Validity and Reliability Study of the Thai Version of WHO Schedules for Clinical Assessment in Neuropsychiatry: Eating Disorders Section

Niramol Patjanasoontorn MD*,
Suchat Paholpak MD*, Thawatchai Krisanaprakornkit MD*

* Department of Psychiatry, Faculty of Medicine, Khon Kaen University, Khon Kaen, Thailand

Objective: *To determine the validity and reliability of the Thai version of the WHO Schedules for Clinical Assessment in Neuropsychiatry (SCAN) Version 2.1, Eating Disorders Section*

Material and Method: *The SCAN interview version 2.1 Eating Disorders Section (section 9) was translated into Thai. The content validity of the translation was verified by comparing the back-translation to the English original. Whenever inconsistencies were encountered, the Thai version was adapted so that it correctly conveyed the meaning of the original English version. The revised Thai version was then field-tested in four regions (Suanprung Psychiatric Hospital, Jitavejkhonkaen Hospital, Srithanya Hospital and Suansaranrom Psychiatric Hospital, each place comprised 20 volunteers) for comprehensibility of the relatively technical language. Re-edition of the Thai version was made in accordance with suggestions from the field trial. The reliability study was done between October 2005 and September 2008 in which 30 persons (4 males; 26 females) were recruited. Fifteen persons (1 males and 14 females) were eating disorders patients (4 anorexia nervosa and 11 bulimia nervosa patients) and the other 15 (3 males and 12 females) were normal. The number of years of formal education varied widely and occupations were diverse. Subjects were interviewed using SCAN eating disorders section by a psychiatrist competent in using the Thai version of SCAN. The interviews were recorded on video so that the material could be re-rated.*

Results: *Regarding validity of WHO SCAN eating disorders section, based on the response from Thai subjects and consultations with competent psychiatrists, the content validity was established. Regarding the reliability study, the time taken to interview an eating disorder patient averaged 23.80 ± 5.15 minutes (range, 18.35-34.26) versus 17.27 ± 4.05 minutes (range, 9.07-22.37) for a normal subject. The mean of inter-rater reliability (kappa) of the eating disorder section was 0.73, standard error (SE) = 0.02, 95% confident interval (CI = 0.68-0.77). Seventy-eight point five percent of the items in the section had a substantial kappa. The mean of intra-rater reliabilities was 0.76, SE = 0.03, 95% CI = 0.70-0.82. Sixty-eight point four percent and 31.58% of the items had a substantial and almost perfect kappa respectively.*

Conclusion: *The Thai version of the Eating Disorders Sections of SCAN version 2.1 proved to be a valid and reliable tool for assessing eating disorders among Thai speakers.*

Keywords: *Eating disorder, Anorexia nervosa, Bulimia nervosa, SCAN, Schedules for clinical assessment in neuropsychiatry, Reliability, Semi-structured interview, Validity*

Unlike most disciplines of physical medicine, psychiatry has no external validating criteria and no laboratory test to confirm or discard diagnostic impressions. Therefore, diagnosis is dependent on the knowledge, skill, and experience of each psychiatrist. Consequently, the difficulty in psychiatric evaluation is that whether several persons or even the same observer rates/re-rates the same patient, the same

Correspondence to:
Paholpak S, Department of Psychiatry, Faculty of Medicine, Khon Kaen University, Khon Kaen 40002, Thailand.
Phone & Fax: 043-348-384, Mobile: 081-661-0674
E-mail: suchat_p@kku.ac.th

symptoms, and/or signs may be interpreted differently because of the manner in which the information was expressed by the patient and/or understood by the rater[1]. Many interview formats have been developed to facilitate the interviewing of eating disorders (ED) patients. The examples are Eating Attitudes Test[2], Bulimia Test-Revised[3], Bulimic Investigatory Test Edinburgh[4,5], Eating Disorder Examination[6], Composite International Diagnostic Interview (CIDI)[7], Structure Clinical Interview for DSM-IV-TR (SCID)[8] and WHO Schedules for Clinical Assessment in Neuropsychiatry (SCAN)[9,10]. SCAN is a semi-structured diagnostic-interview protocol with validated

inter-rater reliability to help psychiatrists interview, assess, measure, and classify psychopathology and behavior associated, according to the ICD-10 diagnostic system[11], with the major psychiatric disorders among adults. SCAN is the gold standard for verifying interview-diagnoses done through clinical trials and other forms of psychiatric research.

