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Letter to the Editor

Reply to Letter to the Editor

We have reviewed all comments on our article “Diagnostic score for COPD: Validation of the DS-COPD in clinical settings” (Clin. Epidemiol. Global Health, 2013; 1: 107–114)¹ point by point, and have addressed all the queries, using information from the current article and from the previously published development article.²

The details of the score development were all presented in another publication: Salameh P, Khayat G, Waked M. Could symptoms and risk factors diagnose COPD? Development of a Diagnosis Score for COPD. Clin. Epidemiol. 2012; 4: 247–255.²

1. As for the factor loadings, they are related to the symptoms index that were deemed inadequate and of low interest, and thus were not used for COPD diagnosis score development. As explained in the publication,² the majority of the scores using the symptoms approach have failed to diagnose COPD. This is why we decided to go beyond symptoms and included socio-demographic factors, risk factors for COPD and symptoms all together in the same multivariate model to best predict the dependent variable, which is COPD diagnosis. The choice of these variables to be included in the multivariate model depended on their association with COPD in bivariate analysis.
2. We are aware that some items of the score may be of local nature, or at least of regional interest; this is why we suggested in the discussion cross-cultural adaptations in other regions.² Moreover, validation of the score is ongoing in the eastern Mediterranean region.
3. We may have omitted to put all calculations details¹; the $r = -0.343$ is related to all individuals, while the -0.242 is related to individuals with COPD only. The highly randomized nature of the relationship between FEV1 and the diagnosis scale is of course expected, since socio-demographic and risk factors are relatively constant over time, while only symptoms may vary along with the severity of the disease; anyway, the small variation coefficient (r^2) just confirms our hypothesis. FEV1 variation may be affected by factors other than the ones taken into account by the DS-COPD score (ongoing exposure to toxics, infections and exacerbations,...); the examination of this issue is also being done in an ongoing project.

4. The scale results were shown in different populations (symptomatic and asymptomatic individuals, cases versus healthy controls, and symptomatic individuals alone); the results that were discussed, considered mostly adequate and chosen to be best pragmatic predictors of disease were by discriminating between those with or without COPD among symptomatic patients, i.e. in a real setting of utilization (Fig. 3 and Table 2).¹
5. Cost estimates were calculated in symptomatic individuals; the 96.6% do not represent the sensitivity of the scale alone, but the sensitivity of using both the scale and spirometry (whenever the scale is inconclusive), i.e. the percentage of individuals diagnosed as COPD by the combined approach among true COPD cases (diagnosed as COPD according to GOLD guidelines).¹

REFERENCES

1. Salameh P, Khayat G, Waked M. Diagnostic score for COPD: validation of the DS-COPD in clinical settings. Clin Epidemiol Glob Health. 2013;1:107–114.
2. Salameh P, Khayat G, Waked M. Could symptoms and risk factors diagnose COPD? Development of a diagnosis score for COPD. Clin Epidemiol. 2012;4:247–255.

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