GUIDE FOR USING THE DRUG ABUSE SCREENING TEST (DAST)

Revised Version, 2023

Dr. Harvey Skinner PhD

Professor of Psychology & Global Health York University, Toronto

email: harvey.skinner@yorku.ca

The DAST (10 and 20 item versions) is published and marketed by the Center for Addiction and Mental Health, Toronto, Canada: www.camh.ca.

Please contact me and/or Sandra Booth about permission to use the DAST:

email: harvey.skinner@yorku.ca email: Sandra.Booth@camh.ca

phone: 1-416-535-8501

© Copyright 2023 by the test author Dr. Harvey Skinner, York University, Toronto, Canada and by the Centre for Addiction and Mental Health, Toronto, Canada.

NAME:	DATE:
-------	-------

DRUG USE QUESTIONNAIRE (DAST - 20)

The following questions concern information about your potential involvement with drugs not including alcoholic beverages during the past 12 months.

Carefully read each statement and decide if your answer is "Yes" or "No". Then, circle the appropriate response beside the question.

In the statements "drug abuse" refers to (1) the use of prescribed or over the counter drugs in excess of the directions and (2) any non-medical use of drugs. The various classes of drugs may include: cannabis (e.g., marijuana, hash), solvents, tranquillizers (e.g., Valium), barbiturates, cocaine, stimulants (e.g., speed), hallucinogens (e.g., LSD) or narcotics/opiods (e.g., heroin, fentanyl, oxycodone - oxyz). Remember that the questions **do not include alcoholic beverages.**

Please answer every question. If you have difficulty with a statement, then choose the response that is mostly right.

Adult Version

These questions refer to the past 12 months.	Circle Your Response	
1. Have you used drugs other than those required for medical reasons?	Yes	No
2. Have you abused prescription drugs?	Yes	No
3. Do you abuse more than one drug at a time?	Yes	No
4. Can you get through the week without using drugs?	Yes	No
5. Are you always able to stop using drugs when you want to?	Yes	No
6. Have you had "blackouts" or "flashbacks" as a result or drug use?	Yes	No
7. Do you ever feel bad or guilty about your drug use?	Yes	No
8. Does your spouse or parents ever complain about your involvement with drugs?	Yes	No
9. Has drug abuse created problems between you and your spouse or your parents?	Yes	No
10. Have you lost friends because of your use of drugs?	Yes	No
11. Have you neglected your family because of your use of drugs?	Yes	No
12. Have you been in trouble at work or school because of drug abuse?	Yes	No
13. Have you lost your job because of drug abuse?	Yes	No
14. Have you gotten into fights when under the influence of drugs?	Yes	No
15. Have you engaged in illegal activities in order to obtain drugs?	Yes	No
16. Have you been arrested for possession of illegal drugs?	Yes	No
17. Have you ever experienced withdrawal symptoms (felt sick) when you stopped taking drugs?	Yes	No
18. Have you had medical problems as a result of your drug use (e.g., memory loss, hepatitis, convulsions, bleeding, etc.)?	Yes	No
19. Have you gone to anyone for help for drug problem?	Yes	No
20. Have you been involved in a treatment program specifically related to drug use?	Yes	No

[©] Copyright 1982 by the test author Dr. Harvey Skinner, York University, Toronto, Canada and by the Centre for Addiction and Mental Health, Toronto, Canada.

.

Adolescent Version

These questions refer to the past 12 months.	<u>Circle</u> Respo	
1. Have you used drugs other than those required for medical reasons?	Yes	No
2. Have you abused prescription drugs?	Yes	No
3. Do you abuse more than one drug at a time?	Yes	No
4. Can you get through the week without using drugs?	Yes	No
5. Are you always able to stop using drugs when you want to?	Yes	No
6. Have you had "blackouts" or "flashbacks" as a result or drug use?	Yes	No
7. Do you ever feel bad or guilty about your drug use?	Yes	No
8. Do your parents ever complain about your involvement with drugs?	Yes	No
9. Has drug abuse created problems between you and your parents?	Yes	No
10. Have you lost friends because of your use of drugs?	Yes	No
11. Have you neglected your family because of your use of drugs?	Yes	No
12. Have you been in trouble at school because of drug abuse?	Yes	No
13. Have you missed school assignments because of drug abuse?	Yes	No
14. Have you gotten into fights when under the influence of drugs?	Yes	No
15. Have you engaged in illegal activities in order to obtain drugs?	Yes	No
16. Have you been arrested for possession of illegal drugs?	Yes	No
17. Have you ever experienced withdrawal symptoms (felt sick) when you stopped taking drugs?	Yes	No
18. Have you had medical problems as a result of your drug use (e.g., memory loss, hepatitis, convulsions, bleeding, etc.)?	Yes	No
19. Have you gone to anyone for help for drug problem?	Yes	No
20. Have you been involved in a treatment program specifically related to drug use?	Yes	No

.

