Under-Recognized Alcohol-Related Disorders in Psychiatric Outpatient Unit

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Objective: *Problematic alcohol consumption is associated with multiple medical conditions and psychiatric comorbidities. Previous publications reported the under-recognition of alcohol-related problems in the clinical setting. The present study comprises of two objectives, 1) to examine the process use by physicians to recognize alcohol-related problems in psychiatric outpatient units, and 2) to compare the results of a CAGE interview and a written version of the CAGE questionnaire.*

Material and Method: *The participants were recruited via interview using the alcohol section of the Thai version of Diagnostic Interview for Genetic Studies (Th-DIGS), which included 165 psychiatric outpatients with alcohol dependence and 165 psychiatric outpatients without alcohol-related disorders. The validity of diagnoses provided by psychiatrists and physicians (in the records) compared with the Th-DIGS diagnoses were analyzed. Kappa statistics were applied to compare the agreement of the responses for the written version and the oral CAGE interviews.*

Results: *Compared with the diagnoses using Th-DIGS, the physician specificity and positive predictive value were 100% (95% CI: 97.8-100% and 94.9-100%, respectively). However, the sensitivity and negative predictive value were 43% (95% CI: 35.4-51%) and 63.5% (95% CI: 57.5-69.6%), respectively. The Kappa value for the written version of the CAGE questionnaire and the CAGE oral interview was 0.723.*

Conclusion: *The results of the present study suggest the need to increase physician awareness regarding alcohol-related problems. A brief and high-sensitivity screening questionnaire, such as the CAGE questionnaire, written versions and oral interview, can be implemented for screening alcohol-related disorders in a clinical setting.*

Keywords: *Alcohol-related disorder, Alcohol dependence, Outpatient unit, CAGE questionnaire*

Alcohol is one of the most harmful substances to individuals and others[1]. According to the World Health Organization (WHO) global burden report database, alcohol use disorders ranked as the 17 leading cause of burden of disease in 2004[2]. In Thailand, alcohol use disorders were the leading cause of years lost due to disability (YLD). In Thai males, alcohol use disorders ranked as the leading cause of YLD and were responsible for 17.9% of all types of disabilities[3,4]. Measured in disability-adjusted life years (DALYs), alcohol use disorders also ranked as the first neuropsychiatric disorder[3].

Alcohol-related problems are common in general medical settings. Alcohol use disorders are implicated in various diseases and are associated with trauma and injuries[5,6]. Previous studies had indicated a relatively high prevalence of alcohol use disorders in both inpatient and outpatient settings[7,8]. In psychiatric units, patients with alcohol-related problems also exhibited co-morbidity with other psychiatric disorders[9-11]. Furthermore, alcohol may represent a background factor involved in psychosocial problems[12,13].

According to a validity study of the Diagnostic Interview for Genetic Studies Thai version (Th-DIGS), this instrument showed excellent validity and reliability in most diagnoses, including alcohol dependence. The positive predictive value (PPV) of alcohol dependence was 59.1%. This finding signified that 59.1% of subjects with positive alcohol dependence as assessed via Th-DIGS would have a clinical diagnosis of alcohol dependence. In contrast, the data could be interpreted as approximately 40% of alcoholic patients were undiagnosed by psychiatrists[15]. Additionally, previous studies indicated under-detected alcohol use disorders in clinical settings[16,17]. Under-diagnosis of alcohol dependence was associated with comorbidities and the denial of drinking problems[18].

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Objective

To our knowledge, however, the issues of alcohol dependence under-diagnosis in clinical settings in Thailand are not well studied. The present study comprised of two objectives, 1) To examine the process used by psychiatrists and physicians to recognize and evaluate alcohol-related problems in psychiatric outpatients compared to the reported diagnoses provided by psychiatrists and physicians using the Th-DIGS, 2) To examine the agreement between self-reported diagnosis and had been interviewed using the CAGE questionnaire. We hypothesized that the results of the present study may reflect the current clinical practice and might be beneficial for improving clinical practice, physician awareness, and screening alcohol-related problems.

