

Screening for comorbidity of psychiatric and substance use disorders using the Standard for Clinicians' Interview in Psychiatry (SCIP)

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Abstract

The Standard for Clinicians' Interview in Psychiatry (SCIP) is a clinician-administered valid and reliable semi-structured diagnostic interview for adult psychiatric disorders. The SCIP Screening Module includes 30 questions and covers 18 adult psychiatric disorders: generalized anxiety, panic, agoraphobia, social phobia, obsessive-compulsive, posttraumatic, major depressive, dysthymic, bipolar, schizoaffective, schizophrenia, attention deficit/hyperactivity, anorexia nervosa, bulimia nervosa, binge-eating, alcohol use, drug use, and somatic symptom disorders. The SCIP Screening Module has been used in clinical assessments, was found to have high sensitivity as a screening tool in a primary-care population, and has the potential to be useful in screening for mental disorders in a general population.

Keywords: SCIP, diagnostic interview, psychiatric disorders.

Introduction

Screening for mental disorders may be performed at the individual or population level. At the individual level, an important part of the clinical interview is to screen for mental disorders in addition to the chief complaint bringing the patient to the clinic. The term "psychiatric review of symptoms" is used to describe this process of psychiatric evaluation (Carlat, 1999). For example, if a patient is evaluated and found to meet the diagnostic criteria for a major depressive episode, the clinician needs to screen for past manic or hypomanic episodes, as well as alcohol and drug use, to rule out the diagnosis of bipolar disorder or the comorbid diagnosis of depression and alcohol or drug use disorders. Psychiatrists and clinical psychologists usually have adequate training to screen for mental disorders before making provisional differential diagnoses and final psychiatric diagnosis(es).

At the population level, screening is "the examination of a group of usually asymptomatic individuals to detect those with a high probability of having a given disease, typically by means of an inexpensive diagnostic test" (Stedman, 1995). Screening may take place within a general population or a specific population. Individuals who screen positive are targeted for more detailed evaluation and medical work to diagnose and treat the specific disorder(s) (Cherpitel, 1998; Cherpitel, 1999; Grut, Fratiglioni, Viitanen, & Winblad, 1993; Wittchen, Nelson, & Lachner, 1998).

Screening of mental disorders by methods of developing screening tools and using them in different populations have been known for decades (Gleser & Ulett, 1952; Saslow, Counts, & DuBois, 1951). Many screening instruments target specific mental disorders such as anxiety, depression, alcohol

and drug use, dementia, and other disorders (Cherpitel, 1998; Cherpitel, 1999; M. Folstein, S. Folstein, & McHugh, 1975; Grut, Fratiglioni, Viitanen, & Winblad, 1993; Spitzer et al., 1994; Wittchen & Boyer, 1998). Other screening measures target general psychiatric symptoms, such as the General Health Questionnaire (GHQ) and the Symptom Checklist-90 (SCL-90) (Derogatis, Lipman, & Covi, 1973; Goldberg, 1972; Goldberg & Williams, 1991).

In 1999, two instruments were published that cover a wide range of DSM-IV Axis I disorders: the Composite International Diagnostic – Screener (CID-S) and the Psychiatric Diagnostic Screening Questionnaire (PDSQ) (Wittchen et al., 1999; Zimmerman & Mattia, 1999). The CID-S is a 12-item self-report questionnaire based on core diagnostic questions from the Composite International Diagnostic Interview (CIDI) and covers a wide range of DSM-IV diagnoses: somatoform, anxiety, depressive, other affective, and substance-use disorders. The CID-S was found to be an efficient diagnostic screening tool for most mental disorders (except for somatoform and substance use disorders) (Wittchen et al., 1999). Another advantage of the CID-S is that test-retest reliability (kappa) for the core (stem) questions of the CID-S items was found to be satisfactory (Wittchen, Lachner, Wunderlich, & Pfister, 1998). The Psychiatric Diagnostic Screening Questionnaire (PDSQ) is a 90-item self-administered questionnaire that screens for 13 DSM-IV disorders (Zimmerman & Mattia, 1999). The final version of the PDSQ consists of 126 questions assessing the symptoms of 13 DSM-IV disorders: major depressive disorder, eating disorder, PTSD, panic disorder, agoraphobia, social phobia, GAD, OCD, alcohol abuse/dependence, drug abuse/dependence, somatization, hypochondriasis, and psychosis (Zimmerman & Mattia, 2001).

