

## Adolescent Needs Satisfaction and Frustration in Malaysia: A Cross-Cultural Consideration by Translation, Adaptation and Validation Procedure

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### Abstract

The humans` psychological needs can lead to frustration or satisfaction. Satisfaction with regard to basic psychological needs is characterized as an energetic situation that causes a rise in confidence as well as a healthy motivational orientation promoting wellness. The aims of this study were to adapt the Basic Psychological Need Satisfaction and Frustration Scale (BPNSFS) for use in Malaysia and to indicate how levels of need satisfaction and frustration are related to the daily life of students in the classroom. The three core psychological demands of competence, autonomy, and relatedness are taken into account in the scale's measurement of satisfaction and frustration. The researchers relied on Brislin's (1970) outline of the back-translation method's basic framework to carry out the process of translating this instrument. To carry out the translation process, a total of eight qualified linguists who are experts in the language field were utilized. Other than that, the researcher employed the external critic approach to evaluate the content validity and linguistics. In general, expert assessors accepted the BPNSNF instrument items. It can be concluded the current research offers researchers a tool to evaluate students' basic psychological need satisfaction and frustration among adolescents.

**Keywords:** Cross-cultural, translation, adaptation, basic psychological needs, satisfaction, frustration, reliability, validity, academic achievement

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## INTRODUCTION

Self-determination theory (SDT) refers to a motivation theory that observes a significant expansion in the academic literature. SDT has been popular as a psychology concerning personality, motivation, and behavior for more than three decades and affects several fields, including education (Guay, 2022; Howard et al., 2021; Fernández-Espínola et al., 2021). A sub-theory concerning SDT is the Basic Psychological Needs Theory (BPNT), which emphasizes three interconnected fundamental elements of human growth: autonomy, competence, and relatedness. The basic psychological needs of humans can lead to frustration or satisfaction (Ryan & Deci, 2000). Satisfaction with regard to basic psychological needs is characterized as an energetic situation that causes a rise in confidence as well as a healthy motivational orientation promoting wellness. It

allows for developing effort, enjoyment, tenacity, dedication, as well as well-being. According to BPNT, need frustration is the inverse of need satisfaction and is associated with well-being and ill health (Šakan et al., 2020; Koutoudaki, 2021).

On the other hand, autonomy is defined as the ability to act dependently or independently, as a group or as an individual (Ryan & Deci, 2000). It is also referred to as the desire of individuals to be themselves, related to the freedom given to them (Šakan et al., 2020, Koutoudaki, 2021, Zamarripa et al., 2020). Therefore, autonomy is crucial for students so that they can make their own decisions and compare the difference between things that are important or not in life so that they can deeply support their activities and ambitions (Guay, 2022; Lynch et al., 2020). Additionally, the need for autonomy in students is the capacity to form their own opinions free from outside influence and dependence.

Competence is feeling successful or effective in doing something or in a social environment (Koutoudaki, 2021; Sheehan et al., 2018). The process of interaction is essential to benefit the self-preservation of every human being (Zamarripa et al., 2020). In addition, competence is access to opportunities and resources for developing and expressing a person's abilities and skills (Ryan & Deci, 2017). Subsequently, competence also highlights the need to be able to change the environment around students and achieve the desired results via your activities (Guay, 2022; Lynch et al., 2020). Particularly, in the context of students' lives, competence is assessed as the ability of students to influence the learning process in order to achieve good results in every learning activity they do successfully (Handrianto et al., 2020). Hence, to ensure that they are successful in accomplishing their objectives, it is imperative that they make effective use of the resources that are available to them as well as the environment.

Other than that, relatedness involves the sensation of affection and care from significant others. As a result, it occurs when the adolescent is cared for by significant others. If frustrated, one feels alienated and estranged (Koutoudaki, 2019; Kim et al., 2022). In addition, relatedness refers to the emotions, attention, and behaviors directed toward the adolescents in one's immediate environment that forge a connection inside a relationship (Zamarripa et al., 2020; Rita et al., 2021). In this context, relatedness will lead to adolescents developing sensitivity toward the emotions and actions of other people and their own (Ryan & Deci, 2017; Park & Kim, 2022). As a whole, the idea of relatedness emphasizes that adolescents need positive, mutually beneficial relationships with others to thrive.

