

The Role of Psychological Flexibility in the Relationship Between Parent and Adolescent Distress

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Abstract Every day, parents must navigate a role that is at the same time both very rewarding and very stressful. Coping with the balance between stress and reward can have immediate and long-term effects for both parents and children, including ineffective parenting strategies. Emotional difficulties, such as anxiety and depression, increase the risk for these ineffective parenting strategies. The impact of parental distress on family functioning is further complicated by the relatively high correlation between parent distress and child distress. The literature seems to suggest that a lack of openness to experience and difficulties with goal-directed behavior may moderate this relationship. From a functional contextual perspective, psychological flexibility, or the ability to adapt to emotional and situational demands in the service of chosen values, may play a role in this phenomenon. More specifically, we hypothesized that parenting flexibility, or flexibility specifically within the context of parenting, would moderate the relationship between parent and child distress. Parents ($n = 71$) and adolescents ($n = 21$) completed online surveys assessing their distress and psychological flexibility, and parents completed an additional measure of parenting flexibility. Results demonstrate a trend toward parenting flexibility as a possible moderator in the relationship between parent and child distress, and a clear need for additional research in this area. Implications for targeting inflexibility in interventions for children and families are discussed.

Keywords Psychological flexibility · Parenting flexibility · Adolescents · Anxiety · Depression

Introduction

Parenting is hard. Every day parents face multiple challenges and responsibilities in regards to their children (Cappa et al. 2011; Deater-Deckard 2005). New parents may have to learn skills such as how to balance discipline and sensitivity, set appropriate boundaries, and reprioritize their schedules. Even experienced parents are not immune to the stress that comes with financial strain, health concerns, sibling rivalry, and educational responsibilities. These daily hassles predict family stress better than major life events (Crnic and Greenberg 1990), and they only increase as children age (Crnic and Booth 1991). In addition to their own stressors, parents experience as much stress from their children's daily hassles as the children themselves (Compas et al. 1989).

At the same time, choosing to become a parent can be a rewarding and meaningful experience. Parents report greater life satisfaction, more positive emotions, and more moment-to-moment meaningfulness than do nonparents (Nelson et al. 2013). Furthermore, parents feel more positive emotions and meaningfulness while engaging with their children than they do in other activities. Parents also identify more with their role as a parent than other roles they occupy (Thoits 1992), and this role facilitates new social ties with family and friends (Nomaguchi and Milkie 2003). Balancing this relationship between stress and reward has immediate and long-term implications for both parents and children (Deater-Deckard 2005).

Parenting stress predicts children's distinct abilities to cope with social, academic, and emotional challenges

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(Cappa et al. 2011). Parenting stress also changes the way children view parental behavior, which in turn affects how adolescents view their academic competence, social acceptance, and physical appearance (Putnick et al. 2008). Moreover, emotional distress puts parents at risk for ineffective parenting strategies (Bayer et al. 2006). Parents may lack warmth due to a preoccupation with negative experiences, to be over-involved due to constant worry, or have a combination of ineffective parenting practices. Anxiety is related to parenting styles that are less nurturing and more restrictive, which can manifest in a general negative affect towards children or preventing life experiences, among other things (Lindhout et al. 2006). Depressive symptoms are similarly related to an increase in negative physical behaviors (Querido et al. 2001), a decrease in verbal interactions, positive or negative, and decreased awareness of the emotional impact of these ineffective strategies (Coyne et al. 2007).

The impact of parental distress on family functioning is further complicated by the relatively high risk of transmission of symptoms from parents to children. Children of parents who suffer from symptoms of anxiety or depression are up to seven times more likely to develop similar patterns of distress (Beidel and Turner 1997; Harrington 1996; Turner et al. 1987). Heritability accounts for only a small percent of shared anxiety or depression, leaving environmental factors to account for most of the variance (Hettema et al. 2001; Silberg et al. 2010). Although the research demonstrating the transmission of anxiety and depression in families is robust, a direct relationship between parent and child symptomology is not clear. Only some families experience this pattern of distress, and within those families there is considerable variation. Researchers have examined several risk factors for the transmission of distress within families, including parental control, disengagement, and learned avoidant strategies.

Parental control strategies, both in terms of behavioral and psychological control, contribute to this relationship between parent and child symptomology (see Ballash et al. 2006 for a review). Behavioral control involves managing overt behaviors (e.g., harshly enforcing a particular strategy for brushing teeth or doing homework), and psychological control involves managing the psychological and emotional development of a child (e.g., limiting cognitive processes and emotional expression; Barber 1996). Both behavioral and psychological control are associated with poor child outcomes. Children of parents high in behavioral control are more likely to engage in aggressive behavior and struggle with school performance (Ballash et al. 2006). Psychological control, however, has been linked to not only externalizing problems but also internalizing problems, such as anxiety and depression (Ballash et al. 2006). The added distress associated with psychological control

seems to be attributable to children's perceived lack of control (Nanda et al. 2012). Anxious parents who attempt to manage their anxiety by managing their children's psychological experience limit their children's sense of control, while modeling the very control strategies that they find ineffective.