More recently, the development of the Standard for Clinicians' Interview in Psychiatry (SCIP) as a new valid and reliable semi-structure diagnostic interview provided a comprehensive screening tool through the Screening Module of the SCIP. The SCIP was tested in an international multisite study in three countries (USA, Canada, and Egypt) between 2000 and 2016.

The total sample size, including all sites, was 1,044 subjects, making the SCIP project the largest validity and reliability study of a diagnostic interview in psychiatry (Aboraya, 2015; Aboraya, 2016; Aboraya et al., 2014; Aboraya et al., 2018; Aboraya et al., 2016). The SCIP Screening Module includes 29 questions and covers most adult psychiatric disorders: generalized anxiety, panic, agoraphobia, social phobia, obsessive-compulsive, posttraumatic, major depressive, dysthymic, bipolar, schizoaffective, schizophrenia, attention deficit/hyperactivity, anorexia nervosa, bulimia nervosa, binge-eating, alcohol use, drug use, and somatic symptom disorders. The time needed to administer the SCIP Screening Module ranges from 5 to 15 minutes. The screening questions were shown to have high inter-rater reliability (kappa). The SCIP Screening Module has also been used in clinical assessments and was tested and found to have high sensitivity as a screening tool in a primary-care population in India (Raghuraman, Balasundaram, Sarkar, & Subramaniam, 2019).

Methods and Results

The materials for the SCIP method of psychiatric assessment include the SCIP interview and the SCIP instruction manual (Aboraya, 2016). The SCIP interview contains approximately 230 questions and observational items, including 29 screening questions. The SCIP screening questions were chosen to include all the “gate,” “core,” or “stem” criterion or criteria of the disorders (Wittchen et al., 1999; Zimmerman, Gorlin, Dalrymple, & Chelminski, 2017). For example, a major depressive episode has two gate criteria: depressed mood and anhedonia; both were included in the screening module. For a schizophrenia diagnosis, two of the three core criteria (delusions, hallucinations, and disorganized thoughts) are required to diagnose schizophrenia, and thus are included in the SCIP Screening Module. On the other hand, a diagnosis of attention deficit hyperactivity disorder (ADHD) is based on the presence of a minimum number of criteria and no gate criterion or criteria required for the diagnosis (Zimmerman et al., 2017). The original SCIP screening module included 2 questions: attention impairment and hyperactivity. Based upon the research by M. Zimmerman, difficulty sustaining

attention and fidgetiness have been found to have the highest sensitivity and negative predictive value and were recommended as a 2-item screening for ADHD (Zimmerman et al., 2017). Based on this recent research, the author added both items to the SCIP Screening Module and removed the hyperactivity item. The modified SCIP Screening Module now includes 30 questions.

Table 1 shows the modified 30-item SCIP Screening Module, inter-rater reliability (kappa), and the standard error, based upon 322 patients interviewed at William R. Sharpe Jr. Hospital, Chestnut Ridge Center (inpatient and outpatient), Ain Shams University Hospital, and Mansoura University Hospital. Out of 30 screening items, 20 items (67%) had good agreement (kappa values >0.7) and 10 items (33%) had fair agreement (kappa values ranging from 0.5 to 0.7).

Table 1. Inter-rater Reliability (Kappa) and Standard Error (SE) for the SCIP Screening Items in Patients at Sharpe Hospital, Chestnut Ridge Center (inpatient and outpatient), Ain Shams University Hospital, and Mansoura University Hospital.

| | SCIP Screening Item | Total Number of Positive Cases | Kappa | SE |
|----|--|--------------------------------|-------|------|
| 1 | Generalized anxiety | 61 | 0.76 | 0.05 |
| 2 | Panic attacks | 54 | 0.81 | 0.05 |
| 3 | Agoraphobia | 26 | 0.52 | 0.05 |
| 4 | Social phobia | 22 | 0.51 | 0.05 |
| 5 | Screening for obsessions | 38 | 0.70 | 0.04 |
| 6 | Screening for compulsions | 31 | 0.58 | 0.05 |
| 7 | Witness or experience traumatic events | 69 | 0.75 | 0.05 |
| 8 | Re-experience traumatic events | 34 | 0.89 | 0.05 |
| 9 | Depressed mood | 158 | 0.86 | 0.04 |
| 10 | Anhedonia | 125 | 0.87 | 0.04 |
| 11 | Suicidal ideation, intention, plan | 79 | 0.61 | 0.04 |