SCAN has a I-shell program, CATEGO, which is a set of programs for processing the SCAN data and generating output (diagnosis). SCAN is intended for use only by clinicians with an adequate knowledge of psychopathology who have taken the WHO-designated SCAN training. SCAN has broad international acceptability and has been translated into 26 major languages, including in the Peoples' Republic of China, Japan, Turkey, and India[12-15].

Thailand has neither its own national nor a translated international standard, psychiatric, diagnostic instrument. There is currently a need for a reliable and valid measure of ED that is brief and economical to administer and that can be used to assess response to treatment. The authors determined to translate SCAN into Thai and planned its establishment as the gold standard for psychiatric diagnosing in Thailand.

Eating disorders of various kinds have been reported in up to 4% of adolescents and young adults. Women are affected more than men. Most common age of onset is between 14 and18 years. Anorexia nervosa is found in 0.5 to 1% of adolescent girls, bulimia nervosa 1 to 3%[16]. All the subjects suffering from an ED fulfilled diagnostic criteria for at least another DSM-IV axis I psychiatric disorder[17,18]. Patients tend to have disturbance in impulse control, emotional tone, body image, social relationships, sexual attitudes[19-21]. Long term (7 to 19 years) follow-up revealed only 50% had fully recovered from ED, 26.9% were currently affected by an ED, 23.1% showed a persistent body image disturbance and/or the presence of compensatory behaviors[22].

As eating disorders are highly important, this particular sub-study focuses on the validity and reliability of SCAN ED section. With this instrument, the authors wished to further the knowledge of the disorders and treatment in the Thai context. Validity and reliability studies of some other sections of SCAN Thai version were reported separately[23-27].

Material and Method

The authors used a cross-sectional validity and reliability design. The Khon Kaen University Ethics Committee reviewed and approved the present study protocol. Regarding the validity study, the SCAN interview book version 2.1 was translated, with permission from the WHO, from English into Thai by SP. The content validity of the translation was verified by comparing the back-translation and adapting the Thai version in order to keep the meaning as the English original. The comprehensibility of the language was then tested by in-depth interview among a cross-section of Thais from four regions of the country (Chiang Mai, Suanprung Psychiatric Hospital, Khon Kaen, Jitavej Khon Kaen Hospital, Bangkok, Srithanya Hospital and Suratthani, Suansaranrom Psychiatric Hospital). Each region comprised 20 native volunteers including psychiatric patients and their normal relatives. Reflections, comments, and suggestions were assessed then summarized during a consensus meeting and SCAN Thai version was re-edited accordingly. The final Thai version was incorporated into the SCAN I-shell program and used for general testing.

Thirty (4 males and 26 females) volunteers were recruited between October 2005 and September 2008 for the reliability study. Inclusion criteria included Thai citizens, able to understand and speak Thai, at least 14 years of age, be a volunteer, and gave informed consent to participate in the present study. Each volunteer was given 200 Baht to cover overland travel expenses. Fifteen volunteers were ED patients (1 male and 14 females) and 15 (3 males and 12 females) were normal. The volunteer patients were from Srinagarind In-/Out-patient Departments and identified by ICD-10 or DSM-IV-TR criteria. The normal volunteers were faculty personnel with no previous psychiatric illness. The number of years of formal education of both patients and normal volunteers varied widely and occupations were diverse.

A psychiatrist trained in SCAN did the specific SCAN ED section interviews with all of the patients and normal persons. The interviews were recorded on video with a focus on the interviewee, not the interviewer. The interviews were recorded on video so that the material could be re-rated. To test the intra-rater reliability, a psychiatrist (trained in SCAN) used the Thai version of the ED Sections of SCAN to re-rate the videotaped interviews two more times, two weeks apart. Accordingly, the inter-rater reliability study was accomplished by two psychiatrists re-rating the video material simultaneously or at different times and comparing the results.

