

## Transcultural Adaptation of the Following Affective States Test (FAST) for the Brazilian Context

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### Abstract

Individuals differ in their tendency to follow or ignore feelings as a source of information to guide behavior, and it is relevant to examine these particularities. This study presents an assessment of the psychometric properties of the transcultural adaptation of the Following Affective States Test (FAST) for the Brazilian context. After translation and back translation, the adapted version was applied among adult volunteers ( $n=302$ ), both sexes (208 women, 68.9%), aged between 18 and 61 years old ( $M=28.6$ ;  $SD=9.4$ ) along with the Positive and Negative Affect Scale (PANAS) and the Emotion Regulation Questionnaire (ERQ). The confirmatory factor analysis (CFA) of the Brazilian version presented appropriate goodness of fit for the four-factor model ( $GFI=0.92$ ;  $CFI=0.83$ ;  $RMSEA=0.07$ ) with appropriate internal consistency (Cronbach's  $\alpha=0.60-0.72$ ). Statistically significant positive correlations were found between the FAST and positive/negative affects (PANAS) and emotion regulation strategies (ERQ). The adapted version of the FAST presented promising indicators concerning validity and reliability evidence for the Brazilian context.

*Keywords:* cross-cultural adaptation; affect; emotion regulation; scales; psychometrics.

### Adaptação Transcultural da *Following Affective States Test* (FAST) para Contexto do Brasil

#### Resumo

Indivíduos diferem em sua propensão para seguir ou ignorar suas emoções como fonte de informação para guiar seus comportamentos, sendo relevante examinar suas particularidades. Nesse campo, este estudo avaliou qualidades psicométricas da adaptação transcultural do instrumento *Following Affective States Test* (FAST) para o Brasil. Após tradução e retrotradução, a FAST foi aplicada em voluntários adultos ( $n = 302$  sujeitos), de ambos os sexos (208 mulheres, 68,9%), com idade entre 18-61 anos ( $M = 28,6$ ;  $DP = 9,4$ ), juntamente com a Escala de Afetos Positivos e Negativos (PANAS) e o Questionário de Regulação Emocional (ERQ). A análise fatorial confirmatória (CFA) da FAST apresentou bons índices de ajuste para o modelo de quatro fatores ( $GFI = 0,92$ ;  $CFI = 0,83$ ;  $RMSEA = 0,07$ ), com adequada consistência interna (alfa de Cronbach =  $0,60-0,72$ ). Existiram correlações estatisticamente significativas e positivas entre FAST e afetos positivos/negativos (PANAS) e com estratégias de regulação emocional (ERQ). Conclui-se que FAST apresentou indicadores promissores relativos a evidências de validade e precisão para o contexto brasileiro.

*Palavras-chave:* adaptação transcultural; afetos; regulação emocional; escalas; psicometria.

### Adaptación Transcultural del *Following Affective States Test* (FAST) para el Contexto Brasileño

#### Resumen

Los individuos difieren en su propensión a seguir o ignorar sus sentimientos como fuente de información para guiar su conducta, y es relevante examinar sus particularidades. En este campo, este estudio evaluó las propiedades psicométricas de la adaptación transcultural de la prueba *Following Affective States Test* (FAST) para el contexto brasileño. Después de la traducción y retrotraducción, FAST se aplicó a voluntarios adultos ( $N = 302$ ), de ambos sexos (208 mujeres, 68.9%), con edades comprendidas entre 18 a 61 años ( $M = 28.6$ ;  $DS = 9.4$ ), junto con Escala de Afecto Positivo y Negativo (PANAS) y el Cuestionario de Regulación Emocional (ERQ). El análisis factorial confirmatorio (CFA) de FAST presentó buenos índices de ajuste para el modelo de cuatro factores ( $GFI = 0.92$ ;  $CFI = 0.83$ ;  $RMSEA = 0.07$ ), con una consistencia interna adecuada (alfa de Cronbach =  $0.60-0.72$ ). Se encontraron correlaciones estadísticamente significativas y positivas entre FAST y los efectos positivos y negativos (PANAS) con las estrategias de regulación emocional (ERQ). Se concluye que FAST presentó indicadores prometedores relacionados con la evidencia de validez y la confiabilidad para el contexto brasileño.

*Palabras clave:* adaptación transcultural; afecto; regulación emocional; escalas; psicometría.

## Introduction

The study of affective processes has gained considerable attention in various scientific fields such as Biology, Sociology, Genetics, Neurosciences, Etiology, Economics, and Psychology (Coan & Allen, 2007; Suchy, 2011). Among the topics most frequently studied

in Psychology, research addressing individual differences in the process of assessing positive and negative affects, emotion perception, emotional regulation, as well as the relationship between affective processes and cognitive functioning, stands out (Eysenck & Keane, 2017).

