Preprint

Development and Validation of the Spanish Process-Based Assessment Tool (PBAT)

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Abstract

The Process-Based Assessment Tool (PBAT) was developed to monitor biopsychosocial processes of change that are of relevance to individual treatment goals. It applies an idionomic approach to identify key processes of change, using high temporal density measurement applied at the level of the person. The purpose of the present study was to psychometrically validate the Spanish version of the PBAT and to expand the cross-cultural application of the questionnaire. A representative sample of 602 participants completed an online, cross-sectional questionnaire. Methods from the original study were followed including the same criterion variables; psychological distress (sadness, anxiety, stress, anger, lack of social support), health, and vitality level, and the need or frustration of autonomy, connection, and competence. Results showed that PBAT items significantly predicted criterion variables; Positive behaviors from the PBAT were the strongest predictors of health, vitality, as well as need satisfaction of autonomy, connection and competence. Negative behaviors from the PBAT were the strongest predictors of psychological distress, as well as the frustration of autonomy, connection and competence. Despite evidence for cultural differences in specific items, the overall conclusions of this validation study are consistent with the original study. The Spanish version of PBAT can be recommended for use in further scientific research and therapeutic processes.

Keywords: process-based therapy, PBT, test adaptation, process-based assessment tool, PBAT.

Introduction

Process-Based Therapy (PBT) emerged as an alternative to symptom-based approaches, which until now have been the predominant style of therapy in the field of clinical psychology (Hayes & Hofmann, 2017, 2021). Instead of using syndrome-specific protocols, PBT addresses the underlying processes that drive psychopathological symptoms. The process-based approach offers a more holistic, unifying method bridging multiple therapy models to offer an individualized approach to treatment (Hayes et al., 2019). It focusses on person-specific biopsychosocial processes that are theory-based, dynamic, experimental, progressive, contextually bound, multi-level, and have been empirically linked to key clinical outcomes (Hayes et al., 2022; Moskow et al., 2023). This shift in focus from syndromes to processes allows for more flexible treatment strategies compiled from a wide range of theoretical orientations.

PBT is grounded in evolutionary theory, with maladaptive psychological processes considered to be evolutionarily caused by problems in variation, selection, and/or retention of context-specific biopsychosocial processes in any given context (Hayes et al., 2020). The extended evolutionary meta-model (EEMM) was proposed as a means of organizing processes along psychological dimensions (affective, cognitive, attentional, self, motivational, overt behavioral), nested within levels of analysis (physiological, sociocultural), in response to evolutionary variables (variation, selection, retention, context) (Hayes et al., 2020; Moskow et al., 2023). The EEMM provides a systematic framework to consider the potential contribution of any of these dimensions and levels in identifying any aspect of human suffering. Once identified, clinicians can then apply individualized treatment techniques to target the specific components of the EEMM that are associated with maladaptation, acknowledging the possible interconnectedness between dimensions and across levels of the model. As

a result of the development of this more dynamic approach to treatment, new methods of assessment are needed to appropriately monitor change over time.

The Process-Based Assessment Tool (PBAT; Ciarrochi et al., 2022) was developed in response to this new wave in cognitive and behavioral therapies, designed to assess processes of change in psychological interventions adopting a PBT approach. It was designed for intensive longitudinal clinical assessment to track individual variability in both positive and negative processes that contribute to clinical outcomes. The PBAT includes a pool of items aiming to capture positive behaviors that either contribute to general well-being and prosperity, or negative behaviors which have the potential to develop into psychopathological symptoms. This comprises different dimensions of selection, variation, and retention to allow clinicians and researchers the freedom to select individual item/s for use in idionomic research and practice. The original validation study found that the PBAT distinguishes between positive and negative processes, links in theoretically coherent ways to need satisfaction and thwarting, as well as linking to clinically relevant outcomes of sadness, anger, anxiety, stress, lack of social support, vitality, and health.

This paper aims to (a) develop and validate the Spanish version of the Process-Based Assessment Tool (PBAT), and (b) replicate the original study by Ciarrochi et al. (2022) by testing the hypotheses put forward therein. Mirroring the original article, we tested three hypotheses: (H1) Firstly, we expected positive items would correlate moderately with other positive items, as would negative items, but positive and negative items would correlate less well. (H2) Secondly, we expected PBAT items would relate in a theoretically consistent manner with the satisfaction or frustration of underlying goals. (H3) Finally, we also anticipated the PBAT would be associated with clinically relevant outcomes of sadness, anger, anxiety, stress, lack of social support, vitality, and health.

