ELSEVIER

Contents lists available at ScienceDirect

Journal of Contextual Behavioral Science

journal homepage: www.elsevier.com/locate/jcbs



Brief Empirical Reports

Development and validation of the parental acceptance questionnaire (6-PAQ)



Ryan L. Greene, Clinton E. Field, Jamison D. Fargo, Michael P. Twohig*

Utah State University, USA

ARTICLE INFO

Article history: Received 6 November 2014 Received in revised form 24 May 2015 Accepted 26 May 2015

Keywords: Children Family Psychological flexibility Measurement

ABSTRACT

The purpose of this study was to develop the Parental Acceptance Questionnaire (6-PAQ), an instrument measuring the six primary processes theorized to contribute to psychological flexibility among parents. Items were collaboratively developed by a team of experts. Parents (N=181) were recruited from a public elementary school and administered a pilot version of the 6-PAQ, which was refined using psychometric modeling procedures. The final version of the instrument yielded an overall internal consistency reliability coefficient of 0.84 with an average of 0.73 across the six psychological flexibility processes subscales. Results of a confirmatory factor analysis using items from the final version of the 6-PAQ suggested the measurement structure possessed an exceptional overall fit to the data: CFI=0.97, TLI=0.96, RMSEA=0.06 (90% confidence interval=0.05-0.08), and WRMR=0.86. Collectively, these results provide preliminary support for the 6-PAQ as a reliable and valid measure to assess parental psychological flexibility. Empirical and clinical implications of results as well as limitations and future directions are discussed.

© 2015 Association for Contextual Behavioral Science. Published by Elsevier Inc. All rights reserved.

1. Introduction

Psychological flexibility is the ability to fully contact the present moment and the inner experiences that are occurring without needless defense, while, depending upon the context, persisting or changing in the pursuit of goals or personal values (Hayes, Luoma, Bond, Masuda, & Lillis, 2006). It is made up of six discrete psychological processes: acceptance, defusion, self-as-context, being present, values, and committed action (Hayes et al., 2006). Psychological flexibility has been found to be appropriately related to most measures of pathology and quality of life, and positive increases in psychological flexibility are generally related to better functioning (Hayes, Levin, Plumb-Vilardaga, Villatte, & Pistorello, 2013). The general measure of this construct is the Acceptance and Action Questionnaire-II (AAQ-II; Bond et al., 2011). It has been found that disorder specific measures are generally more sensitive than general measures, leading to the development of measures of psychological flexibility for diabetes (Gregg, Callaghan, Hayes, & Glenn-Lawson, 2007), epilepsy (Lundgren, Dahl, & Hayes, 2008), substance abuse (Luoma, Drake, Hayes, & Kohlenberg, 2011), weight, (Lillis & Hayes, 2008), body image (Sandoz, Wilson, Merwin, & Kellum, 2011), chronic pain (McCracken, Vowles, & Eccleston, 2004), social anxiety (MacKenzie & Kocovski, 2010), tinnitus (Westin, Hayes, & Andersson, 2008), auditory hallucinations (Shawyer et al., 2007), work (Bond, Lloyd, & Guenole, 2012), and stigma (Levin, Luoma, Lillis, Hayes, & Vilardaga, 2014).

There are measurement options that focus on related constructs for children and adolescents (Twohig, Field, Armstrong, & Dahl, 2010). Plus there are measures of psychological flexibility for parents including the parental acceptance and action questionnaire (Cheron, Ehrenreich, & Pincus, 2009) as well as a recently published parental psychological flexibility questionnaire (Burke & Moore, 2014), and a measure specifically for parents of children with chronic pain (McCracken & Gauntlett-Gilbert, 2011).

The parental acceptance and action questionnaire is a 15-item self-report questionnaire based on a 7-point Likert scale that measures parental experiential avoidance and psychological inflexibility. The parental acceptance and action questionnaire items load onto one of two scales – parental unwillingness in witnessing their child's experience of negative emotion (unwillingness subscale) as well as parental inability to effectively manage their own reactions to their child's affect (inaction subscale; Cheron et al., 2009). The recently developed parental psychological flexibility questionnaire is 19 item questionnaire that assesses three factors of psychological flexibility in parents: defusion, acceptance, and committed action. Thus, neither measure assesses all six processes of psychological flexibility. Both the PAAQ and the parental

^{*} Correspondence to: Utah State University, Department of Psychology, 2810 Old Main Hill, Logan, UT 84322-2810, USA. Fax: +435 797 1448.