The findings show that people differ in their propensity to follow or ignore their feelings when it comes

to guiding their actions. There are individual differences in how much attention people pay to their feelings and the extent to which they use them to guide behavior (Clore, Gasper, & Garvin, 2001; Elliot & Thrash, 2002; Gasper & Bramesfeld, 2006). Individuals may use feelings as a piece of relevant information in the process of adapting to the environment (Hackenbracht & Gasper, 2013; Schwarz, 2016), a characteristic that favors subjective wellbeing throughout one's development (Brose, Lindenberger, & Schmiedek, 2013; Charles & Carstensen, 2014) and may be associated with improved prognosis for recovery in psychiatric disorders (Butler et al., 2018; Thompson et al., 2013).

In the 1970s, there was great interest in assessing individual tendency to follow feelings when making day-to-day decisions, a time when various measures were developed, and different constructs were addressed, such as having difficulties with emotional experiences, and emotional intelligence (Palmieri, Boden, & Berenbaum, 2009). One of the first instruments developed was Private Self-Consciousness Scale (Fenigstein, Scheier, & Buss, 1975), intended to examine one's inner self and feelings. The Emotional Attention subscale, in turn, which is part of the Trait Meta-Mood Scale – TMMS (Salovey, Mayer, Goldman, Turvey, & Palfai, 1995), one of the first emotional intelligence measures, assesses the level of attention individuals pay to their emotional experiences. The Mood Monitoring Subscale that integrates The Mood Awareness Scale – TMAS (Swinkels & Giuliano, 1995) assesses the extent to which individuals pay attention to their emotional experiences. The Rational-Experiential Inventory – REI (Epstein, Pacini, & Heier, 1996), in its subscale Faith in Intuition, which assesses rational and intuitive processes in the dual processing model, provides indicators of the extent to which individuals use affective information to assess their experiences. However, none of these instruments differentiate between positive and negative emotional experiences, treating propensity to pay attention and follow affects as a one-dimensional phenomenon. Investigating the relationship between paying attention to emotions, measured by TMMS and the Toronto Alexithymia Scale (TAS-20) in a sample of 867 participants of different ethnicities, Palmieri, Boden, and Berenbaum (2009) used exploratory and confirmatory factor analyses and verified that attention to one's feelings might be a subcomponent of emotional awareness. The tendency to follow or ignore emotions, however, may be seen as originating in different motivational systems (Davis & Panksepp, 2018; Elliot &

Thrash, 2002; Maio & Esses, 2001; Wimmer, Lackner, Papousek, & Peacher, 2018). According to Gasper and Bramesfeld (2006), positive affects may indicate the presence of rewards, while negative affects inform the individual of potential problems to be avoided.

#### *Following Affective States Test (FAST)*

To overcome the difficulties found in the existing assessments regarding the topic under study, Gasper and Bramesfeld (2006) developed the Following Affective States Test (FAST), a multidimensional instrument, to assess the propensity of individuals to follow or ignore their affective states. The authors used a set of 30 items on a Likert scale (from 0=strongly disagree to 6=strongly agree) to apply on a sample of 329 adults. An exploratory factor analysis indicated four factors: following positive feelings (FolPos); ignoring positive feelings (IgnPos); following negative feelings (FolNeg); and ignoring negative feelings (IgnNeg). Afterward, a confirmatory factor analysis indicated that the four-factor model presented goodness of fit [RMSE=0.07, CI90% 0.063-0.076;  $X^2=448.35$ ;  $df = 98$ ; GFI=0.93] that was higher than that of presented by the one- and two-factor models.

Following, the authors sought convergent and discriminant validity between FAST and various psychological constructs. They identified that one's tendency to follow negative feelings presents a moderate positive correlation with anxiety trait and weak negative correlation with negative feelings, in addition to moderate negative correlation with optimism, self-esteem, and subjective wellbeing. Following positive feelings, on the other hand, presented a weak positive correlation with positive feelings and self-esteem. Additionally, ignoring negative feelings was weakly correlated with difficulties in identifying emotions while ignoring positive feelings presented a weak negative correlation with paying attention to emotions, and the ability to experience emotions. Therefore, the authors suggest that the tendency for following one's affects holds an important relationship with psychological wellbeing (Gasper & Bramesfeld, 2006). They also tested the hypothesis that FAST could predict emotional responsiveness to tasks that involved emotional content, examining patterns of answers in tasks in which the participants had to complete words with either emotional mobilization or emotional neutrality. The findings support the notion that following feelings play a moderator role in emotional reactivity, even after controlling for the influence of personality traits (e.g., extroversion or neuroticism).

In the context of the United States, Martin, Becker, Cicero, and Kerns (2013) examined the relationship between anhedonia symptoms and differences in the processing of cognitive and affective information in the functioning of patients diagnosed with schizophrenia in comparison to a control group. The researchers compared performance in affective and cognitive tasks and related it with scores obtained in the FAST. A positive association was found between high levels of anhedonia and more significant interference in the tasks of an affective nature. Thus, the clinical group (with schizophrenia) paid greater attention to negative emotions and lesser attention to positive emotions; however, faced difficulties in ignoring emotions, whether positive or negative, when compared to the control group. This study shows the usefulness and richness of information provided by FAST in clinical practice with adults.