Methods

Participants

Participant recruitment was conducted by the market research institute SONDEA S.L., which has an online panel and uses a proprietary application for data collection. The sample was selected with the intention of representing the general Spanish population based on quotas for sex, age, and location according to the municipal register of the Spanish National Institute of Statistics (INE, 2022). The sample consisted of 602 participants (49% female) between 18-75 years old. Participants anonymously completed an online cross-sectional survey and, in return, received financial compensation. The response rate was 100%. The study was approved by the ethics committee of the Complutense University of Madrid (Ref. CE_20240208_11_SOC). Participants provided their informed consent to participate and complete the questionnaires. The data were collected on the 12th and 13th of March 2024.

Measures

Process-Based Assessment Tool Measure

Process-Based Assessment Tool (PBAT; Ciarrochi et al., 2022) is an 18-item self-report scale assessed via 100-point response scales ranging from 0 (“strongly disagree”) to 100 (“strongly agree”). To ensure a proper translation of the PBAT, we adopted the back-translation approach, a procedure widely described in the literature (Muñiz et al., 2013). Three people (one bilingual translator and two English-speaking psychologists) independently translated the PBAT from English into Spanish. A consensus was then reached after being reviewed by three experts in functional analysis, resulting in the first Spanish version of the tool (Back Translation 1). This version was then back-translated (from Spanish to English) and reviewed by another

group of experts, including one of the authors of the original tool, to ensure the equivalence of the translation (Back Translation 2). Finally, after integrating the suggestions made, it was back-translated into Spanish (Back Translation 3), resulting in the final Spanish version of the PBAT (see Table 1 and Appendix I).

Criterion-Variables

Clinically Relevant Outcomes. To assess psychological distress, the STOP-D questionnaire was used (Young et al., 2007, 2015). Participants rated the intensity of sadness, anxiety, stress, anger, and lack of social support during the past week on a slider scale from 0 (not at all) to 100 (a great deal). Health during the past week was measured using a five-point scale (Ware & Sherbourne, 1992) with responses ranging from 1 (poor) to 5 (excellent). Finally, three positive items from the vitality scale (Ryan & Frederick, 1997) were used, with the instructions specifying that the statements referred to the past week. Participants responded on a slider scale from 0 (not at all true) to 100 (very true).

Need Satisfaction. Following the reasoning of the original article, which aligns the dimensions proposed in the PBT with the concepts tested in needs psychology (Ryan & Deci, 2017), items of satisfaction and frustration from the domains of autonomy, competence, and connection were chosen (Chen et al., 2015). The instructions specified that the statements referred to the past week. Participants responded on a slider from 0 (definitely false) to 100 (definitely true).

All items were randomized both among participants and within the same questionnaire. All scales were presented with the response mark at the midpoint: 50 for sliding scales ranging from 0 to 100, and 3 for the five-point scale of the single health item ranging from 1 to 5.

Statistical Procedure

Replicating the protocol of the original study, the machine learning algorithm selected was the Boruta algorithm (Kursa & Rudnicki, 2010) which builds on the random forest classification approach (Breiman, 2001). Analysis using the Boruta algorithm allowed for determining the predictive value of individual PBAT items with respect to the included criterion variables.

Results

Descriptives

The means and standard deviations of the PBAT items are shown in Table 2, separated by participants' gender. Participants agreed on the selection of positive behavior, feeling less capable of finding meaningful challenges. Regarding negative behaviors, the ones most reported by participants were problems with unhelpful thinking, while the least common was hurting social connections. There were some gender differences, with males being more likely than females to report experiencing a range of appropriate emotions to the moment, feeling more stuck and less able to change their ineffective behavior, and having more difficulty retaining behaviors that were good for them.

There were also some gender differences in the outcome variables, with men being significantly more likely than women to report feeling anxious and stressed, while women were more likely than men to report feeling more vital and healthy. There were no gender differences in the satisfaction and frustration of needs. The results are shown in Table 3.