The authors probed for the presence and severity of ED symptoms in the Present State (PS). The

authors asked each volunteer whether he (she) used to have or was having the symptom in each item during the month before the date of examination. The PS may be part of a much longer present episode (PE), with onset years earlier. When rating the ED Sections the authors used Rating Scale I (a special rating scale for ED in SCAN) or an item-specific rating scale as indicated in each item. Twenty-eight questions probe the symptoms in the ED section. In order to have reliability study of as many questions as possible, even when the general probing question at the very beginning of each section got a negative answer, the authors continued to ask every detailed questions. However, whenever answers were unambiguous (*i.e.* a numerical length of time or a simple 'yes' or 'no'), the rater's judgment was not required. Consequently, the authors did not rate items that probed the duration of symptoms and age at onset. Finally, 19 items from ED section were rated.

Statistical evaluation

The inter- and intra-rater reliability was based on the agreement between raters by using descriptive statistics. Rating scales for ED section were treated as categorical data (*i.e.* 0, 1, 2, 3, 5, 8 and 9 indicating absence, presence in minor degree and not appropriate for classification, moderate severity, severe, presence of psychotic symptoms making the rating very difficult, not sure whether present or absent even with adequate examination, inappropriate to rate due to incomplete examination respectively. Calculation used the kappa (κ) statistic in STATA 7.0. The defined level for the degree of agreement was 'poor' ($\kappa < 0$), 'slight' (κ 0-0.20), 'fair' ($\kappa = 0.21-0.40$), 'moderate' ($\kappa = 0.41-0.60$), 'substantial' ($\kappa = 0.60-0.80$) and 'almost perfect' agreement ($\kappa = 0.81-1.0$)[28-30].

Results

Regarding validity study, examining the back translation showed the ability to conserve the original meaning. During field trial, comments and suggestions for comparable meanings but re-phrasing by using Thai grammar and idioms were suggested from the participants. Therefore, some adaptation of the phraseology, wording, and sequencing of the sentences to make SCAN ED section understandable 'Thai' were done. Examples of these tasks can be seen in the appendix.

Regarding the reliability study 30 volunteers (4 males and 26 females), including 15 ED patients and 15 normal volunteers, were recruited and none of them

withdrew. Eating disorders patients were 14 females and one male. They averaged 19.53 ± 2.03 years of age (range, 16-23) and averaged 12.9 ± 1.92 years (range 10-16) of formal education. Occupations included students (13), employees (1) and unemployed (1). The normal volunteers were 12 females and three males. They averaged 20.07 ± 2.31 years of age (range, 17-25) and averaged 12.8 ± 2.37 years (range 9-16) of formal education. Occupations included students (12), employees (2) and unemployed (1). The interview for an eating disorder patient required an average of 23.80 ± 5.15 minutes (range, 18.35-34.26) vs. 17.27 ± 4.05 minutes (range, 9.07-22.37) for a normal volunteer.

The inter-rater and intra-rater kappas, standard error (SE) and 95% confident interval (CI) for each symptom (item) of the ED Section are presented in Table 1. Classification of the κ value for each symptom as 'almost perfect', 'substantial', 'moderate', 'fair', 'slight' and 'poor' are presented in Table 2. Classification of the κ values as range, mean, median, mode, standard deviation, SE, 95% CI, minima and maxima for the whole ED section are presented in Table 3. Regarding inter-rater reliability, kappa values

Table 1. Reliability (kappa value) of each item of SCAN eating disorders section

Item	Reliability (kappa value)					
	Inter-rater			Intra-rater		
	kappa	SE	95% CI	kappa	SE	95% CI
9.001	0.67	0.03	0.60-0.74	0.74	0.03	0.68-0.81
9.002	0.72	0.03	0.66-0.79	0.86	0.03	0.79-0.92
9.003	0.68	0.03	0.61-0.74	0.73	0.03	0.66-0.80
9.004	0.74	0.03	0.68-0.81	0.61	0.03	0.54-0.68
9.005	0.63	0.02	0.58-0.68	0.62	0.03	0.57-0.67
9.006	0.71	0.03	0.64-0.77	0.79	0.03	0.72-0.86
9.007	0.66	0.03	0.59-0.72	1.00	0.03	0.93-1.00
9.008	0.78	0.03	0.71-0.85	0.63	0.03	0.57-0.70
9.009	0.67	0.03	0.60-0.73	0.62	0.03	0.55-0.68
9.010	0.79	0.03	0.72-0.86	0.71	0.03	0.64-0.78
9.011	1.00	0.03	0.93-1.00	1.00	0.03	0.93-1.00
9.012	0.72	0.03	0.67-0.78	0.89	0.03	0.83-0.95
9.013	0.69	0.02	0.65-0.72	0.73	0.01	0.69-0.77
9.014	0.67	0.03	0.60-0.73	0.80	0.03	0.73-0.87
9.015	0.71	0.03	0.64-0.77	0.71	0.03	0.64-0.77
9.016	0.60	0.03	0.53-0.67	0.73	0.03	0.68-0.80
9.023	0.87	0.03	0.80-0.94	0.61	0.03	0.54-0.68
9.026	0.69	0.02	0.64-0.74	0.79	0.02	0.74-0.84
9.027	0.85	0.03	0.79-0.90	0.92	0.03	0.87-0.98