Marroquín, Boyle, Nolen-Hoeksema, and Stanton (2016) tested the role of following feelings among adults in predicting the future. They applied FAST to 119 students, randomly assigned to two groups. The first group watched a movie that elicited negative emotions, while the second group watched neutral videos. The participants reported their affective state before and after watching the movies and later completed a questionnaire addressing their expectations about the future (Future Events Questionnaire – FEQ). The results suggested that both one's affective state and tendency to following affects predicted the participants' expectations about the future. Therefore, the authors empirically evidenced particularities in the process of integrating affective information and its interference in one's future expectations, showing the relevance of emotional elaboration on the individuals' adaptive process, highlighting the importance of this subject in contemporary scientific research.

Therefore, there is a research field in which FAST may be applied to address emotional processing, considering the importance following affects may have for affective processes in general, as well as its relationship with cognitive and adaptive processes. Thus, because of scientific evidence and a lack of studies using this psychological measure in the Brazilian context, this study's main objective was to perform this instrument's transcultural adaptation according to internationally acknowledged guidelines (International Test Commission, 2017).

First, the FAST was translated into Portuguese and adapted in semantic and content terms for the

Brazilian context, followed by a verification of its validity and reliability. This process enabled hypothesizing the existence of a positive relationship between following positive/negative feelings and positive/negative emotional experiences examined by the Brazilian version of the Positive and Negative Affect Schedule (PANAS) (Giacomini & Hutz, 1997). Additionally, considering that ignoring affects demands a specific motivational process (Gasper & Bramesfeld, 2006), we verified whether individuals who ignore the influence of their feelings (either positive or negative) would be more prone to use emotional suppression strategies measured by the Emotion Regulation Questionnaire (ERQ; Boian, Soares, & Lima, 2009).

## Method

This is a quantitative, cross-sectional, descriptive, and interpretative study, based on standardized psychological instruments. The search and collection of data was disseminated on an online platform, that is, it was conducted on the Internet, without any face-to-face contact between the researchers and volunteers.

### Participants

The convenience sample was composed of 302 individuals, both sexes, aged between 18 and 61 years old (28.6 years old on average,  $SD=9.4$ ). Most participants were women ( $n=208$ ; 68.9%) with 16.9 years of schooling on average ( $SD=4.5$ ); 187 (61.9%) individuals were single; and as for their occupations, 121 (40.1%) were students, and the remaining ( $n=181$ ; 59.9%) had different professions. Therefore, the sample was sufficient to ground the analyses, as the volunteers were young adults with a high educational level, with varied occupations.

### Instruments

The online platform was used to systematize the instructions and provide the volunteers with proper conditions to complete the instruments, including a form addressing sociodemographic information (age, sex, education, occupation). The following materials were used to collect specific data concerning the psychological variables.

- *Following Affective States Test* (FAST): 16-item self-report instrument designed by Gasper and Bramesfeld (2006) to assess the propensity of individuals to follow or avoid the use of emotional information when making decisions. The

FAST assesses four psychological dimensions: following positive feelings, ignoring positive feelings, following negative feelings, and ignoring negative feelings. The items are presented on a Likert scale, ranging from strongly disagree (score=0) to strongly agree (score=6) in the form of statements addressing one's inclination to follow or ignore affects. The total score in each dimension ranges from zero to 24 points. The FAST's original study reports reliability ranging from 0.60 to 0.72 (Gaspar & Bramesfeld, 2006). This instrument was the object of sociocultural adaptation to the Brazilian context.

- *Positive and Negative Affects States (PANAS)*: Developed by Watson, Clark, and Tellegen (1988) and adapted to the Brazilian context by Giacomoni and Hutz (1997). It was designed to assess individual differences in two dimensions: positive and negative affects. This 20 item-instrument presents adjectives that represent feelings individuals experienced in recent times: 10 referring to positive affects and 10 to negative affects. The items are organized on a five-point Likert scale in which 1=very slightly or not at all and 5=extremely; the total score for positive and negative affects range from 10 to 50 points in each dimension. The psychometric evidence of the PANAS Brazilian version presented good reliability indicators; with Cronbach's alphas equal to 0.86 and 0.88 for negative and positive affects, respectively.
- *Emotion Regulation Questionnaire (ERQ)*: originally developed by Gross and John (2003) and adapted for the Brazilian context by Boian, Soares and Lima (2009), this 10-item self-report instrument is intended to assess two strategies used to deal with feelings: cognitive reappraisal and emotional suppression. It is organized on a Likert scale ranging from 1 (Totally disagree) to 7 (Totally agree). Batis-toni, Ordonez, Silva, Nascimento and Cachioni (2013) addressed Brazilian elderly individuals and reported appropriate psychometric indexes for this instrument along with validity (exploratory factor analysis) and reliability evidence verified through Cronbach's alpha (cognitive reappraisal=0.74; emotional suppression=0.69) and test-retest (cognitive reappraisal=0.75; emotional suppression=0.73).