Material and Method
Subjects

Patients who attended the outpatient unit of the Psychiatric Department, Siriraj Hospital were enrolled in the present study. To be eligible, the participants had to be at least 18 years of age and were required to sign informed consent. It was required that the participants had good comprehension of Thai language and cooperated with the questionnaire and semi-structured interview. The participants would be excluded if they had severe psychiatric or medical conditions requiring emergency management, such as unstable vital signs, active psychotic symptoms, and suicidal behaviors. The participants who had communication problems, such as hearing problems or mental capacity problems (i.e., mental retardation) were also excluded.

The present study was conducted with the approval of the Siriraj Research Affair and Siriraj Institutional Review Board (SIRB), Faculty of Medicine Siriraj Hospital, Mahidol University. Informed consent was obtained from all of the participants.

Procedure and measurement

After receiving informed consent, the studied team recruited 165 psychiatric outpatients with alcohol dependence and 165 psychiatric outpatients without alcohol-related disorders via interviewed using the alcohol dependence section in Th-DIGS. The participants answered the questionnaire, which evaluated their demographic data, principal complaints, history of alcohol consumption, reported to a physician regarded their drinking experience and reasons why they did not report earlier their drinking history to their physician. Additionally, to assess the agreement between self-report and the CAGE questionnaire interview. The participants also answered a written version of the CAGE questionnaire, after responding to the questions regarding demographic data and history of alcohol consumption. The CAGE questions were also included in Th-DIGS interview.

After completing the interviews, the authors interpreted the diagnoses (e.g., alcohol dependence or no diagnosis of alcohol dependence). To test the validity, the diagnoses obtained from the physicians, which were reviewed by the diagnosis reported in the medical record, were compared with the diagnosis interpreted from the Th-DIGS diagnosis.

Instruments

Diagnostic Interview for Genetic Studies Thai version (Th-DIGS): a semi-structured interview originally developed by the National Institute of Mental Health (NIMH) to collect data on psychiatric signs and symptoms, including current and life-time psychiatric history, to assess various psychiatric disorders[14]. The overall Kappa of concurrent validity of the Th-DIGS was 0.82, with 93.6% sensitivity and 95% specificity. The overall Kappa coefficients of inter-rater reliability and test-retest reliability were 0.89 and 0.78, respectively. The concurrent validity of alcohol dependence was 0.66 (fair to good). The sensitivity and specificity were 100% and 83.5%, respectively. The positive predictive value (PPV) and negative predictive value (NPV) were 59.1% and 100%, respectively[15].

CAGE questionnaire: a self-report scale designed to screen for alcohol dependence. The questionnaire consists of four items that assesses the respondent's attitude regarding their alcohol consumption, using the following questions: 1) Have you ever felt that you needed to cut down on your drinking? 2) Have people annoyed you by criticizing your drinking habits? 3) Have you ever felt guilty about drinking?, and 4) Have you ever felt you needed a drink first thing in the morning (eye-opener) to steady your nerves or to get rid of a hangover?[19]. The cut-off point of two items or more identifies drinking problems[20]. The CAGE proved superior for detecting alcohol abuse and dependence with a sensitivity of 43% to 94% and a specificity of 70 to 97%[21,22].

Analysis

The data were analyzed using SPSS software v16.0 (SPSS Inc., Chicago, Illinois, US). The

demographic data and drinking history were reported by frequency, percentage, mean, and standard deviation (SD). A two by two table was constructed for each diagnosis based on physician diagnoses and clinical diagnoses, using the Th-DIGS as the reference. The sensitivity, specificity, PPV, and NPV with 95% confidence interval (CI) were calculated to evaluate the validity. The agreement between the answers for the CAGE questionnaire, which were given by the participants themselves, and those received from the interviewer's recorded answer (part of the Th-DIGS) was examined using Kappa statistics. The agreement was considered as excellent when Kappa coefficient (k) was greater than 0.75, fair-to-good when k was 0.40 to 0.75 and poor when k was below 0.40[23].