Although parental control is consistently associated with both parent anxiety and child anxiety, it is not always the primary risk factor (Ballash et al. 2006). In some cases, parental disengagement seems to account for some of the transmission of anxiety, over and beyond control behaviors (Woodruff-Borden et al. 2002). Anxious parents are less likely to praise their children and more likely to ignore their children, which can, in turn account for increased levels of anxiety. Furthermore, when anxious parents do engage with their children, the engagement is often not productive (Woodruff-Borden et al. 2002). Parents may be preoccupied with their own distress and not notice when their children are in need of productive assistance. In fact, control behaviors start to play a significant role in these parent-child interactions when children display negative emotions. Parents may be preoccupied with decreasing their own and their child's negative affect rather than addressing specific behaviors or functions (Ballash et al. 2006; Woodruff-Borden et al. 2002).

Learned behaviors, such as avoidant planning, also contribute to this relationship (Chorpita et al. 1996). Avoidant planning is a coping style for which escape is the preferred solution to difficult situations, as opposed to coping styles that involve active problem solving strategies. When given an ambiguous situation, anxious parents are more likely to engage in avoidant planning which in turn influences the planning strategies of their children (Chorpita et al. 1996). Anxiety in children may be partially due to a reciprocal relationship between their anxiety symptoms and their parents' responsive behavior (Hudson and Rapee 2004). Parenting an anxious child involves difficult interactions that may require different responsive behaviors. During these difficult interactions, parents may become over involved or controlling with their children in an attempt to relieve their own distress (Hudson and Rapee 2004). Unfortunately, this response may lead the child to perceive the situation as more threatening, less manageable, and something to be avoided.

The relationship between parent and child distress is complex, but some clarity may come from considering a broader factor that is related to parental control, disengagement, and learned avoidant strategies. This literature seems to suggest that a lack of openness to experience and difficulties with goal directed behavior may put some parents at particular risk for transmission of distress to their children. In other words, the relationship between parent and child distress may be influenced by psychological

flexibility. Psychological flexibility is the process of noticing and accepting thoughts and feelings as they are, and using the energy that would otherwise be spent avoiding these negative feelings to live consistent with chosen values (Hayes et al. 2011b).

Psychological flexibility has been posited as “fundamental” to psychological health (see Kashdan and Rottenberg 2010 for a review), and helps explain unique aspects of mental health not explained by other well-validated constructs such as depression, anxiety, stress, sensitivity, and neuroticism (Gloster et al. 2011). In fact, psychological flexibility may be representative of overall functioning and impairment, while other constructs are representative of individual symptoms of different aspects of psychopathology. Difficulty with opening up to experiences in the present in order to pursue valued based actions is considered psychologically *inflexible*, sometimes referred to as experiential avoidance, and is related to several forms of impairment and distress (Kashdan and Rottenberg 2010). Inflexibility can be conceptualized as a single construct (Bond et al. 2011), or it can be broken down into distinct processes. For our purposes, inflexibility consists of two primary processes: unwillingness to be open and accepting of thoughts and feelings as they come up in the present moment, and difficulty choosing and engaging in behaviors consistent with valued directions.

Psychological inflexibility has been linked to specific forms of psychopathology (Kashdan et al. 2006), including generalized anxiety disorder (Lee et al. 2010) and depression (Cribb et al. 2006; Nolen-Hoeksema et al. 2008). Increasing psychological flexibility involves targeting these problems with strategies for accepting experiences and promoting value-based behavior (Fledderus et al. 2010). Interventions based on the psychological flexibility model of mental health (i.e., Acceptance and Commitment Therapy or ACT; Hayes et al. 2011a, b; 1999) have been effectively applied to improve living in individuals struggling with psychosis (Bach and Hayes 2002; Gaudiano and Herbert 2006), anxiety (Roemer et al. 2008), and depression (Zettle et al. 2011; Zettle and Rains 1989). It seems that building an individual’s capacities to be aware of and open toward ongoing experiences while actively choosing and engaging in meaningful actions toward broad intentions can produce powerful change in people’s lives.

The psychological flexibility model seems to be equally applicable to the functioning of children, adolescents, and parents (Greco and Hayes 2008). Children who have the skills to respond flexibly to daily hassles are not impacted by those hassles in their everyday functioning (Marks et al. 2010). Awareness and acceptance of experiences further predict increases in wellbeing and decreases in sadness and hostility over time (Ciarrochi et al. 2011). Interventions based on this model of psychological flexibility have also

been adapted for children and adolescents with promising outcomes (Murrell and Scherbarth 2006). For example, adolescents have benefited from acceptance-based interventions targeting maladaptive conduct (Luciano et al. 2009) and risky sexual behaviors (Metzler et al. 2000). Preliminary data also suggests that targeting inflexibility can decrease symptomology and increase wellbeing in youth populations suffering from anxiety (Semple et al. 2005) and depression (Hayes et al. 2011a).

Children have a similar capacity for distress and inflexibility to adults, but the family context is particularly relevant to the development and maintenance of these outcomes given the hugely influential role of parents in the early years of life (O’Brien et al. 2008). A 6-year longitudinal study found that parenting style was closely associated with changes in psychological flexibility in a large sample of high school students (Williams et al. 2012). The parent–child relationship can similarly impact parent distress and inflexibility. Parents are sometimes made more uncomfortable by their children’s negative emotions than the children themselves. Psychological inflexibility mediated the relationship between dysphoria and parenting stress in a high-risk population (Shea and Coyne 2011). In fact, dysphoria, parenting stress, child behavior problems, and maladaptive parenting processes all positively correlated with inflexibility.