#### *Procedures*

First, the transcultural adaptation process of the FAST to the Brazilian context was completed according to the procedures suggested by the Brazilian and international scientific literature in the field (Beaton, Bombardier, Guillemin, & Ferraz, 1998; Borsa, Damásio, & Bandeira, 2012; Cassepp-Borges, Balbinotti, & Teodoro, 2010; International Test Commission, 2017). After consent was obtained from the authors of the original instrument, the test was translated by two professionals from the field of Psychology, fluent in English and experienced with transcultural adaptation. This study's primary author consolidated the two versions, and another two different translators back translated this consolidated version. The back-translated versions were consolidated and sent to the original FAST authors so they could assess whether the items were conceptually coherent. Small changes were implemented in four items. Afterward, a fifth collaborator, a professional experienced in psychological assessment and fluent in English, translated the last version of FAST. This version was finally approved by the original instrument's authors and submitted to a panel of judges, who analyzed it considering the Brazilian context.

The independent panel was composed of five PhDs, experts in psychological assessment who had not taken part in the translation process. They assessed the instrument's preliminary version according to the following criteria: clarity of language, pertinence, and theoretical relevance, as well as the dimensions provided by FAST for each item. This procedure was intended to assess the semantic adequacy of items and aided the refinement of the instrument's language (Borsa et al., 2012) in order to achieve the instrument's final version.

After obtaining the Institutional Review Board (CAAE: 62744516.3.0000.5407) approval, an online platform was developed and disseminated through social media (Facebook). This platform provided clarification about the study's objectives, and volunteers confirmed their consent by signing free and informed consent forms. Fifteen minutes on average was needed to complete the FAST, PANAS, and ERQ, along with a sociodemographic questionnaire.

The answers to the instruments were systematized according to the respective standardized guidelines and gathered in an electronic spreadsheet. Descriptive analyzes were used to treat sociodemographic data as well as the scores the participants obtained in the instruments. The focus is on the psychometric indexes of the FAST adapted version derived from analyses performed

using open-source R software (version 3.4.4) (<https://cran.r-project.org/>).

The steps suggested by Cassepp-Borges, Balbinotti and Teodoro (2010) were followed to assess the content validity of the FAST adapted version. Data that resulted from the judges' analysis were examined, which enabled calculating the Content Validity Coefficient (CVC). A CVC cutoff point of 0.7 was established to consider an item as having content validity. Subsequently, we examined to which dimension each item belonged by calculating the Intraclass Correlation Coefficient (ICC) using the psych package (Revelle, 2017).

Confirmatory Factor Analysis (CFA) was conducted using the results of the adapted version using Robust Weighted Least Squares (DWLS) Estimation using Lavaan package (Rosseel, 2012). A confirmatory factor analysis was used because it is a more accurate procedure, compared to exploratory analysis, to estimate the number of dimensions involved in an instrument, in addition to be grounded on relevant theory for model estimation (Keith, Caemmerer, & Reynolds, 2016). The model's goodness of fit was verified using Root Mean-Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), Tucker-Lewis Index (TLI) and Standardized Root Mean Square Residual (SRMR). The criteria suggested by DiStefano (2016) were used as parameter to analyze the model's fitness.

The distribution of results obtained in the instruments was tested for normality, which was confirmed, so that a Pearson's correlation analysis ( $r$ ) was performed between FAST, PANAS (positive and negative affects) and ERQ, seeking to establish convergent validity. Finally, we checked the FAST adapted version's reliability using Cronbach's alpha ( $\alpha$ ) and composed reliability for each of the instrument's dimensions.

## Results

The findings were systematized, focusing on psychometric indicators of the FAST version adapted for the Brazilian context. This is the first result of this study: the adapted scale, as shown in Table 1. As for the signs related to content validity, the judge panel's validation showed a high level of agreement concerning clarity ( $CVC \geq 0.72$ ), pertinence ( $CVC \geq 0.76$ ), and theoretical relevance ( $CVC \geq 0.84$ ).

The total CVC of the criteria was above 0.90, which is a high index of content validity. As for the analysis of dimensions represented by each of the FAST adapted version items, the ICC results show that

the judges obtained a high level of agreement regarding the items assessed ( $ICC=0.97$ ;  $CI\ 95\%,\ 0.93-0.99$ ).

As theoretically expected, the Confirmatory Factor Analysis (CFA) of the results obtained in this sample indicates appropriate goodness of fit of the four-factor model, [ $X^2(302)=262.089$ ;  $p<0.001$ ;  $GFI=0.92$ ;  $CFI=0.83$ ;  $RMSEA=0.07$ ;  $p<0.001$ ; ( $CI\ 90\%=0.06-0.08$ );  $TLI=0.8$ ;  $SRMR=0.07$ ]. Absolute fitness indexes, which assess the model's residuals relative to the population expectations, were appropriate (SRMR). Comparative indexes that assess the model relative to maintained assumptions (TLI and CFI), though slightly below the ideal, indicate the model is acceptable.

The indicators found in the current sample provide empirical evidence that supports the structure proposed by the authors of the original instrument, that is, four factors (i.e., following positive feelings - FolPos; ignoring positive feelings - IgnPos, following negative feelings - FolNeg; and ignoring negative feelings - IngNeg) with the 16 items that compose it. A correlation analysis between the four factors showed that FolPos presents a weak correlation with IgnNeg ( $r=0.23$ ;  $p<0.001$ ) as well as a weak correlation with IgnPos ( $r=-0.25$ ;  $p<0.001$ ) and FolNeg ( $r=-0.18$ ;  $p<0.01$ ). The IgnPos factor presented a weak correlation with IgnNeg ( $r=0.23$ ;  $p<0.01$ ). No correlations were found between IgnPos and FolNeg ( $r=0.09$ ) or between FolNeg and IgnNeg ( $r=-0.07$ ).

