

The Thai EPOCH Measure of Adolescent Well-being

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Abstract

The study and promotion of well-being, particularly among adolescents, is well-documented within the western context. The EPOCH measure was adapted from the PERMA model as a tool to measure adolescent well-being. Cross-cultural and linguistically equivalent versions of the EPOCH model are necessary in order to help make a precise evaluation of adolescents' well-being in diverse cultures. By conducting psychometric research on the Thai version of the EPOCH scale, we aimed to explore the five-factor model among Thai adolescents. To create and validate a Thai version of the EPOCH, the English version of the EPOCH was back-translated and distributed based on a snowball sampling method on social media. 368 respondents completed the Thai EPOCH. The responses were analyzed to assess the internal consistency of each of the subscales—engagement, perseverance, optimism, connectedness, and happiness. The results indicate that the Thai EPOCH has the potential to be a useful tool for assessing the well-being of Thai speakers.

Keywords: EPOCH measure of adolescent well-being, positive psychology, Thailand, well-being, psychology

Introduction

Positive psychology is a new direction in psychology that emphasizes and advocates the scientific study of human strengths and virtues that make individuals and communities flourish (Seligman and Csikszentmihalyi, 2000). Previous psychological theories tend to suggest that people are

driven by their past, their biological factors, their cultures, or their unconscious minds (Compton and Hoffman, 2020). On the other hand, positive psychology notices that many people adapt and adjust to life from extremely creative approaches that enable them and the people around them to feel good about life despite the difficulties and vicissitudes in life (Compton and Hoffman, 2020). As such, these accomplishments deserve to be lauded instead of explained away by citing biological needs or related concepts. Positive psychology, thus, describes good functioning as not merely the absence of pathology and damage but also as the presence of strength and virtue (Seligman and Csikszentmihalyi, 2000). Resolving the problems is undoubtedly important, but nurturing personal strengths may lead to greater positive outcomes (Kern et al., 2016). From the positive psychology perspective, an optimal way to measure well-being is flourishing, and the purpose of positive psychology is to increase flourishing, which is the so-called “well-being theory” (Seligman, 2011). The well-being theory comprises five domains (PERMA): positive emotion, engagement, positive relationships, meaning, and accomplishment. A vast amount of research on positive psychological functioning has considered only adult populations; however, there is a relative dearth of comparable information on children's and adolescents' functioning (Casas, 2011).

Adolescence is a critical stage that undergoes biological, psychological, and social changes in life, and these changes can make adolescents vulnerable to mental health problems (World Health Organization, 2020b). The onset of many psychological disorders and symptoms such as anxiety, depression, rapid fluctuations in mood, and emotional outbursts also tend to take place during this period. It is also a time to acquire knowledge, skills, and attributes to cope with challenges during youth and adulthood (World Health Organization, 2020a). Adolescents who experience positive well-being are more likely to have better general health and fewer risky health behaviors during young adulthood (Hoyt et al., 2012). As such, in order to support young people's physical and mental health during adolescence and later on in life, there is a crucial need to improve young people's mental well-being

and protect them from the risk factors that may influence their potential to flourish (World Health Organization, 2020b). Moreover, adolescents have unique perceptions, judgments, and aspirations about their well-being, which can provide essential information about the positive domains that develop in adolescence and promote flourishing in adulthood.

In light of this, Kern et al. (2016) developed the EPOCH model as an extension of the PERMA that focused on adolescents' well-being and strengths. The EPOCH instrument is made up of 20 statements that assess five different components: Engagement, Perseverance, Optimism, Connectedness, and Happiness. These five positive psychological characteristics are believed to cultivate and foster the PERMA domains and other positive outcomes throughout life. Engagement refers to a person's ability to become fully involved and absorbed in what he is doing. Perseverance is characterized by the ability to be persistent in accomplishing goals despite difficulties. Optimism is a sense of hope and confidence about the future, as well as a propensity to look at things from a positive perspective. Connectedness is conceptualized as developing positive interpersonal relationships and a sense that one is cared for, loved, and valued by others. Happiness refers to a long-lasting positive mood state and satisfaction with life.