Altogether, these results suggest that females report feeling better than males. Despite males more frequently reporting positive behavior related to affect selection, they were also more likely to report having difficulty changing their ineffective behavior and retaining behaviors that were good for them.

Structural Validity

Hypothesis 1 postulated that positive and negative behaviors on the PBAT would be different. The results are consistent with the predictions of the hypothesis regarding selection behaviors (see Table 4). Correlations were significant among the seven positive items (mean = +.46, range = +.36 to +.6), as well as among the seven negative items (mean = +.39, range = +.26 to +.54). Following the cut-off points used in the original article (.3 and .5), all correlations were generally moderate, with five small correlations and ten large correlations among the 42 calculated. Regarding the correlations between positive and negative items, they were predominantly negative and weak (mean = -.13). Although the majority of the relationships (33 out of 49) reached statistical significance, they showed a considerable variability in both strength and direction (range = -.35 to +.11), suggesting a weak association rather than a strong or deterministic relationship between the items. The strongest link (r = .6) was shown between two positive behaviors, “used thinking to live better” and “paid attention to important things”.

However, in relation to the behavior of variation and retention, inconsistencies are observed (Table 5). The item relating to retention of positive behavior (“Stuck to strategies that worked”) was significantly positively correlated with the negative variation item (.12) and with the negative retention item (.19), contrary to expectations.

Criteria Validity

According to Hypothesis 2, we expected to find a relationship between reports of effective variation, selection, and retention behaviors and the satisfaction of autonomy, connection, and competence. Conversely, ineffective behaviors were expected to be associated with higher levels of frustration of these needs. As shown in Table 6, the results align with this expectation. Specifically, positive behaviors were

moderately related to the three forms of need satisfaction (mean = +.4; range = +.18 to +.54), but not to the frustration of these needs (mean = -.16; range = -.34 to +.12). Conversely, negative behaviors were also moderately related to the three forms of need frustration (mean = +.42; range = +.29 to +.53), but not to need satisfaction (mean = -.21; range = -.02 to -.37). Contrary to expectations, the positive retention item ("Stuck to strategies that worked") positively and significantly correlated with frustration in autonomy (.12).

Lastly, Hypothesis 3 suggested that the PBAT items would be associated with clinically relevant outcomes obtained from the STOP-D, health, and vitality scales. Table 7 presents the findings which support this prediction. Positive items better predicted health and vitality (mean = +.32; range = +.09 to +.51) compared to negative items (mean = -.21; range = -.32 to -.09), whereas negative items better predicted sadness, anxiety, stress, anger, and lack of support (mean = +.41; range = +.27 to +.58) than positive items (mean = -.16; range = −.37 to +.06). Similarly to the original study, none of the correlations were high enough to suggest that the PBAT was redundant with the outcome measures. Once again, contrary to expectations, the positive retention item ("Stuck to strategies that worked") positively correlated with the outcomes of sadness (.04), anxiety (.02), stress (.06), anger (.03), and lack of support (.04).

In the same manner as the original study, machine learning was utilized for the final analysis to identify the most important predictors of each clinically relevant outcome (see Statistical Procedure section). Table 8 displays the ranking of items in relation to the specified outcome. Negative items tended to be better predictors of

negative outcomes, and positive items of positive outcomes. Overall, the best predictor of all negative states was "Found no appropriate outlet for expressing feelings", and the best predictor of positive states was "Used thinking to live better".

Some of the positive items from the PBAT were key predictors of all positive outcomes, including choosing to do personally important things, helping my health, paying attention to important things in my daily life, and using my thinking to live better. Regarding the negative items: compliance, struggling to connect with moments, hurting connections, finding no outlet for feelings, thinking getting in the way, stuck and unable to change behavior, and struggling to keep doing something important, were the most significant predictors of all negative outcomes. Vitality was most closely linked to all positive behavior selection items. Health was most strongly linked to finding no appropriate outlet for feelings, stuck and unable to change ineffective behavior, and using thinking to live better.

Discussion

The purpose of this study was to translate the Process-Based Assessment Tool (PBAT; Ciarrochi et al., 2022) into Spanish and to then test the structural and criterion validity of the translated items. The study applied the same methodological approach as the validation study of the original PBAT, including the same criterion variables, as well as a representative, non-clinical sample.