[©] Copyright 1982 by the test author Dr. Harvey Skinner, York University, Toronto, Canada and by the Centre for Addiction and Mental Health, Toronto, Canada.

NAME:	DATE:
-------	-------

DRUG USE QUESTIONNAIRE (DAST-10)

The following questions concern information about your possible involvement with drugs not including alcoholic beverages during the past 12 months. Carefully read each statement and decide if your answer is "Yes" or "No". Then, circle the appropriate response beside the question.

In the statements "drug abuse" refers to (1) the use of prescribed or over the counter drugs in excess of the directions and (2) any non-medical use of drugs. The various classes of drugs may include: cannabis (e.g., marijuana, hash), solvents, tranquillizers (e.g., Valium), barbiturates, cocaine, stimulants (e.g., speed), hallucinogens (e.g., LSD) or narcotics/opiods (e.g., heroin, fentanyl, oxycodone - oxyz). Remember that the questions **do not include alcoholic beverages.**

Please answer every question. If you have difficulty with a statement, then choose the response that is mostly right.

<u>Th</u>	ese questions refer to the past 12 months.	<u>Circle</u> Respo	
1.	Have you used drugs other than those required for medical reasons?	Yes	No
2.	Do you abuse more than one drug at a time?	Yes	No
3.	Are you always able to stop using drugs when you want to?	Yes	No
4.	Have you had "blackouts" or "flashbacks" as a result or drug use?	Yes	No
5.	Do you ever feel bad or guilty about your drug use?	Yes	No
6.	Does your spouse or parents ever complain about your involvement with drugs?	Yes	No
7.	Have you neglected your family because of your use of drugs?	Yes	No
8.	Have you engaged in illegal activities in order to obtain drugs?	Yes	No
9.	Have you ever experienced withdrawal symptoms (felt sick) when you stopped taking drugs?	Yes	No
10.	Have you had medical problems as a result of your drug use (e.g., memory loss, hepatitis, convulsions, bleeding, etc.)?	Yes	No

[©] Copyright 1982 by the test author Dr. Harvey Skinner, York University, Toronto, Canada and by the Centre for Addiction and Mental Health, Toronto, Canada.

GUIDE FOR USING THE DRUG ABUSE SCREENING TEST (DAST)

Revised Version, 2023

Dr. Harvey Skinner, PhD

Professor of Psychology & Global Health York University, Toronto

email: harvey.skinner@yorku.ca

The DAST (10 and 20 item versions) is published and marketed by the Center for Addiction and Mental Health, Toronto, Canada: www.camh.ca. Please contact me and/or Sandra Booth about permission to use the DAST:

email: harvey.skinner@yorku.ca email: Sandra.Booth@camh.ca

phone: 1-416-535-8501

Why Assess Drug Use?

Systematic assessment of drug use and abuse is necessary for ensuring good clinical care. Measures, which are both reliable and valid, provide information to the practitioner, which can be used for identifying problems (early if possible) and for evaluating the effectiveness of treatment. As well, this information is useful for matching patient needs with tailored intervention.

The Drug Abuse Screening Test (DAST) was designed to provide a brief, self-report instrument for population screening, clinical case finding and treatment evaluation research. The DAST yields a *quantitative* index of the degree of consequences related to drug abuse. This instrument takes approximately 5 minutes to administer and may be given in either a self-report or interview format. The DAST may be used in a variety of settings to provide a quick index of drug abuse problems.

Note: use of the DAST (administration, scoring, interpretation) needs oversight by a qualified professional (health, education, social service, academic research, etc) with professional competency in understanding tests and measurement. The DAST is Not designed for personal self-administration or self-screening by the general public.

DAST-20 and DAST-10 Versions

The original DAST contained 28 items that were modeled after the widely used Michigan Alcoholism Screening Test (Selzer, American Journal of Psychiatry, 1971, 127, 1653-1658). Two shortened versions of the DAST were devised using 20-items and 10-items that were good discriminators. The 20-item DAST correlated almost perfectly r = .99) with the original 28-item DAST is measuring the same construct as the longer scale. Moreover, the internal consistency reliability (alpha) was extremely high (.95 for the total sample, and for a subsample that excluded clients with only alcohol problems). Good discrimination is evident among clients classified by their reason for seeking treatment. Most clients with alcohol related problems scored 5 or below, whereas the majority of clients with drug problems scored 6 or above on the 20- item DAST. The DAST-10 correlated very high (r = .98) with the DAST-20 and has excellent internal consistency reliability for such a brief scale (.92 total sample and .74 drug abuse).

The DAST-10 is intended as a brief tool for screening and case finding in a range of settings such as: healthcare, workplace, social services, education, criminal justice – corrections. The DAST-20 with its additional 10 items provides a broader assessment of content areas intended for clinical assessment and research purposes.