Results

Demographic data

The data were collected from 330 recruited participants, including 165 participants with alcohol dependence and 165 participants without alcohol-related disorders; 70.3% of the participants were male (232/330). The mean age of the participants was 42.07 years (range: 18-75 years). Moreover, 44.6% of the participants were single and 44.5% of the participants were married. Approximately 82% of the participants were employed, and the majority of the participants attended the outpatient unit as a follow-up visit. The demographic data and the characteristics of the participants are presented in Table 1.

Next, the authors evaluated drinking experience, the number of participants who reported drinking experience to a physician and the reasons why the participants did not report earlier the drinking experience. Two hundred sixteen of 330 participants (65.5%) reported experiences of alcohol consumption. However, only 153 of these (71.5%) responded that they had reported their drinking histories to the physicians. The major reasons were that the physician did not inquire about their alcohol consumption (44.3%); the participants believed that it was not the principal problem (26.2%), and alcohol consumption was not associated with their primary complaint (13.1%). The details of the drinking experience, the number of participants who reported their drinking experience to a physician, and the reasons for which the participants did not report the drinking experience are shown in Table 2.

Sensitivity of alcohol dependence detection by physicians

The authors examined the process used by physicians to recognize alcohol-related problems by comparing the results of the physician diagnoses to the diagnosis using Th-DIGS, which used Th-DIGS as a standard. The sensitivity and specificity were 43% (95% CI: 35.4-51%) and 100% (95% CI: 97.8-100%),

Table 1. Demographics and characteristics of participants

Demographics and characteristics	Diagnosis using the Th-DIGS		Total (n = 330) n (%)
	Alcohol dependence group (n = 165), n (%)	No diagnosis group (n = 165), n (%)	
Age (years), mean ± SD	42.9±11.7	41.2±12.3	42.1±12.0
Gender			
Male	145 (87.9)	87 (52.7)	232 (70.3)
Female	20 (12.1)	78 (47.3)	98 (29.7)
Marital status			
Single	57 (34.6)	90 (54.5)	147 (44.5)
Married	89 (53.9)	58 (35.2)	147 (44.5)
Widow	11 (6.7)	6 (3.6)	17 (5.2)
Divorced	8 (4.8)	10 (6.1)	18 (5.5)
Occupational Status			
Employed	135 (81.8)	136 (82.4)	271 (82.1)
Unemployed	30 (18.2)	29 (17.6)	59 (17.9)
Hospital visit			
First visit	19 (11.5)	20 (12.1)	39 (11.8)
Follow-up	141 (85.5)	144 (87.3)	285 (86.4)

Th-DIGS = Diagnostic Interview for Genetic Studies Thai version

Table 2. Drinking experience: the number of participants who reported drinking experience to a physician and the reasons for which the participants did not report the drinking experience

Demographics and characteristics	Diagnosis using the Th-DIGS		Total (n = 330) n (%)
	Alcohol dependence group (n = 165), n (%)	No diagnosis group (n = 165), n (%)	
Drinking experiences			
Drinking	154 (93.3)	62 (37.6)	216 (65.5)
No drinking	11 (6.7)	103 (62.4)	114 (34.5)
Number of participants who reported drinking experiences to physicians			
Reported	127 (83.0)	26 (42.6)	153 (71.5)
Not report	26 (17.0)	35 (57.4)	61 (28.5)
The reasons for which the participants did not report their drinking experiences			
Not the primary problem	8 (30.8)	8 (22.9)	16 (26.2)
Not associated with the chief complaint	1 (3.8)	7 (20.0)	8 (13.1)
Physician did not inquire about their alcohol consumption	13 (50.0)	14 (40.0)	27 (44.3)
Other or unspecified	4 (15.4)	6 (17.1)	10 (16.4)

Th-DIGS = Diagnostic Interview for Genetic Studies Thai version

Table 3. Alcohol dependence diagnosed using Th-DIGS compared with Physician diagnosis: sensitivity, specificity, positive predictive value (PPV), and negative predictive value (NPV)

		Th-DIGS diagnoses		
		Positive	Negative	
Physicians diagnoses	Positive	71	0	PPV 100% (94.9-100%)
	Negative	94	165	NPV 63.7% (57.5-69.6%)
		Sensitivity 43% (35.4-51%)	Specificity 100% (97.8-100%)	

respectively, while the PPV and the NPV were 100% (95% CI: 97.8-100%), and 63.7% (95% CI: 57.5-69.6%), respectively (Table 3).