In line with the results of the original study, differences were observed between the positive and negative behaviors of the PBAT (Hypothesis 1), except in the case of the positive behavior retention item (“Stuck to strategies that worked”), which showed inconsistencies with the original study. Similarly, the PBAT items were consistently linked to measures of needs (Hypothesis 2). Positive behaviors were linked with the need satisfaction subscale, whereas negative behaviors were linked with the need frustration subscale. Again, the positive retention item ("Stuck to strategies that worked") yielded inconsistent results, positively associating with

domains of frustration of needs. Regarding the clinical relevance of the Spanish PBAT (Hypothesis 3), results reflected the original study, where positive items better predicted health and vitality, and negative items better predicted sadness, anxiety, stress, anger, and lack of support. This pattern was true for all items except for the positive retention item.

There were several findings that could be indicative of potential cultural differences between the original and the Spanish version of the PBAT. Firstly, the positive behavior retention item acts differently to the original for both hypothesis 1 and 2. These inconsistencies may reflect issues in the interpretation of the Spanish translation of this item. Secondly, we found gender differences in the STOP-D questionnaire that differed from the original study; we found a gender difference in the psychological distress factor was not found in the original study, as well as women scoring better on factors of vitality and health, which was found to be reversed in the original study. Finally, the strongest link between selection items of the Spanish PBAT was found between the positive behaviors of cognition and attention, whereas in the original questionnaire it was between affect and attention.

Limitations

Several limitations should be considered in the interpretation of these findings. Firstly, the study is limited by its cross-sectional nature. It therefore remains unclear as to how the items of the Spanish version of the PBAT change over time, or how they respond to therapeutic manipulations. Secondly, as this study primarily aimed at replicating the original study, we also recruited a representative, non-clinical sample. It is therefore possible that the PBAT items could interact differently in individuals with varying clinical profiles.

Conclusions and future directions

The findings from this study suggests that the Spanish version of the PBAT functions similarly to its original version and is acceptable for use in Spanish speaking populations, expanding the cross-cultural application of the PBAT. Furthermore, the questionnaire's application in cross-cultural studies examining the nature of change processes is supported, with the results demonstrating a clear connection to various aspects of biopsychosocial functioning. Future research should involve clinical samples and longitudinal designs to see how the PBAT items interact over time in a dynamic and progressive way to predict changes in clinical outcomes. This would further support the PBAT's validity in measuring processes of change that relate to clinical outcomes in psychological interventions.

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Tables

Table 1

Items in the PBAT and their Spanish translation

Process Target		PBAT items	Spanish translation
Selection			
Affect/Yearning to Feel	+	I was able to experience a range of emotions appropriate to the moment	Fui capaz de sentir una variedad de emociones apropiadas para el momento
	-	I did not find an appropriate outlet for my emotions	No encontré una salida apropiada para mis emociones
Cognition/Yearning for Coherence	+	I used my thinking in ways that helped me live better	Utilicé mi pensamiento de maneras que me ayudaron a vivir mejor
	-	My thinking got in the way of things that were important to me	Mi pensamiento se interpuso en cosas que eran importantes para mí
Attention/Yearning to be Oriented	+	I paid attention to important things in my daily life	Presté atención a cosas importantes en mi vida diaria
	-	I struggled to connect with the moments in my day-to-day life	Me costó conectar con los momentos de mi día a día
Social Connection/Need for Connection	+	I did things to connect with people who are important to me	Hice cosas para estar más cerca de las personas que son importantes para mí
	-	I did things that hurt my connection with people who are important to me	Hice cosas que dañaron mi relación con personas que son importantes para mí
Motivation/Need for	+	I chose to do things that were personally important to	Elegí hacer cosas que eran personalmente importantes

Autonomy		me	para mí
Overt Behavior/Need for Competence	-	I did things only because I was complying with what others wanted me to do	Hice cosas solo por cumplir con lo que otros querían que hiciera
	+	I found personally important ways to challenge myself	Encontré maneras personalmente importantes de desafiarme a mí mismo/a
	-	I did not find a meaningful way to challenge myself	No encontré una manera significativa de desafiarme a mí mismo/a
Physical Health Behaviors	+	I acted in ways that helped my physical health	Actué de forma que ayudó a mi salud física
	-	I acted in ways that hurt my physical health	Actué de forma que perjudicó mi salud física
Variation	+	I was able to change my behavior, when changing helped my life	Fui capaz de cambiar mi comportamiento, cuando cambiar ayudaba a mi vida
	-	I felt stuck and unable to change my ineffective behavior	Me sentí atascado/a e incapaz de cambiar mi comportamiento ineficaz
Retention	+	I stuck to strategies that seemed to have worked	Me ceñí a estrategias que parecían haber funcionado
	-	I struggled to keep doing something that was good for me	Me costó continuar haciendo algo que era bueno para mí