When these three basic needs are met, it paves the way for the development of optimal behavior, which in turn leads to positive results. Aside from that, high levels of satisfaction with psychological needs tend to promote high levels of internalization of behavior and self-determined motivation, improving overall well-being outcomes (Olafsen et al., 2021; Vansteenkiste et al., 2020). A previous study has shown that need frustration is linked to various unfavourable consequences, including internalizing distress, burnout, organizational deviance, unhealthy weight management behaviors, and other unpleasant affective states (Del Valle et al., 2018; Costa et al., 2018). In recent years, research has concentrated on psychological need of frustration as a potential indicator of poor well-being and decreased human functioning.

Many researchers utilize the BPNSFS, which was created by Chen et al. (2015) based on a review of prior work. The scale seeks to measure both frustration and satisfaction, incorporating three main needs components described in SDT, namely competence satisfaction, autonomy satisfaction, as well as relatedness satisfaction. Note that the SDT component comprises 24 question items that assess six subscales. The first stage of this instrument's development encompassed four different languages, namely Chinese, Spanish, Dutch, and English. It was evaluated against culturally diverse study samples from China, Peru, Belgium, and the United States (Chen et al., 2015; Moon, 2023). However, this scale has now expanded all across the world (Sheehan et al., 2018; Koutoudaki, 2019; Olafsen et al., 2021; Vansteenkiste et al., 2020; Del Valle et al., 2018; Costa et al., 2018). Consequently, the scale will be translated and adapted for adolescents in Malaysia.

A research instrument is a tool to obtain data in a study (Ghazali Darusalam & Sufean Hussin, 2021) by measuring tools used to diagnose or identify respondents' issues and problems (Sidek Mohd Noah & Jamaludin Ahmad, 2005; Alnuaimi et al., 2021). Therefore, Fraenkel et al. (2019) recommended that researchers adapted existing instruments to reduce time on research. However, it is a big challenge to carry out the cross-cultural translation. This is due to the fact that it requires the process of translating previously developed questionnaires into a variety of languages for them to be constructed in a way that is both reliable and psychometrically effective for use in research. In addition, it entails adjusting one's language and cultural practices to fit in with the new surroundings. The primary objectives of this research were to adapt and validate the BPNSFS for use with secondary school students.

## **RESEARCH METHOD**

Scientifically, carrying out the translation process of an instrument requires a specific procedure in order to guide the production of quality measuring instruments. This is because the direct translation of psychological constructs may not be relevant for other cultures (Zamarripa et al., 2020; Brislin et al., 1973; Linda Jamaludin, 2020; Kamaludiin & Sulaiman, 2019). Therefore, after considering previous researchers' views, this study will employ the back-translation approach. The Brislin translation model (1970; 1986), which has been widely utilized in research, is the basis for the translation process and the validity with respect to the BPNSFS instrument.

Before carrying out the BPNSFS translation process, the researcher obtained permission via email to use and translate from Jolene van der Kaap-Deeder. The steps involved in the implementation of the translation are as follows: (1) Forward translation; (2) Back-translation; (3) Committee review and revision; and (4) Instrument validation process. Figure 1 provides an explanation of the stages involved in the execution of back translation based on Brislin's model (1970).