DAST-R (under development)

Note that a revised version of the DAST, called the Drug Abuse Screening Test - Revised or DAST-R (Skinner, 2022), is under development that incorporates recommendations from NIDA (US National Institute on Drug Abuse) on Words Matter: Preferred Language for Talking About Addiction (NIDA, 2021). The aim is to reduce or avoid the potential for harmful stigma and negativity around addictions that may prevent people from talking about and seeking help regarding substance use and misuse. Analyses of the DAST-R are underway.

Measurement Properties

Measurement properties of the DAST were initially evaluated using a clinical sample of 256 drug/alcohol abuse clients (Skinner, Addictive Behaviors, 1982). The internal consistency reliability estimate was substantial at .92. and a factor analysis of item intercorrelations suggested an unidimensional scale. With respect to response style biases, the DAST was only moderately correlated with social desirability and denial. Concurrent validity was examined by correlating the DAST with background variables, frequency of drug use, and psycho-pathology. A greater range of problems associated with drug abuse (DAST) was related to the more frequent use of cannabis, barbiturates and opiates other then heroin. With respect to psychopathology, the largest correlations were with the sociopathic scales of Impulse Expression and Social Deviation. High scorers on the DAST tended to engage in reckless actions and express attitudes that are markedly different from common social codes.

Furthermore, the DAST was positively related to interpersonal problems, suspiciousness, depressive symptoms and a preoccupation with bodily dysfunction. Thus, drug abuse tended to be manifests in, or covary with, other psychopathological characteristics. Finally, the DAST total score clearly differentiated among clients with (1) drug problems only versus (2) mixed drug/alcohol problems versus (3) alcohol problems only.

Advantages

- 1) The DAST is brief and inexpensive to administer.
- 2) It provides a quantitative index of the extent of problems related to drug abuse. Thus, one may move beyond the identification of a drug problem and obtain a reliable estimate of the degree of problem severity.
- 3) DAST scores could be used to corroborate information gained by other assessment sources (e.g. clinical interview or laboratory tests).
- 4) The routine administration of the DAST would provide a convenient device of recording the extent of problems associated with drug abuse. It would ensure that relevant questions regarding consequences of drug abuse are asked of all clients.
- 5) The DAST could provide a reference standard for monitoring changes in client population over time, as well as for comparing clients at different assessment centers.

Limitations

- 1) Since the content of the DAST items is obvious, clients may fake results.
- 2) Since any given assessment approach provides an incomplete picture of the client's status, there is a danger that DAST scores may be given too much emphasis. Because the DAST yields a numerical score, this score may be misinterpreted.

Administration

The DAST may be administered by either self-report format (in person or online) or an interview, with oversight by a qualified professional (health, education, social service, academic research, etc). The self-report version is generally preferred since it allows the efficient assessment of large groups. In many circumstances one would expect the interview and self-report formats to give identical results. Increasingly, the DAST is being administered via an online process (eg. Electronic Health Record) to facilitate administration and scoring.

The standard Instructions when using the DAST-10 or DAST-20 as a population or clinical **screening instrument** is to consider the **past 12 months**. Thus, when used this way one would need to wait at least another 12 months before readministering the DAST-10. When either the DAST-10 and DAST-20 are used for **research or clinical follow-up** purposes, one could alter the Instructions to consider the appropriate timeframe: e.g. past 6 months in a clinical follow-up study following discharge from a treatment program.

Caution: the assessment approaches may differ (1) when a client is particularly defensive or high on social anxiety which may produce under-reporting of problems in a face- to-face interview format, or (2) when a client has difficulty reading and understanding the content of items in the self-report version. The DAST should *not* be administered to clients who are presently under the influence of drugs, or who are undergoing a drug withdrawal reaction. Under

these conditions the reliability and validity of the DAST would be suspect. Thus, one should ensure that clients are drug free (detoxified) before the DAST is administered.

The following introduction should be used for either interview or self-report formats: "The following questions concern information about your potential involvement with drugs not including alcohol beverages."

"In the statements, 'drug abuse' refers to (1) the use of prescribed or over the counter drugs in excess of the directions and (2) any non medical use of drugs. The various classes of drugs may include: cannabis, (e.g., marijuana, hash), solvents or glue, tranquillizers (e.g., valium), barbiturates, cocaine, stimulants, hallucinogens (e.g., LSD), or narcotics/opiods (e.g., heroin, fentanyl, oxycodone - oxyz). Remember that the questions do not include alcoholic beverages."

Scoring

The DAST total score is computed by summing all items that are endorsed in the direction of increased drug problems.

DAST-10: item #3 (Are you always able to stop using drugs when you want to) is keyed 1 point for a "No" response. The other 9 items are keyed one point each for a "Yes" response. For example, if a client circled "Yes" for item #1 he/she would receive a score of 1 or a score of 0 if he/she circled "no". With item #3 a score of 1 would be given for a "No" response and a score of 0 for a "Yes" response. When each item has been scored in this fashion, the DAST-10 *total score* is simply the sum of the 10 item scores. This total score can range from 0 to 10.

