Author's response to reviews

Title: A new approach to child mental health care within general practice. An Evaluation study

Authors:

Peter F.M. Verhaak (p.verhaak@nivel.nl)
Marloes Van Dijk (marloesvandijk1109@gmail.com)
Dick Walstock (walstock@xs4all.nl)
Marieke Zwaanswijk (m.zwaanswijk@nivel.nl)

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Author's response to reviews: see over
Response to the reviewers comments on “A new approach to child mental health care with general practice. An Evaluation Study.

We would like to thank both reviewers for their thorough appraisal of our MS. In the following we will discuss each of the points mentioned by them and report the textual changes we propose to meet their objections.

Reviewer 1

Major Compulsory Revisions

1. Both in the abstract and in the paper, the description of the intervention lacks detail. Possibly, the protocol of the integrated care intervention, first mentioned in the Results (line 188), should be outlined earlier, in the Methods, when describing the intervention. Also, a flowchart might help to understand how care was integrated in this experiment.

We disagree that the intervention is first mentioned in the Results (line 188). All elements of the intervention, described in Table 1 (line 188) have been introduced in the Method section (under the heading “intervention” from line 102).
We have added an introductory paragraph in which the focus of the intervention and the way of working is clarified in more detail (see also the first request for major revisions of reviewer 2).

The philosophy behind the experiment is the following:

• many aspecific symptoms (such as abdominal pain, obstipation, sleeping problems, behavioural problems that may be self-limiting, etc.) may refer to somatic disease, to problems in the family or to youth mental health issues;
• the GP, who is mostly the professional first contacted, has the initiative to start some kind of treatment;
• to be able to identify and handle child and adolescent mental health problems appropriately, the GP needs time and opportunity for a thorough investment, a network of specialists to refer to and consult for more detailed diagnoses, and options for providing short-term interventions;
• many of the mental health problems identified may be treated within general practice, provided that general practice has the necessary manpower and know-how available.

The experiment contained a kind of disease management approach, in which GPs got a lump-sum fee for a comprehensive assessment of children (and parents) presumed to have mental health problems (including consultation by specialized consultants) and any further treatment of those problems in general practice.

and the way of working is clarified in more detail in the method section, after introducing the intervention.

The routine procedure is as follows: GPs at the Eureka practices see children at their surgeries whom they suspect may have a mental health problem. If they include the child in the Eureka project, they either plan an extended youth consultation or involve the YMHPN directly. The outcome of the extended youth consultation may be an end of the Eureka intervention, further involvement of the YMHPN or referral to pedagogic care, primary youth mental healthcare (both also available in the medical centre) or specialized mental healthcare. Throughout the Eureka intervention, youth mental health specialist consultants may be involved. See Figure 1 for a flow chart of the treatment process.

We have also added a flow chart.

2. It is unclear why the investigators used data from 2011 for their comparison between experimental practices and control practices, and not included the data from 2012.

We did not include data from 2012 because of a practical reason. The evaluation study was carried out in the period 2011 – spring 2013. Report was due in May 2013. We collected data from the Electronic Medical Records of the practices, participating in the Eureka intervention over 2010 – 2012. Early 2013, data from control practices, to be obtained from the NIVEL Primary Care Database, were only available up till December 2011.
3. In the results, a subgroup analysis is presented by age (Table 2: 4-10 and 11-18 years). It is unclear (a) whether this was a pre-planned subgroup analysis, and (b) the cut-off was chosen beforehand or data driven. Why not cut-off at 12 years, a common boundary for primary versus secondary school children.

This was a pre-planned subgroup analysis, because we were interested in possible differences between children and adolescents. The cut off was chosen beforehand, because we had the Strength and Difficulties Questionnaire as an outcome measure in the study, and the SDQ is used differently for children up till 10 years old (only parent reporting) and 11 year and older (adolescent and parent reporting). Due to a low response on the SDQ we did not include that aspect of the study in our paper.

4. The data protection guidelines, described in lines 158-160, seem to apply only for the NIVEL Primary Care Database. Please describe how this was handled in the experimental practices.

Some of the experimental practices were already participating in the NIVEL Primary Care Database. The other 2 have temporarily participated (they signed an agreement to this end) and complied to the data protection guidelines. We added the following sentence:

The NIVEL Primary Care Database is registered with the Dutch Data Protection Authority. The Eureka practices were already part of the NIVEL Primary Care Database or were added to it and its procedures on a temporary basis. All data is collected and handled according to the data protection guidelines of the said Authority.