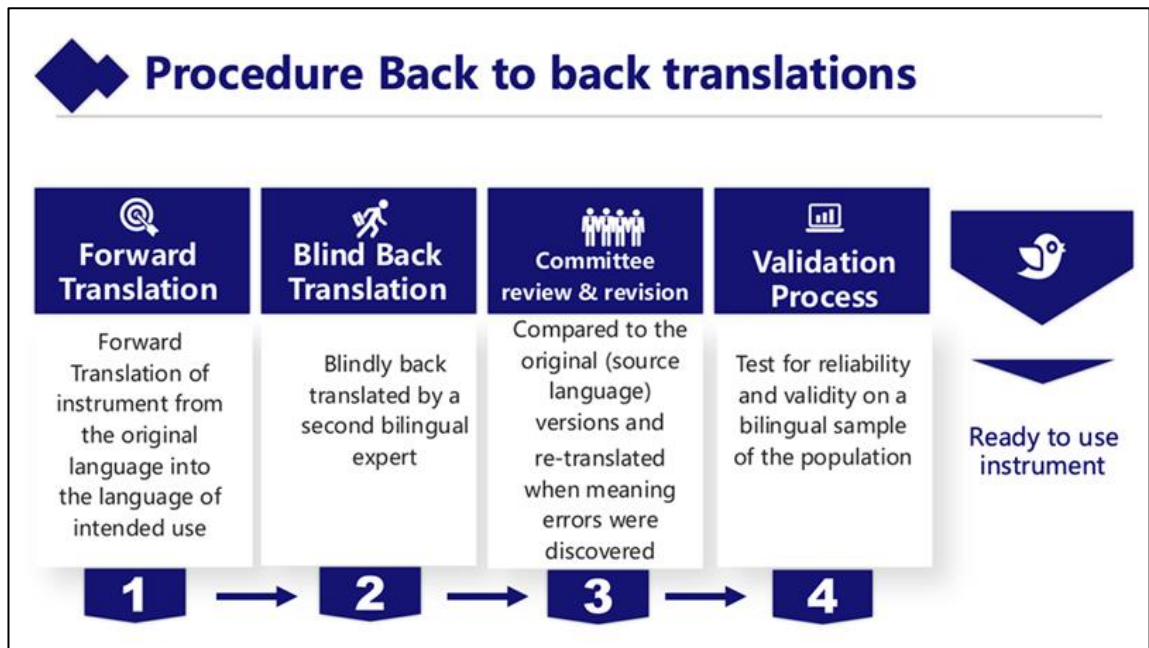


Figure 1: The procedures of back to back translations

### ***Forward translation***

This stage involves the process of translating the BPNSFS instrument from the original language (English) to the target language (Malay). According to Sousa and Rojjanasrirat (2011), to carry out this procedure, two experts are required, namely, a language expert and a field expert. Therefore, the researcher obtained the services of a translator from the Malaysian Language Translation Institute (MLTI) and a teacher specializing in the field of guidance and counselling for secondary schools. Note that the criteria for the first expert panel are based on the appointment of the MLTI and the Malaysian Ministry of Education. The researcher wants to make sure that the translator has fundamental knowledge of the language, including how to use terminology, grammar, and sentence structure. To that end, the researcher will be hiring a translator from MLTI. In doing so, it may be possible to create a measuring device that adolescents can easily comprehend. Apart from that, the second combination of translators is excellent guidance and counselling teachers who have served for more than 15 years. This can help produce questionnaires based on emotional language terms that are suitable for adolescents.

### ***Blind back translation***

The process of re-translating the BPNSFS instrument follows in the second stage. from Malay to the original language, which is English. This process is done without looking at the original instrument. This technique is often applied in efforts to translate psychological measurement tools (Nengsih et al., 2022; Rahman et al., 2022). According to Mohd Rahim Kamaluddin & Wan Shahrazad Wan Sulaiman (2019), knowledge in the field is a criterion for a translator to

translate measuring instruments. At this stage, the researcher obtained the translation services of a School Improvement Specialist Coach (SISC+) officer specializing in English from the Kuantan District Education Office, a high school English teacher, and a high school guidance and counselling teacher with over 28 years of experience teaching in schools.

### ***Committee review and revision***

A committee was established that aims to review and review the grammar, sentence structure, and use of terminology in the BPNSFS instrument. The members of this committee consist of a counselling lecturer at a Public Higher Education Institution, a SISC+ officer specializing in Malay from the Putrajaya Department of Education, a counselling officer from the Pahang State Education Department, an excellent high school guidance and counselling teacher and two excellent high schools Malay teachers. The researcher held a discussion with the revision committee to strengthen the translation process. However, due to the obstacles of COVID-19, face-to-face sessions could not be held. Therefore, the researcher used the google meet medium for the purpose of the discussion with the BPNSFSF instrument revision committee.