In the family context, psychological flexibility is no longer important only for the individual, but also for the relationships among members of the family (Walser and Westrup 2009). Understanding the role of psychological flexibility in the relationship that parents have with their children may be particularly useful (Coyne and Murrell 2009). Parenting flexibility, more specifically, involves contacting the present moment, without needless attempts to control psychological experiences, including those of the child, when doing so serves family related values. Attempts to reduce the frequency of a child’s negative emotions as well as any negative reactions to the child’s distress can be particularly detrimental (Cheron et al. 2009). Keeping a child from experiencing any distress at all can actually prevent the child from learning valuable coping skills (Tiwari et al. 2008). Also, if attempts to decrease distress are unsuccessful, parents will sometimes turn to harsh and ineffective parenting practices (Shea and Coyne 2011).

Parenting inflexibility is related to a variety of ineffective parenting strategies (Coyne and Wilson 2004; Murrell et al. 2008). Emotionally avoidant language is associated with lower reflective functioning, more recent substance use, and lower sensitivity to child cues in a sample of methadone-maintained mothers (Borelli et al. 2012). Emotion suppression strategies in parents are also predictive of their child’s suppression strategies (Bariola et al. 2012). The father who tells his son “stop crying or I’ll give

you something to cry about,” is letting his son know that it is best to avoid negative emotions, and by extension any thoughts or situations that may cause those negative emotions. Unsurprisingly, parents experiencing anxiety or depression are even more likely to avoid painful thoughts of their own parenting skills and their children’s emotional wellbeing (Coyne and Wilson 2004).

One criticism of many of these studies is that psychological flexibility specific to the parent–child relationship may not always be reflected in measures of overall flexibility (Lloyd and Hastings 2008). Psychological flexibility is a context dependent construct (Gloster et al. 2012). Although self-report measures may capture overall flexibility across life domains, they are limited in the inferences that can be made about specific contexts. Conceptually, psychological flexibility can fluctuate across contexts depending on variations in its relevance to an individual’s values (Hayes et al. 1999). A parent, for example, may be able to flexibly respond to emotional distress in general, but experience more difficulty being flexible when responding to a child’s emotional distress. Variations of the AAQ-II have been able to predict individual differences over and above the general measure in specific environmental contexts such as the workplace (Bond et al. 2013) and specific emotional struggles such as social anxiety (MacKenzie and Kocovski 2010), weight-related problems (Lillis et al. 2009) and substance abuse (Luoma et al. 2011).

In order to study parenting flexibility more effectively, Cheron et al. (2009) developed the Parental Acceptance and Action Questionnaire (PAAQ) and used it in a study with 154 adolescents and their parents recruited from a childhood anxiety clinic. This study yielded several encouraging findings. They found that parenting flexibility accounted for significant variability in child anxiety symptomology, and the PAAQ was able to predict this variance above other related measures, including parent symptomology. What remains unclear is whether there is a relationship between parenting flexibility and adolescent psychological flexibility, and whether parenting flexibility is a risk factor in the transmission of anxiety and depression symptomology from parents to adolescents in a normal population.

The purpose of the present study was to continue the exploration of the relationships among parent distress, child distress, parent inflexibility and child inflexibility, with particular emphasis on the evaluation of psychological inflexibility as a possible moderator of the relationship between parent distress and child distress. Specific hypotheses included: (1) both parent and child distress will correlate positively with parenting inflexibility and child psychological inflexibility, respectively; (2) parent distress will correlate positively with child distress; (3) parenting

flexibility will correlate positively with adolescent psychological flexibility and (4) the relationship between child distress and parent distress will be moderated by both parenting inflexibility and child inflexibility.

Method

Participants

Participants included students and their parents recruited from three local high schools in the Southern United States. Permission to recruit from these high schools was received from the local school board. Parents ($N = 71$) aged 31–55 included 64 mothers and 7 fathers who self identified as White ($n = 59$), Black ($n = 10$), Hispanic ($n = 1$), and Asian ($n = 1$). A subset of these parents also had an adolescent who participated ($n = 21$). Adolescents, aged 12–18, were 7 boys and 14 girls who self identified as White ($n = 18$), Black ($n = 2$), and Hispanic ($n = 1$). All participant dyads were entered into a raffle for gift cards to the local mall for the amounts of \$75, \$50, and \$35.

Measures

Demographic Questionnaires

Parent and adolescent participants were first given a brief set of questions regarding certain demographic information. Items, such as age, gender, and ethnicity, did not have any identifying properties.

Acceptance and Fusion Questionnaire for Youth

The 17-item AFQ-Y (Greco et al. 2008) is a self-report measure of psychological inflexibility in children. This measure was based on the AAQ-I, and adapted to be more appropriate for a younger population. The AFQ-Y has shown high internal consistency reliability in a normative sample, $\alpha = .90$. Similarly, good internal consistency was found within the current sample, $\alpha = .89$. Statements, such as “my thoughts and feelings mess up my life,” are evaluated on a 5-point Likert scale ranging from 0 (*not at all true*) to 4 (*very true*). High scores on the AFQ-Y indicate greater levels of psychological inflexibility.