There is a growing body of literature that has examined the psychometric properties of the EPOCH scale in different languages and countries, including the United States (Kern et al., 2016), Australia (Kern et al., 2016), Indonesia (Setyandari, 2019), Iran (Taheri et al., 2020), and China (Kern et al., 2018; Zeng and Kern, 2019). Kern et al. (2016) designed the original English version of the EPOCH instrument and tested it on adolescents in the United States and Australia. The internal consistency coefficients of the measure across 10 samples ranged between 0.85 to 0.95, and the test-retest reliability was stable in the short term, with lower stability over longer periods ($r = 0.71$ for a 3-week interval and $r = 0.39$ for a 3-year interval). There was also supported data of convergent and discriminant validity (Kern et al., 2016). In another study, Zeng and Kern (2019) carried out psychomet-

ric research using a Chinese version of the EPOCH measure and reported an internal consistency coefficient of 0.95. Not only the overall scale, but each subscale also had high levels of internal consistency (Kern et al., 2016; Zeng and Kern, 2019). The five-factor structure of the EPOCH model was also supported (Kern et al., 2016; Zeng and Kern, 2019; Kern et al., 2018), and equivalence across different age and gender groups was also reported (Kern et al., 2018). Further correlational analyses indicated that the five subscales were correlated with health and psychological constructs, including physical health, self-efficacy, life satisfaction, academic engagement, self-acceptance, resilience, and relationships with friends and teachers (Kern et al., 2016; Zeng and Kern, 2019). This evidence thus supports the reliability and validity of the EPOCH scale for a multidimensional assessment of adolescents' psychological functioning.

The cross-cultural measurement invariance of the EPOCH model demonstrated that the factor structure was adequate across cultures, but the mean scores were not directly comparable (Kern et al., 2018). As the instrument was initially designed and assessed in the Western context, the extent to which it is appropriate to use in the Eastern context remains questionable. Other research has indicated that the conceptualizations of psychological well-being in Eastern cultures may be distinct from Western cultures (Suh and Choi, 2018; Wirtz et al., 2009). Contemporary western cultures tend to consider positive affectivity, hedonic balance, and individualistic qualities such as self-determination, autonomy, and self-esteem when defining well-being (Joshianloo, 2014). This is noticeably different from how Eastern cultures define well-being, which is based on moral values, contentment, peace, harmony, virtues, and spirituality (Joshianloo, 2014). As such, cross-cultural and linguistic equivalent versions of the EPOCH model are necessary in order to help make a precise evaluation of adolescents' well-being in diverse cultures. Given the uniqueness of Thai norms and values, a validation of the EPOCH measure in Thai samples is needed to define its applicability in Thai culture. By conducting psychometric research on the Thai version of the EPOCH

scale, we aimed to explore the five-factor model in Thai adolescents. To the best of our knowledge, there is no Thai language of the EPOCH model being psychometrically assessed yet, and the examination of its psychometric properties would add to the evidence of adopting this measure in understudied cultural groups. Furthermore, a validated Thai EPOCH model could improve the quality and reliability of cross-cultural research on adolescents' well-being. Therefore, the purpose of this research is to provide evidence for the psychometric properties of the Thai EPOCH in the Thai-speaking population.

Methods

To create and validate a Thai version of the EPOCH, the English version of the EPOCH was first translated into Thai by two bilingual graduate students. Each translated the instrument independently. The two then compared their translations, discussed any differences, and agreed on a single version of the Thai EPOCH. This was then translated back into English by another individual, and the researchers compared this back-translated English version with the original EPOCH. No differences in content were noted, so the Thai EPOCH was accepted for further validation. The Thai EPOCH is included in Appendix A.

The Thai EPOCH was then administered via a Google Form on social media. Snowball sampling was used, whereby respondents were asked to share the survey with additional contacts. To validate the Thai EPOCH, the results were filtered to include only respondents aged 18-24. The filtered results included 368 respondents, 210 of whom identified as "female," 146 of whom identified as "male," and 12 of whom identified as "prefer not to say."

Following the administration of the survey, descriptive statistics were calculated for each of the subscales: Engagement, Perseverance, Optimism, Connectedness, and Happiness. Results were calculated for students self-identifying as male, female, and "prefer not to say." The Cronbach's alpha of each subscale was calculated to determine the internal validity of each scale. Because the data was not normally

distributed, parametric statistical tests could not be applied. Furthermore, the number of respondents in the "prefer not to say" category was low ($n = 12$), so that group could not be meaningfully compared to the others. A non-parametric test, the Mann-Whitney-U test, was applied to examine the difference between the students identifying as male or female and to determine whether one group was stochastically greater than the other. A group being stochastically greater than another means that if a subject is taken from each group, the subject from the group that is stochastically greater than the other is likely to have a higher score than the other subject. The Pearson correlation among the subscales was also calculated.