E-mail address: michael.twohig@usu.edu (M.P. Twohig).

psychological flexibility questionnaire were largely or completely based on versions of the AAQ. Even though this has been done in other areas (e.g., Lundgren et al., 2008), it makes for oddly worded and cumbersome items, and misses areas that are idiosyncratic to parenting such as consistent parenting and routines, positive interactions with child, and responses to child misbehavior. Thus, while these measures are great additions to this area of work, they have limitations.

Multiple studies show that psychological inflexibility, or components of it, are negatively related to well-being and functioning in adolescents (Ciarrochi, Kashdan, Leeson, Heaven, & Jordan, 2011: Greco et al., 2005: McCracken & Gauntlett-Gilbert, 2011: Shea & Covne, 2011), as is low psychological flexibility in parents (e.g., Cheron et al., 2009; McCracken & Gauntlett-Gilbert, 2011). There is also a bidirectional relationship between parenting styles and child psychological flexibility (Williams, Ciarrochi, & Heaven, 2012). A 6 year (starting in grade 7) longitudinal study showed that authoritarian parenting predicts psychological inflexibility in the child at later time points, and that psychological flexibility in the child at grade 9 predicted decreases in authoritarian parenting and increases in authoritative parenting (Williams et al., 2012). This highlights the possible interaction between emotionally avoidant parenting and related child struggles (Aschenbrand & Kendall, 2012; Tiwari et al., 2008).

Similar to the need for disorder specific measures of psychological inflexibility, parental psychological inflexibility is a target of concern in child and adolescent psychology (Coyne & Murrell, 2009; Greco & Hayes, 2008; Murrell, Coyne, & Wilson, 2005). ACT for parents, either for their functioning or part of a parent guided intervention, is a developing line of work (Biglan, Layton, Jones, Hankins, & Rusby, 2013; Blackledge & Hayes, 2006; Coyne & Murrell, 2009). Without measurement tools that assess parent functioning along the spectrum of psychological flexibility, assessment of the effects of parent interventions is limited and speculative. Assessment is vital in developing case conceptualization, identifying useful treatments/interventions, and in evaluating the progress and outcomes of therapy. Access to measurement tools that adequately measure all aspects of psychological flexibility in the realm of parenting actions is crucial.

This study aimed to develop a new measure of parental psychological flexibility that assesses all six processes of change. To do so a group of experts created a large pool of items that tapped into each of the six processes that contribute to psychological flexibility. These items went through multiple levels of evaluation. A final set of items was administered to parents at a public elementary school. Statistical analysis helped produce the final version of the measure which includes 18 items, three assessing each psychological process of change.

2. Methods

The initial pilot version of the 6-PAQ instrument (64 items) was developed with a series of items targeting the six ACT-specific processes from a parenting context: acceptance, defusion, being present, self as context, clear values, and behavioral commitments (see Hayes et al., 2006 for definitions). Next, a team of experts reviewed and rated the quality of each of the items, and provided feedback to strengthen or clarify the wording of the items. A small group of parents then reviewed the instrument and provided feedback on item clarity and wording from a parenting standpoint. Items were further modified or removed based on this feedback yielding a working measure of 47 items. Next, internal consistency reliability was calculated on items within each of the six psychological flexibility processes as well as the entire instrument after administering the refined 6-PAQ pilot instrument (47 items) to a

sample of parents of elementary school children. Data from this administration were used in further psychometric analyses to create the final version of the instrument (18 items). These steps are further elaborated in the sections that follow.

2.1. Development of the Pilot 6-PAQ instrument

Six graduate students led by a psychologist (C.E.F) with training in ACT and expertize in child clinical psychology developed an initial pool of 64 items related to each of the six processes associated with psychological flexibility from a parenting perspective. In order to evaluate the content validity of the initial set of items. M.P.T. and three graduate students from his research group independently evaluated how well each item corresponded to each of the six processes on a 1-3 point scale: 1 = needs improvement - difficult to understand or needed to be restructured; 2=reasonable-fairly clear, but required minor changes; 3=acceptable-easily understood and no changes were necessary. Open-ended feedback for each item was also provided. Items that required restructuring and improvement were modified to meet the expectations of expert reviewers. Items that did not meet criteria for a particular process or that appeared to overlap with another process were either removed from the item pool or modified to be acceptable. Seventeen items were removed from the pool through this process. Next, to evaluate face validity, the remaining items on the 6-PAQ were presented to two lay parents who were asked to evaluate whether each item was clear and coherent. No items were dropped from the item pool at this point, but slight word changes and additional clarifications to response options were made to clarify comprehension or address structural problems.