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Table 2

Means, standard deviations, and sex differences for PBAT items

PBAT item	Female		Male		t_{diff}	p value
	M	SD	M	SD		
Positive Selection						
Chose to do personally important things	70.417	18.981	70.814	20.747	-0.244	0.807
Helped My Health	64.726	22.525	66.451	23.277	-0.923	0.356
Paid attention to important things in daily life	70.889	21.052	71.183	20.597	-0.173	0.863
Connected with important people	68.886	21.088	71.898	21.63	-1.729	0.084
Experience range emotions approp. to moment	68.57	19.112	72.447	19.354	-2.472	0.014
Found ways to challenge self	57.798	22.304	57.681	23.939	0.062	0.951
Used thinking to live better	65.107	20.261	66.654	21.364	-0.911	0.363
Negative Selection						
Did things only to comply to others	50.57	27.427	53.308	29.49	-1.179	0.239
Hurt my health	37.801	27.485	40.122	28.363	-1.019	0.309
Struggled to connect with moments of day	44.664	27.392	46.546	27.649	-0.838	0.402
Hurt social connections	36.726	29.939	39.458	31.259	-1.094	0.274
Found no appropriate outlet for feelings	42.534	27.869	44.108	29.175	-0.677	0.499
Found no meaningful challenge	46.678	24.562	47.258	26.722	-0.277	0.782
My thinking got in the way of important things	53.313	26.701	56.39	27.348	-1.396	0.163
Variation						

Stuck & unable to change ineffective behavior	43.573	27.831	48.536	28.546	-2.158	0.031
Able to change behavior, when changing helped	69.026	19.735	71.142	21.502	-1.257	0.209
Retention						
Struggled to keep doing what was important	47.114	28.062	54.444	28.778	-3.162	0.002
Stuck to Strategies that worked	60.277	21.14	58.407	21.871	1.066	0.287

374 *Note*. Scales ranges from 0 (strongly disagree) to 100 (strongly agree).

Table 3

Means, standard deviations, and sex differences for Need Satisfaction and outcome variables

Scale	Female		Male		t_{dif}	p value
	M	SD	M	SD		
Sad	43.41	30.135	45.81	31.079	-0.961	0.337
Anxious	45.85	28.498	52.831	30.313	-2.908	0.004
Stressed	49.202	29.253	55.268	29.159	-2.547	0.011
Angry	44.375	27.505	48.407	29.675	-1.727	0.085
NoSupp	42.436	30.126	46.247	30.943	-1.53	0.126
Vital	62.243	20.022	58.688	21.816	2.081	0.038
Health	3	0.878	2.81	0.876	2.655	0.008
Autonomy Satisfaction	64.941	20.858	62.983	23.125	1.09	0.276
Autonomy Frustration	42.805	27.392	45.217	28.32	-1.062	0.289
Connection Satisfaction	69.326	21.068	67.769	23.479	0.855	0.393
Connection Frustration	36.879	28.745	38.163	29.945	-0.536	0.592
Competence Satisfaction	65.042	21.903	64.919	23.068	0.067	0.946
Competence Frustration	42.71	28.443	45.827	29.605	-1.316	0.189

Note. People rated the extent to which they felt sad, anxious, stressed, angry and unsupported on a scale from 0 (not at all) to 100 (a great deal). Health ratings ranged from 1(poor) to 5 (excellent). Vitality ratings ranged from 0 (not at all true) to 100 (very true).