Results

The average scores for each subscale of the Thai EPOCH and each gender group are included in Table 1 below. The item-by-item average scores are included in Appendix B. All analysis was conducted in R (R Core Team, 2019).

Table 1 Descriptive statistics of Thai EPOCH subscales

	Engagement		Perseverance		Optimism		Connectedness		Happiness	
	M	SD	M	SD	M	SD	M	SD	M	SD
All ($n = 368$)	3.09	0.81	3.01	0.76	3.22	0.82	3.40	0.94	3.10	0.88
Female ($n = 210$)	3.00	0.79	3.00	0.79	3.17	0.84	3.39	0.98	2.99	0.88
Male ($n = 146$)	3.20	0.81	3.05	0.72	3.28	0.79	3.38	0.90	3.25	0.87
Prefer not to say ($n = 12$)	3.35	0.90	3.02	0.67	3.40	0.75	3.77	0.86	3.17	0.93

The internal consistency the Thai EPOCH was assessed by calculating the Cronbach's alpha of each subscale. The alpha of Engagement was .74, the alpha of Perseverance was .66, the alpha of Optimism was .71, the alpha of Connectedness was .79, and the alpha of Happiness was .80. The alpha of the entire Thai EPOCH scale was

.90. Different recommendations regarding acceptable values exist, but most suggest that alpha values should be between .70 and .90 (Tavakol and Dennick, 2011). The alpha value of the Perseverance scale is slightly below the recommended range, but the alphas of the remaining scales are consistent with the recommendations.

Visual inspection of the Q-Q plots revealed that the data were not normally distributed; therefore, the Mann-Whitney U test was used to compare the scores of the male and female groups. The results of this comparison are shown in Table 2 below. The Engagement scores of the male students (Mdn = 3.25) were stochastically greater than the Engagement scores of the female students (Mdn = 3.00) ($p = .014$). Similarly, the Happiness scores of the male students (Mdn = 3.50) were stochastically greater than the Happiness scores of the female students (Mdn = 3.00) ($p = .005$). The Mann-Whitney U test did not show any statistically significant differences in the Perseverance, Optimism, or Connectedness scores.

Table 2 Comparison of male and female responses to EPOCH subscales

Subscale	Male Mdn	Female Mdn	Mann-Whitney U	p
Engagement	3.25	3.00	17663	.014*
Perseverance	3.00	3.00	16323	.296
Optimism	3.38	3.25	16497	.220
Connectedness	3.25	3.50	15220	.909
Happiness	3.50	3.00	17976	.005**

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

Correlation analysis indicated the relationships among the Thai EPOCH subscales as shown in Table 3. The Pearson correlation coefficients are shown, and in all cases, $p < .001$. The strongest correlation was between Happiness and Optimism ($r = .601$) and the weakest correlation was between Engagement and Perseverance ($r = .365$).

Table 3 Pearson correlations among Thai EPOCH subscales

Subscale	Engagement	Perseverance	Optimism	Connectedness	Happiness
Engagement	1.000	.365	.467	.422	.586
Perseverance	.365	1.000	.529	.407	.410
Optimism	.467	.529	1.000	.545	.601
Connectedness	.422	.407	.545	1.000	.571
Happiness	.586	.410	.601	.571	1.000

Discussion

As well-being research continues to expand globally and the academic community recognizes the importance of student mental health, the development of culture/language specific instruments to ascertain well-being have become necessary. Many measures of well-being have been developed to assist with the measurement, comparison and implications of well-being across cultures. The EPOCH model consists of five positive characteristics that contribute to higher levels of wellbeing in adolescents:

Engagement (E): This refers to the state of being absorbed, interested, and fully involved in an activity or the world around them. High levels of engagement can lead to a state of “flow,” where individuals are so engrossed in an activity that they lose track of time.

Perseverance (P): Perseverance is the ability to stick with tasks and goals, even in the face of challenges and setbacks. It involves the determination to finish what one starts.

Optimism (O): Optimism involves having hope and confidence in the future. It means looking at events with a generally positive outlook, viewing negative events as temporary and specific to the situation, and believing that things will ultimately work out well.