5. Table 2 and 3 are very messy, especially the last column: I would prefer to have test results separately for each comparison.

We have split the pretest – posttest comparison within the experimental practice and the experiment – control (deprived) – control (not deprived) comparison in both tables.

6. It would be helpful for readers to have a listing of the diagnoses that were made.

In the revised version, we present the following table.

<table>
<thead>
<tr>
<th></th>
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</tr>
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<td>49</td>
<td>5</td>
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<td>6</td>
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<td>2</td>
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<td>11</td>
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<td>3</td>
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<td>3</td>
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<td>11.4</td>
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<td>73</td>
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<td>Hyperactive child</td>
<td>26</td>
<td>15.5</td>
<td>33</td>
<td>20.9</td>
</tr>
<tr>
<td>Other worries (psychological) about child/adolescent behaviour</td>
<td>53</td>
<td>31.7</td>
<td>82</td>
<td>52.0</td>
</tr>
<tr>
<td>Learning problems</td>
<td>4</td>
<td>2.4</td>
<td>5.1</td>
<td>72</td>
</tr>
</tbody>
</table>

Table: N of children (4 – 18 years) with psychological and social symptoms and disorders, registered one year before the start of the Eureka intervention and one year after the start of the Eureka intervention.
Other symptoms NEC

<table>
<thead>
<tr>
<th>Psychological Disorders</th>
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<td>2</td>
<td>1.2</td>
<td>10</td>
<td>6.3</td>
<td>40</td>
<td>3.6</td>
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<tr>
<td>Depressive disorder</td>
<td>6</td>
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<td>2</td>
<td>1.3</td>
<td>17</td>
<td>1.5</td>
</tr>
<tr>
<td>Work/school stress</td>
<td>3</td>
<td>1.8</td>
<td>3</td>
<td>1.9</td>
<td>11</td>
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Social Problems

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<th>12</th>
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<th>10</th>
<th>6.3</th>
<th>13</th>
<th>1.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent – child relationship</td>
<td>4</td>
<td>2.4</td>
<td>8</td>
<td>5.1</td>
<td>23</td>
<td>2.1</td>
</tr>
</tbody>
</table>

1. significant difference between pre-test and post-test (p < .01)
2. significant difference between post-test and not deprived controls (p < .05)
3. significant difference between post-test and deprived controls (p < .05)

Minor essential revisions

7. Although not a native speaker myself, I am quite sure that the use of English terms and language is suboptimal. Examples: - line 124 ‘deployment’ - the use of ‘got’ in various places - line 222 ‘significantly different than’ - line 284 ‘valid’: probably ‘validated’ I would recommend to have a native speaker, familiar with health care terminology, check the manuscript.

The revised MS has been checked by a native speaker.

8. Throughout the text there are several typographical errors, e.g. using capitals with running text.

We have checked the text on capitals

9. Line 154 ‘we collected data’ : from what I understand data were already collected, but data of a subset of practices was selected for the comparison with the experimental practices.

We replaced “collected” with “used”.

10. The statement that the children had on average nearly 5 sessions with the YMHPN (line 195) seems to be contradicted by Table 1, which shows only 471 sessions for 127 children, an average of less than 4 sessions.

We made a mistake. We have corrected the average number to “nearly 4 sessions”

11. In figure 1, the number of children depicted in each pie chart is lacking. Furthermore, having printed this in black and white, I could not differentiate between the middle grays (dark blue and pink).

We have given the number in the graph and provided an extra figure with pattern instead of colour

Reviewer 2

Major Compulsory Revisions

My main concern with the paper is that far too little detail is provided on the intervention, methods and measures. First, no detail is provided on the types of “psychological and social problems” that were considered. Mental health problems for children and youth are far ranging and it is not clear whether the focus was on actual mental disorders, such as ADHD, autism, learning disabilities, or complaints a parents may have that their child sometimes has temper tantrums. The term “psychological and social problems” is very vague and provides the reader no information on the
As we outlined in our response to reviewer 1, regarding his point nr. 5, the mental health problems presented to general practitioners are very diverse, ranging from simple symptoms, at first often presented as somatic symptoms to complex mental disorders. Moreover, as pointed out above as well, we had to rely on routinely collected data by GPs, coded in ICPC, resulting in a large amount of “other concerns about children/adolescent behaviour”. We have added a table (see reply to reviewer 1) with the 15 most commonly reported ICPC codes. We pointed out in the revised text that