Table 1. Background of the Instrument Translation Committee

<b>Expert positions</b>	<b>Background</b>
Forward translation (Malay-English)	
1. MLTI training panel	<ol style="list-style-type: none"> <li>1. Have gone through the assessment of the MLTI to become a certified language translator.</li> <li>2. Actively doing the translation process of local instruments.</li> </ol>
2. Excellent teacher in guidance and counselling (1)	<ol style="list-style-type: none"> <li>1. Excellent teacher in guidance and counselling since 2010, appointed by the Malaysian Ministry of Education.</li> <li>2. Committee of the National Council of Counselling Teachers.</li> <li>3. State action research lead trainer.</li> <li>4. Speaker of the Ministry's Mind Transformation Program.</li> <li>5. Educational Service Commission interview panel.</li> </ol>
Blind Back translation (English- Malay)	
1. SISC+ officer specializing in English from the Kuantan District Education Office	<ol style="list-style-type: none"> <li>1. Experienced in teaching English subjects from grades 1 to 5.</li> <li>2. Served for 20 years in secondary schools.</li> <li>3. Experience in marking Malaysian Certificate of Education papers.</li> <li>4. Assist and monitor the Teaching and Learning sessions of English teachers at the district level.</li> <li>5. Experience writing academic books.</li> </ol>
2. English teacher (1)	<ol style="list-style-type: none"> <li>1. Experienced in teaching English subjects from grades 1 to 5.</li> <li>2. Served for 12 years in secondary school.</li> <li>3. Experience marking SPM papers.</li> </ol>
3. Guidance and Counselling teacher (2)	<ol style="list-style-type: none"> <li>1. Served for 28 years in secondary schools.</li> <li>2. Certified guidance and counselling teacher.</li> <li>3. Experience writing state-level action research</li> <li>4. Committee for the construction of the State Level Drug Prevention Education Module.</li> </ol>
Committee review and revision	
1. Senior lecturer in a public university	<ol style="list-style-type: none"> <li>1. Senior lecturer in the counseling field working at a public university</li> <li>2. Actively took part in publication and research.</li> <li>3. Active in professional bodies.</li> </ol>
2. SISC+ officer specializing in the Malay language from the State Department of	<ol style="list-style-type: none"> <li>1. Experienced in teaching Malay subjects from levels 1 to 5.</li> <li>2. Worked for more than 20 years in High School.</li> <li>3. Experience as <i>Munsyi Dewan</i>.</li> </ol>

Education Officer	4. Writer of <i>Munsi Bahasa</i> Column in <i>Berita Harian</i> and <i>Utusan Malaysia</i> .
3. Student Affairs Officer from the State Department of Education Officer	1. Experienced working in schools for 21 years and 2 years as the State Department of Education Officer 2. Monitor data related to psychometrics and school student activities in the State Department of Education Officer 3. Experienced as a facilitator and running a counselling module for secondary school students.
4. Excellent teacher in guidance and counselling (1)	1. The same panel is at the first stage of translation (English to Malay).
5. Excellent teacher in the Malay language (1)	1. Experienced serving in secondary schools for 18 years. 2. Main Trainer of Malay Language paper 1 at the state level. 3. National Lead Trainer for the Malay language subject for the Malaysian Certificate of Education.
6. Excellent teacher in the Malay language (2)	1. Experienced serving in secondary schools for 23 years. 2. Main Trainer of Malay Language paper 1 at the state level. 3. Involved in the construction of Malay language textbooks.

Table 1 presents the background of the experts used to carry out the translation process. Referring to Sousa and Rojjanasrirat (2011), a person considered an expert is an individual who has knowledge and experience in related fields. Therefore, in revising the instrument, the researcher also involved a guidance and counselling teacher and an official from the State Education Department who has experience managing student psychometric data at the district and state levels. In addition, the review process also involved a senior lecturer in psychology and counselling from a public institution of higher learning. After completing the review process by BPNSFS instrument experts, the researcher conducted a review process for language accuracy and item comprehension.

