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Is the PHQ-9 item of suicide thoughts good enough to detect clinical risk of suicide in workers from essential services seeking emotional support during the COVID-19 pandemic?

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This is a preliminary, unedited version of a manuscript that has been accepted for publication in the Brazilian Journal of Psychiatry. As a service to our readers, we are providing this early version of the manuscript. The manuscript will still undergo copyediting, typesetting, and review of the resulting proof before it is published in final form. The final version may present slight differences in relation to the present version.

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Conflicts of interest? No

Multiple studies have been using online assessment of mental health[1]; however, a few have addressed the evaluation and approach to suicidal risk. We would like to share our experience using the Patient Health Questionnaire (PHQ-9), the standard measure for depression according to The Common Measures in Mental Health Science Governance Board[2], as a screening tool to assess suicidal risk. The PHQ-9 contains the following item: '*Over the last two weeks, how often have you been bothered by: Thoughts that you would be better off dead or of hurting yourself in some way*?'. This sentence raises a question: are those bothered by thoughts of being 'better dead' or 'hurting themselves' at clinical risk of suicide?

We used data from TelePSI, a project providing tele-psychotherapy and tele-psychiatric support for workers from essential services facing the COVID-19 pandemic. Participants responding to any response category other than 'Not at all' in this question were referred for a detailed psychiatric evaluation with a manualized protocol that addresses 44 risk/protective factors associated with suicidal behavior.[3] We then classified the clinical risk of suicide into none, mild, moderate, or severe. Moderate and severe risk indicates the necessity of an in-person assessment and immediate inpatient admission, respectively. Data analysis was performed using logistic regression.

Among 945 adults that participated in the project (NCT04632082), 659 (69.7%) answered 'Not at all' to the item, 178 (18.8%) 'Several days,' 55 (5.8%) 'More than half days' and 53 (5.6%) 'Nearly every day'. Out of the 286 participants referred to the psychiatric evaluation, 211 (73.8%) completed the assessment. After the evaluation, 112 (53.1%) had no clinical risk, 84 (39.8%) had a mild risk, 14 (6.6%) had moderate risk, and one (0.5%) had a severe clinical risk. Endorsing categories 'more than half days' or 'nearly every day' compared to 'several days' on the PHQ-9 item was associated with moderate/severe clinical risk (OR=28.2, 95%CI= 3.63 - 219.2). Using categories 'more than half days' or 'nearly every day' as the cut-off for referral to a psychiatrist would identify the 14 participants with moderate to severe risk, except one (with a moderate risk). We depict the demographic characteristics of the sample in Table 1.

Table 1. Demographic characteristics of the sample (n=945)

Demographic characteristic	Absolute number (%)
Gender Female	790 (83.6)
Mean age (SD)	37.79 (9.65)
Profession	
Health service	632 (66.9)
Teacher	193 (20.4)
Other essential worker	120 (12.7)

State	
São Paulo	**202 (21.4)**
Rio Grande do Sul	**166 (17.6)**
Minas Gerais	**130 (13.7)**
Bahia	**71 (7.5)**
Rio de Janeiro	**66 (7)**
Other	**310 (32.8)**

Contemporary models of suicide risk shows that suicide etiology is heterogeneous, with an interaction between predisposing and precipitating factors[4]. Consistent with previous research,[5] our data support that a positive response on the suicidal thoughts item from the PHQ-9 does not equate to clinical risk. It is not only the "categorical" item of PHQ-9 that matters, but also its severity. Participants that answered the response categories 'More than half days' and 'Nearly every day' on the suicidal thoughts item from PHQ-9 might be at an increased clinical risk of suicide and might need to be assessed by a psychiatrist.

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