DEPRESSION SCREENING AT THE PRIMARY CARE LEVEL – A COST-EFFICIENT INTERVENTION

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Abstract:
Over 350 million people worldwide suffer from depression, and it is one of the leading causes of disability across the globe (1, 2, 3, 4, 5). In Europe, approximately 21 million people are affected by depression out of a population of 446 million people. Depression places a burden not only on individuals but also on the society due to its impact on health, social and economic systems. Depression accounts for 1% of the GDP of Europe (8), and amounted to approximately 118 billion euros, which translates to approximately EUR 253 per inhabitant (8). Given the magnitude of the burden of depression, there is a need for efforts to be directed at early identification to improve recovery and enhance treatment outcomes and ideally, to prevent depressive symptoms from developing into a clinical depressive episode. Depression is considered as a common mental health disorder (CMHD) given its high prevalence and many people presenting with depressive symptoms often seek care from their primary care physician or general practitioner first, making the general practitioner an ideal gatekeeper for screening and detection and management of depression (6, 7, 26). Screening for depression at the primary care level can have a significant impact on early recognition and treatment, prevention of the development of more severe forms of depression, better adherence to treatment of chronic conditions, enhancement of recovery outcomes and consequently on the associated costs. According to the studies, despite the high prevalence of depression and the fact that many people experiencing depressive symptoms first come into contact with the health system through their primary care physicians, depression is in fact only identified in 30-50% of instances by primary care professionals (27,34). Early intervention is key as previous research shows that 20% of people who committed suicide visited a primary care physician in the month preceding the suicide (12, 35). The purpose of this review is to search based on the existing studies what are the recommendations regarding depression screening at the primary care level. At present, at the international level based on the existing studies is not a uniform opinion about recommending the screening at the primary care level for depression and about the criteria to be met for the depression screening at the primary care level that could lead to a cost-efficient intervention. It is still incipient the research regarding the efficiency of this intervention and the conditions in which it becomes cost-efficient.

Keywords: depression, screening, primary care

The prevalence of depression regardless of severity among the general population ranges between 8% and 12% (24, 25) depending on the methodological approach and scales used to classify depression, while the prevalence of major depression at the primary care level is 5-10% (23, 24, 32). Of the number of people presenting with depression in primary care, approximately 10-20% have a comorbidity with another non-communicable disease such as diabetes mellitus, cardiovascular disease, or cancer (23,42). Given the high prevalence of depression and given that the patient first access the primary care services, as in most of countries, Romania being one of them, GP’s are the main gatekeeper for a multitude of health problems, including mental health problems, and as they often have many tasks and a high caseload, they require easy to use, quick and effective screening tools that help them to be confident in identifying depression and taking action on it.

Depression screening usually implies the administration of questionnaires to people presenting with depressive symptoms by primary care staff (physicians or primary care nurses). Questionnaires can either be self-report or administered by a physician or nurse, having a small or medium number of questions that can be self-administered or can be administered by the family doctor both to the patients with high risk for developing depression such as patients with chronic illness diagnosis (10, 36) but also to the other patients. One of the questionnaires that is frequently used by the primary care physicians to detect depression is patient health questionnaire 2 (PHQ - 2), that contain 2 questions namely: Over the last 2 weeks, how often have you been bothered by feeling down, depressed, or hopeless? 2. During the past month, have you often been bothered by anything that interests or pleases you? The possible answers for each of questions are: Not at all (scoring 0), several days (scoring 1), several days (scoring 1). More than half the days (scoring 2) and Nearly every day (scoring 3). The total scoring ranges from 0 to 6, the authors (44) identified a PHQ-2 score of 3 as the optimal cut point of the screening purposes and stated that a cut point of 2 would enhance sensitivity and a cut point of 4 would enhance specificity. These two verbal questions have also the advantage that are concise and detect the majority of the depression cases (31). The purpose of the questionnaire is to enhance routine inquire about the most prevalent and treatable mental disorder in primary care. The National Institute for Health and Care Excellence (NICE) (15) recommended in the depression guideline that the entire population should be screened for depression at the primary care level, done with the PHQ -
2 questionnaire (15), which has a sensitivity of 97% (95% CI, 83% to 99%) and a specificity of 67% (95% CI, 62% to 72%) (31,43). A person responding yes to both of the PHQ-2 items is referred for a more in-depth assessment at the specialized level services. The probability rate for the screening to be positive when done with this two questions was 2.9 (2.5 to 3.4), and the probability rate for the screening to be negative was 0.05 (0.01 to 0.35) (31).