2.2. Participants and setting

The target population for the 6-PAQ were parents of children between the ages of 3 and 12. Therefore, participants were included if they: (a) were a legal guardian, (b) had a child between the ages of 3 and 12 years of age, and (c) were the parent or caregiver who spent the most time with the child. Participants were excluded if they had received psychological treatment within the past 12 months, based on self-report.

Participants were recruited from a mid-sized kindergarten through sixth grade elementary school (709 students) located in a suburban area of central Utah. A packet containing information on the purpose of the study, an explanation of the procedures, details of the reward party (an ice cream party was provided as incentive for completion of the packet), as well as inclusion and exclusion criteria were sent home with the child. Study materials included the 6-PAQ and a demographic questionnaire (assessing marital status, sex, age, education level, employment status, income. number of children, and race/ethnicity), as well as a researcher created question of parenting style that described four parenting styles and asked the parent to select his or her style. Participants had one week to complete the survey online. Parents were asked to complete the packet for one child, resulting in 414 identified families (see Fig. 1). Overall, 176 participants completed the demographic questionnaire and 6-PAQ, 5 completed some of the items, and 233 participants did not complete or attempt either questionnaire.

2.3. Data analysis and 6-PAQ refinement

Data collected from the administered version of the 6-PAQ were then subjected to psychometric analyses in order to establish the reliability and validity of scores. Cronbach alpha coefficients were estimated in order to determine the internal consistency reliability of the total instrument as well for each subscale. A

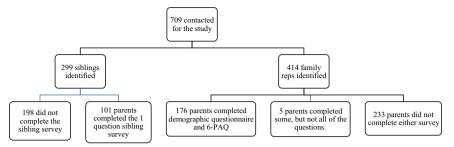


Fig. 1. Participant flowchart.

Table 1Internal consistency reliability for initial and final versions of the 6-PAQ instrument.

Subscale	Initial version (47 items)	Final version (18 items)		
Overall	0.67	0.88		
Acceptance	0.69	0.60		
Defusion	0.62	0.74		
Being Present	0.17	0.71		
Self as Context	0.66	0.69		
Values	0.37	0.83		
Committed action	0.54	0.66		

confirmatory factor analysis (CFA) was then conducted to evaluate the hypothesized structure, in other words, the construct validity, of the items corresponding to each of the six subscales of the instrument. Additionally, an overarching construct of Psychological Flexibility was included as a higher-order factor with all six subscales (factors) serving as indicator variables. Based on these results, 6-PAQ items were retained, removed, or revised. Items were considered for removal if (a) the Cronbach's alpha increased if removed, (b) they were uncorrelated with others items within the same subscale, (c) an item had a factor loading below 0.40 from the CFA, or (d) there was limited or no variation in item responses. Each item identified for removal was discussed among researchers until a consensus was reached. This process yielded 18 items that were retained in the final version of the 6-PAQ instrument, three items per subscale (see appendix for final versions). The items in the final 6-PAQ instrument were then subjected to another internal consistency reliability analysis with computation of Cronbach alpha coefficients as well as a CFA to evaluate construct validity. Although instruments similar and dissimilar to the overall 6-PAQ as well as its six subscales were not administered simultaneously with the 6-PAQ in order to determine convergent and divergent validity of total and subscale scores, the subscales were allowed to covary in the CFA. This allowed us to determine how similarly or dissimilarly the subscales functioned, providing an estimation of convergent and divergent validity within the instrument itself.

Scores for 6-PAQ items were summed to create a total score, and scores for items within each subscale were summed to create subscale scores. Descriptive statistics for total and subscale summed scores were computed overall as well as for various demographic groups, including gender, age, parenting style, and education level. 6-PAQ total and subscale scores were then compared across levels of each demographic variable using independent-samples *t*-tests or between-subjects 1-way ANOVAs with an alpha-level of 0.01 due to the large number of comparisons made.

Table 2Results of confirmatory factor analysis of the final version of the 6-PAQ instrument.

