

Early detection of child and adolescent mental disorders: some elements of a necessary debate

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Introduction

Child and adolescent psychiatric research is improving. Cohort studies with substantial sample sizes are no more an exception. Measurement tools are refined and adapted to specific age periods. Results have not been long in coming and we now have good evidence that many mental disorders in children and adolescents are statistically associated with soft and early signs and symptoms. Three papers are dealing with this question in this issue of ECAP [3, 4, 8], in areas as diverse as ADHD (attention deficit/hyperactivity disorder), psychosis or educational achievement.

In all these three papers, the authors are very cautious about the practical implications of their studies. They are correct in doing so, because an insight into these results raises the question of a systematic screening and early detection of mental disorders. Obviously child and adolescent mental health would be advanced substantially. But the path is strewn with pitfalls. Let us try to open the debate in simple and practical terms.

Prevention is better than cure

On a clinical point of view this is quite obvious. Even if prevention is not that good for the doctor's narcissism (patients and parents will never realize that you have avoided some major problems), the experience of being a psychiatric patient is rarely a positive event. In more

scientific terms, there is now good evidence that child or adolescent psychiatric symptoms/disorders are related to poor outcomes in adulthood. Thus prevention appears as a good strategy, and this is likely to be even more true for young subjects.

Indeed, early development is crucial in human beings, because it determines social, cognitive and emotional achievement to a considerable amount. A mental disorder can thoroughly perturb this achievement, with some major consequences for the rest of the patient's existence. Some neurobiological arguments are even likely to put emphasis on the role of prevention for a young subject who still has to achieve important developmental milestones. This aspect is illustrated by the notion of critical developmental periods, which represent maturational stages, during which the brain is especially sensitive to certain stimuli. If the child is not exposed to this stimulus, it may be difficult or even impossible to develop some functions later. Acquisitions of vision and language are typically associated to such critical periods. Of course, if a mental disorder interferes with the patient's development during such a critical period, some acquisitions could become impossible. In such a situation, prevention becomes crucial.

For all these reasons there is now a substantial literature that promotes early detection and early treatment of disorders as different as autism, schizophrenia, ADHD, anorexia nervosa or learning disorders.

Prevention is not so simple

Cancer is a domain where the amount of data concerning the evaluation of early detection programs is considerable. The data is not always easy to interpret. Concerning breast cancer, there is still a controversy about the balance between early and effective treatment of smaller tumors

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on one side and financial cost, irradiations due to mammography, clinical cost of false positives, etc. on the other side [2]. More upsetting, a paper recently published in the *New England Journal of Medicine* explains that more than 500,000 thyroid cancers have been over diagnosed between 1988 and 2007. The vast majority of these patients underwent total thyroidectomy, neck lymph-node detection and radiotherapy, which from today's point of view happened to be way too excessive [7]. In fact, physicians had evidence based guidelines to treat thyroid cancer, when these cancers were diagnosed on clinical grounds. It appears that these same guidelines were used straightforwardly to treat cancer diagnosed through a universal or selective prevention program. However, treatments were evidence based in the first case, but not in the second.

Of course, early detection of cancers is a particularly sensitive subject because of the important side effects of cancer treatments. But speech treatments are essential in child and adolescent psychiatry and, clearly, speech therapy is potentially less harmful than radiotherapy. The question of prevention is hence perhaps less problematic in child and adolescent psychiatry.

Potential problems with early detection of mental disorders in youths

These problems can be clinical, psychological, societal or economical.

On a clinical point of view, side effects of medications given to patients, who were falsely screened positive, are evident problems. And medications should not be considered alone, since psychological interventions can have side-effects too. This issue is all the more critical as predictive values of the most classical detection tools used in child and adolescent psychiatry are in general rather low. For instance, the strengths and difficulties questionnaire (SDQ) has a positive predictive value as low as 12 % to screen ADHD and 18 % for autism spectrum disorder (ASD) [5].

On a more psychological point of view, it is likely that a massive program of early detection would generate a huge amount of stigma, irrespective of whether the youths are detected as true positive or false positive "cases". More subtle is the impact of a positive screening on intra-familial relationships. If a child is screened positive, even if the professionals are particularly cautious in presenting the results, there is a risk that this event becomes fixed in the family history. Much later, for instance during adolescence, on the occasion of a conflict with parents, the event will possibly come back "I knew it, when you were four they told us you were crazy...".

Early detection could also raise societal tensions. When the DSM 5 was published, many articles appeared in the mainstream press stating that psychiatrists will be pleased

only if everybody has a psychiatric disorder (this was particularly true for child and adolescent psychiatry with respect to ASD and ADHD). It was pointed out that psychiatrists receive money from big pharma. Inevitably, such critics will appear again with possibly a higher intensity as soon as massive screening programs are initiated.

Finally, in many countries there is a shortage of professionals who are capable of dealing with mental health problems in youths. So a very practical question related to early detection is: "who is going to confirm diagnoses and to provide treatments?". If the answer is "nobody", then we should better not engage in such programs.

Conclusion

There is now an accumulation of data which makes the question of early detection of mental disorders a top priority. There are a lot of expectations from such a strategy. Some have suggested with respectable arguments that success is at hand: we could expect to improve dramatically patients with ASD in the foreseeable future thanks to very early and intensive psychological interventions [1]. It seems, however, that things are not so clear; let us remember that very recently the "United States Preventive Services Task Force" declined to recommend universal screening for ASD features [6].

Doctors often succumb to a well-known type of bias: they believe that if they take care of a patient, this will be necessarily for his/her good. And this is particularly true if this care is associated with no prescription of drugs, surgery or other "hard" treatments of any kind. Prevention, early detection of mental disorders could appear then as "naturally" good, in particular because we know now that early interventions can be very effective. But the devil rests in the details. There are some clinical, psychological, societal and economical factors that could render the best intentioned early detection program a complete failure. We have to be cautious, because this could hamper a promising field.

In practice, we have to stick to our course with respect to prevention programs, we need to pursue the same route as for clinical practice: we always need to identify the side effects of our treatments be they at the level of the patient, the caregivers, other family members or society as a whole. It is important to bear in mind that most often our imagination of such side effects desperately falls short of those observed in the real world.

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