Connectedness (C): Connectedness goes beyond having people in one’s life; it encompasses feeling loved, supported, and valued by others. It involves forming close emotional bonds and experiencing a sense of connection with others.

Happiness (H): Happiness refers to a general feeling of joy, cheerfulness, and contentment with life. It doesn't mean being happy all the time, but rather feeling generally satisfied with one's life.

This study was designed to specifically address the need for a Thai language EPOCH, to evaluate the psychometric properties of this tool, and to measure the potential of the Thai language EPOCH as a measure to assess adolescent well-being. The results indicate that the process of translation and back-translation from English to Thai was successful as demonstrated by the reasonable levels of internal consistency of the Thai EPOCH. As expected, there is a moderate to strong correlation among the various subscales of the Thai EPOCH. These results align with the work of Kern et al (2019) which implemented a Chinese version of EPOCH and that of Taheri et al (2022) a Persian translation of the EPOCH in Iran. Given the validity of the Thai version of the EPOCH, it would likely prove beneficial if further studies could gather a greater number of responses and compare the results of the Thai EPOCH to other existing scales in Thai. The study reported in this article is a step towards assessing the wellbeing of adolescents in Thailand using a Thai-language instrument; further studies will build on this research.

Conclusion

This article has presented a Thai translation of the EPOCH Measure for Adolescent Well-Being. The original EPOCH scale (Kern et al., 2016) was translated into Thai and administered to a group of 368 speakers of Thai. The responses were analyzed to assess the internal consistency of each of the subscales—Engagement, Perseverance, Optimism, Connectedness, and Happiness. The results indicate that the Thai EPOCH could be a useful tool for assessing the well-being of Thai speakers. The Thai EPOCH and similar instruments are growing in importance as researchers and practitioners of psychology seek to expand their understanding and practice into new cultural and linguistic contexts.

Conflict of Interest Statement

The researchers have no conflicts of interest with any subject of this article.

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Appendix A

The Thai EPOCH

แบบวัดสุขภาพทางจิตของคนวัยหนุ่มสาวแบบ EPOCH

แบบวัดชนิดนี้ถูกเลือกเนื่องจากคนในวัยหนุ่มสาวนั้นสามารถให้ข้อมูลสำคัญเกี่ยวกับลักษณะนิสัยเชิงบวกซึ่งมีพัฒนาการในช่วงวัยรุ่น และมีมุมมองแตกต่างจากผู้ใหญ่ที่มักเป็นเป้าหมายหลักของแบบวัดสุขภาพทางจิตส่วนมาก นอกจากนั้น แบบวัด EPOCH ยังถูกเลือกเนื่องจากเป็นการประเมินเชิงหลายมิติ ซึ่งอาจทำให้สามารถออกแบบกระบวนการปรับเปลี่ยนลักษณะนิสัยได้อย่างเฉพาะเจาะจง เพื่อส่งเสริมการพัฒนาลักษณะนิสัยเชิงบวกที่จะเติบโตอย่างยั่งยืนไปตลอดชีวิต และแบบวัดชนิดนี้ยังอาจเป็นประโยชน์ต่อการวิเคราะห์ความแตกต่างภายในกลุ่มประชากรอีกด้วย

แบบวัดนี้ประกอบไปด้วย 20 ข้อความซึ่งจะใช้ประเมินลักษณะนิสัยเชิงบวกทั้ง 5 ชนิด อันได้แก่ ความมีส่วนร่วม ความมุ่งมั่น ความมองโลกในแง่ดี ความผูกพัน และ ความสุข โดยให้ผู้ทำแบบประเมินวงกลมคำตอบว่าแต่ละข้อความนั้นสอดคล้องกับตนเองเพียงใด

ข้อความที่ 1-11

- 1: แทบจะไม่เคย
- 2: บางครั้ง
- 3: บ่อยครั้ง
- 4: เป็นประจำ
- 5: แทบจะตลอดเวลา

ข้อความที่ 12-20

- 1: ไม่ตรงกับฉันเลยสักนิด
- 2: ตรงกับฉันเล็กน้อย
- 3: ค่อนข้างตรงกับฉัน
- 4: ตรงกับฉันเป็นส่วนใหญ่
- 5: ตรงกับฉันแทบทุกอย่าง