In brief: score 1 point for each item answered "Yes" except for item #3 where a "No" receives 1 point. Then add up the points for the total DAST-10 score.

DAST-20: two items #4 (Can you get through the week without using drugs) and #5 (Are you always able to stop using drugs when you want to), are keyed 1 point each for a "No" response. The other 18 items are keyed one point each for a "Yes" response. For example, if a client circled "Yes" for item #1 he/she would receive a score of 1, whereas if the client circled "No" for item #1 he/she would receive a score of 0. With items #4 and #5, a score of 1 would be given for a "No" response and a score of 0 for a "Yes" response. When each item has been scored in this fashion, the DAST-20 total score is simply the sum of the 20 item scores. This total score can range from 0 to 20.

In brief: score 1 point for each item answered "Yes" except for items #4 and #5 where a "No" receives 1 point. Then add up the points for the total DAST-20 score.

Interpretation

The DAST-10 and DAST-20 total scores order individual along a continuum with respect to their *degree* of problems or consequences related to drug abuse. A score of zero indicates that no evidence of drug related problems was reported. As the DAST score increases there is a corresponding rise in the level of drug problems reported. A maximum score of 10 (DAST-10) or 20 (DAST-20) would indicate substantial problems. Thus, as the DAST total score increases one may interpret that a given individual has accrued an increasingly diverse range of drug-related consequences. Then, one may examine the DAST item responses to identify specific problem areas, such as the family or work. The following tentative guidelines are suggested for interpreting the DAST total score.

DAST Interpretation Guide

Severity Level	DAST- 10 Score	DAST- 20 Score	ASAM Level & Recommended Action
None	0	0	Preventative
Low	1-2	1-5	Level 1: Brief Counseling/Outpatient
Intermediate (likely meets DSM-5 criteria)	3-5	6-10	Level 1 or 2: Intensive Outpatient (IOP) /Partial Hospitalization (PH)
Substantial	6-8	11-15	Level 2 or 3: IOP, PH, Residential/Inpatient (IP)
Severe	9-10	16-20	Level 4: Intensive IP

ASAM: American Society of Addiction Medicine Criteria, 2023 https://www.asam.org/asam-criteria/about-the-asam-criteria

A low score does not necessarily mean that the client is free of drug related problems. One must consider the length of time the client has been using drugs, the client's age, level of consumption and other data collected in the assessment in order to interpret the DAST score. On the DAST-20 most of the alcohol abuse clients scored 5 or below, whereas most of the mixed drug/alcohol clients and drug abuse group scored 6 or above. Hence, a DAST-20 score of 6 or greater is suggested for case finding

purposes (use 3 or more on the DAST-10). Further research is planned to evaluate the diagnostic validity of alternative cutoff points on the DAST.

DAST Language/Cultural Adaptation Guide

A standard procedure when doing a language/cultural adaptation of an assessment instrument (e.g., DAST-10 or DAST-20) is to follow these steps:

- 1. Review the content and wording of items for local interpretation and cultural relevance. Make adaptations as needed may want to consult with the instrument authors.
- 2. Translate the instructions and items into the other language.
- 3. Back translate the instructions and items into English, and then reconcile any discrepancies.
- 4. <u>Pilot Study:</u> test the assessment instrument with a small sample. Ask them to complete the new language version of the DAST. Then, have each subject explain how they are interpreting each item. Note any difficulties with their interpretation and then make adjustments to the wording.
- 5. Psychometric Study: administer the instrument (DAST-10 or DAST-20) to a relevant sample (e.g., 100 subjects). Then, generate local normative data for the instrument (mean, standard deviation, score distribution (normal; skewness; kurtosis). Also conduct an item analysis to check item-scale correlations and internal consistency reliability (coefficient Alpha). Examine scale scores by important demographics such as age, sex, cultural background.
- 6. <u>Interpretation Guide:</u> develop cut-points and instructions for how to use DAST test scores for screening, case finding and recommending further action.

Useful Reference:

Sousa VD, Rojjanasrirat W. Translation, adaptation and validation of instruments or scales for use in cross-cultural health care research: a clear and user-friendly guideline. J Eval Clin Pract. 2011 Apr;17(2):268-74. doi: 10.1111/j.1365-2753.2010.01434.x. Epub 2010 Sep 28. PMID: 20874835.

General Availability

The DAST (10 and 20 item versions) is published and marketed by the Center for Addiction and Mental Health, Toronto, Canada: www.camh.ca. The Centre for Addiction and Mental Health (CAMH) is Canada's largest mental health and

addiction teaching hospital, as well as one of the world's leading research centers in the area of addiction and mental health.