Parental Acceptance and Action Questionnaire

The PAAQ (Cheron et al. 2009) is a 15-item self-report measure of parenting inflexibility, with two factors labeled *inaction* and *unwillingness*. This measure was based on the AAQ-I, and adapted for inflexibility specifically in the context of parenting. The unwillingness subscale measures

parents' avoidance of distressing emotions related to parenting, while the inaction subscale measures parents' difficulty with taking valued actions related to parenting. The PAAQ has shown moderate internal consistency $\alpha = .64-.65$ and moderate test-retest reliability $\alpha = .68-.74$ for the inaction and unwillingness scales, respectively. Internal consistency in the current sample was slightly lower for both the inaction scale, $\alpha = .54$, and the unwillingness subscale, $\alpha = .58$. Statements, such as "worries can get in the way of my child's success," are evaluated on a 7-point Likert scale ranging from 1 (*never true*) to 7 (*always true*). High scores indicate greater levels of psychological inflexibility.

Depression Anxiety Stress Scales 21

The DASS21 (Lovibond and Lovibond 1995) is a short 21-item version of the original 42-item DASS, a self-report measure of three separate negative emotional states experienced within the previous week. The three subscales measure depression, anxiety, and stress, and all DASS21 scores are doubled after score in order to compare to DASS scores. Internal consistency for the DASS21 depression, anxiety, and stress subscales is .94, .87, and .91, respectively. The DASS21 has similarly demonstrated strong concurrent validity with several other measures of anxiety and depression. More recently, it has been tested in younger samples and upholds good psychometric properties for children as young as 14 years old on the depression and anxiety subscales. Internal consistency in the current study among adults was high for overall distress, $\alpha = .92$, and good for depression scale, $\alpha = .87$, anxiety scale, $\alpha .86$, and stress scale, $\alpha = .82$. Statements are evaluated on a 4-point Likert scale ranging from 0 (*did not apply to me at all*) to 3 (*applied to me very much, or most of the time*). Example statements include, "I couldn't seem to experience any positive feelings at all" for the depression scale and "I was aware of dryness of my mouth" for the anxiety scale. Because the stress scale showed less reliability and validity in a younger population (Szabo 2010), and was not related to the hypotheses in this study, adolescent stress subscale scores were omitted from analyses. However, stress items were included in overall distress scores. Among adolescents, internal consistency was high for overall distress, $\alpha = .92$, and the depression scale, $\alpha = .91$. Reliability was slightly lower, however, for the anxiety scale, $\alpha = .66$.

Procedure

Students and their parents were invited via their school to participate in an online survey for the chance to win one of three gift cards. Families who decided to participate were

directed to a link to the survey batteries (child battery and parent battery), which they were able to take at their convenience. Surveys were administered through Survey Monkey, a secure website that maintains confidentiality and provided fully informed consent at the beginning of each survey. Parents consented to participate and gave permission for their adolescent to participate. Adolescents also gave assent to participate. All data were collected anonymously with emails kept separately in order to inform the winners of the raffle.

Results

Descriptive Statistics

Parent Descriptive Analyses

Distributions of scores on flexibility and distress variables were examined for parents. Distributions were normal and not atypical for a non-clinical sample. Means and standard deviations are presented in Table 1. Comparable to normative data on the DASS21 in a non-clinical sample (Henry and Crawford 2005), parents' overall distress was slightly elevated, primarily due to a significantly elevated stress score, $t = 2.51, p = .0142$. Compared to the sample of parents who participated in the creation of the PAAQ (Cheron et al. 2009), parenting inflexibility was lower in this sample due to a significantly lower unwillingness score, $t = -3.99, p = .0002$. Correlational analyses were conducted among all parent variables in order to explore bivariate relationships among distress variables, and between flexibility and distress variables. As predicted, distress variables were positively intercorrelated as well as positively correlated with parenting inflexibility (see Table 1).

Adolescent Descriptive Analyses

Distributions of scores on flexibility and distress variables were examined for adolescents. Distributions were normal and not atypical for a non-clinical sample. Means and standard deviations are presented in Table 2. Distributions found prior to doubling the scores for depression ($M = 3.81$), anxiety ($M = 2.90$), and stress ($M = 6.48$) were comparable with normative data in an adolescent sample (Szabo 2010). Inflexibility scores were slightly lower than means found in the original psychometric study (Greco et al. 2008), but not significantly different. Correlational analyses were conducted to examine bivariate relationships among distress variables, and between flexibility and distress variables. As predicted, distress scores were positively intercorrelated, as well as positively correlated with inflexibility in adolescents (see Table 2).

Table 1 Summary of intercorrelations, means, and standard deviations for parent distress and flexibility variables

Measure	1	2	3	4	5	6	7
1. DASS	–						
2. DASS-D	.88***	–					
3. DASS-A	.86***	.66***	–				
4. DASS-S	.87***	.65***	.58***	–			
5. PAAQ	.35**	.25*	.33**	.32**	–		
6. PAAQ-I	.22	.19	.17	.21	.74***	–	
7. PAAQ-U	.28*	.16	.30*	.24*	.66***	–.01	–
<i>M</i>	21.24	4.68	4.79	11.77	51.54	26.04	25.49
<i>SD</i>	18.72	6.47	7.37	7.74	9.81	7.34	6.56

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 2 Summary of intercorrelations, means, and standard deviations for adolescent distress and flexibility variables

Measure	1	2	3	4
1. DASS _A	–			
2. DASS-D _A	.86***	–		
3. DASS-A _A	.87***	.71**	–	
4. AFQ-Y	.63**	.54*	.45*	–
<i>M</i>	26.38	7.62	5.81	18.38
<i>SD</i>	21.95	9.52	5.83	12.13