Data concerning the correlation analysis of the data from FAST and the expression of positive and negative affects (PANAS) are presented in Table 2, along with the correlations between FAST and the participants' characteristics of emotional regulation (ERQ).

Note that statistically significant correlations were found between the sociodemographic variables. The participants' age was significantly associated with one's tendency to follow affects, while age presents a weak correlation with FolPos and a weak negative correlation with FolNeg. Education (expressed in years of schooling), in turn, was not associated with any of the FAST adapted version's dimensions, and apparently, it does not interfere in the way individuals consider their affective experiences.

One's tendency to follow affects (positive or negative), verified by the FAST, also appears significantly correlated with the affects expressed by PANAS. FolPos presented a moderate correlation with positive affects. FolNeg, on the other hand, presented a weak negative correlation with positive affects and a moderate positive correlation with negative affects. In summary, the

Table 1.  
*FAST adapted to Brazil and its content validity coefficients (panel of judges)*

Items	Clarity	Pertinence	Relevance
1. Eu sempre me entrego às minhas emoções negativas.	0.76	0.80	0.88
2. Quando me sinto bem sobre algo, eu geralmente vou atrás disso.	0.72	0.92	0.88
3. Eu não deixo meu bom humor influenciar meu comportamento.	0.92	1.00	0.96
4. Geralmente é uma perda de tempo pensar sobre emoções negativas.	0.92	0.92	0.92
5. Eu presto muita atenção aos meus sentimentos positivos.	0.88	0.96	1.00
6. As pessoas nunca devem se guiar por emoções negativas.	0.96	1.00	1.00
7. As pessoas não devem deixar que suas emoções positivas influenciem o modo como elas fazem seu trabalho.	0.96	1.00	1.00
8. Eu costumo prestar mais atenção ao meu humor negativo do que ao meu humor positivo.	1.00	0.84	0.80
9. Sentimentos positivos dão uma direção à vida.	0.96	1.00	1.00
10. Eu presto atenção aos meus sentimentos negativos.	1.00	0.88	0.88
11. As pessoas nunca devem se guiar por emoções positivas.	0.96	1.00	1.00
12. Ao tomar decisões, as pessoas nunca devem ser influenciadas pelos seus sentimentos negativos.	0.96	1.00	1.00
13. Eu sempre me deixo levar por minhas emoções positivas.	0.88	0.88	0.92
14. Prestar atenção aos sentimentos de tristeza pode levar a pessoa a tomar decisões ruins.	0.92	0.88	0.88
15. Eu costumo ficar remoendo meus sentimentos negativos mais do que as outras pessoas.	0.88	0.76	0.84
16. Eu tento não me deixar levar pelas minhas emoções positivas.	0.84	0.88	0.84
TOTAL	0.91	0.92	0.92

tendency among adults to follow feelings is significantly related to both positive and negative affective experiences.

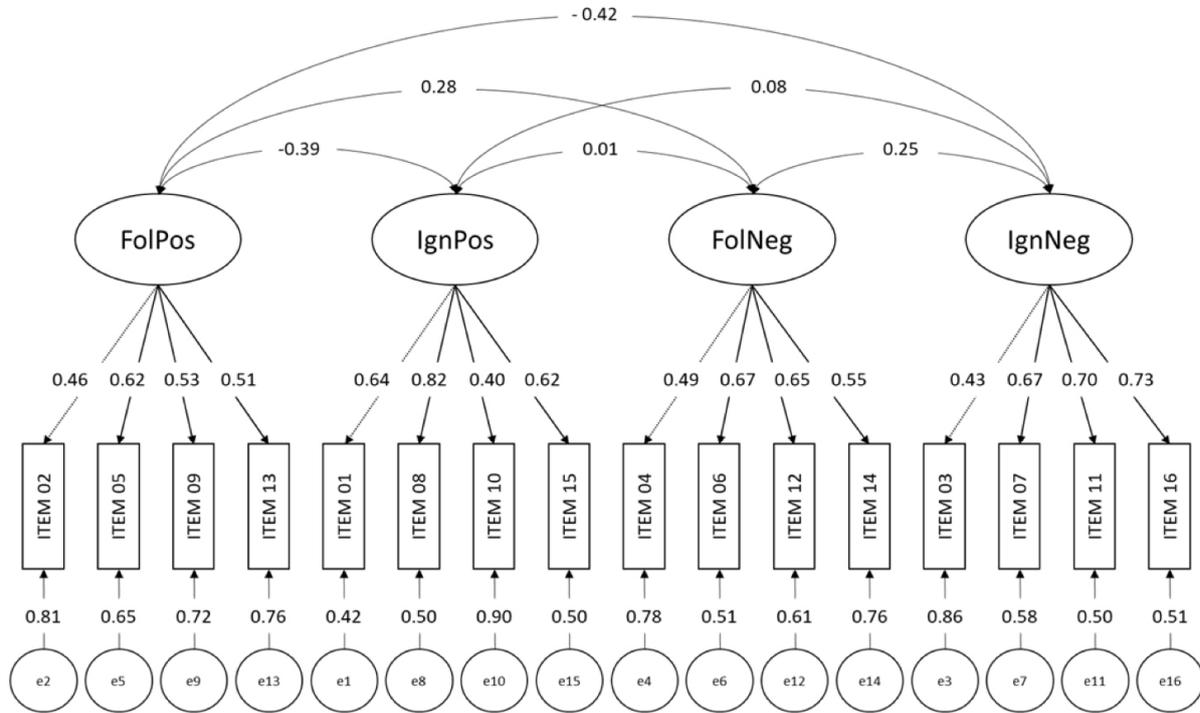
The FAST dimensions, in turn, evidenced statistically significant correlations with emotion regulation strategies (ERQ) used by the participants. Note that following positive affects (FolPos) presented a moderate positive correlation with cognitive reappraisal and a weak negative correlation with emotional suppression. Additionally, following negative affects (FolNeg) presented a weak positive correlation with emotional suppression and a weak negative correlation with cognitive reappraisal. Finally, ignoring positive experiences (IgnPos) presented a moderate positive correlation with emotional suppression while ignoring negative affects (IgnNeg) presented a weak positive correlation with cognitive reappraisal and with emotional suppression.