Contact: **Sandra Booth** at the Center for Addiction and Mental Health (CAMH) email: <u>Sandra.Booth@camh.ca</u>; phone: 1- 416-535-8501

Availability for Research Use

The principal author is very interested in interactting with colleagues about further research validating the DAST and DAST-R versions in Canada and globally, as well as research on Language and cultural adaptations. Copies of the DAST-10 and DAST-20 are available from Dr. Harvey Skinner, York Univerrsity, email: hskinner@yorku.ca.

International Recognition

The original publication on the DAST was in Addivtive Behaviors 1982, 7, 363-371. This article has been cited **3,637 times** as of July 24, 2023 according to Google Scholar, and there is a steady growth in the number of citations with the current yearly totals around 250. This underscores the widespread interest and use of the DAST in North America and internationally.

(https://scholar.google.com/citations?user=osp9WvIAAAAJ&hl=en).

The DAST is recognized as a gold standard for drug abuse screening, case finding and assessment. For example, it is a recommended instrument by the US National Institute on Drug Abuse (NIDA) as an evidence-based screening tools and assessment resource. The DAST-10 is listed as a National Institute on Drug Abuse (NIDA) Clinical Trials Network (CTN)-recommended Common Data Elements (CDEs) of Substance Use Disorders for use in clinical trials and electronic health records (EHRs), on the National Drug Abuse Treatment Clinical Trials Network (CTN) website (https://cde.drugabuse.gov/).

- https://www.drugabuse.gov/nidamed-medical-health-professionals/screening-tools-resources/chart-screening-tools
- https://cde.drugabuse.gov/instrument/e9053390-ee9c-9140-e040-bb89ad433d69
- https://datashare.nida.nih.gov/instrument/drug-abuse-screening-test
- https://cde.nida.nih.gov/sites/nida_cde/files/DrugAbuseScreeningTest_2014Mar24.p
 https://cde.nida.nih.gov/sites/nida_cde/files/DrugAbuseScreeningTest_2014Mar24.p

Key References

a) Test Development

Skinner, HA: The Drug Abuse Screening Test. Addictive Behaviors, 1982, 7, 363-371.

Skinner, HA; and Goldberg, A: Evidence for a drug dependence syndrome among narcotic users. <u>British Journal of Addiction</u>, 1986, 81, 533-538.

Gavin, DR; Ross, HE; and Skinner HA: Diagnostic validity of the DAST in the assessment of DSM-III drug disorders. <u>British Journal of Addiction</u>, 1989, 84, 301-371.

b) Systematic Reviews

Yudko E, Lozhkina O, Fouts A. A comprehensive review of the psychometric properties of the Drug Abuse Screening Test. <u>J Subst Abuse Treat</u>. 2007 Mar; 32(2):189-98.

Mdege ND and Lang J. Screening instruments for detecting illicit drug use/abuse that could be useful in general hospital wards: A systematic review. <u>Addictive Behaviors</u>. 2011: 36: 1111-1119.

Preet Kaur Sahota, Siri Shastry, Dana B. Mukamel, Linda Murphy, ... Bharath Chakravarthy. Screening emergency department patients for opioid drug use: A qualitative systematic review. <u>Addictive Behaviors</u>, 2018, 85, 139-146.

Erin Johnson, Samantha Barstack, Yikai Xu, Hannah Wise, Bradley T. Erford, Catharina Chang & David Delmonico Psychometric Synthesis of the Drug Abuse Screening Test (DAST) Versions, <u>Measurement and Evaluation in Counseling and Development</u>, 09 Sep 2024. DOI: 10.1080/07481756.2024.2399199

c) Examples of Articles Using the DAST

Giguere C-E and Potvin S. The Drug Abuse Screening Test preserves its excellent psychometric properties in psychiatric patients evaluated in an emergency setting. <u>Addictive Behaviors</u>, 2017: 64, 165-170.

Patnode, C. D., Perdue, L. A., Rushkin, M., Dana, T., Blazina, I., Bougatsos, C., Grusing, S., O'Connor, E. A., Fu, R., & Chou, R. (2020). Screening for Unhealthy Drug Use. *JAMA*, *323*(22), 2310. https://doi.org/10.1001/jama.2019.21381

Cocco, KM; and Carey, KB (1998). Psychometric properties of the Drug Abuse Screening Test in psychiatric outpatients. Psychological Assessment, 10, 408-414.

Carey, MP; Carey, KB; Maisto, SA; Gleason, JR; Gordon CM; and Brewer, KK (1999). HIV risk behavior among outpatients at a state psychiatric hospital: Prevalence and risk modeling. <u>Behavior Therapy</u>, 30, 389-406.

Maisto, SA; Carey, MP; Carey, KB; Gleason, JG; and Gordon CM (2000). Use of the AUDIT and the DAST-10 to identify alcohol and drug use disorders among adults with a severe and persistent mental illness. <u>Psychological Assessment</u>, 12, 186-192.