The table shows that the increase in identification of psychological symptoms and diagnoses within Eureka practices before and after intervention lies particularly within the categories “other concerns about the child’s behaviour (ICPC P22)” and “anxiety disorder (ICPC P74)”. The largest differences between experiment’s practices and the control practices are in the categories “other concerns about the child’s behaviour” and “parental behaviour (ICPC Z21)”. Control practices in deprived areas record a higher prevalence of “learning problems” than the experiment’s practices do.

Second, it is unclear why GPs would be doing the assessments and treatments if the practices include social workers and psychologists, who would be better trained to do them. It would be important to present more information on the choice of GPs rather than professionals specifically trained in assessment of psychological disorders, and if the GPs in the Netherlands have substantially more training in child and adolescent psychopathology than GPs in other countries, because published research indicates GPs have limited training in this field.

As we explain in the added paragraph in the introduction, the philosophy of the experiment is that the GP is in fact the first professional to be contacted about most children’s mental health problems. Aim of the experiment is to equip GPs better to spend more time for an extended contact with the patient, possibly with more informants.

Such a comprehensive assessment (for which GPs basically are trained) can have several consequences, varying from involving a specialized mental health consultant, referral for more specialized diagnostics, short-term treatment by the youth mental health nurse, treatment by an available social worker or psychologist, or referral for treatment within pedagogic or ambulatory mental health care settings.

In fact, treatment by the present social workers and psychologist is regarded as “primary care referral”, that is described in figure 1 and that increased after implementation of the Eureka intervention.

We added the following paragraph to point out this philosophy and to explain the choice of GPs.

The philosophy behind the experiment is the following:

• many aspecific symptoms (such as abdominal pain, obstipation, sleeping problems, behavioural problems that may be self-limiting, etc.) may refer to somatic disease, to problems in the family or to youth mental health issues;
• the GP, who is mostly the professional first contacted, has the initiative to start some kind of treatment;
• to be able to identify and handle child and adolescent mental health problems appropriately, the GP needs time and opportunity for a thorough investment, a network of specialists to refer to and consult for more detailed diagnoses, and options for providing short-term interventions;
• many of the mental health problems identified may be treated within general practice, provided that general practice has the necessary manpower and know-how available.

The experiment contained a kind of disease management approach, in which GPs got a lump-sum fee for a comprehensive assessment of children (and parents) presumed to have mental health problems (including consultation by specialized consultants) and any further treatment of those problems in general practice.
No information is provided on whether the assessments and treatments, etc., were based on evidence-based practice. For example, despite the use of psychotropic medications with children, surprisingly few randomized controlled studies have been conducted, so what psychotropics were prescribed and why. Additionally, evidence-based psychotherapies are also manual-based and again no information is provided to the reader on what “treatments” were conducted. Nor is information provided on what methods were used for assessing problems. There are available a broad range of standardized interviews and psychological tests that generate DSM and ICD diagnoses with good reliability and validity. No information is provided on whether standardized interviews and psychological testing was used. It may be that more were identified and treated, but were the GPs well enough trained to provide the state of art treatment for the problems? (See Hoagwood et al. 2001, Evidence-Based Practice in Child and Adolescent Mental Health Services in Psychiatric Services)

We carried out a naturalistic evaluation study, in which the Eureka intervention, as described in the method section, was carried out as a kind of black box. Although we may assume that GPs and mental health professionals and all others involved in the health care process, will act according to evidence based practice, we did not intend to assess their practice at such a level.

The focus of our evaluation study is not on the specifics of each individual treatment, but on the large scale effects: are participating GPs identifying more psychological and social problems? To what extent do they use the extras of the Eureka intervention, such as the possibility to consult a youth mental health specialist and the possibility of short-term treatment by the Youth Mental Health nurse? Does an increased sensitivity for youth mental health problems lead to an increase of referrals to youth mental health care?