At present, at the level of European and international clinical guidelines there is no agreement with regards to the efficiency of the depression screening at the primary care level (13,14,15,16,18,20,21,23,27,43,44). This is a consequence of the fact that there are not enough randomized control trials that could provide the necessary evidence regarding its efficiency when done at the general level of the population as well as when done for high-risk target groups. In addition, there is a concern regarding the unjustified increase of the number of patients that due to the false positives arising from tools, resulting in clients being sent to specialised care when in fact it is not required (27). On the other hand, studies of primary care patients have found that health care costs are higher in depressed patients than non-depressed in many categories, including primary care visits, medical specialty visits, lab tests, pharmacy costs, inpatient medical costs, and mental health visits (8, 9). To illustrate, one study conducted in England found that patients diagnosed with depression in Great Britain show that patients diagnosed with depression have costs two time higher ($4246 vs $2371, P < .001) compared with the ones that are not diagnosed, this situation remaining similar one year after the initiation of antidepressant treatment ($3971 vs $2644 (28). However, there is still a need to understand how big this problem is: is it more of a cost risk that more people get referred to specialized care when in fact they could be managed in primary care, or more of a problem if people go undetected completed in primary care which is more of an ethical and low quality of life problem.

There are a number of aspects that should be taken into account when doing depression screening which could influence the result of screening and its cost-effectiveness. In order to recommend the screening as a cost-effective intervention at the primary care level there are some criteria which need to be met (23):

1) Patients who do not have this diagnosis agree to do the screening (29)
2) A relatively high number of positive results of screening are obtained (29)
3) Agreement of patients who screen positively to access the specialized services for supplementary evaluation that would validate/invalidate the initial result
4) Reasonable accessibility of the patients to the specialized services (33), patients from rural and isolated areas being disadvantaged
5) A relatively high number of false positive results of screening are obtained (29)
6) Patient agreement for depression treatment one the depression diagnosis was confirmed (29)
7) For the treatment adherence psycho-education services are offered (37), knowing that there is an attrition rate from treatment of 70% in the first three months (38,39), while clinical guidelines recommend that depression treatment lasts between 6 months and one year (37)
8) Accessibility to psychological interventions such as cognitive behavioural therapy (40,41), according to the recommendation of the NICE clinical guidelines (15).

An overview of the criteria listed above, leads to the conclusion that a screening program in order to be cost-effective has to take into consideration at least three essential aspects: a relatively high number of positive results of screening, a relatively low number of false positive results of screening and the accessibility to specialized services that can provide evaluation and comprehensive treatment (medication, psycho-education, cognitive behaviour psychotherapy) and a possibility for accomplishing these aspect is the integration of specialized services in primary care (20).

As a consequence, it is important that randomized controlled trials focused on screening for depression at the primary care level specify the criteria for inclusion/exclusion for screening, patients' randomization and the patients' accessibility of specialized services after getting a positive screening result.

Some previous research studies have found that depressive symptoms do not change much as a result of screening done at the primary care level. To illustrate, a 2008 Cochrane systematic review (28) evaluated five randomized controlled trials and found that there is no evidence of a reduction of depressive symptomatology in the general population as a result of depression screening in primary care settings without substantial staff-assisted depression care supports. In another research study from the Netherlands depression screening was done on a sample of 1687 patients with a high risk of developing depressions through a questionnaire sent by mail. Out of the 770 patients that returned the questionnaire filled in, 226 (29%) showing a positive result for depression, only 17 (1%) initiated depression treatment (22).

A research study done by a Spanish group of researchers (19,21), study that respected the randomization criterion and the cluster of patients screened consisted of patients with high risk for developing depression such as those with a depression history, those with somatic symptoms that are not caused by somatic illness and those with psychological comorbidities due to somatic illnesses and those with drug and alcohol abuse, the result showing that the depression rate 6 month after screening (15%) (21) was not different to the one in the control group (15,8%), (average mean difference − 0.02 and confidence interval 95%−0.25 la 0.20) (18). In contrast, the American clinical guideline for depression (46) reviewed 9 randomised controlled trials and concluded that screening for depression is cost-efficient in the context of integrated primary care and specialized services but inefficient in the absence of the services' integration (17,30).

In sum, there seems to be mixed results supporting the notion of screening for depression at the primary care level. More research is needed for shading light on the efficiency of recommending the depression screening in the primary care services (11) and if this should be recommended to general population or only to indicated risk groups.

Conclusions: At present there is insufficient evidence that universal screening for depression at the primary care level is beneficial from a cost-effectiveness or detection and treatment point of view. That being said, primary care professionals should still be aware of the following two groups of patients presenting in primary care that should be screened further for depressive symptoms:
1. Group of patients with high risk of developing depression due to a previous diagnosis of depression, presence of a chronic illness, a family history of depression, unexplained somatic symptoms, traumatic life events and those that have a frequent utilization of services without a resulting diagnosis.

2. Patients who present with depressive symptoms such as little pleasure or interest in doing things, feeling hopeless, chronic fatigue or insomnia.

The RCTs done up to now have inconclusive results with regards to the reduction of depressive symptoms and disappointing due to low percentage of people who accept to initiate the depression treatment, after being screened and diagnosed with depression at the primary care level. The absence of the research studies to demonstrate the cost-efficiency of universal screening for depression at the primary care level leads to the necessity that more research need to be developed in this direction, studies that should include more than the screening itself but also include the screening instruments, criteria for screening and treatment.

References:


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