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Letter to the Editor

Conducting risk assessments and case detection in online environments in the scope of fight with COVID-19

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To the Editor,

We have recently read with great interest a recent publication in your journal, entitled "Conducting risk assessments and case detection in online environments in the scope of fight with COVID-19: A good practice example" [1]. Birinci et al. [1] described their experience with a web-based, mobile service, with online feedback for the need (if any) to consult with health care services for further testing, based on the calculated risk level. Electronic data obtained from this service, "Turkiye's Corona Precaution Application" (CPA), were analyzed for the period between March 19 and August 2020, for 10 selected provinces. Authors claimed that a total of 12,067 individuals were identified as PCR-positive upon referral to health services, based on their "high risk" status as calculated online upon use of the CPA and stated that "this app has been one of the most effective tools in controlling the spread of the disease [1]. It is noteworthy that 12,067 corresponds to 4.5% of total cases detected in the country over this period but the reported test positivity of 8.9% corresponds to 27.8 times the test positivity in the general population, based on MoH COVID-19 statistics (3.2 per 1000, with 270,133 total cases on August 31, 2020, with a population of 83,614,362) [2]. Such a difference may reflect the exclusive benefit of the CPA, yet, a selection bias due to augmented use of the CPA by individuals with comorbidities, frequent contact with COVID-19 cases, and/or having COVID-19-like symptoms at the time of the interview cannot be ruled out [3, 4]. Criteria used in CPA for high-risk scores, proportion of those with PCR testing, and/or how PCR test results were linked to entries in the CPA are missing in the manuscript. Overall, presentation of findings (the title, Fig. 6 and 7, in particular) is quite confusing and we would appreciate the authors' clarification on some issues, as raised below [1].

Initiation of such a mobile service within a week after the first official COVID-19 case in the country and 1,436,321 inquiries within the first 12 days (Fig. 6) is praiseworthy [1]. However, potential reasons for a decrease in inquiries down to 3% afterwards (109,077 in May) need further discussion. Of the 2,159,903 individuals using the application, reportedly 135,277 were found to be at high risk (6.3%), but the "rates" in Table 1 vary between 4.0 and 5.6, raising concerns on whether the proportions were "too high" in provinces other than the 10 reported. Figure 7 reveals a differentially higher risk status favoring older ages across gender groups (legend is missing, though). Similarly, variations could be present regarding population size, geography, developmental index, availability/ accessibility of health care services (PCR testing, in particular), self-testing at home, potential for exposure to SARS-CoV-2 (such as international traveling), etc. [5]. Thus, we believe that integration of information on potential confounders into Table 1 would be of great interest to the readers. Interpretations such as "the highest risk ratio in Gaziantep" (page 186) are quite misleading unless representativeness of CPA users for the overall provincial population and sampling fractions are provided in the text. Lastly, but not the least, further information is required on how (if any) repeated inquiries were resolved and how data on PCR results were matched with CPA records (including the time span between CPA record and PCR testing); relevant ethical issues need to be elaborated [1].

We congratulate the MoH personnel and software developers for timely provision of a free, mobile, self-risk-calculation application, with integral feedback on necessity for referral to the health system. The potential benefit of the application could be disclosed much better with a more detailed and robust investigation of the data.

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