Support by trained mentor mothers for abused women: a promising intervention in primary care

Gert-Jan Prosman*, Sylvie H Lo Fo Wong and Antoine LM Lagro-Janssen

Department of Primary and Community Care, Unit Gender & Women’s Health, Radboud University Nijmegen Medical Centre, Nijmegen, The Netherlands.

*Correspondence to Gert-Jan Prosman, Department of Primary and Community Care, Unit Gender & Women’s Health, Radboud University Nijmegen Medical Centre, ELG 118, PO Box 9101, 6500 HB Nijmegen, The Netherlands; E-mail. g.prosman@elg.umcn.nl

Received March 24 2013; Revised August 29 2013; Accepted August 31 2013.

Abstract

Background. Intimate partner violence (IPV) against women is a major health problem and negatively affects the victim’s mental and physical health. Evidence-based interventions in family practice are scarce.

Objective. We aimed to evaluate a low threshold home-visiting intervention for abused women provided by trained mentor mothers in family practice. The aim was to reduce exposure to IPV, symptoms of depression as well as to improve social support, participation in society and acceptance of mental health care.

Methods. A pre–post study of a 16-week mentoring intervention with identified abused women with children was conducted. After referral by a family doctor, a mentor mother visited the abused woman weekly. Primary outcomes are IPV assessed with the Composite Abuse Scale (CAS), depressive symptoms using the Symptom Checklist (SCL 90) and social support by the Utrecht Coping List. Secondary outcomes are analysed qualitatively: participation in society defined as employment and education and the acceptance of mental health care.

Results. At baseline, 63 out of 66 abused women were referred to mentor support. Forty-three participants completed the intervention programme. IPV decreased from CAS total 46.7 (SD 24.7) to 9.0 (SD 9.1) (P ≤ 0.001) after the mentor mother support programme. Symptoms of depression decreased from 53.3 (SD 13.7) to 34.8 (SD 11.5) (P ≤ 0.001) and social support increased from 13.2 (SD 4.0) to 15.2 (SD 3.5) (P ≤ 0.001). Participation in society and the acceptance of mental health care for mother and child improved.

Conclusions. Sixteen weekly visits by trained mentor mothers are a promising intervention to decrease exposure to IPV and symptoms of depression, as well as to improve social support, participation in society and the acceptance of professional help for abused women and their children.

Key words: Depression, family practice, home visiting, intimate partner violence, mentor mothering, social support.

Introduction

The World Health Organization considers intimate partner violence (IPV) against women by male (ex-)partners a major health problem (1,2). IPV is defined as ‘violence caused by an (ex-)partner in an intimate relationship and consists of physical, mental and/or sexual abuse’ (3). Abused women suffer significantly more from physical and psychological problems than non-abused women (1,2,4–6). Fifty to 60% of the women in an abusive relationship suffer from depressive complaints (7–9). Abused women are commonly isolated by their abusive partner (10). Social isolation is characterized...
by lack of fulfilment of social needs in formal and informal contacts (11). Increasing social support and participation in society is beneficial to the well-being of them (10,12). Not only the direct victims of IPV but also their children experience significantly more behavioural and emotional problems than children of non-abused women. Therefore, more attention of health care workers is warranted (13–15). Victims of IPV rarely spontaneously disclose the abuse to their health care providers (16,17). Hence, the identification of IPV is very low and complex (18). A recent review showed that screening resulted in an increased identification of abused women, but did not increase the numbers referred for support. Moreover, screening did not reduce the level of violence experienced by women; this underlined the need for easy accessible interventions (19). Abused women visit their family doctor (FD), who also provides health care to their children, more frequently than non-abused women (20,21). Providing support to abused mothers might have a positive effect on intergenerational transmission (4,22,23). A positive parental relationship will help children to cope adequately with the negative effects of witnessing IPV (24). Therefore, suitable interventions in primary care are crucial opportunities to reach abused mothers and their children (10,15). Here, we adapted the mentoring programme for abused mothers [MOthers’ Advocates In the Community (MOSAIIC)] in Melbourne, (25) broadened the target group to abused mothers with children under 19 living at home and shortened the guidance period from 12 months to 16 weeks. Our programme, MeMoSA (Mentor Mothers for Support and Advice), linked mentor mothers to family practices. In this study, we assess the effects of 16 weeks mentor support for women referred by their FD. Our main objectives were: will mentor support decrease the exposure to IPV, depressive symptoms, increase social support and improve the participation in society and the acceptance of mental health care for abused mother and child?