Acceptance (A) 12 0.86 0.05			
12 0.66 0.05	17.63	< 0.001	0.75
3 0.68 0.08	8.51	< 0.001	0.46
14 0.65 0.06	10.28	< 0.001	0.42
Defusion (D)			
11 0.86 0.05	17.37	< 0.001	0.73
6 0.74 0.05	14.55	< 0.001	0.55
16 0.80 0.04	18.11	< 0.001	0.64
Being present (BP)			
8 0.83 0.05	15.86	< 0.001	0.70
1 0.83 0.05	15.80	< 0.001	0.69
17 0.82 0.05	15.58	< 0.001	0.67
Self as context (SC)			
13 0.85 0.06	13.39	< 0.001	0.72
4 0.60 0.06	9.77	< 0.001	0.36
9 0.74 0.06	13.15	< 0.001	0.55
Values (V)			
10 0.95 0.03	27.87	< 0.001	0.91
5 0.86 0.04	24.65	< 0.001	0.74
18 0.87 0.03	25.49	< 0.001	0.76
Committed action (CA)			
7 0.80 0.05	16.80	< 0.001	0.65
15 0.66 0.06	11.41	< 0.001	0.43
2 0.74 0.05	13.65	< 0.001	0.55
Psychological flexibility (higher order construct)			
CA 0.91 0.05	19.12	< 0.001	0.83
A 0.72 0.07	11.20	< 0.001	0.52
D 0.88 0.05	19.05	< 0.001	0.78
BP 0.71 0.05	13.03	< 0.001	0.50
SC 0.84 0.04	18.90	< 0.001	0.70
V 0.78 0.04	18.13	< 0.001	0.61

Note: See Appendix 1 for the text of items associated with each sub scale.

Table 3Correlations among subscales of the final version of the 6-PAQ instrument.

ACT process	Acceptance	Defusion	Being present	Self as context	Values
Defusion	0.74	_	_	_	_
Being present	0.48	0.64	_	_	_
Self as context	0.64	0.87	0.63	_	-
Values	0.51	0.56	0.57	0.50	-
Committed action	0.58	0.68	0.55	0.65	0.89

Table 4Descriptive statistics for total and subscale 6-PAQ summed scores, for the total sample as well as by subgroup.

Variable	Level	%	N	AQ M (SD)	DQ M (SD)	BPQ M (SD)	SCQ M (SD)	VQ M (SD)	CAQ M (SD)	Total M (SD)
Sex	Female	90	163	10.6 (1.3)	9.9 (1.6)	8.9 (2.0)	8.9 (1.9)	9.5 ^a (1.9)	8.8 (1.7)	56.7 (8.1)
	Male	10	18	9.7 (2.7)	9.1(3.6)	8.6 (3.6)	8.7 (3.4)	8.1 ^b (3.4)	7.9 (3.1)	52.3 (18.2)
Age	< 30	10	18	10.3 (1.1)	10.3 (1.5)	8.6 (2.7)	8.2 (3.2)	8.7 (3.4)	7.8 (3.0)	54.1 (12.3)
	30-34	36	65	10.7 (1.4)	10.0 (1.6)	9.0 (1.9)	9.4 (1.6)	9.7 (1.6)	9.2 (1.4)	58.2 (7.2)
	35-39	36	64	10.3 (1.3)	9.8 (1.8)	8.8 (1.9)	8.7 (1.6)	9.4 (1.7)	8.7 (1.5)	55.9 (7.7)
	40+	18	33	10.4 (2.1)	9.5 (2.8)	9.0 (2.9)	8.5 (2.7)	9.0 (2.8)	8.3 (2.4)	54.9 (14.3)
Parenting Style	Authoritarian	5	9	10.4 (1.6)	9.7 (1.9)	8.0 (2.9)	9.0 (1.8)	9.2 (2.1)	8.2 (1.3)	54.6 (9.6)
	Authoritative	90	160	10.5 (1.5)	9.9 (2.0)	8.9 (2.2)	8.8 (2.1)	9.4 (2.2)	8.8 (1.9)	56.5 (9.8)
	Permissive	5	8	9.7 (1.6)	9.3 (1.4)	8.6 (1.8)	9.0 (1.0)	9.8 (1.8)	8.3 (1.6)	55.0 (7.1)
Education	< = HS	13	24	10.0 (1.3)	10.0 (1.4)	8.8 (2.1)	8.6 (2.3)	8.8 (2.2)	8.0 (2.0)	54.5 (7.8)
	Some college	33	60	10.6 (1.2)	10.2 (1.5)	9.5 (1.9)	9.4 (2.0)	9.7 (2.0)	9.1 (1.7)	58.7 (7.8)
	College degree	54	97	10.4 (1.7)	9.6 (2.2)	8.4 (2.4)	8.6 (2.0)	9.3 (2.2)	8.6 (1.9)	55.2 (10.8)
Total Sample				10.4 (1.5)	9.9 (1.9)	8.8 (2.2)	8.8 (2.1)	9.4 (2.1)	8.7 (1.9)	56.3 (9.6)