The subscript “A” is used to denote Adolescent scores on the DASS21 and subscales in order to discriminate from parent scores

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 3 Summary of correlations between parent–child dyad variables as well as means and standard deviations for parent variables within the subset of parents whose adolescent also participated

	AFQ-Y	DASS _A	DASS-D _A	DASS-A _A	<i>M</i>	<i>SD</i>
DASS	.21	.18	.25	.27	13.24	12.28
DASS-D	.17	.14	.16	.33	51.24	6.03
DASS-A	.10	.11	.28	.12	28.76	7.00
DASS-S	.31	.22	.20	.28	22.48	5.79
PAAQ	.02	.07	.19	–.04	4.19 [†]	8.22
PAAQ-I	.07	.12	.21	.10	4.95 [†]	5.89
PAAQ-U	–.03	–.02	.04	–.12	11.9	7.45

* $p < .05$ for parent–child dyad correlations

[†] $p < .05$ for means that are significantly different from parents whose adolescent did not participate

Parent–Child Descriptive Analyses

Of the 71 parents who participated in this study, there were only 21 whose adolescent also participated. Parents whose adolescent also participated were 19 mothers and 2 fathers, 32–55 years old, who self-identified as white ($n = 19$) and black ($n = 2$). Means and standard deviations for this subset of parents are presented in Table 3. Correlational

analyses were conducted to examine relationships between parent and adolescent distress. It was predicted that parent and adolescent DASS21 scores would be positively correlated. However, no significant correlations between parent and child distress were found (see Table 3). Power analyses found that the moderate effect sizes found between parent and child distress variables could have resulted in significant correlations with 40–60 participants. It was also predicted that PAAQ and subscale scores and adolescent AFQ-Y scores would be positively correlated. No correlations between parenting flexibility variables and adolescent psychological flexibility were found (see Table 3). Possible explanations for this lack of relationship between parent and child flexibility are addressed in the discussion.

In order to examine any differences between parents whose adolescent participated and parents whose adolescent did not participate, a series of t-tests were conducted. There was a significant difference between groups on overall PAAQ scores of parenting inflexibility, $t(45) = 2.82, p = .0036$, which was primarily driven by differences between groups on the inaction subscale scores of the PAAQ, $t(37) = 3.47, p = .0007$. In other words, parents who have difficulty taking valued actions with respect to parenting were less likely to follow through and have their adolescents complete the second portion of the study. There were no differences between groups on overall DASS21 or subscale scores.

Multiple Regression Analyses

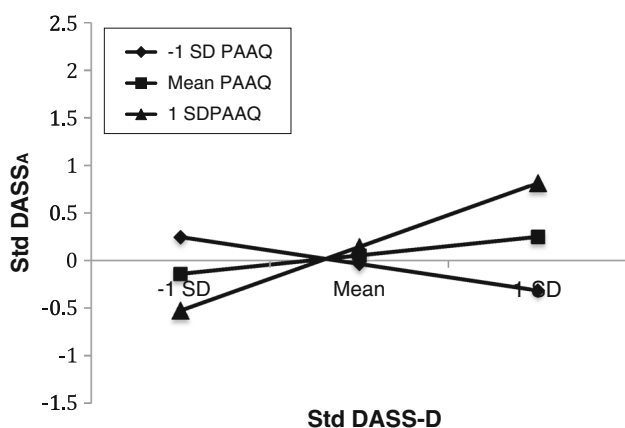
A series of multiple regression analyses were conducted to test the prediction that flexibility would moderate the relationships between parent and child distress. It was predicted that the relationship between parent and child anxiety and depression would vary at different levels of parenting flexibility and adolescent psychological flexibility. Analyses were conducted for overall adolescent distress, adolescent depression, and adolescent anxiety. For each dependent variable, separate models were constructed

Table 4 Significant regression models predicting overall adolescent distress by parent distress and parenting inflexibility

Predictors	<i>B</i>	<i>SE B</i>	<i>t</i>	ΔR^2
Model 1				
DASS-D	0.0544	0.2084	0.26	.04
PAAQ	0.0892	0.2135	0.42	.01
DASS-D \times PAAQ	0.4761	0.2212	2.15**	.21
Model 2				
DASS-D	0.2019	0.2170	0.93	.04
PAAQ-I	0.1912	0.2174	0.88	.04
DASS-D \times PAAQ-I	0.4112	0.210901	1.95*	.18

All variables standardized prior to analysis

* $p < .10$, ** $p < .05$, *** $p < .01$

**Fig. 1** Parent depression \times Parenting inflexibility interaction effect on adolescent distress

to examine the interaction between a parent distress variable (i.e. depression or anxiety) and each flexibility variable (i.e. parenting flexibility, inaction, unwillingness, or adolescent psychological flexibility). All variables were standardized prior to conducting analyses. For each model, effects of predictors were calculated holding individuals constant on all other predictors. A summary of significant interaction effects is presented in each section.