**Methods**

**Design and setting**

We originally designed a randomized controlled trial (RCT) study to compare the effects of MeMoSA with usual care. Randomization took place at practice level. FDs in intervention practices were directly in contact with mentor mothers and offered mentor support. The comparison group offered usual care and was asked to fill out the same questionnaires as the intervention group. Due to the fact that no one of the control group was included after 1 year, we modified MeMoSA to a before and after study. The comparison group was also asked to refer abused women to MeMoSA.

Our study took place in 32 family practices in the urban area of Rotterdam, a multi-ethnic city in the Netherlands.

**Intervention**

A comprehensive education programme for mentors was developed for effective support (Box 1). The mentor support consisted of 16 weekly home visits by a trained mentor mother. Four different protocols were developed, which described the interventions during the 16 weeks in detail (26). This programme focuses on establishing a friendly supportive relationship with the abused woman, in guiding her in dealing with IPV, depressive symptoms and in strengthening social and parenting support and acceptance of professional mental health care, both for mother and child (Box 1) (26).

Matching on language and culture took place when needed before the first visit, which was scheduled within 1 week of referral. In case home visits were considered unsafe for the IPV victims, the FD’s office was used. At the first visit, the mentor developed a tailored-made support plan. All mentor mothers

---

**Box 1. Topics for coaching MeMoSA**

**1. Dealing with IPV (safety planning, recognizing, dealing with aggressive behaviour)**

- Recognizing unacceptable and dangerous behaviour
- Developing a safety plan
- Educating psychological (cognitive and emotional) consequences of IPV.
- Evaluating own cognitions of guilt and shame

**2. Coping with depressive symptoms (based on cognitive behavioural therapy)**

- Inventory of sad mood related to activities
- Evaluating possibilities to influence own mood
- Supporting to implement

**3. Strengthening social network [finding (volunteering) job, going back to school]**

- Inventory opportunities to strengthen personal support system
- Developing, implementing and evaluating a plan for education or finding a job

**4. Accepting professional mental health assistance and parenting support**

- Inventory barriers to visit mental health care (in consultation with their FD)
- Visiting mental health care together
- Increasing awareness of the impact of exposure to IPV on children’s health
- When needed, involve teachers and preventive health care or (school) social work-parenting support
provided feedback of each session during supervision session every fortnight to evaluate and improve the mentor support. At the end of the intervention programme, a final report was provided to the FD.

Mentor mothers

Mentor mothers were recruited from welfare, health care and educational institutes in Rotterdam. Mentor mothers were educated for social or health care, such as doctor assistants and social workers.

After the selection of the applications letters, a FD (SLFW) and a psychologist (G-JP) did all job interviews. Ten women with at least a middle social or health care education went through an interview procedure, examining criteria such as motivation, motherhood and psychological stability. Finally, seven women from different ethnic backgrounds were selected. Before the start of the study, mentor mothers received a 10-day training in order to use the developed training manual (Box 1) for mentor support (26). The training consisted of theoretical backgrounds of IPV, depression, children witnessing abuse, parenting support, practical skills on the protocols used and how to deal in emergency situations. All mentors were provided with mobile phones. The interventions of all mentor mothers were supervised to monitor the quality of their support. The mentor mothers were certified for MeMoSA after 1 year into the intervention programme (26).

Family doctors

Forty-two out of 98 FDs, who were invited by letter to participate, consented to participate in the MeMoSA study. The FDs were trained to improve their ability to identify IPV. No incentives were given for including abused women.