The findings concerning the individuals' tendency to follow or ignore their feelings to guide behavior,

seems to be significantly related to emotion regulation strategies, as expressed by ERQ. Thus, one should consider the set of results together to accurately interpret them in an individual's context of life, as the results suggest that affective experiences play a relevant role in adaptive strategies used in daily life. Therefore, FAST is a promising instrument to be used in both research and clinical practice in the field of Psychology.

Finally, the reliability of the FAST adapted version was verified using two methods: internal consistency according to the Cronbach's alpha coefficient and Composed Reliability Index (CRI), which are presented in Table 3.

The internal consistency indicators were very close to those found in studies addressing the instrument's original version. Both Cronbach's alpha ( $\alpha$ ) and the Composed Reliability Index (CRI) were above 0.60 (up to 0.76). Therefore, the FAST Brazilian version presents good reliability indexes.



Note. (a) FolPos=following positive feelings; IgnPos=ignoring positive feelings; FolNeg=following negative feelings; IgnNeg=ignoring negative feelings.

Figure 1. Standardized weights of the FAST factor structure obtained by confirmatory factor analysis.

Table 2.

Correlation between FAST factors and sociodemographic variables, affects, and emotion regulation strategies

Variables	N	FAST Dimensions (a)			
		FolPos	IgnPos	FolNeg	IgnNeg
Age	217	.210**	0.048	-.218**	-0.006
Education	254	0.086	-0.095	-0.045	-0.065
PANAS					
Positive Affects	302	.353**	-0.045	-.270**	0.063
Negative Affects	302	-0.109	0.089	.472**	0.03
ERQ					
Reappraisal	302	.363**	-0.058	-.290**	.152*
Suppression	302	-.178**	.375**	.117*	.246**

Note. (a) FolPos=following positive feelings; IgnPos=ignoring positive feelings; FolNeg=following negative feelings; IgnNeg=ignoring negative feelings.

\*  $p < 0.05$ ; \*\*  $p < 0.001$ .

### Discussion

One’s tendency to follow or ignore feelings plays an important role in individuals’ emotional

processing. Thus far, the Brazilian scientific literature has not reported a standardized instrument to measure this characteristic, configuring this study’s contribution. The psychometric properties of the

Table 3.  
*FAST precision coefficients: original and Brazilian version*

Factors	FAST - Br		Original FAST	
	( $\alpha$ )	CRI	( $\alpha$ )	Test-retest ( $r$ )
Following Positive Affects (FolPos)	0.60	0.62	0.65	0.70
Ignoring Positive Affects (IgnPos)	0.72	0.76	0.68	0.60
Following Negative Affects (FolNeg)	0.72	0.77	0.73	0.72
Ignoring Negative Affects (IgnNeg)	0.67	0.71	0.66	0.62

*Note.*  $\alpha$  = Cronbach's alpha coefficient; CRI = Composed Reliability Index.

FAST transcultural adaptation for the Brazilian context were investigated in this study, and validity and reliability evidence is presented.

After adequately carrying out the initial procedures (translation and back translation) to adapt the FAST to the Brazilian context, a high level of agreement was obtained by the independent judges regarding the clarity, pertinence, and theoretical relevance of the instrument's 16 items. Even though the literature presents divergences concerning levels that are considered to be optimal, Cassepp-Borges et al. (2010) suggest that CVC above 0.7 are good indicators of the content validity of psychological instruments. According to this criterion, the 16 items of the FAST Brazilian version present clarity of language, pertinence as representatives of the construct assessed, and are theoretically relevant. Additionally, the Intraclass Correlation Coefficient (ICC) indicates that the items belong to the dimensions expected by the instrument's original model. Thus, the Brazilian version presented semantic and content adequacy, which enabled proceeding to the empirical test to find evidence that supports the instrument's validity in the Brazilian context.