Note. 6-PAQ total and subscale scores were compared across levels of each demographic characteristic using independent-samples t-tests and 1-way between-subjects ANOVAs; group means that significantly differed (p < .01) are indicated with different letters (e.g., a,b) in the table.

3. Results

3.1. Demographic characteristics of parent participants

The majority of respondents were female (90.1%), married (95%), identified as Caucasian (88.4%), did not work outside the home (55.8%), and described their parenting style as authoritative (88.4%). The average age of parental respondents was 35.3 years (SD=4.82). The modal level of education was a bachelor's degree (29.8%), with 23% having completed at least one year of college, while all participants had at least a high school education or equivalent. A majority of participants indicated their annual salary to be between \$60,000 and \$69,999 (19%). A majority of parents reported having three (33%) or four (28%) children.

3.2. Psychometrics for the initial pilot version of the 6-PAQ instrument

Complete responses on the 47-item 6-PAQ were obtained for 176 of the 181 participants. Internal consistency reliability for the entire initial version of the instrument was 0.67, ranging from 0.17 to 0.69 across the six subscales of the 6-PAQ (see Table 1). Results of the initial CFA suggested a good overall fit (CFI=0.88, TLI=0.88, RMSEA=0.06 [95% confidence interval=0.05-0.06]).

3.3. Psychometrics of the final version of the 6-PAQ instrument

After removal of 29 items, estimates of internal consistency reliability and construct validity of the 6-PAQ were recalculated using the final set of 18 items, three items per subscale. Internal consistency reliability for the entire instrument reached 0.88, and ranged from 0.60 to 0.83 for the six subscales (see Table 1). The CFA for the revised version of the 6-PAQ suggested exceptional overall fit (see Table 2; CFI=0.95, TLI=0.94, RMSEA=0.08 [95% confidence interval=0.07-0.09]) and all of the six subscales had strong loadings with the overarching factor of Psychological Flexibility (R^2 range: 0.50–0.83, see Table 2).

3.4. Correlations between subscales of the final 6-PAQ instrument

Table 3 presents the correlations among each subscale of the

final 6-PAQ, as derived from the CFA. All subscales were positively correlated with each other and ranged from 0.48 to 0.89. Additionally, in support of the construct validity of this measure we expected stronger correlations between the "mindfulness and acceptance" processes of change and the "commitment and behavior change" subscales (Hayes et al., 2013). The highest correlations for each process are as expected, for example, with defusion and acceptance correlated at 0.74 and values and committed action at 0.89.

3.5. Final version of the 6-PAQ

The final version of the 6-PAQ is presented in a usable form in the appendix. The measure is completed by one parent or guardian with reference to one child. Scoring involves reversing items 1, 2, 5, 7, 10, 15, and 18, and then summing all items for the total score. Lower scores represent greater parental psychological flexibility whereas higher scores represent greater psychological inflexibility. The subscales are scored as follow: acceptance=items 3, 12, 14; defusion=6, 11, 16; being present=1, 8, 17; self as context=4, 9, 13; values=5, 10, 18; and committed action=2, 7, 15. Clinical norms and cutoffs are not yet available.

Descriptive statistics for total and subscale summed scores from this sample are presented in Table 4. These statistics are also presented for various demographic groups, including gender, age, parenting style, and education level. There was only one significant mean difference in subscale or total PAQ scores between levels of the demographic factors presented in Table 4: females had higher VQ scores $(M=9.5,\ SD=1.9)$ than males $(M=8.1,\ SD=3.4)$, t=2.61, df=179, p=.009.