Predicting Overall Adolescent Distress

First, regression analyses were conducted to explore whether parent depression or parent anxiety predicted overall adolescent distress at various levels of inflexibility (overall parenting inflexibility, unwillingness, inaction, and adolescent psychological flexibility). Only models including parent depression (as opposed to anxiety) and parenting inflexibility (as opposed to adolescent inflexibility) successfully predicted adolescent distress. As seen in Table 4 (Model 1), there was a significant Parent Depression \times Parenting Inflexibility interaction, suggesting that

Table 5 Significant regression models predicting adolescent depression by parent distress and parenting inflexibility

Predictors	<i>B</i>	<i>SE B</i>	<i>t</i>	ΔR^2
Model 1				
DASS-A	-0.0567	0.2166	-0.78	.002
PAAQ-U	0.0204	0.2215	0.09	.0004
DASS-A \times PAAQ-U	0.5496	0.2596	2.12**	.19

All variables standardized prior to analysis

* $p < .10$, ** $p < .05$, *** $p < .01$

the relationship between overall adolescent distress and parent depression varies by parenting inflexibility. As seen in Fig. 1, when parenting inflexibility was high, increases in parent depression predicted increases in adolescent distress. Conversely, when parenting inflexibility was low, increases in parent depression predicted decreases in adolescent distress.

Multiple regression analyses using Parenting Inaction and Parenting Unwillingness subscales in place of overall Parenting Inflexibility were both nonsignificant. The Parent Depression \times Parent Inaction interaction, however, was approaching significance ($p = .0679$; see Table 4, Model 2) with a pattern similar to the Parent Depression \times Parenting Inflexibility interaction. This suggests that this relationship between overall adolescent distress and parent depression may be more specifically moderated by an inability to take valued actions in the face of difficulty.

Predicting Adolescent Depression

Next, regression analyses were conducted to explore whether parent depression or parent anxiety predicted adolescent depression at various levels of inflexibility. Only models including parent anxiety (as opposed to depression) and parenting inflexibility (as opposed to adolescent inflexibility) successfully predicted adolescent depression. As seen in Table 5 (Model 1), there was a significant Parent Anxiety \times Parenting Unwillingness interaction. Again, a similar pattern emerges. When parenting unwillingness was high, increases in parent anxiety predicted increases in adolescent depression. This suggests that the relationship between adolescent depression and parent anxiety varies by parents' unwillingness to contact negative emotions.

Predicting Adolescent Anxiety

Finally, regression analyses were conducted to explore whether parent depression or parent anxiety predicted adolescent anxiety at various levels of inflexibility. One model including parent depression (as opposed to anxiety) and parenting inflexibility (as opposed to adolescent inflexibility) successfully predicted adolescent distress. As

Table 6 Significant regression models predicting adolescent anxiety by parent distress, parenting inflexibility, and adolescent psychological inflexibility

Predictors	<i>B</i>	<i>SE B</i>	<i>t</i>	ΔR^2
Model 1				
DASS-D	0.3827	0.1766	0.39*	.14
PAAQ	0.0042	0.1809	0.02	.00002
DASS-D \times PAAQ	0.6104	0.1875	3.26***	.34
Model 2				
DASS-D	0.2717	0.1815	1.50	.07
AFQ-Y	0.3592	0.1827	1.97*	.12
DASS-D \times AFQ-Y	0.3863	0.1618	2.39**	.18
Model 3				
DASS-A	0.0395	0.2004	−0.20	.001
AFQ-Y	0.3900	0.1948	2.00*	.15
DASS-A \times AFQ-Y	0.4435	0.2116	2.10*	.16

All variables standardized prior to analysis

* $p < .10$, ** $p < .05$, *** $p < .01$

seen in Table 6 (Model 1), there was a significant Parent Depression \times Parenting Inflexibility interaction, and this model significantly predicted adolescent anxiety, $R^2 = .45$, $F(3, 17) = 4.67$, $p = .0148$. Once again, a similar pattern emerges. When parenting inflexibility was high, increases in parent depression predicted increases in adolescent anxiety.

Regression models were repeated replacing the parenting inflexibility variables with adolescent inflexibility. As seen in Table 6 (Model 2), there was a significant Parent Depression \times Adolescent Psychological Inflexibility interaction, and this model significantly predicted adolescent anxiety, $R^2 = .46$, $F(3, 17) = 4.74$, $p = .0140$. Additionally, there was a Parent Anxiety \times Adolescent Psychological Flexibility interaction (see Table 6, Model 3) that was approaching significance, $t(1) = 2.10$, $p = .0513$, and this model also significantly predicted adolescent anxiety, $R^2 = .37$, $F(3, 17) = 3.38$, $p = .0428$. When adolescent psychological inflexibility was high, increases in parent depression or anxiety predicted increases in adolescent anxiety.

Discussion

Parenting is associated with many stressors, and research shows that the stress of parenting can influence the strategies that children use to cope in a number of ways (Cappa et al. 2011). When parents struggle with balancing these stressors, they sometimes turn to ineffective parenting behaviors that can have a negative impact on child coping. This relationship between parenting stress and child coping can be even more detrimental when parents struggle with

anxiety or depression due to the high probability that their children will also struggle with similar distress (Harrington 1996). One construct that may be useful for understanding and coping with the stress of parenting is psychological flexibility (Coyne and Murrell 2009). Parenting Inflexibility specifically, or the inability to take valued family actions in the face of painful emotions related to parenting, can play a role in child distress and coping strategies.

The primary purpose of this study was to examine the relationships among parent distress, adolescent distress, parenting flexibility, and adolescent psychological flexibility. Additionally, this study aimed to examine evidence for parenting flexibility as a moderator of the relationship between parent and child distress. Parents ($N = 71$) of adolescents reported on their distress (i.e. anxiety, depression, and stress) and their parenting flexibility. The adolescent children of these parents were also invited to participate in this study. Those who chose to participate ($n = 21$) also reported on their distress as well as their psychological flexibility.