Table 4

Link between positive and negative selection behavior

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. PersonalImpor	–												
2. HelpHealth	0.38***	–											
3. PaidAttToImportant	0.52***	0.47***	–										
4. ConnectToPeople	0.48***	0.39***	0.55***	–									
5. ExperienceRangeEmotions	0.4***	0.4***	0.51***	0.47***	–								
6. ImportantChallenge	0.38***	0.4***	0.38***	0.36***	0.39***	–							
7. ThinkingHelpedLife	0.55***	0.53***	0.6***	0.47***	0.45***	0.52***	–						
8. Complying	-0.15***	-0.11**	-0.15***	0	0.01	0.02	-0.1*	–					
9. HurtHealth	-0.16***	-0.31***	-0.32***	-0.21***	-0.17***	-0.02	-0.21***	0.36***	–				
10. StruggleConnectMoments	-0.23***	-0.19***	-0.29***	-0.17***	-0.16***	-0.02	-0.25***	0.45***	0.43***	–			
11. HurtConnect	-0.16***	-0.15***	-0.21***	-0.12**	-0.06	0.11**	-0.16***	0.41***	0.45***	0.52***	–		
12. NoOutletForFeelings	-0.27***	-0.22***	-0.35***	-0.25***	-0.17***	-0.04	-0.3***	0.35***	0.52***	0.54***	0.5***	–	
13. NoMeaningfulChallenge	-0.18***	-0.08	-0.22***	-0.12**	-0.05	0.04	-0.11**	0.29***	0.26***	0.4***	0.28***	0.42***	–

14. ThinkingGotInWay	-0.02	-0.04	-0.12**	-0.07	-0.04	0.03	-0.08	0.32***	0.28***	0.44***	0.38***	0.38***	0.27***

Note. Shaded area is the relationship between positive and negative behavior.

385 **Table 5**

386 *Relationship between variation and retention items*

	1	2	3
Variation			
1. Stuck, unable to change	–		
2. Able to change behavior	-0.14***	–	
Retention			
3. Struggled to keep doing important	0.5***	-0.03	–
4. Stuck to working strategies	0.12**	0.26***	0.19***

Table 6

Link of PBAT items to satisfaction and frustration of the need for autonomy, competence, and connection

	Autonomy Satisfaction	Autonomy Frustration	Connection Satisfaction	Connection Frustration	Competence Satisfaction	Competence Frustration
Positive Selection						
PersonalImpor	**0.54*** **	-0.25***	0.43***	-0.26***	0.46***	-0.26***
HelpHealth	0.39***	-0.24***	0.44***	-0.16***	0.39***	-0.19***
PaidAttToImportant	0.45***	-0.32***	0.46***	-0.34***	0.4***	-0.31***
ConnectToPeople	0.4***	-0.16***	**0.49*** **	-0.25***	0.46***	-0.18***
ExperienceRangeEmotions	0.43***	-0.16***	0.37***	-0.14***	0.41***	-0.14***
ImportantChallenge	0.41***	-0.07	0.28***	0.05	**0.42*** **	-0.08
ThinkingHelpedLife	0.5***	-0.25***	0.46***	-0.22***	0.5***	-0.26***
Negative Selection						
Complying	-0.22***	**0.43*** **	-0.17***	0.39***	-0.1*	0.34***
HurtHealth	-0.21***	0.44***	-0.31***	0.46***	-0.19***	0.4***
StruggledConnectMoments	-0.3***	0.46***	-0.29***	0.5***	-0.16***	0.44***
HurtConnect	-0.2***	0.37***	-0.27***	**0.52*** **	-0.15***	0.38***
NoOutletForFeelings	-0.34***	0.49***	-0.37***	0.53***	-0.23***	0.46***
NoMeaningfulChallenge	-0.19***	0.29***	-0.15***	0.38***	-0.02	**0.32*** **
ThinkingGotInWay	-0.19***	0.31***	-0.17***	0.35***	-0.09*	0.4***
Variation						
StuckUnableChange	-0.32***	0.47***	-0.31***	0.5***	-0.21***	0.5***

AbleToChangeBehavior	0.4***	-0.18***	0.32***	-0.08	0.38***	-0.07
Retention						
StruggledToKeepDoing	-0.21***	0.39***	-0.2***	0.34***	-0.15***	0.37***
StuckToStrategies	0.21***	0.12**	0.18***	0.03	0.2***	0.06

389 *Note.* Bolded items are cases where PBAT items are expected to closely match the content of the validated need measure.

