication about adoption, easiness in talking about origins) in which correlations range from .30 to .67. *Communication Frequency/Openness* (CFO, $\alpha = .55$) comprises frequency and openness of communication ($r = .38$, $p = .001$). *Parental Satisfaction with Communication about Adoption* (PSCA) is treated as a single variable because it was, in fact, correlated with most of all the other variables.

Finally, Preacher and Hayes' (2008) bootstrapping method was used for estimating direct and indirect effects of possible mediators. Ordinary least squares (OLS) regression is recommended for sample sizes that are not large enough for structural equation modelling. These analyses were conducted with PROCESS macro (Hayes, 2013) which computes the effects of the independent variable on each of the serial mediator(s) (*a* path), the effects of the mediator(s) on the dependent variable (*b* path), and the total (*c* path) and direct effects (*c'* path) of the independent variable on the dependent one. Then, bootstrapping estimates the total and specific indirect effects of the independent variable on the dependent one through the mediator(s). Mediation is demonstrated when the indirect effect is significant and the confidence intervals do not cross zero, indicating that it is significantly different from zero at a *p*<.05. A significant total indirect effect indicates that the independent variable influences the dependent one by means of the whole group of mediators. A specific indirect effect through one of the mediators reveals that, within the model, the influence of the independent variable on the dependent one occurs through that specific mediator variable.

Results

Adopted Children's Emotion Regulation

Results showed high scores in ERCS (*M* = 3.05, *SD* = 0.33, range 2.17-3.74) and average scores in ELN (*M* = 2.06, *SD* = 0.43, range 1.20-3.33). There were no differences in the child's ERCS and ELN according to the parent's gender, *t*(68) = 0.57, *ns*; *t*(68) = - 0.89, *ns*. The child's ERCS and ELN were not significantly correlated to the parents' age (*r* = -.08, *ns*; *r* = .02, *ns*) or schooling (*r* = -.20, *ns*; *r* = .22, *ns*). There were no statistically significant differences in ELN, *t*(68) = 0.85, *ns*, nor in ERCS, *t*(68) = - 1.14, *ns*, according to the child's gender. Furthermore, ELN and ERCS were not significantly correlated to the time spent in the birth family, age at adoption, time in the adoptive family and child's age. Nevertheless, the time spent in institutions was positively correlated to the child's ELN (*r* = .25, *p* = .035) and thus this variable was controlled in subsequent analyses.

Family dynamics

Acknowledgment/rejection of adoption related differences. According to 64.3% participants, adoptive parents should develop extra parenting skills related to family adaptation and attachment development, communication about adoption, acceptance/understanding of the child's past and coping with social stigma, among others. Adoptive parenting was evaluated as more difficult by 47.1% parents (in relation to attachment development, communication about adoption, search for origins and adoption process). Regarding adoptees' needs, 61.4% considered that adopted children have more needs than non-adoptees in emotional development, adoptive identity, health and education. Nonetheless, only 14.5% participants believed that more affection should be given to an adoptee than to a non-adopted child. Finally, 84.3% parents assumed that adoptees have more concerns than non-adopted children, related to curiosity for past history, fear of rejection/abandonment by the adoptive family, social discrimination/prejudice and acceptance of adoptive status.

The cluster analysis allowed for the identification of four groups of families according to the acknowledgment/rejection of adoption related differences. Table 1 presents the characterization of the clusters. Based on this characterization, a new variable was computed, *Acknowledgment of Differences* (AD), which reflects a continuous increase in acknowledgment of differences on a 4-point scale. Parents belonging to cluster 1 were given a score of 1 (less acknowledgment/more rejection of differences);

	Cluster 1 n = 11		Cluster 2 n = 15		Cluster 3 n = 18		Cluster 4 n = 25	
	Yes (%)	No (%)	Yes (%)	No (%)	Yes (%)	No (%)	Yes (%)	No (%)
Child's specific needs		100		100	100		100	
More difficult to be parent		91		53		100	100	
More parenting skills		100	100		50		84	
More affection		100		100		78		76
Child's specific concerns	64		80		89		92	

Table 1
Cluster analysis

Note: Variables are presented in order of importance to the formation of the clusters, not previously defined by the researchers

parents in cluster 2 were scored 2; parents in cluster 3 scored 3 and parents belonging to cluster 4 scored 4 (more acknowledgment/less rejection of differences).

AD did not significantly differ according to the parent's, $t(67) = 0.60$, *ns*, nor the child's gender, $t(67) = 0.17$, *ns*. It also did not significantly correlate with the parent's age ($r = -.08$, *ns*), but rather with their schooling ($r = .36, p = .003$). AD was higher for children with more time in the birth family ($r = .27, p = .026$), placed older in the adoptive family ($r = .36, p = .002$) and with shorter time after placement ($r = -.32, p = .008$). AD was not significantly correlated with the child's age ($r = .09$, *ns*) nor the time spent in institutional care ($r = .23$, *ns*).