Carey, MP; Carey, KB; Maisto, SA; Gordon, CM; and Vanable, P (2001) Prevalence and correlates of HIV-related risk behavior among psychiatric outpatients. <u>Journal of Consulting and Clinical Psychology</u>, 69, 846-850.

Sean Esteban McCabe, Carol J. Boyd, James A. Cranford, Michele Morales, and Janie Slayden. A modified version of the Drug Abuse Screening Test among undergraduate students. <u>J Subst Abuse Treat</u>. 2006 Oct; 31(3): 297–303. Published online 2006 Jul 25. doi: 10.1016/j.jsat.2006.04.010

d) Language Adaptations and Studies

Bedregal LE, Sobell LC, Sobell MB, Simco E. Psychometric characteristics of a Spanish version of the DAST-10 and the RAGS. <u>Addictive Behaviors</u>, 2006: 31, 309-319.

Villalobos-Gallegos, L., A. Pérez-López, R. Mendoza-Hassey, J. Graue-Moreno, and R. Marín-Navarrete. 2015. Psychometric and diagnostic properties of the drug abuse screening test (DAST): Comparing the DAST-20 vs. the DAST-10. <u>Salud Mental</u> 38 (2):89–94. doi:10.17711/SM.0185-3325.2015.012.

<u>M.L. Lafuente</u>. Spanish validation of the Drug Abuse Screening Test (DAST-20 and DAST-10). <u>Salud y Drogas</u> 2010: 10(1):35-50.

<u>Steve Martino</u>, <u>Carlos M Grilo</u> and <u>Dwain Fehon</u>. Development of the Drug Abuse Screening Test for Adolescents (DAST-A). <u>Addictive Behaviors</u> 2000: 25(1):57-70 DOI:10.1016/S0306-4603(99)00030-1

Cuneyt Evren, Kultegin Ogel, Bilge Evren, & Muge Bozkurt. Psychometric Properties of the Turkish Versions of the Drug Use Disorders Identification Test (DUDIT) and the Drug Abuse Screening Test. (DAST-10) in the Prison Setting. <u>Journal of Psychoactive Drugs</u>, Volume 46, 2014 - <u>Issue 2</u>. Pages 140-146 | Published online: 06 May 2014.

Yongseok Kim. Validating a Korean Version of the Drug Abuse Screening Test-10 (DAST-10). <u>Journal of Social Service Research</u>. Volume 40, 2014 - <u>Issue 2</u> Pages 232-241 | Published online: 21 Feb 2014

Lap Po Lam, Wing Cheong Leung, Patrick Ip, Chun Bong Chow, Mei Fung Chan, Judy Wai Ying Ng, Chu Sing,² Ying Hoo Lam, Wing Lai Tony Mak, Kam Ming Chow, and Robert Kien Howe Chin Validation of the Drug Abuse Screening Test (DAST-10): A study on illicit drug use among Chinese pregnant women. <u>Sci Rep</u>. 2015; 5: 11420. Published online 2015 Jun 19. doi: 10.1038/srep11420

Takuya Shimane, Akifumi Imamura, Kazuko Ikeda et. Al. Reliability and Validity of the Japanese Version of the DAST-20. Jpn. J. Alcohol & Drug Dependence. 2015: 50(6), 310-324.

Hussam Aly Sayed Murad, Nawaf Abdulaziz AlHarthi, Marwan Abdulrhman Bakarman & Zohair Jamil Gazzaz (2021): Development and Validation of an Arabic Version of the Drug Abuse Screening Test-10 (DAST-10) among Saudi Drug Abusers, <u>Journal of Psychoactive Drugs</u>, DOI: 10.1080/02791072.2021.2013580

Carey, K. B., M. P. Carey, and P. S. Chandra. 2003. Psychometric evaluation of the alcohol use disorders identification test and short drug abuse screening test with psychiatric patients in India. *The Journal of Clinical Psychiatry* 64 (7):767. doi:10.4088/JCP.v64n0705.

Liao, J.-Y., H.-Y. Chi, J.-L. Guo, C.-M. Huang, and S.-F. Shih. 2017. The validity and reliability of the Mandarin Chinese version of the drug abuse screening test among adolescents in Taiwan. *Substance Abuse Treatment, Prevention, and Policy* 12 (1):30. doi:10.1186/s13011-017-0109-2.

Abdelwahab, S. I., R. M. Alsanosy, B.-E. E. Rahim, S. Mohan, S. Taha, M. Mohamed Elhassan, and M. El-Setouhy. 2015. Khat (Catha edulis Forsk.) dependence potential and pattern of use in Saudi Arabia. <u>BioMed Research International</u> 2015:1–8. doi:10.1155/2015/604526.