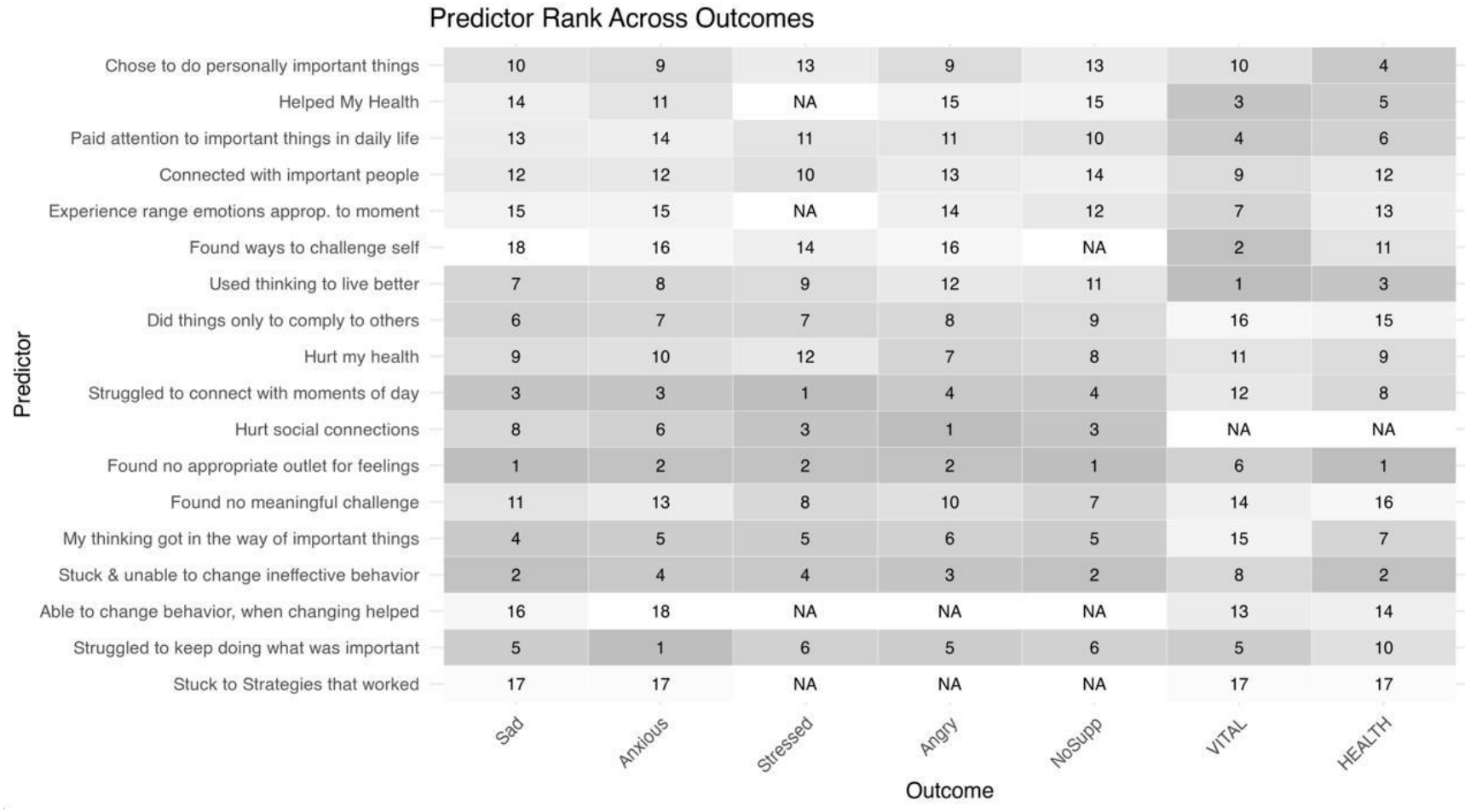
Table 7

Link between PBAT and clinically relevant outcome

	Sad	Anxious	Stressed	Angry	NoSupp	Health	Vital
Positive Selection							
PersonalImpor	-0.31***	-0.27***	-0.19***	-0.24***	-0.23***	0.29***	0.41***
HelpHealth	-0.28***	-0.25***	-0.18***	-0.17***	-0.18***	0.3***	0.46***
PaidAttToImportant	-0.34***	-0.24***	-0.23***	-0.22***	-0.3***	0.3***	0.41***
ConnectToPeople	-0.28***	-0.2***	-0.15***	-0.17***	-0.21***	0.22***	0.38***
ExperienceRangeEmotions	-0.18***	-0.13**	-0.1*	-0.07	-0.17***	0.22***	0.36***
ImportantChallenge	-0.14***	-0.09*	-0.05	0	-0.02	0.24***	0.43***
ThinkingHelpedLife	-0.37***	-0.27***	-0.22***	-0.2***	-0.25***	0.33***	0.51***
Negative Selection							
Complying	0.41***	0.34***	0.33***	0.36***	0.33***	-0.2***	-0.17***
HurtHealth	0.41***	0.35***	0.31***	0.4***	0.4***	-0.25***	-0.27***
StruggledConnectMoments	0.5***	0.46***	0.45***	0.49***	0.45***	-0.2***	-0.25***
HurtConnect	0.44***	0.41***	0.39***	0.53***	0.44***	-0.16***	-0.13**
NoOutletForFeelings	0.58***	0.45***	0.43***	0.49***	0.52***	-0.28***	-0.28***
NoMeaningfulChallenge	0.35***	0.28***	0.27***	0.29***	0.38***	-0.13**	-0.09*
ThinkingGotInWay	0.43***	0.37***	0.35***	0.36***	0.36***	-0.18***	-0.15***
Variation							
StuckUnableChange	0.58***	0.48***	0.45***	0.49***	0.5***	-0.28***	-0.32***
AbleToChangeBehavior	-0.21***	-0.14***	-0.1*	-0.1*	-0.1*	0.26***	0.39***
Retention							
StruggledToKeepDoing	0.44***	0.43***	0.37***	0.41***	0.4***	-0.23***	-0.27***
StuckToStrategies	0.04	0.02	0.06	0.03	0.04	0.09*	0.15***

Table 8

Ranked relative importance of PBAT items for seven clinically relevant outcomes