Communication about adoption. The variables EAC ($M = 5.15, SD = 1.39$), CFO ($M = 5.28, SD = 1.20$) and PSCA ($M = 6.20, SD = 1.16$) allowed for the characterization of the adoption communication process and were positively inter-correlated: EAC-CFO ($r = .53, p<.001$), CFO-PSCA ($r = .31, p = .010$), EAC-PSCA ($r = .38, p = .001$). Considering all the sociodemographic variables, only correlations between EAC and parents' schooling ($r = -.29, p = .017$) and PSCA and parents' schooling ($r = -.42, p<.001$) were statistically significant.

Child's Emotion Regulation and Family Dynamics: Relationships

Table 2 presents the overall correlations matrix. ELN, AD, EAC and PSCA were significantly inter-correlated. These variables will be used in upcoming analysis.

Predictors of Emotional Lability/Negativity

Based on the above inter-correlations, in order to verify that the adoptive family dynamics predicts the adoptee's emotion regulation, a hierarchical multiple regression was conducted, using ELN as dependent variable and AD, EAC and PSCA as predictors (Table 3). The final model explained 36% variance observed in the child's ELN, $R^2 = .36, F(3, 65) = 12.12, p<.001$. The hierarchical regression showed that, in each stage, the explained variance decreased and reduced the contribution of the previous predictors. According to Holmbeck (1997), conditions to suspect the existence of mediating variables were present.

Test of double mediation model. Based on the previous findings, an OLS path analysis regression was conducted to test the mediator effect of EAC and PSCA in the relationship between AD and ELN. Figure 1 presents the proposed conceptual model,

Table 2
Inter-correlations between variables

	ELN	ERCS	AD	EAC	CFO	PSCA
ELN	1					
ERCS	-.94***	1				
AD	.24*	-.21	1			
EAC	-.34**	.31**	-.29*	1		
CFO	-.13	.13	-.02	.53***	1	
PSCA	-.58***	.56***	-.28*	.38**	.31*	1

Note: ELN – Emotional Lability/Negativity; ERCS – Emotion Regulation Composite Score; AD – Acknowledgment of Differences; EAC – Emotionally Attuned Communication; CFO – Communication Frequency/Openness; PSCA – Parental Satisfaction with Communication about Adoption
* $p<.050$; ** $p<.010$, *** $p<.001$

Table 3
Predictors of emotional lability/negativity in the adopted child: Hierarchical regression model

Variables	Model 1		Model 2		Model 3	
	B	β	B	β	B	β
AD	.10	.24*	.06	.15	.02	.06
EAC			-.10	-.32**	-.05	-.14
PSCA					-.19	-.51***
R^2	.06		.15		.36	
F	4.26*		5.92**		12.12***	

Note: * $p<.050$; ** $p<.010$; *** $p<.001$

as well as the different paths and direct/indirect effects on the dependent variable.

The total effect of AD on the child's ELN is significant ($c = 0.10, p = .04$), although there was no evidence that AD influenced the dependent variable (ELN) regardless of its effect on the mediators' influence (direct effect [c'] $= 0.02, p = .57$). The hypothesis of mediation was proven by the analysis of indirect effects: the total indirect effects were significant because the confidence intervals did not cross zero (BCa 95% CI [0.02, 0.14]). Considering all the possible paths (see Figure 1), the only significant path was $AD \rightarrow EAC \rightarrow PSCA \rightarrow ELN$ (BCa 95% CI [0.002, 0.06]), which proved the double mediation hypothesis. AD only had a significant impact on the child's ELN through the EAC and PSCA, and only in the presence of both mediators.
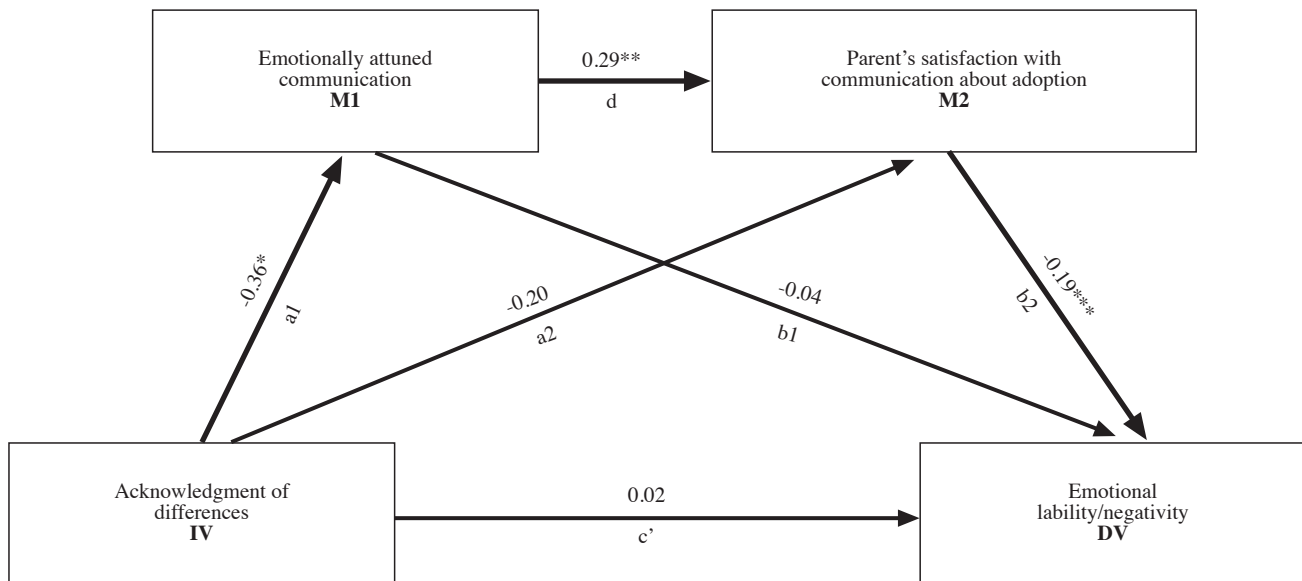
Figure 1. Schematic representation of the multiple mediator model