4. Discussion

The aim of the present study was to develop a reliable and valid measure of parental psychological flexibility across the six representative ACT processes. The internal consistency reliability of the final version of the 6-PAQ instrument was good overall, reaching 0.88, and reached acceptable to good levels for the six individual subscales: acceptance, 0.60; defusion, 0.74; being present, 0.71; self as context, 0.69; values, 0.83; and committed

Table A1Appendix

Child's name:	6-PAQ Birth date:		Date	e:					
Carefully read each of the following items. Then choose the answer or description that best describes your thoughts, feelings, or style of interacting with your child. Your answers should reflect your most consistent feelings and reactions that have been present over the past few months. 1 = Strongly disagree/never 2 = disagree/infrequently 3 = agree/often									
	norrible if my child had a	1	2	3	4				
tantrum in a public place. To complete this item, you would consider your attitudes and perspectives over the past few months and then indicate your most stable reaction. Please proceed to answer the following questions:									
	n my child, I focus on our	1	2	3	4				
2. I am consistent in my3. I would rather give in	to my child than have	1 1	2 2	3	4 4				
him/her make a scene 4. I get upset if things d interact with my child	on't go my way when I	1	2	3	4				
5. I can clearly state my parenting.		1	2	3	4				
	my parenting, I must be a	1	2	3	4				
7. My parenting behavior matters to me as a parting the moment.	rs are based on what ent rather than how I feel	1	2	3	4				
	somewhere else when I	1	2	3	4				
9. When my child misbe	chaves I find myself ons rather than dealing	1	2	3	4				
10. My actions as a pare values.	nt are consistent with my	1	2	3	4				
11. I have negative thou my child behaves in a		1	2	3	4				
	te/maintain routines be-	1	2	3	4				
	sn't go as I had planned, I	1	2	3	4				
14. I avoid taking my ch how they will behave.	ild to the store for fear of	1	2	3	4				
	convenience for effective	1	2	3	4				
16. I'm a bad parent wh 17. When spending time	ay and thinking of the	1	2 2	3	4				
18. I have clear parentin interactions with my	g values that guide my	1	2	3	4				

action, 0.66. Results of the CFA provided preliminary support for the construct validity of the 6-PAQ subscale structure, in terms of its overall fit to the observed data as well as the distinctness and relationships among the subscales themselves.

Results of this study are encouraging and possess both empirical and clinical implications. While the parental acceptance and action questionnaire (Cheron et al., 2009) and the parental psychological flexibility questionnaire (Burke & Moore, 2014) exist, they are more general measures of parenting, they were based on the original AAQ, and they only measure a sample of the six processes that make up psychological flexibility. This is the first psychometrically sound measure available that effectively measures each aspect of the psychological flexibility construct and parental psychological flexibility as a whole. This measure fills that void. This could spur future research into the roles of varying aspects of psychological inflexibility in clinical presentations. While there are likely individual differences in presentations, it is possible that parents who never engage in their child's therapy are low in values and behavioral commitments, those who try and quit early (such

as terminate time-out early) might struggle with acceptance and defusion.

The ultimate clinical utility of this and other measures of parental psychological flexibility are yet to be determined, but that does not lessen their need. It has been argued that evidence-based practices such as behavioral parent training may indirectly promote change in level of parental psychological flexibility while emerging parent training models, such as ACT-informed behavioral parent training, directly hypothesize shifts in flexibility as a direct target of treatment (Coyne & Murrell, 2009; Greco & Eifert, 2004). The availability of a measure such as the 6-PAQ could promote measurement of the effectiveness of these strategies while also serving as a guide in the future development of ACT-related parenting therapies.

The current study suggests that the 6-PAQ possesses basic psychometric qualities that could support its use as a valuable research and clinical assessment tool of parental psychological flexibility. However, some noteworthy limitations are apparent with the current study. One concern is the generalizability of the 6-PAQ. The sample was mainly comprised of married, Caucasian females from within a suburban elementary school boundary. Therefore, the sample is limited in its ability to generalize to samples of males, single parents, and individuals from different cultural and ethnic backgrounds. While the overall aim was to create a measure with clinical utility, the sample utilized was not a clinical sample and clinical interpretive guidelines are not available at this point. Hambrick et al. (2010) demonstrated that many widely used measures perform differently across ethnic groups. Collecting data from parents from a variety of demographic regions and from clinical and additional non-clinical populations would likely yield a more diverse sample. Further work needs to be done to determine treatment utility as it is unknown how treatment may impact each ACT process assessed by the 6-PAQ, especially across diverse clinical populations. Another concern is that the sample size was on the lower end of what would be considered adequate for fully evaluating a new instrument. Additionally, we did not compare the results of the 6-PAO (total and subscale scores) to existing measures of psychological flexibility to determine how similar or dissimilar they are. All of these limitations could serve as opportunities for future research on the properties and functioning of the 6-PAQ.