Agreement between the written version and oral interview of the CAGE questionnaire

The results of the participant written version of the CAGE questionnaire and the data derived from interviews were compared and their level of agreement was calculated. The Kappa coefficient of the comparison between all of the written CAGE questionnaires and the oral CAGE questionnaires was 0.72, (fair to good).

Discussion

The authors investigated the level of sensitivity to detect and diagnose alcohol-related problems in psychiatric patients. The results should be carefully interpreted because the data were gathered from participants only; recall bias and denial of drinking history cannot be excluded. The present study found that physician diagnosis exhibited high specificity and PPV for the detection of alcohol consumption problems; however, the sensitivity was quite low (43%). Compared to the authors' previous study, approximately 40% of alcoholic patients were undiagnosed by psychiatrists[15]. The sensitivity of the present study was lower than that of the previous study even though the population was recruited from the same setting and the same diagnostic interview. This discrepancy may due to 1) approximately 20% of the recruited participants in the present study visited the clinic for the first time thus, a detailed history, including alcohol consumption history, may not have been completely recorded, 2) the present study included patients evaluated by psychiatrists and physicians, whereas the previous study recruited only patients evaluated by psychiatrists; and 3) the time difference between data collections. Moreover, under-evaluation may be associated with the presence of other psychiatric symptoms, especially psychotic symptoms, the denial of alcohol problems, and less severe symptoms of alcohol dependence[18].

As discussed in the introduction, the national survey on burden of diseases and injuries in Thailand in 2004 indicated that alcohol use problems was one of the leading problems impacting the disability-adjusted life year[3]. In 2009, alcohol use problems represented the leading cause of YLD in Thai males, which was responsible for 22.6% of disabilities from all causes in males; this is a 4.7% increase from 2004. When assessed in disability-adjusted life years (DALYs), it ranked as the first mental disorder[24]. With respect to the results of the present study, the authors suggest the need to recognize this problem in the clinical setting. One of the strategies is the use screening tests for the early detection and intervention of problematic alcohol consumption[5,25]. According to the results, the agreement between the written version and interview of CAGE questions displayed a fair to good agreement (Table 4). The present study obtained results similar to those obtained in the study performed by Aertgeerts et al (the present study's k/ that of Aertgeerts et al = 0.72/0.75)[26]. The CAGE questionnaire may use as a tool for screening for alcohol-related problems in psychiatric units, either using written versions implemented in departments that have a limited number of health care staff or via oral interviews performed by physicians or health care staff[21].

The present study recruited only psychiatric outpatients. In fact, alcohol-related problems are commonly observed in association with medical conditions[27,28]. Patients cannot avoid visiting medical outpatient units due to their physical sufferings but can deny or hesitate to consult psychiatrists regarding their drinking problems. According to the questionnaire results, some alcohol-related participants denied their drinking histories. Furthermore, many of the patients believed that alcohol consumption issues were not their primary problem, and the physician did not ask them about their drinking histories. These observations imply that physicians should be more concerned regarding drinking history and should seek further

information (e.g., data from their families and relatives, etc.). Further studies should investigate the significance of these problems in other settings (e.g., the prevalence of problematic drinking or sensitivity to detect alcohol problems in general medical outpatient settings and inpatient units). Lastly, the authors suggest the implementation of brief screening instruments for alcohol-associated problems in psychiatric outpatient units and medical outpatient units to increase the recognition of alcohol consumption problems[20,21].