Table 2. Classification of kappa values of each item of SCAN Eating Disorders Section

Reliability			
Inter-rater reliability		Intra-rater reliability	
Kappa value	Number of item	Kappa value	Number of item
Slightly (0.00-0.20)	-	Slightly (0.00-0.20)	-
Fair (0.21-0.40)	-	Fair (0.21-0.40)	-
Moderate (0.41-0.60)	9.016 Total = 1 items (5.26%)	Moderate (0.41-0.60)	-
Substantial (0.61-0.80)	9.001, 9.002, 9.003, 9.004, 9.005, 9.006, 9.007,9.008,9.009, 9.010,9.012,9.013, 9.014,9.015,9.026 Total = 15 items (78.95%)	Substantial (0.61-0.80)	9.001, 9.003, 9.004, 9.005, 9.006, 9.008, 9.009, 9.010, 9.013, 9.015, 9.016, 9.023, 9.026 Total = 13 items (68.42%)
Almost perfect (0.81-1.00)	9.011, 9.023, 9.027 Total = 3 items (15.79%)	Almost perfect (0.81-1.00)	9.002, 9.007, 9.011, 9.012, 9.014, 9.027 Total = 6 items (31.58%)

Table 3. Summary of reliability of eating disorders section

Statistical value	Reliabilty	
	Inter-rater (kappa)	Intra-rater (kappa)
Number of items rated	19	19
Mean	0.73	0.76
Std. deviation	0.09	0.13
Std. error of mean	0.02	0.03
95% confidence interval	0.68-0.77	0.70-0.82
Median	0.71	0.73
Mode	0.71	0.61
Minimum	0.60	0.61
Maximum	1.00	1.00

ranged 0.60-1.00, mean (and 95% CI) was 0.73 and (0.68-0.77), 78.9% of the 19 questioning items had kappa in substantial level, 15.79% in almost perfect level and only 5.26% in moderate level. For intra-rater reliability, kappa values ranged 0.61-1.00, mean (and 95% CI) was 0.76 (and 0.70-0.82), 68.42% of the 19 questioning items had kappa in substantial level, 31.58% in almost perfect level, and no item got kappa below moderate level

Discussion

Respondents were able to understand and respond to the SCAN-ED section interview, thereby confirming both qualitative validation of the translation/ back-translation, field trial process, and SCAN's cross culture utility[31].

Interviewing ED patients took an average of 24 minutes *i.e.* 6 minutes longer than normal control. SCAN ED Section is not lengthy and not time consuming. The high mean inter- and intra-rater reliability in this section was perhaps due to the 1) high validity, 2) high comprehensibility, 3) strict adherence to the rating criteria, or 4) good training in the use of the SCAN Glossary. SCAN is a clinician used interview schedule. Therefore, SCAN ED Section could help yielding a diagnosis of eating disorders. It is not like other questionnaires. Even Eating Attitudes Test (EAT) has been established as highly efficient as the sole means to identify eating disorders however, study has shown that the EAT can be an efficient screening instrument as part of a two-stage screening process in which those who score at or above a cut-off score of 20 are referred for a diagnostic interview[32]. Bulimia Test-Revised had a particular attention to bulimic condition[33]. Eating Disorder Diagnostic Scale even has a high clinical applicability yet it is a self-report[34]. Bulimic Investigatory Test Edinburgh or BITE pays attention to binge condition[35]. Eating Disorder Examination (EDE) is only a measure of the specific psychopathology of anorexia nervosa and bulimia nervosa[6]. CIDI is a fully-structured interview but it was designed to be used by trained lay interviewers[36]. The authors chose to validate and did a reliability test of the SCAN ED section as it is a scale

