



Letter to the Editor

On the limitations of the Alcohol Use Disorders Identification Test (AUDIT)



Moehring et al. (2019) tested whether the Alcohol Use Disorders Identification Test (AUDIT) accurately detected alcohol use disorder (AUD). Such studies are crucially needed, as this research question has scarcely been investigated for the Fifth Diagnostic and Statistical Manual of Psychiatric Disorders (DSM-5) definition of AUD (Dawson et al., 2012; Hagman, 2016) and because the AUDIT is widely used for screening and brief intervention (Lange et al., 2019; Walsh et al., 2017). The study's conclusion was that the AUDIT is an adequate and valid screening questionnaire for the detection of DSM-5 AUD in the general population. However, we believe that this conclusion should be more muted, and would like to raise awareness on the limitations of the AUDIT.

The paper recommended that the threshold of the AUDIT be adapted to the severity of AUD. However, such a procedure is problematic in population-based assessments in which the true AUD status remains unknown. Nevertheless, we strongly approve of the investigation of screening tools' diagnostic performance according to the characteristics of the participants. The findings showed that the AUDIT did not perform equally among all subgroups of individuals and thus that we should factor in individual characteristics when screening for AUD.

For example, among men, the thresholds only displayed fair psychometric properties. A high proportion of individuals were misclassified (33% false positives for mild AUD). For the subgroup of men with mild AUD, a threshold of 6 (Youden J statistic = 0.46) was better than 5 (Youden J statistic = 0.40), but there was a high proportion of false negatives (36%). Even if there are no guidelines to identify acceptable sensitivity and specificity, we believe that such values do not depict an adequate and valid screening tool and are far below previous recommendations suggesting a specificity of 95% (Lange et al., 2019). In addition, we would recommend a threshold of 6, which displayed the best balance between sensitivity and specificity and could be used without depending upon the severity of the underlying disorder.

In a recent study conducted in a sample of young men—the most vulnerable population for hazardous drinking—we also found evidence of the inaccuracy of the AUDIT (Baggio et al., 2019). All previous recommended thresholds displayed poor specificity (≥ 6 : 26%; ≥ 8 : 34%; ≥ 13 : 53%, see sensitivities and specificities in Table 1). The best threshold was 15 (sensitivity = 69%, specificity = 76%), which still misclassified a large proportion of individuals and added to the current inconsistency in the optimal AUDIT thresholds.

Clinicians and researchers should be aware that the AUDIT is highly limited in providing accurate estimates of AUD, that it is likely to

misclassify individuals, and it should not be used as a universal screening tool for AUD as it cannot maximize both sensitivity and specificity (Lange et al., 2019). The paper by Moehring and colleagues helps to highlight these points, and we hope that our contribution will raise awareness on the limitations of the AUDIT in future research and clinical practice.

Table 1

Performance of the AUDIT against a diagnostic interview for AUD (young Swiss men, n = 233).

Threshold	Sensitivity	Specificity	Youden J statistic
Everybody	100	0	0
≥ 2	100	1.9	0.019
≥ 3	100	7.7	0.077
≥ 4	100	12.3	0.123
≥ 5	100	16.1	0.161
≥ 6	100	25.8	0.258
≥ 7	100	30.3	0.303
≥ 8	98.7	33.6	0.323
≥ 9	98.7	38.1	0.368
≥ 10	97.4	41.9	0.393
≥ 11	96.2	44.5	0.407
≥ 12	96.2	47.7	0.439
≥ 13	94.9	52.9	0.478
≥ 14	80.8	62.6	0.434
≥ 15	69.2	75.5	0.447
≥ 16	52.6	82.6	0.352
≥ 17	44.9	89.0	0.339
≥ 18	38.5	92.3	0.308
≥ 19	33.3	96.8	0.301
≥ 20	28.1	96.8	0.249
≥ 21	23.1	97.4	0.205
≥ 22	19.2	98.7	0.179
≥ 23	16.7	99.4	0.161
≥ 24	–	–	–
≥ 25	12.8	100	0.128
≥ 26	11.5	100	0.115
≥ 27	7.7	100	0.077
≥ 28	6.4	100	0.064
≥ 29	5.1	100	0.051
≥ 30	3.9	100	0.039
≥ 31	1.3	100	0.013
Nobody	0	100	0

AUDIT: Alcohol Use Disorders Identification Test; AUD: Alcohol use disorder. The preferred model is highlighted in bold.

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Contributors

SB drafted the letter and performed statistical analyses. The study's objectives were developed by SB and KI. KI and SB collected data. KI made substantial contributions for interpretation of data. KI critically reviewed the letter for important intellectual content. Both authors agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. Both authors read and approved the final manuscript.

Declaration of Competing Interest

No conflict declared.

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Stéphanie Baggio^{a,b,*}

^a Division of Prison Health, Geneva University Hospitals and University of Geneva, Chemin du Petit Bel Air 2, 1226, Thônex, Switzerland

^b Department of Forensic Psychiatry, Institute of Forensic Medicine, University of Bern, Falkenplatz 16, 3012, Bern, Switzerland

E-mail address: stephanie.baggio@hcuge.ch.

Katia Iglesias

School of Health Sciences, HES-SO University of Applied Sciences and Arts of Western Switzerland, Route des Arsenaux 16a, 1700, Fribourg, Switzerland

E-mail address: katia.iglesias@hefr.ch.

* Corresponding author at: Division of Prison Health, Geneva University Hospitals and University of Geneva, Chemin du Petit Bel Air 2, 1226, Thônex, Switzerland.