### ***Examining the BPNSFS instrument items' linguistic accuracy and comprehensibility***

The process of examining the accuracy of the language and understanding of the items is carried out so that the study subjects can understand all the items of the instrument question well. This process needs to be done even after the careful translation has been carried out because the answers given may not be relevant to the actual context of the study (Brislin, 1970; Bhawana et al., 2023). In general, Nunnally and Bernstein (1994) suggest that at least five subjects be used to test new instrument items. Therefore, for this stage, the researcher gave a questionnaire to 15 school students during the pilot study to see the level of understanding of the students' language aspect of these two instruments. In addition, the students involved are required to provide comments on spelling, sentence structure, and understanding of the sentences used. Afterwards, the researcher made improvements to the sentences used in the BPNSFS instrument after taking into account the comments given by the students during this procedure.

Subsequently, the researcher also obtained the services of three languages consisting of (i) a board munsi who has experience teaching in schools and is actively involved in writing, (ii) an expert Malay teacher with 33 years of teaching experience, and (iii) an experienced High School Malay teacher more

than 20 years and experience marking Malaysian Certificate of Education papers. As a result, the researcher has adapted the language-adjusted validation form from Kuldass (2018). Based on expert opinions, it was discovered that all three experts concurred that secondary school students between the ages of 13 and 18 might utilize the BPNSFS items. Experts also agree on using appropriate writing size, space, line, and format. Correspondingly, the researcher improved the results of expert comments on spelling mistakes, sentences, and the use of language adjustments and instructions so that all three instruments have good language adjustments for student use. The expert's summary of the suitability and validity of the language adjustment for the three instruments is shown in Table 2.

Table 2. Language-Adjusted Validity of the Instrument BPNSFS

No	Question	Panel 1		Panel 2		Panel 3	
		Yes	No	Yes	No	Yes	No
1	Each question item clearly describes the use of good Malay language.	/		/		/	
2	Each item is suitable for use by high school students aged 13-17 years.	/		/		/	
3	The instructions used are clear enough for high school students.	/		/		/	
4	There is no mistake in the use of the sentence.		/		/		/
5	There are no spelling errors.		/	/		/	
6	The use of the appropriate writing size.	/		/		/	
7	Use of space and appropriate lines.	/		/		/	
8	Appropriate writing format.	/		/		/	
9	Overall review	There are language usage, punctuation, and grammar that needs to be corrected. The overall use of words is appropriate, and the meaning is to be used until.		No comments		Students need to be given a clear explanation before answering the questions because of different levels of understanding and experience.	

### ***Determination of the validity of the contents of the instrument***

Determining content validity is a subjective assessment because it involves experts in relevant fields. According to Fraenkel et al. (2019), content validity can be defined as the truth, accuracy, meaning, and usability of an instrument that allows data to be inferred. In addition, content validity is important so that the assessment is accurate and the findings can reflect the construct that is to be measured (Kamaludiin & Sulaiman, 2019; Rita & Handrianto, 2020; Standing et al., 2022). This study employed the external critic method to assess the content validity of the instrument. By comparing the minimum, maximum, and mean scores from the score evaluation by external critics, an evaluation is formed.

The external critic method is one of the effective methods to study the instrument's validity. Mohd Majid Kontin (2004) opined that the number of experts to evaluate the instrument is adequate from three to nine people. Note that this study utilized seven experts to evaluate the BPNSFS instrument. The researcher has prepared a set of instruments to get opinions and criticism from the experts involved. A ten-point Likert scale was used to assess the content validity of the BPNSFS instruments starting from a scale of 1 (strongly disagree) to 10 (strongly agree). List of experts involved in evaluating the instrument as in Table 3.

Table 3. List of Experts Evaluating the Instrument's Content Validity

	List of panels	Expertise/experience	Institution
1	Senior lecturer Public university Guidance and counselling.	Expert in the validity of psychological and counseling instruments and modules.	Universiti Sains Malaysia
2	Excellent Teacher Guidance and counseling in a high school.	Expert in the validity of psychological and counseling instruments and modules	SMK Triang di Temerloh Pahang
3	Officials from the State Education Department.	Munysi Dewan and experienced check the language validity of instruments and modules.	JPN Putrajaya
4	Officials from the District Education Office.	SISC+ and checking the language validity of instruments and modules.	PPD Kuantan
5	Excellent teacher in Malay subjects from a high school.	Teaching Malay subjects and are experienced in checking the language validity of instruments and modules.	SM Teknik di Kuantan Pahang
6	Excellent teacher in Guidance and Counselling from a high school.	Expert and experienced in evaluating the validity of psychological and counseling instruments and modules.	SMART Kuantan Pahang.
7	Teacher in Malay subject from a high school.	Teaching Malay subjects and are experienced in checking the language validity of instruments and modules.	SMK Bukit Rangin di Kuantan Pahang