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|----|------------------------------------|----|------|------|
| 12 | Elated mood | 76 | 0.72 | 0.05 |
| 13 | Irritable mood | 65 | 0.75 | 0.05 |
| 14 | Mixed mood (same day mood changes) | 44 | 0.50 | 0.05 |
| 15 | Paranoid delusions | 97 | 0.83 | 0.04 |
| 16 | Other delusions | 39 | 0.77 | 0.04 |
| 17 | Auditory hallucinations | 92 | 0.76 | 0.04 |
| 18 | Other hallucinations | 51 | 0.68 | 0.05 |
| 19 | Violence | 74 | 0.64 | 0.04 |
| 20 | Disorganized behavior | 32 | 0.54 | 0.04 |
| 21 | Disorganized thoughts | 39 | 0.65 | 0.04 |
| 22 | Alcohol problems | 53 | 0.89 | 0.06 |
| 23 | Drug problems | 17 | 0.78 | 0.06 |
| 24 | Somatic symptoms | 33 | 0.81 | 0.05 |
| 25 | Pain symptoms | 24 | 0.93 | 0.05 |
| 26 | Worry about weight and image | 12 | 0.73 | 0.05 |
| 27 | Binge eating | 27 | 0.97 | 0.12 |
| 28 | Poor attention | 41 | 0.92 | 0.12 |
| 29 | Sustained attention impairment | 39 | 0.95 | 0.12 |
| 30 | Fidgety | 41 | 0.81 | 0.12 |

Discussion

Screening of psychiatric symptoms at the individual and population levels has significant clinical and public health significance. At the individual level, comprehensive screening of psychiatric symptoms will result in identifying co-morbidity, minimize misdiagnoses, and ideally improve the quality of patient care. If a patient has a depressed mood and other symptoms of depression and at the same time drinks alcohol, the clinician needs to screen for alcohol drinking patterns and the time sequence of depression and alcohol drinking. If the patient has no depressive symptoms in the past prior to drinking alcohol and the depressive symptoms remitted after the patient stopped drinking alcohol, that indicates alcohol-induced depressive disorder. On the other

hand, if the patient had depressive symptoms even before starting to drink alcohol and the depression worsened as drinking increased, that points to comorbidity of depression and alcohol use disorder.

At the population level, screening high-risk populations with the appropriate tools will result in early identification of cases and hopefully early intervention and treatment, or data for research. The SCIP 30-item Screening Module includes comprehensive coverage of adult psychiatric disorders. Very few studies in the literature have measured the reliability of the individual screening items (Wittchen, Lachner, Wunderlich, & Pfister, 1998). Inter-rater reliability (Kappa) for the 30-items was fair to good. The time needed to administer the SCIP Screening Module ranges from 5 to 15 minutes. Given these attributes and advantages, researchers and clinicians should consider using the SCIP Screening Module in situations in which a broad and brief screening tool is needed.

References

- Aboraya, A. (2015). The Validity Results of the Standard for Clinicians' Interview in Psychiatry (SCIP). *Schizophrenia Bulletin*, 41, S103-S104.
- Aboraya, A. (2016). Instruction Manual for the Standard for Clinicians' Interview in Psychiatry (SCIP). *Innovations in Clinical Neuroscience*, 13, 41-77.
- Aboraya, A., El-Missiry, A., Barlowe, J., John, C., Ebrahimian, A., Muvvala, S., ... Price, E. (2014). The reliability of the standard for clinicians' interview in psychiatry (SCIP): a clinician-administered tool with categorical, dimensional and numeric output. *Schizophrenia Research*, 156(2-3), 174-183.
- Aboraya, A., Nasrallah, H. A., Elswick, D., Elshazly, A., Estephan, N., Aboraya, D., ... Dohar, S. (2018). Measurement-based care in psychiatry: Past, present, and future. *Innovations in Clinical Neuroscience*, 15(11-12), 13-26.
- Aboraya, A., Nasrallah, H., Muvvala, S., El-Missiry, A., Mansour, H, Hill, C., ... Price, E. C. (2016). The Standard for Clinicians' Interview in Psychiatry (SCIP): A Clinician-administered tool with categorical, dimensional, and numeric output-conceptual development, design, and description of the SCIP. *Innovations in Clinical Neuroscience*, 13(5-6), 31-77.
- Carlat, D. J. (1999). *The Psychiatric Interview*. Philadelphia, PA: Lippincott Williams & Wilkins
- Cherpitel, C. J. (1998). Performance of screening instruments for identifying alcohol dependence in the general population, compared with clinical populations. *Alcoholism: Clinical and Experimental Research*, 22(7), 1399-1404.
- Cherpitel, C. J. (1999). Screening for alcohol problems in the U.S. general population: a comparison of the CAGE and TWEAK by gender, ethnicity, and services utilization. *Journal of Studies on Alcohol and Drugs*, 60(5), 705-711.
- Derogatis, L. R., Lipman, R. S., & Covi, L. (1973). SCL-90: an outpatient psychiatric rating scale--preliminary report. *Psychopharmacology Bulletin*, 9(1), 13-28.
- Folstein, M. F., Folstein, S. E., & McHugh, P. R. (1975). "Mini-mental state". A practical method for grading the cognitive state of patients for the clinician. *Journal of Psychiatric Research*, 12(3), 189-198.
- Gleser, G., & Ulett, G. (1952). The Saslow Screening Test as a measure of anxiety-proneness. *Journal of Clinical Psychology*, 8(3), 279-283.
- Goldberg, D. P. (1972). *Detection of Psychiatric Illness by Questionnaire*. Oxford, England: Oxford University Press
- Goldberg, D., & Williams, P. (1991). *A User's Guide to the General Health Questionnaire*. Berkshire, England: NFER-Nelson.
- Grut, M., Fratiglioni, L., Viitanen, M., & Winblad, B. (1993). Accuracy of the Mini-Mental Status Examination as a screening test for dementia in a