Shirinbayan, P., Salavati, M., Soleimani, F., Saeedi, A., Asghari-Jafarabadi, M., Hemmati- Garakani, S., & Vameghi, R. (2020). The psychometric properties of the drug abuse screening test. *Addict Health*, *12*(1), 25-33. https://doi.org/10.22122/ahj.v12i1.256 Persian (Farci) Version

Nawaratne S.D. and Vidanapathirana J. Psychometric properties of the modified Drug Abuse Screening Test Sinhala version (DAST-SL): evaluation of reliability and validity in Sri Lanka BMC Public Health (2024) 24:1773. https://doi.org/10.1186/s12889-024-19288-x

e. Health Systems – Implementation Science Research

Johnsrud, D. (2022). *Implementing the DAST-10 screening tool in a primary care practice* [Doctoral dissertation] University of Arizona. ProQuest Dissertations and Theses Global.

Tanis, D. B. (2020). Dast-10 education with the intent to adopt at an integrated health clinic [Unpublished doctoral dissertation]. University of Arizona.

f. Reducing Stigma: Revising Wording to create the DAST- R

- Lisa Marie Crowley. (2023 underway) Reducing Structural Stigma Barriers in Substance Use Disorders: DAST-10-R Introduction and Feasibility of Use. [Unpublished doctoral dissertation]. University of Arizona.
- National Institute on Drug Abuse. (2021, July 23). Words matter: Preferred language for talking about addiction. https://nida.nih.gov/research-topics/addiction-science/words-matter-preferred-language-talking-about-addiction
- Sukhera, J., Knaak, S., Ungar, T., & Rehman, M. (2021). Dismantling structural stigma related to mental health and substance use: An educational framework. *Academic Medicine*, *97*(2), 175-181. https://doi.org/10.1097/acm.00000000000004451
- Volkow, N. D., Gordon, J. A., & Koob, G. F. (2021). Choosing appropriate language to reduce the stigma around mental illness and substance use disorders. *Neuropsychopharmacology*, 46(13), 2230-2232. https://doi.org/10.1038/s41386-021-01069-4
- Botticelli, M. P., & Koh, H. K. (2016). Changing the language of addiction. *JAMA*, *316*(13), 1361-1362. doi:10.1001/jama.2016.11874
- Bielenberg, J., Swisher, G., Lembke, A., & Haug, N. A. (2021). A systematic review of stigma interventions for providers who treat patients with substance use disorders. *Journal of substance abuse treatment*, 131, 108486. https://doi.org/10.1016/j.jsat.2021.108486
- American Psychiatric Association. (2013). Substance-Related and Addictive Disorders In Diagnostic and statistical manual of mental disorders (5th ed.). https://doi-org.ezproxy4.library.arizona.edu/10.1176/appi.books.9780890425596
- American Psychiatric Association. (2022). What is a substance use disorder.

 Phttps://psychiatry.org/patients-families/addiction-substance-use-disorders/what-is-a-substance-use-disorderlease. Retrieved August 22, 2022, from https://psychiatry.org/patients-families/addiction-substance-use-disorders/what-is-a-substance-use-disorder

Table 1. Language Translations/Adaptations

Language		Description	Reference
1. English		Original versions of the DAST-10 and DAST-20 published by the Center for Addiction and Mental Health CAMH, Toronto, Canada: www.camh.ca	Skinner, H. 1982. DAST-10 & DAST-20. Center for Addiction and Mental Health (CAMH), Toronto, Canada.
		Revised versions of the DAST-10-R and DAST-20-R published by the Center for Addiction and Mental Health CAMH, Toronto, Canada: www.camh.ca	Skinner, H. 2022. DAST-10-R & DAST-20-R, Center for Addiction and Mental Health (CAMH), Toronto, Canada.
	Adolescents	The DAST-A derived from a modification of the original adult version	Martino, Grilo & Felon, 2000. Addictive Behaviors.
	Youth	A modified version of the DAST for undergraduate students	McCabe et al. 2006. <i>J Subst</i> Abuse Treat; 31(3), 297-303
	India – cultural adaptation	Psychometric evaluation of the drug abuse screening test (DAST-10) with psychiatric patients in India.	Carey et al. 2003 Journal of Clinical Psychiatry.
2.	French	French language versions of the DAST-10 and DAST-20 published by the Center for Addiction and Mental Health CAMH, Toronto, Canada: www.camh.ca	Skinner, H. 1982. DAST-10 & DAST-20. Center for Addiction and Mental Health (CAMH), Toronto, Canada
3.	Spanish	Psychometric characteristics of a Spanish version of the DAST-10 in USA	Bedregal et al. 2006. Addictive Behaviors.
		Psychometric and diagnostic properties of the drug abuse screening test in Mexico.	Villalobos-Gallegos et al. 2015. Salud Mental.
		Spanish validation of the Drug Abuse Screening Test (DAST-20 and DAST-10).	Gálvez <i>et al. 2010</i> . <u>Salud y</u> <u>Drogas.</u>
4.	Chinese - Mandarin	Validation of the Drug Abuse Screening Test(DAST-10): A study on illicit drug use among Chinese pregnant women.	Lam PO et al., 2015. Sci Rep.
	Chinese – Mandarin - Adolescent	Validity and reliability of the Mandarin Chinese version of the drug abuse screening test among adolescents in Taiwan	Liao et al. 2017. Substance Abuse Treatment, Prevention, and Policy
5.	Reliability and Validity of the Japanese Version of the DAST-20.		Shimane et al. 2015. Jpn. J. Alcohol & Drug Dependence.
6.	Korean	Validating a Korean Version of the Drug Abuse Screening Test (DAST-10).	Kim Y et al 2014. Journal of Social Service Research.
7.	Arabic	Development and Validation of an Arabic Version of the Drug Abuse Screening Test-	Murad HAS et al. 2021. Journal of Psychoactive Drugs