The reliability indicators of the FAST factors were good, suggesting the instrument has appropriate internal consistency (Pasquali, 2017). Even though the FolPos and IgnNeg factors presented low indicators, these results may be due to the low number of items in each of the factors, only four. The scientific literature has shown that internal consistency coefficients are highly influenced by the number of items (Pasquali, 2017) and their factor loadings (Maroco & Garcia-Marques, 2006).

Another element that may influence reliability levels is the semantic construction of items. Many present adverbs related to the temporality of their content ("generally", "always", "never"), which may

raise irrelevant variance to the detriment of the variance produced by the construct. Hence, the indicators may reflect some peculiarity in the response of items rather than variations in the latent trait (Johnson & Morgan, 2016). Nonetheless, according to Nunnally and Bernstein (1978), values close to 0.7 are considered acceptable in the initial stages of research addressing validity evidence. Note that this study's findings regarding the instrument reliability were similar to those obtained by the original instrument (Gasper & Bramesfeld, 2006). The authors of the original version assessed its internal consistency among different samples and found similar values. Therefore, the findings concerning the reliability of the Brazilian version are very promising and encourage the continuity of scientific investigation using this instrument.

The confirmatory factor analysis of the FAST adapted version enabled testing whether the model proposed by its original authors would remain in the Brazilian context. The findings corroborated the instrument's multidimensional nature, assessing four factors, replicating the original four-factor model (Gasper & Bramesfeld, 2006) with appropriate goodness of fit (DiStefano, 2016; Hu & Bentler, 1999). As proposed by the authors, relative independence would be expected among the four factors, which was attested by the magnitude of the correlations identified in this study. According to Elliot and Thrash (2002), approximation and avoidance can be considered distinct systems that are related by motivational processes, personality traits, and affective processes, which may explain the relationship between temperament and pursuit of goals. The results of the correlations found in this study endorse the hypothesis that following positive and negative feelings are almost unrelated processes based on distinct motivations. Wimmer, Lackner, Papousek and Peacher (2018) combined self-reported data and

electroencephalogram (EEG) and identified that the scores obtained in the self-report measure were associated with the neural activation of the respective systems. It is possible that the need to ignore feelings, both positive and negative, also demand separate processes, which may mean the need for unrelated functional systems that provide information to guide behavior.

A relationship was found between correlated constructs and sociodemographic variables after testing the instrument's factor structure and internal consistency. No correlations were found between any of the FAST factors and education, which may indicate that this characteristic is not affected by years of schooling. However, in a study using functional magnetic resonance, Demenescu et al. (2014) identified a greater activation of the amygdala in response to emotional stimuli among participants with a low educational level compared to individuals with high levels of formal education. The authors state that despite the preliminary results, there is a considerable gap in terms of the role education plays in affective processes. Gilar-Corbí, Pozo-Rico, Sánchez and Castejón (2018) conducted a randomized study and report that the development of emotional competencies might facilitate the educational process. On the other hand, a review addressing the relationship between emotional intelligence and education shows that the results of studies are contradictory; that is, some studies report a positive relationship, but others do not (Humphrey, Curran, Morris, Farrell, & Woods, 2007). Considering these results, a potential explanation for lack of correlation in this study may be related to the sample's low variability. Because the sample was composed of a group of people with a high educational level, differences were possibly masked by sample bias. Therefore, further studies addressing samples with lower levels of education are needed.

A positive correlation was found between FolPos and age, indicating that as individuals age and mature, they tend to allow positive feelings to guide behavior. In contrast, Pinquart (2001) identified in a meta-analysis addressing 125 studies that there is a decline in positive affects and an increase in negative affects with age. These relationships, however, are only valid in some European countries, indicating potential sociocultural differences. In a cross-sectional study, Donnellan and Lucas (2008) compared 14,039 British and 20,852 Germany individuals in terms of the Big Five characteristics, intending to investigate changes in personality according to age. The results indicate that even though

personality traits are considered to be stable, important changes take place throughout life, especially in terms of agreeableness, which was positively correlated with age. Neuroticism, however, showed divergent changes that depended on nationality.

On the other hand, in a longitudinal study addressing samples of experiences, Carstensen et al. (2011) monitored 184 individuals over several weeks. The participants completed personality inventories, a verbal intelligence test, a form addressing physical and mental health characteristics, and reported affects experienced during the follow-up. Using regression analysis, the authors found higher levels of subjective wellbeing and greater emotional stability according to the participants' age, even when controlling for personality features, verbal fluency, physical health, and socioeconomic variables. Reed, Chan and Mikels (2014) conducted a meta-analysis with 100 studies to assess age's positive effects on various affective and cognitive processes. Specifically, concerning affective processes, the authors identified positive effects between age and subjective wellbeing, suggesting these processes are related to changes of objectives that take place throughout life, which change the priorities of older people, who value positive emotional experiences more frequently than younger individuals.