The original intent of the 6-PAQ was to address a problematic gap in the measurement of a key construct among parents, psychological flexibility. The current study represents initial efforts to address this gap by offering support for the 6-PAQ as a measurement tool that could aid in understanding how treatments targeting parents impact processes related to psychological flexibility. Additional study will be needed to further establish the 6-PAQ as a psychometrically sound measure that possesses clinical utility in diverse populations and clinical settings.

Appendix A

See Appendix Table A1

References

Aschenbrand, S. G., & Kendall, P. C. (2012). The effect of perceived child anxiety status on parental latency to intervene with anxious and nonanxious youth. *Journal of Consulting and Clinical Psychology*, 80(2), 232–238.

Biglan, A., Layton, G. L., Jones, L. B., Hankins, M., & Rusby, J. C. (2013). The value of workshops on psychological flexibility for early childhood special education staff. *Topics in Early Childhood Special Education*, 32(4), 196–210.

Blackledge, J. T., & Hayes, S. C. (2006). Using Acceptance and Commitment Training in the Support of Parents of Children Diagnosed with Autism. *Child and Family*

- Behavior Therapy, 28(1), 1-18.
- Bond, F. W., Hayes, S. C., Baer, R. A., Carpenter, K. M., Guenole, N., Orcutt, H. K., & Zettle, R. D. (2011). Preliminary psychometric properties of the Acceptance and Action Questionnaire-II: A revised measure of psychological inflexibility and experiential avoidance. *Behavior Therapy*, 42(4), 676–688.
- Bond, F. W., Lloyd, J., & Guenole, N. (2012). The work-related acceptance and action questionnaire (WAAQ): Initial psychometric findings and their implications for measuring psychological flexibility in specific contexts. *Journal of Occupational* and Organizational Psychology (pp. 1–25), 1–25.
- Burke, K., & Moore, S. (2014). Development of the parental psychological flexibility questionnaire. Child Psychiatry and Human Development.
- Cheron, D. M., Ehrenreich, J. T., & Pincus, D. B. (2009). Assessment of parental experiential avoidance in a clinical sample of children with anxiety disorders. Child Psychiatry and Human Development, 40(3), 383–403.
- Ciarrochi, J., Kashdan, T. B., Leeson, P., Heaven, P., & Jordan, C. (2011). On being aware and accepting: A one-year longitudinal study into adolescent well-being. *Journal of Adolescence*, 34(4), 695–703.
- Coyne, L. W., & Murrell, A. R. (2009). The joy of parenting: An acceptance and commitment therapy guide to effective parenting in the early years. Oakland, CA, US: New Harbinger Publications.
- Greco, L. A., & Eifert, G. H. (2004). Treating parent-adolescent conflict: Is acceptance the missing link for an integrative family therapy. *Cognitive and Behavioral Practice*, 11(3), 305–314.
- Greco, L. A., & Hayes, S. C. (Eds.). (2008). Acceptance and mindfulness treatments for children and adolescents: A practitioner's guide. New Harbinger Publications.
- Greco, L. A., Heffner, M., Poe, S., Ritchie, S., Polak, M., & Lynch, S. K. (2005). Maternal adjustment following preterm birth: contributions of experiential avoidance. *Behavior Therapy*, 36(2), 177–184.
- Gregg, J. A., Callaghan, G. M., Hayes, S. C., & Glenn-Lawson, J. L. (2007). Improving diabetes self-management through acceptance, mindfulness, and values: A randomized controlled trial. *Journal of Consulting & Clinical Psychology*, 75, 336–343.
- Hambrick, J. P., Rodebaugh, T. L., Balsis, S., Woods, C. M., Mendez, J. L., & Heimberg, R. G. (2010). Cross-ethnic measurement equivalence of measures of depression, social anxiety, and worry. Assessment, 17, 155–171.
- Hayes, S. C., Levin, M. E., Plumb-Vilardaga, J., Villatte, J. L., & Pistorello, J. (2013). Acceptance and commitment therapy and contextual behavioral science: Examining the progress of a distinctive model of behavioral and cognitive therapy. *Behavior Therapy*, 44(2), 180–198.
- Hayes, S. C., Luoma, J. B., Bond, F. W., Masuda, A., & Lillis, J. (2006). Acceptance and commitment therapy: Model, processes and outcomes. *Behaviour Research and Therapy*, 44, 1–25.
- Levin, M. E., Luoma, J. B., Lillis, J., Hayes, S. C., & Vilardaga, R. (2014). The Acceptance and Action Questionnaire Stigma (AAQ-S): Developing a measure of psychological flexibility with stigmatizing thoughts. *Journal of Contextual Behavioral Science*, 3(1), 21–26.