	10 (DAST-10) among Saudi Drug Abusers. This study translated and assessed the applicability of the Drug Abuse Screening Test-10 (DAST-10) to measure Khat dependence.	Abdelwahab et al. 2015. BioMed Research International
8. Persian - Farci	The psychometric properties of the drug abuse screening test.	Shirinbayan, et al. 2020. <i>Addict Health</i> ,
9. Turkish	Psychometric Properties of the Turkish Versions of the Drug Use Disorders Identification Test (DUDIT) and the Drug Abuse Screening Test. (DAST-10) in the Prison Setting.	Evren C et al. 2014. Journal of Psychoactive Drugs,
10. Tagalog (Pilippines)	Development and validation of Tagalog versions of the Drug Abuse Screening Test-20 (DAST-20) and Stimulant Relapse Risk Scale (SRRS) for drug users in the Philippines	Harada T et al. PLoS One. 2023 Jan 6;18(1):e0280047
11. Portuguese	Permission was given by for this translation. No publication yet.	Available from Dr Harvey Skinner (hskinner@yorku.ca)
12. Finnish	Permission was given by for this translation. No publication yet.	Available from Dr Harvey Skinner (hskinner@yorku.ca)
13. Urdu	Permission was given by for this translation. No publication yet.	Available from Dr Harvey Skinner (hskinner@yorku.ca)
14. Filipino	Permission was given by for this translation. No publication yet.	Available from Dr Harvey Skinner (hskinner@yorku.ca)
15. Surigaonon dialect	Permission was given by for this translation. No publication yet.	Available from Dr Harvey Skinner (hskinner@yorku.ca)
16. Icelandic	Permission was given by for this translation. No publication yet.	Available from Dr Harvey Skinner (hskinner@yorku.ca)
17. Swedish	Permission was given by for this translation. No publication yet.	Available from Dr Harvey Skinner (hskinner@yorku.ca)
18. Matlese	Permission was given by for this translation. No publication yet.	Available from Dr Harvey Skinner (hskinner@yorku.ca)

Swedish: Magda Skogberg <magda.skogberg@mehilainen.fi>, Mehiläinen Occupational Health Services, Arkadiankatu 6, 7.krs, 00100 Helsinki, FINLAND

Maltese: Rebecca Overend <u>rebecca.overend.17@um.edu.mt</u>, University of Malta, presently reading for a Master of Psychology in Counselling Psychology.

Table 2. Guide for DAST Language/Cultural Adaptation

- 7. **Review the Content and Wording**_of items for local interpretation and cultural relevance. Make adaptations as needed may want to consult with the instrument authors.
- 8. **Translate** the instructions and items into the other language.
- 9. **Back Translate** the instructions and items into English, and then reconcile any discrepancies.
- 10. **Qualitative Study of item interpretation and meaning**: evaluate the assessment instrument with a small sample. Ask them to complete the new language version of the DAST. Then, have each subject explain how they are interpreting each item. Note any difficulties with their interpretation and then make adjustments to the wording.
- 11. Quantitative Study of Psychometric/Measurement properties: administer the DAST to a relevant sample (e.g., 100 subjects). Then, generate local normative data for the instrument (mean, standard deviation, score distribution (normal; skewness; kurtosis). Also conduct an item analysis to check item-scale correlations and internal consistency reliability (coefficient Alpha). Examine scale scores by important demographics such as age, sex, cultural background.
- 12. **Interpretation Guide**: develop cut-points and instructions for how to use DAST test scores for screening, case finding and recommending further action.

Useful Reference:

Sousa VD, Rojjanasrirat W. Translation, adaptation and validation of instruments or scales for use in cross-cultural health care research: a clear and user-friendly guideline. J Eval Clin Pract. 2011 Apr;17(2):268-74. doi: 10.1111/j.1365-2753.2010.01434.x. Epub 2010 Sep 28. PMID: 20874835