for clinician diagnosis and as a sub-protocol of the whole SCAN validity and reliability testing. With the proved validity and substantial level kappa, both intra-rater and inter-rater, will mean that any well-trained rater would obtain similar results and/or measurements or the resulting ratings would be representative of the subject's score. Therefore, the user can apply SCAN with substantial confidence for both inter- and intra-rater rating. The authors expects, with the proved validity and reliability, different clinicians with adequate training in using Thai version of ED section of SCAN, to minimize the variability that occur in the diagnostic process and maximize the replicability of diagnoses and the discrimination of patients.

In conclusion, the Eating Disorders Section of the Thai version of SCAN was tested for its validity and reliability. Interviewing an ED patient using SCAN ED section did not take a long time. The inter- and intra-rater agreement assessments were consistently strong. Still, there was some limitation in the present study. During the reliability study, the authors recruited only the patients with anorexia nervosa or bulimia nervosa. Further reliability study on other types of eating disorders (atypical anorexia nervosa and atypical bulimia nervosa) might be needed.

Potential conflicts of interest

None.

References

1. Yager G, Gitlin MJ. Clinical manifestations of psychiatric disorders. In: Sadock BJ, Sadock VA, editors. Kaplan & Sadock's comprehensive textbook of psychiatry. 8th ed. Philadelphia: Lippincott Williams & Wilkins; 2005: 964-1002.
2. Garner DM, Garfinkel PE. The Eating Attitudes Test: an index of the symptoms of anorexia nervosa. Psychol Med 1979; 9: 273-9.
3. McCarthy DM, Simmons JR, Smith GT, Tomlinson KL, Hill KK. Reliability, stability, and factor structure of the Bulimia Test-Revised and Eating Disorder Inventory-2 scales in adolescence. Assessment 2002; 9: 382-9.
4. Freeman CP, Henderson M. The BITE: indices of

agreement. Br J Psychiatry 1988; 152: 575-7.
5. Henderson M, Freeman CP. A self-rating scale for bulimia. The 'BITE'. Br J Psychiatry 1987; 150: 18-24.
6. Cooper Z, Cooper PJ, Fairburn CG. The validity of the eating disorder examination and its subscales. Br J Psychiatry 1989; 154: 807-12.
7. Haro JM, Arbabzadeh-Bouchez S, Brugha TS, de Girolamo G, Guyer ME, Jin R, et al. Concordance of the Composite International Diagnostic Interview Version 3.0 (CIDI 3.0) with standardized clinical assessments in the WHO World Mental Health surveys. Int J Methods Psychiatr Res 2006; 15: 167-80.
8. Skre I, Onstad S, Torgersen S, Kringlen E. High interrater reliability for the Structured Clinical Interview for DSM-III-R Axis I (SCID-I). Acta Psychiatr Scand 1991; 84: 167-73.
9. World Health Organization. Eating disorders. In: World Health Organization, editor. Schedules for clinical assessment in neuropsychiatry. Version 2.1 Interview. Geneva: WHO; 1999: 117-24.
10. World Health Organization. Eating disorders. In: World Health Organization, editor. Schedules for clinical assessment in neuropsychiatry. Version 2.1 Glossary. Geneva: WHO; 1999: 87-90.
11. World Health Organization. Behavioral syndromes associated with physiological disterbance and physical factors. In: World Health Organization, editor. International statistical cassification of diseases and related health problems. 10th Rev. Geneva: WHO; 1992: 352-3.
12. Aboraya A, Tien A, Stevenson J, Crosby K. Schedules for Clinical Assessment in Neuropsychiatry (SCAN): introduction to WV's mental health community. W V Med J 1998; 94: 326-8.
13. Janca A, Ustun TB, Sartorius N. New versions of World Health Organization instruments for the assessment of mental disorders. Acta Psychiatr Scand 1994; 90: 73-83.
14. Rijnders CA, van den Berg JF, Hodiamont PP, Nienhuis FJ, Furer JW, Mulder J, et al. Psychometric properties of the schedules for clinical assessment in neuropsychiatry (SCAN-2.1). Soc Psychiatry Psychiatr Epidemiol 2000; 35: 348-52.
15. Wing JK, Babor T, Brugha T, Burke J, Cooper JE, Giel R, et al. SCAN. Schedules for Clinical Assessment in Neuropsychiatry. Arch Gen Psychiatry 1990; 47: 589-93.
16. Sadock BJ, Sadock VA. Eating disorders. In: Sadock BJ, Sadock VA, editors. Kaplan & Sadocks's