Study group, data collection

From March 2007 to June 2010, women with children up to 18 years, living at home, who visited their FD and were identified as being actually abused by their partner, were included in the study. All women participated voluntarily and signed an informed consent. Exclusion criteria were severe psychiatric disorders, critically ill or not mentally able to fill out a questionnaire. The mentor mother introduced the questionnaires at the start of the programme: the Composite Abuse Scale (CAS), (27) the subscale of depressive symptoms of the Symptom Checklist (SCL 90) (28) and the subscale ‘seeking social support’ of the Utrecht Coping List (UCL) (29). These questionnaires were filled out at baseline ($T_0$) and after the completion of MeMoSA at 16 weeks ($T_1$). At baseline, demographic data (age, country of origin, level of education and number of children) were obtained. Education level was divided into low (no school, primary school, low vocational education), middle (grammar school, middle vocational education) and high (higher vocational education, university). Information regarding participation in society and accepting of mental health care for mother and child were reported at $T_0$ and $T_1$.

Primary outcomes and instruments used

Intimate partner violence

IPV was measured by the CAS (27), a validated scale to measure physical abuse, emotional abuse, harassment and severe combined abuse. The CAS contains 30 questions, which can be scored ranging from 0 (never) to 5 (daily) with good convergent and divergent validity and high internal consistencies (Cronbach’s $\alpha > 0.75$). A woman can experience one or more of these subtypes of abuse. A total score on the CAS $\geq 7$ is defined as partner abuse.

Symptoms of depression

The subscale ‘depression’ of the SCL 90 (28) was used to obtain an indication of symptoms of depression. This 16-item subscale was scored on a five-point scale ranging from 1 (not at all) to 5 (very much) with good convergent and divergent validity and high internal consistencies (Cronbach’s $\alpha$: 0.91). A higher score on the SCL 90 (DEP) indicated a higher level of depressive symptoms.

Social support

Social support was measured by the subscale seeking social support of the UCL (29). The UCL subscale (six items) can be scored on a four-point scale ranging from 1 (seldom/never) to 4 (very often) with good reliability and validity (Cronbach’s $\alpha$: 0.85). A higher score on the UCL subscale indicated a higher level of seeking social support.

Secondary outcomes

To analyse participation in society, the changes in employment, education and acceptance of mental health care for mother and children were evaluated based on the final reports of the mentor mothers. Participation in society was defined by two characteristics: (i) having a (volunteer) job and (ii) participating in an education programme. A positive change on one of these was defined as improvement of participation in society.

Acceptance of mental health care by the abused women has been defined as a positive change when at least two visits to mental health care took place during the intervention programme MeMoSA. The acceptance of support for the children was defined as (i) informing the school teacher or the child preventive health care centre about the abuse situation and requesting help, (ii) acceptance of mental health care for the child and (iii) participation in a youth support programme for mother and child. The increase of one of these was defined as improvement of ‘acceptance of support for children’.
Analysis

Descriptive statistics in SPSS version 17.0 was used to assess the characteristics of the study population. To compare the results of the CAS, depressive symptoms of the SCL 90 and the subscale seeking social support (UCL), pre- and post-intervention, we used a paired sample T-test. To determine the improvement of participation in society and the acceptance of mental health care support, the final mentor reports were analysed qualitatively by two independent researchers as described above. They assessed the differences at $T_1$ and $T_0$ from the mentor reports to determine the improvement.

Results

In total, 24 FDs (60%) referred at least once to MeMoSA. Sixty-six women were referred to the study (Fig. 1). After several attempts, three women could not be reached. We lost contact with three other women after one visit. Another 10 women were referred to mental health care or a social worker after two visits. Four women with only an assessment at baseline ($T_0$) (mean visits: 4.3) left the programme and were referred to mental health care due to severe post-traumatic stress disorder. Three women with baseline assessment were lost to follow up after six visits. Hence, in total, 43 participants (65%) finished the entire support programme. Most women in our study group were migrants with lower education. Characteristics regarding age, country of origin, education and number of children showed no significant differences between completers ($n = 43$) and non-completers ($n = 23$) (Table 1).