- 1) เมื่อมีเรื่องดีๆ เกิดขึ้นกับฉัน ฉันมีคนที่สามารถนำพาดีไปเล่าให้ฟังได้
- 2) ฉันทำสิ่งที่ฉันเริ่มจนสำเร็จ
- 3) ฉันมองเห็นอนาคตที่ดีสำหรับตัวเอง
- 4) ฉันมีความสุข
- 5) เวลาทำกิจกรรมสักอย่าง ฉันมักเพลิดเพลินจนลืมเวลาไป

- 6) ฉันรู้สึกสนุกเป็นอย่างมาก
- 7) ฉันรู้สึกดีเกี่ยวกับสิ่งที่ทำอยู่เป็นอย่างมาก
- 8) ฉันรักชีวิตที่เป็นอยู่
- 9) ฉันทำการบินอย่างต่อเนื่องจนกว่าจะเสร็จ
- 10) เวลาที่ฉันมีปัญหา ฉันมีคนที่จะคอยอยู่เคียงข้าง
- 11) ฉันจดจ่อกับกิจกรรมที่ทำมากจนลืมเรื่องอื่นๆ ไปหมด
- 12) เมื่อฉันเรียนรู้สิ่งใหม่ๆ ฉันมักไม่รู้ตัวเลยว่าเวลาผ่านไปนานเท่าไรแล้ว
- 13) ในสถานการณ์ที่ไม่แน่นอน ฉันคาดหวังถึงผลลัพธ์ที่ดีที่สุด
- 14) ฉันมีคนที่จะห่วงใยฉันจริงๆ
- 15) ฉันคิดว่าในอนาคตมีสิ่งดีๆ รอฉันอยู่
- 16) ฉันมีเพื่อนที่ฉันห่วงใยจริงๆ
- 17) เมื่อฉันวางแผนที่จะทำบางอย่างให้สำเร็จ ฉันจะยึดมั่นกับแผนนั้น
- 18) ฉันเชื่อว่าทุกอย่างจะลงเอยด้วยดี ไม่ว่ามันจะดูยากแค่ไหนก็ตาม
- 19) ฉันเป็นคนทำงานหนัก
- 20) ฉันเป็นคนร่าเริง

Appendix B

Thai EPOCH Scores by Item

Item	Subscale	Male <i>M</i>	Female <i>M</i>	Prefer not to say <i>M</i>
1. When something good happens to me, I have people who I like to share the good news with.	C	3.28	3.42	3.50
2. I finish whatever I begin.	P	2.90	2.73	3.08
3. I am optimistic about my future.	O	2.77	2.56	2.75
4. I feel happy.	H	3.13	2.89	2.92
5. When I do an activity, I enjoy it so much that I lose track of time.	E	3.55	3.29	3.75
6. I have a lot of fun.	H	3.10	2.78	3.17
7. I get completely absorbed in what I am doing.	E	3.10	2.71	2.92
8. I love life.	H	3.18	2.85	2.83
9. I keep at my schoolwork until I am done with it.	P	2.82	2.75	2.50
10. When I have a problem, I have someone who will be there for me.	C	3.12	3.19	3.92
11. I get so involved in activities that I forget about everything else.	E	2.95	2.82	3.50
12. When I am learning something new, I lose track of how much time has passed.	E	3.22	3.19	3.25
13. In uncertain times, I expect the best.	O	3.43	3.27	3.17
14. There are people in my life who really care about me.	C	3.59	3.53	3.83
15. I think good things are going to happen to me.	O	3.53	3.52	3.67
16. I have friends that I really care about.	C	3.53	3.41	3.83
17. Once I make a plan to get something done, I stick to it.	P	3.45	3.31	3.25
18. I believe that things will work out, no matter how difficult they seem.	O	3.39	3.34	4.00
19. I am a hard worker.	P	3.03	3.16	3.25
20. I am a cheerful person.	H	3.57	3.43	3.75

Note. In the table above, the subscales have been abbreviated: “E” stands for Engagement, “P” stands for Perseverance, “O” stands for Optimism, “C” stands for Connectedness, and “H” stands for Happiness.

Scale for questions 1-10:

1 = Almost never

2 = Sometimes

3 = Often

4 = Very often

5 = Almost always

Scale for questions 11-20:

1 = Not at all like me

2 = A little like me

3 = Somewhat like me

4 = Mostly like me

5 = Very much like me