synopsis of psychiatry: behavioral scinces/ clinical psychiatry. 10th ed. Philadelphia: Lippincott Williams & Wilkins; 2007: 728-48.

17. Blinder BJ, Cumella EJ, Sanathora VA. Psychiatric comorbidities of female inpatients with eating disorders. Psychosom Med 2006; 68: 454-61.

18. Quintero-Parraga E, Perez-Montiel AC, Montiel-Nava C, Pirela D, Acosta MF, Pineda N. Eating behavior disorders. Prevalence and clinical features in adolescents in the city of Maracaibo, Zulia State, Venezuela. Invest Clin 2003; 44: 179-93.

19. Casper RC, Offer D, Ostrov E. The self-image of adolescents with acute anorexia nervosa. J Pediatr 1981; 98: 656-61.

20. Laessle RG, Schweiger U, Pirke KM. Depression as a correlate of starvation in patients with eating disorders. Biol Psychiatry 1988; 23: 719-25.

21. Steinhausen HC, Vollrath M. The self-image of adolescent patients with eating disorders. Int J Eat Disord 1993; 13: 221-7.

22. Faravelli C, Ravaldi C, Truglia E, Zucchi T, Cosci F, Ricca V. Clinical epidemiology of eating disorders: results from the Sesto Fiorentino study. Psychother Psychosom 2006; 75: 376-83.

23. Arunpongpaisal S, Krisanaprakornkit T, Paholpak S, Keiwyoo J. Inter- and intra-rater reliability of the Thai version of SCAN: Use of Alcohol and Use of Tobacco Section. J Med Assoc Thai 2006; 89: 2129-37.

24. Krisanaprakornkit T, Rangseekajee P, Paholpak S, Khiewyoo J. The validity and reliability of the WHO Schedules for Clinical Assessment in Neuropsychiatry (SCAN Thai Version): anxiety disorders section. J Med Assoc Thai 2007; 90: 341-7.

25. Krisanaprakornkit T, Paholpak S, Piyavhatkul N. The validity and reliability of the WHO Schedules for Clinical Assessment in Neuropsychiatry (SCAN Thai Version): Mood Disorders Section. J Med Assoc Thai 2006; 89: 205-11.

26. Paholpak S, Arunpongpaisal S, Krisanaprakornkit T, Piyavhatkul N, Khiewyoo J. Validity and reliability study of the Thai version of WHO SCAN: somatoform and dissociative symptoms section. J Med Assoc Thai 2006; 89: 473-83.

27. Paholpak S, Arunpongpaisal S, Krisanaprakornkit T, Khiewyoo J. Validity and reliability study of the Thai version of WHO schedules for clinical assessment in neuropsychiatry: sections on psychotic disorders. J Med Assoc Thai 2008; 91: 408-16.

28. Altman DG. Some common problems in medical research. In: Altman DG, editor. Practical statistic for medical research. London: Chapman & Hall; 1991: 396-439.

29. Feinstein AR. Evaluating concordances. In: Feinstein AR. editor. Principles of medical statistics. Boca Raton, FL: Chapman & Hall/CRC; 2002: 415-8.

30. Portney LG, Watkins MP. Statistical measures of reliability. In: Portney LG, Watkins MP, editors. Foundations of clinical research: applications to practice. 2nd ed. New Jersey: Prentice Hall Health; 2000: 568-75.

31. Brugha TS, Jenkins R, Taub N, Meltzer H, Bebbington PE. A general population comparison of the Composite International Diagnostic Interview (CIDI) and the Schedules for Clinical Assessment in Neuropsychiatry (SCAN). Psychol Med 2001; 31: 1001-13.