The present study has several limitations. First, clinically stable psychiatric patients were recruited to participate in the present study. The patients who could not cooperate well while answering the questionnaire or participating in the semi-structure interview were excluded, as were those with severe psychiatric or medical conditions requiring emergency management. Therefore, the present study cannot be generalized for all types of psychiatric outpatients. Further studies should focus on these patient groups. Second, individuals with problematic alcohol consumption may deny their problem or exhibit recall bias. The data should be carefully interpreted. With respect to the best practice, collecting data from the patient's family members or other sources may enhance the reliability of the data. Third, the alcohol section of Th-DIGS is a highly valid semi-structure interview and is useful for gathering psychiatric data. However, it is more suitable for studies performed by well-trained interviewers than it is a general clinical setting.

Conclusion

Alcohol-related problems in psychiatric outpatients are under-evaluated and un-diagnosed. The present study suggests the need to enhance physician awareness regarding alcohol-related problems in psychiatric patients. A brief and high-sensitivity screening questionnaire, such as the CAGE questionnaire, can be used as an instrument for the screening of alcoholic-related problems in clinical settings.

Table 4. Agreement between the participants' self-report and the interview using the CAGE questionnaire

Items	Kappa
Question 1 (C): Have you ever felt that you needed to cut down on your drinking?	0.70
Question 2 (A): Have people annoyed you by criticizing your drinking?	0.74
Question 3 (G): Have you ever felt guilty about drinking?	0.68
Question 4 (E): Have you ever felt you needed a drink first thing in the morning to steady your nerves or to get rid of a hangover (eye-opener)?	0.71
Sum	0.72

What is already known on this topic?

Alcohol-related problems are common in both psychiatric and general medical settings. Patients with alcohol-related problems also exhibited co-morbidity with other medical conditions and psychiatric disorders.

Previous studies reported the under-recognition of alcohol-related problems in the clinical setting.

What this study adds?

Alcohol-related problems in psychiatric outpatients are under-evaluated and un-diagnosed.

The present study suggests a need to enhance physician awareness regarding alcohol-related problems in psychiatric patients.

The CAGE questionnaire, written versions and oral interview, can be used as an instrument for the screening of alcoholic-related problems in clinical settings.

Potential conflicts of interest

None.

References

1. Nutt DJ, King LA, Phillips LD. Drug harms in the UK: a multicriteria decision analysis. Lancet 2010; 376: 1558-65.
2. The global burden of disease: 2004 update [Internet]. 2008 [cited 2009 Mar 30]. Available from: http://www.who.int/healthinfo/global_burden_disease/2004_report_update/en/index.html
3. Bundhamcharoen K, Odton P, Phulkerd S, Tangcharoensathien V. Burden of disease in Thailand: changes in health gap between 1999 and 2004. BMC Public Health 2011; 11: 53.
4. Data and statistics (database in Thai) [Internet]. 2009 [cited 2009 Apr 5]. Available from: http://www.who.hiso.or.th/hiso/center.php
5. Saunders JB, Aasland OG, Amundsen A, Grant M. Alcohol consumption and related problems among primary health care patients: WHO collaborative project on early detection of persons with harmful alcohol consumption—I. Addiction 1993; 88: 349-62.
6. Alkerwi A, Boutsen M, Vaillant M, Barre J, Lair ML, Albert A, et al. Alcohol consumption and the prevalence of metabolic syndrome: a meta-analysis of observational studies. Atherosclerosis 2009; 204: 624-35.
7. Smothers BA, Yahr HT, Sinclair MD. Prevalence of current DSM-IV alcohol use disorders in short-stay, general hospital admissions, United States, 1994. Arch Intern Med 2003; 163: 713-9.
8. Roson B, Monte R, Gamallo R, Puerta R, Zapatero A, Fernandez-Sola J, et al. Prevalence and routine assessment of unhealthy alcohol use in hospitalized patients. Eur J Intern Med 2010; 21: 458-64.
9. Blanco C, Okuda M, Markowitz JC, Liu SM, Grant BF, Hasin DS. The epidemiology of chronic major depressive disorder and dysthymic disorder: results from the National Epidemiologic Survey on Alcohol and Related Conditions. J Clin Psychiatry 2010; 71: 1645-56.
10. Mewton L, Teesson M, Slade T, Grove R. The epidemiology of DSM-IV alcohol use disorders amongst young adults in the Australian population. Alcohol Alcohol 2011; 46: 185-91.
11. Echeburua E, De Medina RB, Aizpiri J. Comorbidity of alcohol dependence and personality disorders: a comparative study. Alcohol Alcohol 2007; 42: 618-22.
12. Colder CR, Chassin L. The psychosocial characteristics of alcohol users versus problem users: data from a study of adolescents at risk. Dev Psychopathol 1999; 11: 321-48.
13. Innamorati M, Lester D, Amore M, Girardi P, Tatarelli R, Pompili M. Alcohol consumption predicts the EU suicide rates in young women aged 15-29 years but not in men: analysis of trends and differences among early and new EU countries since 2004. Alcohol 2010; 44: 463-9.
14. Nurnberger JI Jr, Blehar MC, Kaufmann CA, York-Cooler C, Simpson SG, Harkavy-Friedman J, et al. Diagnostic interview for genetic studies. Rationale, unique features, and training. NIMH