Intimate partner violence

The mean score of the CAS$_{final}$ decreased from baseline 46.7 (SD 24.7) to 9.0 (SD 9.1) after 16 weeks a change of 37.7 (SD 23.7), 95% confidence interval (CI): 29.8–45.6 ($P \leq 0.001$). At the end of the intervention, 25 women (58%) did not suffer from IPV (scored <7 CAS) and 18 were still victims but faced less violence than at baseline. All subtypes of partner violence decreased (Table 2).

Depressive symptoms

The mean score on the subscale on symptoms of depression (SCL 90) decreased with 35%, from baseline 53.3 (SD 13.7) to 34.8 (SD 11.5), 95% CI: 14.4–22.6 ($P \leq 0.001$), after the mentor mother support.

Social support

The UCL score on the subscale social support increased with 15% significantly from a mean score at baseline of 13.2 (SD 4.0) to 15.2 (SD 3.5), 95% CI: −2.9 to −1.0 ($P \leq 0.001$).

Participation in society: employment and education

At baseline, 11 women (26%) had a job. At the end of MeMoSA, in total, 20 women (47%) were employed. Thirteen women (30%) started a new study during MeMoSA, resulting in 18 women who participated in an educational programme. Two of these women started both a study and a job.

Acceptance of mental health care for mother and children

Abused women

At the start, 5 out of 43 abused women (12%) visited mental health care. During MeMoSA, 1 woman stopped and 21 women (49%) accepted mental health care: guidance by a social worker or a psychologist for at least two times. Mentor mothers visited the mental health care together with the women to improve the transition to mental health care. Fourteen women stopped prematurely with MeMoSA because their problems were too serious for MeMoSA (Fig. 1) and accepted mental health care. At the start of MeMoSA, these women were not motivated to accept help of a social worker or a referral to mental health care.

Children

In our study, 43 women took care of 87 children (Table 1). The mentor reports showed that most of the abused women were not aware that witnessing abuse is harmful and related to their children’s complaints. At baseline, 8 children (9%) received professional support, which increased to 28 children (32%) after the completion of the intervention study (Fig. 2).

Discussion

This pre–post study of a mentoring intervention programme with abused women in family practice linked trained mentor mothers to abused mothers and matched them culturally and linguistically. Overall, the outcomes were very promising. The intervention study decreased the exposure to IPV and reduced the symptoms of depression. Social support and involvement in education and employment were increased after completion of MeMoSA. In addition, women showed greater acceptance of mental health care after MeMoSA. Our study shows that mentoring abused women helps them to revert their isolated life.

Ramsay et al. concluded that advocacy programmes are effective in reducing abuse and increased the use of safety behaviours for abused women in shelter homes (30). Our results confirmed these findings in a group of women outside shelter homes. The benefit of this mentoring programme was a low threshold, ‘friendly’ supportive relationship in combination with low-grade cognitive behavioural therapy interventions, which seems to fit with the needs of abused women. The matched mentor mothers.
66 women referred to MEMOSA

3 women (no contact after several attempts)

63 women participating in MEMOSA

After one visit: 3 women without baseline measurement \(T_0\): lost to follow: removal (1); risk at home (1); mismatch mentor and woman (1).

60 women participating in MEMOSA

After two visits: 10 women without baseline measurement \(T_0\): referred to mental health care/shelter home due to severity of trauma and/or risk at home.

50 women with baseline measurement \(T_0\) to MEMOSA

After four visits: 4 women with baseline measurement \(T_0\): referred to mental health care due to severity of trauma.

46 women followed the intervention program with baseline \(T_0\)

After six visits: 3 women with baseline measurement \(T_0\): lost to follow: removal (1); mismatch between mentor and woman (1); loss of motivation (2).

43 women followed the entire intervention program with baseline \(T_0\) and finale measurement \(T_1\)

Figure 1. Flow chart.
in terms of language and motherhood may have contributed to the cooperation of the abused women.