The results of this study add support to the growing body of literature on the importance of psychological flexibility in mental health (Kashdan et al. 2006). Parenting inflexibility was associated with higher parent anxiety and stress, and this relationship seemed to be driven primarily by parents' unwillingness to contact negative emotions related to parenting. Parents who are unable to pursue valued choices despite negative emotions related to parenting tend to experience more distress. Although based on a much smaller sample size, a similar relationship emerged among adolescent participants, in which those who were inflexible were also more likely to experience elevated anxiety and depression.

Contrary to our hypothesis, however, parenting inflexibility and adolescent psychological inflexibility were not correlated. Although these results are difficult to understand, there are a few possible explanations. First, the context specificity of parenting flexibility may distinguish it enough from adolescent psychological flexibility. It is unclear whether adolescent flexibility and/or distress would be related to parent overall flexibility not specifically within the context of parenting. Future studies might include alternative measures of flexibility to more clearly interpret this relationship. Alternatively, parents who are more willing to let their adolescents experience distress may have adolescents who are experimenting with different coping strategies. Adolescence can be a difficult time for many individuals, and avoidance may be an intuitive strategy to use during such a confusing time. In fact, adolescents often choose to intentionally attempt to distinguish themselves from their parents while they develop independence and explore their own identities, and this divergence may be evident even in self-report. Correlations

between parenting flexibility and child psychological flexibility may emerge at younger, or even older, ages. Further research is needed to understand this discrepancy.

The literature also suggests that there is a relationship between parent and child depression and anxiety (Beidel and Turner 1997; Colletti et al. 2009; Silberg et al. 2010). The results of this study, however, did not find any significant correlations between parent and adolescent depression and anxiety variables. This lack of significance may be due to limited power as a result of the small sample size. Most of the parents who participated did not have an adolescent who also participated. Further, parents whose adolescents neglected to participate seemed to have more difficulty themselves with taking valued actions in the face of distress. It is notable in and of itself that parents who struggle with taking valued actions related to parenting were also less likely to follow through with having their adolescent participate. However, this also means that our moderation analyses were based on a group of parents who were more flexible than the whole population of parents included in this study. There were no differences in distress between parents who were included in the dyadic analyses and those who were not.

Despite the small sample size, correlations between parent and adolescent distress may also have been non-significant because these relationships were moderated by inflexibility. Positive relationships between parent and adolescent distress (overall distress, depression, and anxiety) only emerged when parents (and sometimes, adolescents) had high levels of inflexibility. Because of the small sample size, these interaction effects may be unstable and should be interpreted with caution. Nonetheless, exploring these interaction patterns may provide informative directions for future exploration. Parent depression, for example, only predicted overall adolescent distress when parenting inflexibility was high. Specifically, depressed parents were more likely to have distressed adolescents when they reported increased difficulty taking valued parenting actions in the face of distress. Depressed mothers have fewer interactions with their children (Coyne et al. 2007; Querido et al. 2001). It may be that the interactions that they do have are especially distressing if parents are also struggling with parenting in the way they would want to.

Parenting inflexibility also moderated the relationship between parent anxiety and adolescent depression and, conversely, the relationship between parent depression and adolescent anxiety. In other words, among highly inflexible parents, those with higher anxiety were more likely to have adolescents with higher depression, and those with higher depression were more likely to have adolescents with higher anxiety. Although this may seem counterintuitive, research shows that children of parents with depression are

at a higher risk of developing both depression and anxiety (Colletti et al. 2009). This sample suggested that adolescents of parents with anxiety or depression may be more likely to develop similar patterns of distress without necessarily developing the same form of that distress.

Additionally, anxious parents were more likely to have depressed adolescents when they reported difficulty contacting their negative emotions that are related to parenting. Parents struggling with anxiety are more restrictive and more likely to use controlling behaviors to manage their child's negative emotions (Ballash et al. 2006; Lindhout et al. 2006). It may be that these parents engage in more strategies to manage their child's experience when they are unwilling to experience their own anxiety. In contrast to the relationship between parent depression and adolescent distress that was influenced by a difficulty taking valued actions, here the relationship between parent anxiety and adolescent depression was influenced by unwillingness to contact emotions. Different aspects of inflexibility seem to play unique roles in the relationship between parent and adolescent distress. Parent anxiety and depression also predicted adolescent anxiety when adolescent inflexibility was high. In other words, having difficulty contacting painful emotions may be particularly detrimental to an adolescent whose parent is struggling with anxiety or depression.

This study had several limitations. First, the dyadic analyses were based on a very small sample size. This sample was also based on a narrow demographic consisting predominantly of white females. There is research to suggest that there may be differences in adolescent psychological flexibility (Venta et al. 2012) and distress (Crawford and Henry 2003) by gender, where females report higher inflexibility, anxiety, and depression. Similarly, mother and father symptomology has been shown to affect girls and boys differently (Compas et al. 1989). Although there were no significant differences in this study by gender, this may also be due to the small sample size, making it difficult to determine whether this made an impact. Recruiting both adolescents and their parents proved difficult. In order to maximize participant comfort and response accuracy, all surveys were taken online and completely anonymous (Ong and Weiss 2000). Without direct contact with subjects or access to communicate with them, providing motivation to participate proved unfeasible. Although an adequate number of parents participated, it was much more difficult to attain participation from their teenagers. In future studies, it may be helpful to recruit participants in person and collect email addresses for reminders and updates.