32. Cheng AT, Tien AY, Chang CJ, Brugha TS, Cooper JE, Lee CS, et al. Cross-cultural implementation of a Chinese version of the Schedules for Clinical Assessment in Neuropsychiatry (SCAN) in Taiwan. Br J Psychiatry 2001; 178: 567-72.

33. Vincent MA, McCabe MP, Ricciardelli LA. Factorial validity of the Bulimia Test-Revised in adolescent boys and girls. Behav Res Ther 1999; 37: 1129-40.

34. Stice E, Telch CF, Rizvi SL. Development and validation of the Eating Disorder Diagnostic Scale: a brief self-report measure of anorexia, bulimia, and binge-eating disorder. Psychol Assess 2000; 12: 123-31.

35. Wittchen HU, Robins LN, Cottler LB, Sartorius N, Burke JD, Regier D. Cross-cultural feasibility, reliability and sources of variance of the Composite International Diagnostic Interview (CIDI). The Multicentre WHO/ADAMHA Field Trials. Br J Psychiatry 1991; 159: 645-53, 658.

36. The World Health Organization (WHO) Composite International Diagnostic Interview (CIDI) [database on the Internet]. 2004 [cited 2009 Jan 20]. Available from: http://www.hcp.med.harvard.edu/wmhcidi/

Appendix. Examples of the comprehensibility difficulties and correction during field testing of the questioning items of Eating Disorders Symptoms Section of SCAN

คำถามข้อที่	รายละเอียดของคำถาม	คำแปลที่เข้าใจยากก่อนออกภาคสนาม	คำแปลที่แก้ไขใหม่แล้ว
9.001	Have you worried, during the past year, about eating too much, or putting on weight, or getting too fat?	คุณเคยกังวลว่าจะกินมากเกินไปหรือกังวลว่าอ้วนขึ้นหรืออ้วนเกินไปในระหว่างปีที่แล้วบ้างไหม	คุณเคยกังวลว่ากินมากเกินไปหรือกังวลว่าอ้วนขึ้นหรืออ้วนเกินไปในระหว่างปีที่แล้วบ้างไหม
9.005	Symptoms present but little interference	มีอาการหลายอาการแต่มีผลรบกวนเล็กน้อย	มีอาการหลายอาการแต่มีผลกระทบเล็กน้อย
9.012	Have you missed any period while you were keeping your weight down?	คุณเคยระดูไม่มาบ้างไหมในขณะที่คุณทำน้ำหนักตัวให้ลดไว้	ประจำเดือนของคุณเคยไม่มาบ้างไหมในขณะที่คุณทำน้ำหนักตัวให้ลดไว้
9.013	Have you had periods when you would eat abnormally large amounts of food within an hour or so, that is, binge eating?	คุณเคยมีหลาย ๆ ช่วงที่คุณกินอาหารจำนวนมากอย่างผิดปกติภายในเวลา 1 ชั่วโมงหรือทำนองนี้อย่างที่เรียกว่ากินอย่างเป็นบ้าเป็นหลังบ้างไหม	คุณเคยมีหลาย ๆ ช่วงที่คุณกินอาหารจำนวนมากอย่างผิดปกติภายในเวลา 1 ชั่วโมงหรือทำนองนี้อย่างที่เรียกว่ากินอย่างตะกละตะกลามบ้างไหม

การศึกษาความแม่นตรงและความเชื่อถือได้ของ *WHO Schedules for Clinical Assessment in Neuropsychiatry* ฉบับภาษาไทย หมวดความผิดปกติของการกิน

นิรมล พัจนสุนทร, สุชาติ พหลภาคย์, ธวัชชัย กฤษณะประกรกิจ

วัตถุประสงค์: *เพื่อศึกษาความแม่นตรงและความเชื่อถือได้ของ WHO Schedules for Clinical Assessment in Neuropsychiatry (SCAN) Version 2.1 ภาคภาษาไทยหมวดความผิดปกติของการกิน*