Due to the high prevalence of IPV in family practice(9) and the easy accessibility for abused women to visit their FD, family practice creates great possibilities for early interventions for abused women and children to prevent adverse consequences. The need for easy accessible, short and effective interventions, tailored to women's needs provided in family practice to reduce IPV, has been underlined by an other previous study (31). Moreover, in order to minimize intergenerational transmission, FDs have the unique opportunity to take care for children in these families. Our study showed an increased acceptance of professional help for children. Our study also reveals that most abused women did not relate their children’s complaints to witnessing violence and were not aware that witnessing abuse is harmful to their children (32). In very few cases, school or social work was informed about the abusive family situation of the children. Mentor support had an important role for mothers in becoming aware of the negative effects of IPV on their children and to accept professional support, preventing mental problems and intergenerational transmission of violent behaviour (33). Overall, the mother mentor support to mother and children appears to be of great value to current health care in family practice.

Comparison with other research (MOSAIC)
The comparison between MOSAIC and MeMoSA was described in Table 3. There were some differences between

---

Table 1. Characteristics of abused women participation in mentor mother support

<table>
<thead>
<tr>
<th>Age categories</th>
<th>n = 66 (total group)</th>
<th>n = 50 (women with baseline measurement)</th>
<th>n = 43 (completers of the intervention programme with baseline and final measurement)</th>
<th>n = 23 (lost to follow up)</th>
<th>P*</th>
</tr>
</thead>
<tbody>
<tr>
<td>18–25</td>
<td>12</td>
<td>9</td>
<td>8</td>
<td>4</td>
<td>0.23</td>
</tr>
<tr>
<td>26–35</td>
<td>27</td>
<td>18</td>
<td>15</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>36–45</td>
<td>21</td>
<td>17</td>
<td>14</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>&gt;45</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Country of origin</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.32</td>
</tr>
<tr>
<td>Turkey</td>
<td>15</td>
<td>12</td>
<td>10</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Morocco</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Surinam</td>
<td>15</td>
<td>13</td>
<td>12</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Netherlands</td>
<td>12</td>
<td>10</td>
<td>9</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>The Antilles</td>
<td>6</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Other immigrant countries</td>
<td>14</td>
<td>9</td>
<td>6</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.55</td>
</tr>
<tr>
<td>Low</td>
<td>35</td>
<td>26</td>
<td>23</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Middle</td>
<td>23</td>
<td>19</td>
<td>15</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>8</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Number of children</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.99</td>
</tr>
<tr>
<td>1</td>
<td>27</td>
<td>19</td>
<td>16</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>2–3</td>
<td>33</td>
<td>26</td>
<td>23</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>≥4</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

*Difference between completers (n = 43) and lost to follow up (n = 23) with chi-square test (P ≤ 0.05).

Table 2. Changes in IPV measured with the CAS at the start (T₀) and at the end (T₁) (n = 43)

<table>
<thead>
<tr>
<th>CAS</th>
<th>T₀ mean</th>
<th>T₁ mean</th>
<th>Difference T₁–T₀ mean (SD)</th>
<th>95% CI</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCA</td>
<td>6.5</td>
<td>1.2</td>
<td>5.2 (5.9) 3.4–7.1</td>
<td>&lt;0.001*</td>
<td></td>
</tr>
<tr>
<td>PA</td>
<td>11.0</td>
<td>1.4</td>
<td>9.7 (8.3) 7.1–12.2</td>
<td>&lt;0.001*</td>
<td></td>
</tr>
<tr>
<td>EA</td>
<td>23.7</td>
<td>5.3</td>
<td>18.4 (11.3)14.9–21.8</td>
<td>&lt;0.001*</td>
<td></td>
</tr>
<tr>
<td>HA</td>
<td>5.4</td>
<td>1.1</td>
<td>4.4 (4.2) 3.1–5.7</td>
<td>&lt;0.001*</td>
<td></td>
</tr>
<tr>
<td>CAS total</td>
<td>46.7</td>
<td>9.0</td>
<td>37.7 (25.7) 28.8–45.6</td>
<td>&lt;0.001*</td>
<td></td>
</tr>
</tbody>
</table>

EA, emotional abuse; HA, harassment; PA, physical abuse; SCA, severe combined abuse.