When reviewing research on emotional experiences throughout life, Charles and Carstensen (2014) found that negative affects decrease as age advances. Evidence suggests that, when aging, individuals select those experiences that favor their subjective wellbeing and consequently decrease the possibility of negative experiences. This study's findings seem to be in line with the hypothesis of developmental maturation, in which age seems to be related to positive emotional experiences. The positive correlation between FolPos and age, together with a negative correlation between FolNeg and age, support that notion that older people focus their attention on positive situations, using inner processes to control their own emotional experience.

Statistically significant correlations were found between affects and self-reported positive/negative experiences (PANAS) when examining validity evidence of the FAST adapted version by verifying its relationship with related constructs (PANAS and ERQ). The FolPos factor appears associated with the presence of positive affects, but not with negative affects. These findings replicate those found by the authors of the original version, which were interpreted as a positive validity indicator between following or ignoring feelings

and subjective wellbeing (Gasper & Bramesfeld, 2006). On the other hand, the tendency to follow negative feelings was moderately related to negative feelings and inversely associated with positive affects. This result differs, in part, of the original study where the authors found an inverse relationship between FolNeg and positive affects but not with negative affects, as identified here. These differences may be related to sociocultural specificities between affective processes observed in both samples; thus, further studies are needed to deepen understanding on this matter.

This study's findings also confirmed the hypothesis that there is an association between the propensity to follow/ignore affects and emotion regulation (ERQ) strategies. A positive correlation was found between FolPos and cognitive reappraisal, as well as a negative correlation was found between FolPos and emotional suppression. As already mentioned, these differences may be related to various motivational mechanisms (Elliot & Thrash, 2002; Wimmer et al., 2018). The literature in the field of emotion regulation shows that effort to regulate emotions differ both in terms of efficiency and consequences for emotional experiences (Gross & John, 2003; Srivastava, Tamir, M., John, & Gross, 2014), and in relation to the neural pathways activated during its use (Cutuli, 2014; Goldin, McRae, Ramel, & Gross, 2008).

Goldin et al. (2008), in one study using functional magnetic resonance imaging, identified activity in the prefrontal cortex and decreased activity of the amygdala during the implementation of cognitive reappraisal strategies. In contrast, the authors observed delays in prefrontal activity and increased amygdala and insular activity during the emotional suppression activity. The correlation patterns observed in this study indicate that, in order to follow positive feelings, individuals have to use different elaboration strategies, seeking to reassess daily situations and avoiding suppressing affects. This relationship would be inverted to the tendency to follow negative feelings. On the other hand, to ignore positive affects, individuals use mechanisms that are also related to the emotional suppression strategy.

This view of sharing neural pathways between following/ignoring feelings and emotion regulation strategies may explain why IgnPos and IgnNeg do not negatively correlate with PANAS scores. In a study addressing differences between cognitive reappraisal and emotional suppression, Gross and John (2003) found that reappraisal was correlated with positive emotional experiences and negatively correlated with

negative affects, however, emotional suppression did not present this same correlation pattern, relating only to a lower level of positive affects. Our results show correlations between ignoring affects and the use of suppression strategies, at the same time in which they did not present correlation with negative affects. The set of these findings may point out to the same neural mechanisms involved in the emotion regulation strategies.

Note that this study presents a version of the FAST adapted to the Brazilian context accompanied by initial reliability and validity evidence, encouraging its use in future studies. Some limitations, however, need to be considered in order to understand better the results presented here. The first refers to the composition of the sample. A convenience sample does not represent the amplitude of answers that would be obtained from the general population; the sample used here is composed of young adults (average age of 29 years old) with a high level of education. Additionally, most individuals in the sample were women. Thus, it was not possible (considering the number of participants) to determine whether the instrument is gender-invariant, that is, whether the model's adjustment indicators remain constant for both sexes.

Additionally, the data collection process was conducted in an Internet platform (online responses). Thus, there is the possibility of intervenient variables in the participants' response processes, not observed or recorded by the search, since the researchers did not have face-to-face contact and could not directly observe the participants. Even though the psychometric results obtained by the FAST version adapted to Brazil are similar to those obtained by the original version (Gasper & Bramesfeld, 2006), studies addressing larger samples with more diversified sociodemographic characteristics, are needed to confirm the inferences resulting from this scale.

Another issue refers to the large variability of results concerning the participants' age. The significant empirical findings concerning a positive relationship between age and following positive feelings, as well as a negative association between age and the following negative feelings factor, suggest that age is relevant for emotional processing. Therefore, other scientific studies could examine potential developmental differences concerning the FAST constructs, clarifying this relationship between maturity, affective processes, and the tendency of individuals to follow or ignore their feelings in daily behavior.

Finally, the FAST's potential to assess signs of affective processing among individuals in the Brazilian context is highlighted. Due to the role played by affective processes in various mental disorders (Posner, Russell, & Peterson, 2005), assessing indicators of the extent to which individuals use emotional information may favor adaptive or illness processes. Assessing these individual differences may clarify how emotions integrate cognitive systems, altering its functioning. Therefore, further studies addressing FAST can focus on mediating the individuals' tendency to follow/ignore feelings and indicators.

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