The results of this study are also limited by the ability of self-report measures to adequately reflect behavior. Although self-report measures have many advantages, they

are subject to response biases as well as individual situations and moods. It has been argued that psychological flexibility may be especially vulnerable to the limitations of self-report due to context dependency (Gloster et al. 2011). For example, a father may be effective at contacting the present moment and moving towards values while exercising, but not particularly effective when his children are fighting. Moreover, the internal consistency of the PAAQ was moderately low for both the inaction ($\alpha = .64$) and unwillingness subscales ($\alpha = .65$). Additional data is needed for a more complete analysis of the reliability of this relatively new measure. There was some behavioral support for the validity of the inaction scale, however, as dyads in which parents were high in inaction actually failed to complete the study. Further studies in this area might also include behavioral observations of both parent and child behavior.

A related limitation is inherent in the relationship between inflexibility and distress. Psychological inflexibility involves an avoidance of negative thoughts and emotions when contacting these thoughts and emotions would better serve valued ends (Hayes et al. 2011a, b). Individuals who are highly avoidant, therefore, may actually report less symptomology. Because flexibility involves pursuing chosen values despite negative thoughts and feelings, it may be more appropriate to include measures of wellbeing, such as life satisfaction, daily functioning, physical health, and valued living. Finally, analytic strategies were limited with these data. The cross-sectional nonrandomized design is not adequate to make causal inferences. Longitudinal data are necessary to assess causal relationships as well as changes over time. A longitudinal design could measure flexibility, distress, and wellbeing at several time points throughout a child's development to examine whether fluctuations in flexibility lead to changes in mental health.

Despite these limitations, these results demonstrate the importance of continuing to build the growing body of research on psychological flexibility and the parent–child relationship. This is one of the few preliminary studies to look at flexibility specifically in the context of parenting. Parents who cannot acknowledge and build acceptance around their child's emotional states are more likely to report greater emotional problems themselves (Cheron et al. 2009). Likewise, children of parents who cannot acknowledge these emotional states may develop similar patterns of coping and distress.

Understanding the role of inflexibility in family functioning may also inform clinical practice, whether it is with children, parents, or entire family systems. Parental psychopathology and aspects of family functioning often influence outcomes of child treatments without a clear explanation of how or why they are important (Barnish

and Kendall 2005). Adding a parental component to the treatment of child internalizing problems has been met with mixed success (e.g., Cobham et al. 2010; Shortt et al. 2001; Spence et al. 2000). If parenting inflexibility plays a role in the relationship between parent and child distress, it may be an important target for interventions involving children and families. For example, exercises focusing on building flexibility specifically around parenting may increase wellbeing throughout the family. Moreover, focusing on distress in child and adolescents may be insufficient without considering parent interactions. Taking into consideration flexibility throughout the family system may provide valuable information for more adequately designed interventions.

Finally, there are implications for children and families broadly. Although it can be very stressful, parenting can also be very rewarding. There are steps that parents can take every day to maximize this rewarding experience (Coyne and Murrell 2009). Even in a nonclinical population, maintaining a flexible parenting style can help promote wellbeing in the family. The responsibility of raising a child scarcely comes without feelings of doubt and self-criticism. Building a flexible relationship around these feelings can broaden a parent's range of possible responses and allow more room to pursue what matters most.

Research in the area of psychological flexibility specifically in parents and their children is relatively nascent, and future studies can benefit from improving on these methods. Primarily, research in this area could benefit from better recruiting methods in order to serve both clinical and nonclinical diverse populations. For example, online surveys provide participants with convenience and anonymity, but may not adequately serve at-risk populations where access to computers is limited. Also, although some long-term data in this area has been produced (Ciarrochi et al. 2011), this research could benefit from more longitudinal studies. Children go through many developmental changes, and longitudinal data would help to examine the reciprocal relationships among parent distress, child distress, parent flexibility, and child flexibility over the developmental course.

An important next step will include development of behavioral measures that do not rely solely on self-report. Not only can behavioral measures avoid social desirability biases, they may be more sensitive to the context dependency of psychological flexibility. Furthermore, it will be beneficial to distinguish between wellbeing and psychopathology in a way that can accurately reflect the contextual behavioral paradigm. Rather than focusing on the relationship between inflexibility and distress, similar studies could concentrate on the role of flexibility in resiliency and wellbeing in the parent–child relationship. Finally, including measures of perceived flexibility could

provide further insights into this relationship. Parents in this study reported on their flexibility towards their children, but there was no measure of adolescents' perception of their parents' openness to painful experiences or how successful they were at taking valued action. How adolescents perceive their parents' behavior may be equally or even more influential on their development than their parents' actual behaviors.

Parenting is an important and meaningful experience for many individuals. Throughout a child's development, parents have continuous opportunities to contact rewarding experiences. At the same time, the tremendous responsibility of raising another human being can be very stressful. In order to approach the rewarding experiences of parenting it is also often necessary to come into contact with painful thoughts and emotions. Contacting parenting-related pain with flexibility seems to not only allow for parenting to be a rewarding experience, but also to promote child development and wellbeing.

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