วัสดุและวิธีการ: *คณะผู้วิจัยได้แปลบทสัมภาษณ์เกี่ยวกับความผิดปกติของการกินซึ่งเป็นบทที่ 9 ของ SCAN version 2.1 เป็นภาษาไทย คณะผู้วิจัยได้แปลกลับเป็นภาษาอังกฤษ และตรวจสอบว่าภาษาอังกฤษที่แปลกลับมานั้น มีความหมายแม่นตรงกับความหมายเดิมหรือไม่ ถ้าไม่ตรงก็จะแก้ไขภาคภาษาไทยจนคำแปลเป็นภาษาอังกฤษ มีความหมายตรงกับภาคภาษาอังกฤษต้นฉบับเดิม คณะผู้วิจัยได้นำ SCAN ภาคภาษาไทยที่ได้ไปสัมภาษณ์ อาสาสมัครในภาคสนามทั้ง 4 ภาค ได้แก่ โรงพยาบาลสวนปรุง โรงพยาบาลจิตเวชขอนแก่น โรงพยาบาลศรีธัญญา และโรงพยาบาลสวนสราญรมย์ สถานที่ละ 20 คน เพื่อตรวจสอบความถูกต้องของคำที่ใช้และตรวจสอบว่า คำแปลเป็นที่เข้าใจหรือไม่ ความเห็นที่ได้รับจากอาสาสมัครที่ตอบแบบสัมภาษณ์จะถูกนำมาประกอบการแก้ไข SCAN ภาคภาษาไทยจนคนไทยสามารถเข้าใจคำถามได้ง่าย การศึกษาเกี่ยวกับความเชื่อถือได้ของ SCAN ภาคภาษาไทย หมวดความผิดปกติของการกินได้กระทำตั้งแต่เดือนตุลาคม พ.ศ. 2548 ถึงเดือนกันยายน พ.ศ. 2551 อาสาสมัคร ที่ตอบแบบสัมภาษณ์มี 30 คน เป็นชาย 4 คน หญิง 26 คน เป็นผู้ป่วยความผิดปกติของการกิน 15 คน (เป็นผู้ป่วย anorexia nervosa 4 คน bulimia nervosa 11 คน) (ชาย 1 คน หญิง 14 คน) และคนปกติ 15 คน (ชาย 3 คน หญิง 12 คน) กลุ่มตัวอย่างมีระดับการศึกษาและอาชีพที่แตกต่างกัน จิตแพทย์ที่ชำนาญในการใช้ SCAN ภาคภาษาไทย ใช้ SCAN ภาคภาษาไทยหมวดความผิดปกติของการกินสัมภาษณ์กลุ่มตัวอย่างมีการบันทึกวิดีโอ เพื่อการให้คะแนน แก่คำตอบในภายหลัง*

ผลการศึกษา: *การศึกษาเกี่ยวกับความแม่นตรงพบว่าคำตอบที่ได้รับจากกลุ่มตัวอย่าง และการประเมินของจิตแพทย์ ที่มีความชำนาญในการใช้ SCAN พบว่า SCAN ภาคภาษาไทยของการกินมีเนื้อหาที่แม่นตรงเกี่ยวกับการศึกษา เกี่ยวกับความเชื่อถือ ได้พบว่าระยะเวลาที่ใช้ในการสัมภาษณ์ผู้ป่วย คือ 23.80 ± 5.15 นาที (พิสัย 18.35-34.26 นาที) คนปกติ 17.27 ± 4.05 นาที (พิสัย 9.07-22.37 นาที) ค่าเฉลี่ยค่า standard error (SE) ค่าความเชื่อมั่นร้อยละ 95 (95% CI) ของ inter-rater reliability (kappa) ของ SCAN หมวดความผิดปกติของการกิน คือ 0.73 0.02 และ 0.68-0.77 ตามลำดับ ร้อยละ 78.5 ของคำถามได้ค่า kappa ในระดับ substantial ค่าเฉลี่ยค่า SE ค่า 95% CI ของ intra-rater reliability คือ 0.76 0.03 และ 0.70-.0.82 ตามลำดับ ร้อยละ 68.4 และร้อยละ 31.8 ของคำถามได้ค่า kappa ในระดับ substantial และ perfect ตามลำดับ*

สรุป: *SCAN ภาคภาษาไทยหมวดความผิดปกติของการกินเป็นเครื่องมือที่มีความแม่นตรงและมีความเชื่อถือได้ ในการประเมินคนไทยที่มีความผิดปกติของการกิน*