- Lillis, J., & Hayes, S. C. (2008). Measuring avoidance and inflexibility in weight related problems. *International Journal of Behavioral Consultation and Therapy*, 4 (4), 348–354.
- Lundgren, T., Dahl, J., & Hayes, S. C. (2008). Evaluation of mediators of change in the treatment of epilepsy with acceptance and commitment therapy. *Journal of Behavior Medicine*, 31, 225–235.
- Luoma, J. B., Drake, C., Hayes, S. C., & Kohlenberg, B. (2011). Substance abuse and psychological flexibility: The development of a new measure. *Addiction Research and Theory*, 19(1), 3–13.
- MacKenzie, M. B., & Kocovski, N. L. (2010). Self-reported acceptance of social anxiety symptoms: Development and validation of the social anxiety-acceptance and action questionnaire. *International Journal of Behavioral Consultation and Therapy*, 6, 214–232.
- McCracken, L. M., & Gauntlett-Gilbert, J. (2011). Role of psychological flexibility in parents of adolescents with chronic pain: Development of a measure and preliminary correlation analyses. *PAIN*[®], *152*(4), 780–785.
- McCracken, L. M., Vowles, K. E., & Eccleston, C. (2004). Acceptance of chronic pain: Component analysis and a revised assessment method. *Pain*, 107(1–2), 150, 166
- Murrell, A. R., Coyne, L. W., & Wilson, K. G. (2005). ACT with children, adolescents, and their parents In: S. C. Hayes, & K. Strosahl (Eds.), *Acceptance and commitment therapy: A clinician's guide* (pp. 249–271). New York, NY: Springer.
- Sandoz, E. K., Wilson, K. G., Merwin, R. M., & Kate Kellum, K. (2013). Assessment of Body Image Flexibility: The body image-acceptance and action questionnaire. *Journal of Contextual Behavioral Science*, 2(1), 39–48.
- Shawyer, F., Ratcliff, K., Mackinnon, A., Farhall, J., Hayes, S. C., & Copolov, D. (2007). The voices acceptance and action scale (VAAS): Pilot data. *Journal of Clinical Psychology*, 63(6), 593–606.
- Shea, S. E., & Coyne, L. W. (2011). Maternal dysphoric mood, stress, and parenting practices in mothers of Head Start preschoolers: The role of experiential avoidance. Child & Family Behavior Therapy, 33(3), 231–247.
- Tiwari, S., Podell, J. C., Martin, E. D., Mychailyszyn, M. P., Furr, J. M., & Kendall, P. C. (2008). Experiential avoidance in the parenting of anxious youth: Theory, research, and future directions. *Cognition and Emotion*, 22(3), 480–496.
- Twohig, M. P., Field, C. E., Armstrong, A. B., & Dahl, A. L. (2010). Acceptance and mindfulness as mechanisms for change in mindfulness-based interventions for children and adolescents In: R. A. Baer (Ed.), Assessing mindfulness & acceptance processes in clients: Illuminating the theory and practice of change (pp. 225–250). Oakland, CA: New Harbinger.
- Westin, V., Hayes, S. C., & Andersson, G. (2008). Is it the sound or your relationship to it? The role of acceptance in predicting tinnitus impact. *Behaviour Research and Therapy*, 46(12), 1259–1265.
- Williams, K. E., Ciarrochi, J., & Heaven, P. C. L. (2012). Inflexible parents, inflexible kids: A 6-year longitudinal study of parenting style and the development of psychological flexibility in adolescents. *Journal of Youth and Adolescence*, 41(8), 1053–1066.