Swedish elderly population. *Acta Neurologica Scandinavica*, 87(4), 312-317.

Raghuraman, P., Balasundaram, S., Sarkar, S., & Subramaniam, E. (2019). A cross-sectional study of psychiatric morbidity and quality of life among participants utilizing the preventive health-care services of a tertiary hospital. *Indian Journal of Psychiatry*, 61(2), 192-197.

Saslow, G., Counts, R. M., & DuBois, P. H. (1951). Evaluation of a new psychiatric screening test. *Psychosomatic Medicine*, 13(4), 242-253.

Spitzer, R.L., Williams, J. B., Kroenke, K., Linzer, M., deGruy, F. V. 3rd, Hahn, S. R., ... Johnson, J. G. (1994). Utility of a new procedure for diagnosing mental disorders in primary care: the PRIME-MD 1000 Study. *JAMA*, 272(22), 1749-1756.

Stedman, T. L. (1995). *Stedman's Medical Dictionary*. M. Spraycar & E. Randolph (Eds.). Baltimore, MD: Williams & Wilkins

Wittchen, H.-U., & Boyer, P. (1998). Screening for anxiety disorders. Sensitivity and specificity of the Anxiety Screening Questionnaire (ASQ-15). *The British Journal of Psychiatry Supplement*, 34, 10-17.

Wittchen, H.-U., Hofler, M., Gander, F., Pfister, H., Storz, S., Bedirhan Ustun, N., ... Kessler, R. C. (1999). Screening for mental disorders: performance of the Composite International Diagnostic – Screener (CID-S). *International Journal of Methods in Psychiatric Research*, 8(2), 59-70.

Wittchen, H.-U., Lachner, G., Wunderlich, U., & Pfister, H. (1998). Test-retest reliability of the computerized DSM-IV version of the Munich-Composite International Diagnostic Interview (M-CIDI). *Social Psychiatry and Psychiatric Epidemiology*, 33(11), 568-578.

Wittchen, H.-U., Nelson, C. B., & Lachner, G. (1998). Prevalence of mental disorders and psychosocial impairments in adolescents and young adults. *Psychological Medicine*, 28(1), 109-126.

Zimmerman, M., Gorlin, E., Dalrymple, K., & Chelminski, I. (2017). A clinically useful screen for attention-deficit/hyperactivity disorder in adult psychiatric outpatients. *Annals of Clinical Psychiatry*, 29(3), 160-166.

Zimmerman, M., & Mattia, J. I. (1999). The reliability and validity of a screening Questionnaire for 13 DSM-IV Axis I disorders (the Psychiatric Diagnostic Screening Questionnaire) in psychiatric outpatients. *Journal of Clinical Psychiatry*, 60(10), 677-683.

Zimmerman, M., & Mattia, J. I. (2001). A self-report scale to help make psychiatric diagnoses: the Psychiatric Diagnostic Screening Questionnaire. *Archives of General Psychiatry*, 58(8), 787-794.

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