## RESULTS AND DISCUSSION

Content validity evaluations are based on comparing the lowest possible score, the highest possible score, the mean score, and each individual sub-and construct's overall instrument score on the instrument. An evaluation conducted by specialists to determine the minimum and maximum value for each component of the BPNSFS instrument reveals a significant value greater than 6.00. Based on these scores, it would appear that the BPNSFS instrument is sufficiently capable of measuring the satisfaction and frustration sub-constructs of fundamental psychological needs. Other than that, the basic needs satisfaction and frustration sub-construct has a range of values, with 6.33 being the least satisfied and 10.00 being the most frustrated. The standard deviation value for the BPNSFS sub-construct is 1.31, and the mean score for the entire BPNSFS sub-construct is  $m = 8.72$ . Hence, the items that make up the BPNSFS instrument were, on the whole, approved by the expert evaluators. The overall results of the investigation into the content validity of the BPNSFS instrument are presented in Table 4.

Table 4. Content Validity Value of Items of the Psychological Basic Needs Satisfaction and Frustration Scale (BPNSFS)

Subconstruct	N	Value Minimum	Value Maximum	Mean	Std. Deviation	View Expert
Autonomy satisfaction	7	7.67	10.00	9.07	.99	Accepted
Autonomy frustration	7	7.00	10.00	8.64	1.28	Accepted
Relationship satisfaction	7	6.83	10.00	8.76	1.28	Accepted
Relationship frustration	7	6.50	10.00	8.48	1.41	Accepted
Competence satisfaction	7	6.83	10.00	8.98	1.30	Accepted
Competence frustration	7	6.33	10.00	8.55	1.48	Accepted
Overall validity of BPNSFSF	7	6.69	10.00	8.72	1.31	Accepted

The current study's goal was to establish the validity of the BPNSFS, which is based on the SDT theoretical framework (Kyei-Blankson et al., 2014; Ryan & Deci, 2017; Ryan & Deci, 2000). The findings present that the BPNSFS instrument and its sub-constructs have a high validity value and can measure the variables of frustration and satisfaction with respect to basic psychological needs. Here, the items that make up the BPNSFS instrument were, on the whole, approved by the expert evaluators. Furthermore, the overall validity of the BPNSFS instrument is 8.72. These findings contribute to the development of a useful resource for a key concept within SDT, which will be beneficial for future studies with regard to organizational psychology grounded in this theoretical framework. Apart from that, the BPNSFS has been refined and tested to work best with adolescent routines, considering the two distinct dimensions of need fulfilment as well as need frustration. Previous studies have measured students' basic psychological needs using domain-general scales or scales with notable limitations, for instance, lack of rigorous validation and content validity. Hence, the adapted scale allows researchers to investigate students' needs, frustration, as well as satisfaction at school (Bressler & Bressler, 2007; Hsu et al., 2015; Winingsih et al., 2023). The terms are appropriate in the student's life context and meaning to school students, raising the likelihood that the scale will generate valid and reliable scores.

## CONCLUSION

The SDT provides a framework for understanding the processes that drive students to be motivated at school. Within this framework, the frustration or satisfaction of students' fundamental psychological needs is addressed as an essential facilitator of study functioning, student motivation, as well as overall well-being. By adapting the current gold standard measurement instrument for basic psychological need satisfaction and need frustration to the study context, the

present research offers researchers a tool to evaluate students' basic psychological need satisfaction and frustration during the study. In addition, it verifies both the Malay and English versions of the BPNSFS. In ongoing research, focusing on a uniform operationalization of need satisfaction and frustration will enable comparisons across studies, cultures, as well as contexts, which will contribute to the development of this discipline in a more unified way. Therefore, the results of this study help establish a common measurement of one of the central principles of SDT.

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