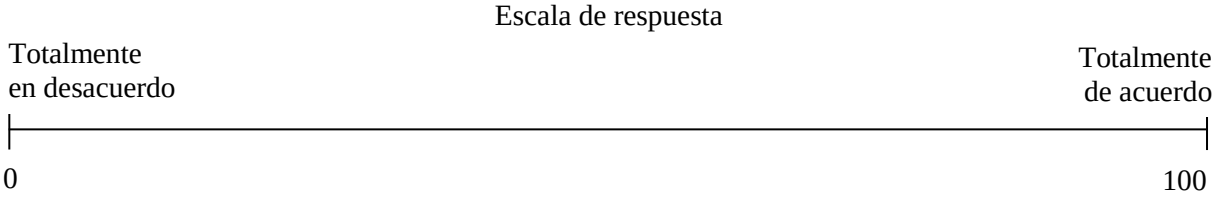


Note. Lower numbers and darker shading indicates higher importance (1=highest ranked). NA = Feature was a non-significant predictor

Appendix I

PBAT

Instrucciones: Marca en la línea el grado de acuerdo con cada afirmación. Basa tus respuestas en cómo has estado actuando durante la última semana*. Recuerda que no hay respuestas correctas o incorrectas.



1. Fui capaz de cambiar mi comportamiento, cuando cambiar ayudaba a mi vida
2. Hice cosas que dañaron mi relación con personas que son importantes para mí
3. Fui capaz de sentir una variedad de emociones apropiadas para el momento
4. Me costó continuar haciendo algo que era bueno para mí
5. No encontré una manera significativa de desafiarme a mí mismo/a
6. Actué de forma que ayudó a mi salud física
7. Mi pensamiento se interpuso en cosas que eran importantes para mí
8. Presté atención a cosas importantes en mi vida diaria
9. Hice cosas solo por cumplir con lo que otros querían que hiciera
10. Me ceñí a estrategias que parecían haber funcionado
11. Encontré maneras personalmente importantes de desafiarme a mí mismo/a
12. Me sentí atascado/a e incapaz de cambiar mi comportamiento ineficaz
13. Utilicé mi pensamiento de maneras que me ayudaron a vivir mejor
14. Me costó conectar con los momentos de mi día a día
15. Hice cosas para estar más cerca de las personas que son importantes para mí
16. Elegí hacer cosas que eran personalmente importantes para mí
17. Actué de forma que perjudicó mi salud física
18. No encontré una salida apropiada para mis emociones