Genetics Initiative. Arch Gen Psychiatry 1994; 51: 849-59.

15. Sitdhiraksa N, Singhakant S, Ratta-apha W, Saisavoey N, Chantarujikapong S. Diagnostic Interview for Genetic Studies (DIGS): validity, inter-rater and test-retest reliability of the Thai version (Th-DIGS). ASEAN J Psychiatr 2008; 9: 104-13.

16. Yamada K, Maeno T, Waza K, Sato T. Under-diagnosis of alcohol-related problems and depression in a family practice in Japan. Asia Pac Fam Med 2008; 7: 3.

17. Simon GE, Goldberg D, Tiemens BG, Ustun TB. Outcomes of recognized and unrecognized depression in an international primary care study. Gen Hosp Psychiatry 1999; 21: 97-105.

18. Woodward B, Fortgang J, Sullivan-Trainor M, Stojanov H, Mirin SM. Underdiagnosis of alcohol dependence in psychiatric inpatients. Am J Drug Alcohol Abuse 1991; 17: 373-88.

19. Ewing JA. Detecting alcoholism. The CAGE questionnaire. JAMA 1984; 252: 1905-7.

20. Aertgeerts B, Buntinx F, Kester A. The value of the CAGE in screening for alcohol abuse and alcohol dependence in general clinical populations: a diagnostic meta-analysis. J Clin Epidemiol 2004; 57: 30-9.

21. Fiellin DA, Reid MC, O'Connor PG. Screening for alcohol problems in primary care: a systematic review. Arch Intern Med 2000; 160: 1977-89.

22. Bernadt MW, Mumford J, Taylor C, Smith B, Murray RM. Comparison of questionnaire and laboratory tests in the detection of excessive drinking and alcoholism. Lancet 1982; 1: 325-8.

23. Fleiss J. Statistical methods for rates and propotions. 2nd ed. New York: John Willey; 1981.

24. International Health Policy Program, Ministry of Public Health. Burden of Disease Thailand: Disability-Adjusted Life Year (DALY). Nonthaburi: The Graphico System; 2012.

25. Shourie S, Conigrave KM, Proude EM, Haber PS. Detection of and intervention for excessive alcohol and tobacco use among adult hospital in-patients. Drug Alcohol Rev 2007; 26: 127-33.

26. Aertgeerts B, Buntinx F, Fevery J, Ansoms S. Is there a difference between CAGE interviews and written CAGE questionnaires? Alcohol Clin Exp Res 2000; 24: 733-6.

27. Testa A, Giannuzzi R, Sollazzo F, Petrongolo L, Bernardini L, Dain S. Psychiatric emergencies (part II): psychiatric disorders coexisting with organic diseases. Eur Rev Med Pharmacol Sci 2013; 17 (Suppl 1): 65-85.