Discussion

This study explored the impact of adoptive family dynamics (acknowledgement/rejection of adoption related differences and communication about adoption) on the adoptee's emotion regulation, which is an essential component of emotional development not explored so far in adoption research. The findings permit a better understanding of the family's influence on adopted children's development.

The first goal was to study adopted children's emotion regulation and to explore its relationship with early adversity. The scores in both general emotion regulation and emotional lability/negativity were adequate, indicating that for the average adopted child this important dimension is not particularly problematic. Also, results indicated that the longer the institutionalization, the higher the child's emotional lability/negativity. This was the only direct link between early adversity and emotional lability. Nevertheless, the negative impact of past adversity was more complex than expected. Although variables defining early adversity, such as the time spent in the birth family, and the age at adoption, were not directly related to the dependent variable, they were significantly correlated with the independent variable acknowledgment of differences, which in turn predicted the emotional lability. This finding is consistent with the existing research about the interrelated nature of the indicators of early adversity (Juffer et al., 2011) and suggests that the length of institutionalization can be considered a global indicator of adverse experiences prior to adoption.

The second goal was to explore the relationship between the two independent variables. Significant relationships between the acknowledgement of differences and the quality of adoption related communication, as measured by emotional attunement and parental satisfaction, were observed, but in a direction (negative correlations) opposing the one suggested by Kirk (1964). This suggests that the acknowledgement of differences does not follow a continuum where the highest score is more positive, but rather a dimension where the highest score implies an insistence on adoption related differences that is no longer an adaptive family

coping, as indicated by Brodzinsky (1987). Moreover, higher scores in differences acknowledgement were related to later adoption and less time in the adoptive family, as found by Palacios and Sánchez-Sandoval (2005). A later placement probably makes the adoption related differences more visible (making the acknowledgment of differences more likely), and less time in the adoptive family could imply less opportunities to build family relationships, including a richer communication. The implication is that the variables defining the quality of family life are interrelated, but the specific relationships depend on the characteristics of its members, age at adoption and time after placement is particularly relevant in the case of adoptive families.

Adoptive parents with longer schooling showed higher acknowledgment of differences, but also poorer quality of communication about adoption. Perhaps, more educated parents have more exposure to adoption related information, but this does not automatically translate into more emotionally attuned and more satisfactory behaviors, at least in terms of communication about adoption. The implication would be that, at least in adoptive families, parents' schooling, per se, is not a good predictor of the quality of family dynamics.

Finally, this study aimed to identify the predictors of the child's emotion regulation. Results showed that the parents' acknowledgement of adoption related differences and communication about adoption were significant predictors of the child's emotion regulation. Through a more emotionally positive communication about adoption and more parental satisfaction with it, an acknowledgment of differences that does not insist on the specificities of adoption significantly predicted less emotional lability/negativity in the adopted child. It is worth noting the simultaneous presence of both mediators in order to produce a significant effect: parents' attitudes (in this case, acknowledgement of differences) are relevant insofar as they translate into specific behaviors (emotional attunement of communication about adoption) and feelings (satisfaction with adoption communication). Similarly to non-adoptive families (Eisenberg et al., 2010; Kim-Spoon et al., 2013), adoptive family

dynamics and emotionality play an important role in the child's emotional development. In agreement with their specificity, this study highlights the importance of adoption related tasks and their impact on the emotion (dis)regulation of the adoptee. It also confirms the importance of a detailed understanding of the adoptees' individual experiences, since the characteristics of family experiences significantly contribute to the variability among adoptees. This endorses that adoptees' experiences should be analyzed in the context of family dynamics rather than related to adoption status per se (Tarroja, 2015).

The sample size (*N* = 70) can be considered a shortcoming of this study. Nevertheless, it is comparable to similar research in this field. A better sample distribution according to age at placement would had been desirable, since the number of adoptees aged 6 or older when adopted is rather scarce, but it does reflect Portuguese adoption figures. Important concepts, such as the acknowledgement/rejection of adoption related differences, are poorly studied in adoption research as well as in this article, and require a more complex methodological approach in further studies.

Acknowledgments

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