We added the following in the discussion section:

Our study was a naturalistic study in which the Eureka intervention should be considered as a “black box”. Contrary to controlled randomly designed effect studies, we were only able to analyse routinely collected data before and after the implementation of the intervention and compare it with data routinely collected elsewhere. We cannot therefore report on the integrity of the intervention as a whole or the standardization of the assessments and therapies used.

Psychotropic drugs are specified in table 4a and 4b in analgesics, antipsychotics, benzodiazepines, SSRIs and psychostimulants. As they are hardly prescribed in case of psychological diagnoses, a further elaboration is not interesting regarding the scope of our paper. Within that scope, the conclusion is relevant that GPs in the practices where Eureka was carried out hardly prescribed any psychopharmacological drugs, before nor after the intervention.

P. 5, line 127, it is not clear what “by short lines” means.

We meant what was said in the next sentence: “All the healthcare providers who deal with the care for the children are working within the same medical centre. Because of systematic contact with the specialized consultants the lines between the primary care and specialized mental health care are short as well”.

We changed this sentence in the following:

- Personal and structured collaboration. All primary care professionals who are involved in caring for children with psychological or social problems are collaborating at the same medical centre. Because specialized consultants are contracted in on a structural basis, personal and close contact between primary care and specialized mental healthcare is guaranteed as well.
more information is needed on the “lump fee”. As written, this system could encourage many children to be assessed for problems by the GP and limit inclusion of other professionals. I am not clear that I understand this system.

It is difficult to provide a more specific definition of the “lump fee” than we did in our text. I think reviewer 2 understands correctly how it works from the written information provided. In the Netherlands the system has earlier been applied to diabetes care in general practice, but she is right that diabetes is a better defined disorder than child mental health problems. Therefore, one of the aims of the evaluation was to assess a possible shift in identifying children with mental health problems. Such a shift could be seen indeed, but we could also see that many more problems of children were classified into a psychological or social problem than were treated within the Eureka protocol.

We added the following sentence in the Discussion:

The question may arise if the lump fee, to be received for any patient included in the Eureka protocol, may not act as a reward to identify more possible mental health problems. This study cannot answer that question. It should be possible, however, to account for the several modules of the Eureka intervention, actually employed, afterwards and calculate with insurers a reasonable lump fee on a yearly basis.

P. 7, again more information on what types of psychological and social problems entered the Eureka program would be helpful. More information on what was done with the children in Eureka would be helpful. This paper presents the intervention as one of increasing numbers for assessment and intervention. Yet no information is provided on the validity and quality of the assessments and interventions. A reader is left wondering whether this was simply an exercise of processing children through a system with limited consideration of whether the problems identified were clinically significant, whether the interventions were evidence-based and whether the interventions actually lead to better functioning of the children.

At point 6 of reviewer 1 we already paid attention to the psychological and social problems encountered with children and adolescents from the Eureka practices.

Regarding the children included in the Eurekaproject, the following information has been added:

Fifty per cent of children with an anxiety disorder entered the Eureka project, 46% of children with “other concerns about the child’s behaviour”, 44% of children with anxiety symptoms (ICPC P01), 29% of children with learning problems (ICPC P24), 25% of children with over-activity (ICPC P21), 22% of children with enuresis (ICPC P12) and 21% of children with parent-child problems (ICPC Z16).

Tables 2 and 3. It is really not clear what these tables represent. In tables 2 and 3, it seems that a smaller proportion on children in the deprived practices were diagnosed and medicated compared to the non-deprived. This seems counter-intuitive. Please provide some explanation or speculation on why this is so. Also why was there no change in diagnoses for children 4-10 years of age?

As already mentioned regarding point 5 of reviewer 1, both tables have been split.

In the additional table 3, presented above, it can be seen that in deprived areas, diagnoses as “hyperactive child”, and “other concerns about child behaviour” are more rare than in non-deprived areas. On the other hand, learning problems are identified more frequently in deprived areas. In the discussion section we speculate about these results:

Compared to control practices, the Eureka intervention appears to be especially directed at specific behavioural problems, anxiety and relational problems with parents. Differences with control practices in deprived areas were larger than with control practices in urban settings that were not deprived, except for “learning problems”. This is more prevalent in control practices in deprived areas than in other control practices and in the Eureka practices. It is possible that help-seeking behaviour by parents in deprived areas for their children’s problems is less prominent than in non-deprived areas, but schools may be playing an important role when people seek help for learning problems.