28. Batki SL, Meszaros ZS, Strutynski K, Dimmock JA, Leontieva L, Ploutz-Snyder R, et al. Medical comorbidity in patients with schizophrenia and alcohol dependence. Schizophr Res 2009; 107: 139-46.

การวินิจฉัยปัญหาที่เกิดจากการใช้สุราในหน่วยตรวจโรคจิตเวชต่ำกว่าที่ควรจะเป็น

วรภัทร รัตอาภา, นันทวัช สิทธิรักษ์, พรจิรา ปริวัชรากุล, ณัฏฐา สายเสวย, กนกวรรณ ลิ้มศรีเจริญ, ลักขณา ทองโชติ, เพชรรัตน์ คุมขัน, นราทิพย์ สงวนพานิช, พนม เกตุมาน

วัตถุประสงค์: ปัญหาที่เกิดจากการใช้แอลกอฮอล์มีความสัมพันธ์กับภาวะทางกายและโรคร่วมทางจิตเวช จากการศึกษาในอดีตพบว่าปัญหานี้มีการถูกวินิจฉัยต่ำกว่าที่ควรจะเป็น การศึกษานี้จึงมีวัตถุประสงค์เพื่อศึกษาว่าปัญหาที่เกิดจากการใช้แอลกอฮอล์ถูกวินิจฉัยโดยแพทย์มากน้อยเพียงใด และต้องการเปรียบเทียบความสอดคล้องกันของแบบคัดกรอง *CAGE* ฉบับสัมภาษณ์และฉบับที่ให้เขียนตอบด้วยตัวเอง

วัสดุและวิธีการ: ผู้เข้าร่วมการศึกษาจะถูกสัมภาษณ์โดยใช้แบบสัมภาษณ์ *Diagnostic Interview for Genetic Studies* ฉบับภาษาไทยในส่วนที่ใช้เก็บข้อมูลเรื่องแอลกอฮอล์ โดยมีจำนวนผู้เข้าร่วมการศึกษาจำนวน 165 ราย ในกลุ่มที่มีการวินิจฉัยภาวะติดสุราหรือแอลกอฮอล์ (*alcohol dependence*) และ 165 ราย ในกลุ่มที่ไม่มีปัญหาเกี่ยวกับการใช้แอลกอฮอล์ การวินิจฉัยที่ได้จากการวินิจฉัยโดยแพทย์ (จากบันทึกเวชระเบียน) จะถูกนำไปเปรียบเทียบความเที่ยงตรงกับการวินิจฉัยที่ได้จากการตอบแบบสัมภาษณ์ และความสอดคล้องกันของคำตอบจากแบบคัดกรอง *CAGE* ฉบับสัมภาษณ์และฉบับที่ให้เขียนตอบด้วยตัวเองจะถูกวิเคราะห์โดยค่าความสอดคล้องทางสถิติ

ผลการศึกษา: เมื่อเปรียบเทียบกับแบบสัมภาษณ์พบว่าแพทย์มีความจำเพาะและค่าพยากรณ์ผลบวกร้อยละ 100 (95% CI: 97.8-100% และ 94.9-100% ตามลำดับ) ส่วนค่าความไวและค่าพยากรณ์ผลลบมีค่าร้อยละ 43 (95% CI: 35.4-51%) และ 63.5 (95% CI: 57.5-69.6%) ตามลำดับ ค่าความสอดคล้องของแบบคัดกรอง *CAGE* ฉบับสัมภาษณ์และฉบับที่ให้เขียนตอบด้วยตนเองคือ 0.72

สรุป: จากผลการศึกษานี้ควรมีการเพิ่มความตระหนักในการวินิจฉัยปัญหาเนื่องจากการใช้แอลกอฮอล์ของผู้ป่วย การใช้แบบคัดกรองที่สั้นและมีความไวสูง เช่น แบบสัมภาษณ์ *CAGE* (โดยวิธีการสัมภาษณ์หรือโดยการเขียนตอบด้วยตนเอง) สามารถช่วยในการคัดกรองปัญหาเนื่องจากการใช้แอลกอฮอล์ของผู้ป่วยในคลินิกได้