*Significant P < 0.001, paired T-test.
Figure 2. Flow chart: professional support children.
Table 3. Comparison between women of the MOSAIC study and MeMoSA

<table>
<thead>
<tr>
<th></th>
<th>MOSAIC intervention</th>
<th>MeMoSA intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n = 90 (%)</td>
<td>N = 63 (%)</td>
</tr>
<tr>
<td>Age mean (SD)</td>
<td>32.0 (6.7)</td>
<td>36.0 (8.0)</td>
</tr>
<tr>
<td>Number of children</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>41 (46)</td>
<td>27 (43)</td>
</tr>
<tr>
<td>&gt;2</td>
<td>48 (54)</td>
<td>39 (62)</td>
</tr>
<tr>
<td>Education level (low)</td>
<td>43 (47)</td>
<td>35 (56)</td>
</tr>
<tr>
<td>Migrants</td>
<td>32 (36)</td>
<td>54 (86)</td>
</tr>
<tr>
<td>Mentor support (months)</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>Attrition rate</td>
<td>46%</td>
<td>35%</td>
</tr>
<tr>
<td>Mentor mother training</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>(days)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training for participating FDs (hours)</td>
<td>6</td>
<td>16</td>
</tr>
</tbody>
</table>

These studies. MeMoSA provided a more intensive training for mentor mothers and participation FDs. Both studies have weekly visits, MOSAIC sometimes only by telephone, whereas MeMoSA had weekly face-to-face contact. The content of the interventions were, however, very similar with the exception that the mentor programme in MeMoSA was more therapeutic of nature and also focused on participation in society. For that reason, the supervision of the mentor mothers was fortnightly and face-to-face compared with the MOSAIC supervision once in 6 weeks. Overall, MeMoSA was a shorter, but more intensive intervention providing similar content. Despite these differences, MOSAIC is the only RCT with mentor mother home-visiting support programme for abused women and children in a similar urban population (Table 3). Because of the lack of a control group, we compared our results to the control group of the MOSAIC study to assess whether the MeMoSA results were due to natural recovery or usual care (25). In the MOSAIC study, IPV was measured by CAS, depressive symptoms by EPDS and social support by MOS-SF. The MOSAIC study presents a reduction of 28% in the intervention group, while IPV in the control group of the MOSAIC study showed a recovery in five women (16%). Assuming a similar natural recovery in our study (n = 7), we still observed a decrease of IPV abuse in 18 women (40%) due to our intervention programme.

The mean score on the depression subscale (SCL 90) decreases with 35% between T and T1, which is similar to the decrease of depressive symptoms of 36% in the experimental group in MOSAIC.

The mean score of the MOS (social support) in the control group of MOSAIC increased with 5%. Applying this to our study suggests a 10% increase in seeking social support, which is comparable with the improvement of MOSAIC. Generally, the results of MOSAIC and MeMoSA are very comparable. Remarkable, however, was the great reduction of exposure to IPV in a much shorter time window in our study. A follow-up is needed to compare the outcomes of the intervention programme 12 months after the completion of the MeMoSA intervention study.

Strengths and limitations of the study

As mentioned before, we could not include a control group in our study protocol. Although the positive effects of the intervention programme are substantial, we cannot eliminate selection bias and the contribution of a natural course. Beside this, the attrition rate of 35% during MeMoSA created an attrition bias. However, our attrition bias was very similar to the attrition rate of 46% in MOSAIC. For a number of practical reasons, we are not able to ask these women to fill out the questionnaires at the completion of the intervention programme, since we were either unable to get in contact or they are too distressed. To minimize bias, Figure 1 presents the reasons for dropout in detail. In line with this bias, the participating women who completed the programme are certainly those who were more motivated and much more ready to accept help. The 14 women (see Fig. 1) who left MeMoSA earlier due to severity of trauma and accepted mental health care support by the guidance of a mentor mother also showed great potential for the MeMoSA programme. Finally, our results are based on a small group of severely victimized women, as represented in the high CAS scores, similar to the study group of MOSAIC. In our analysis, 42 FDs referred 66 abused women. Identifying IPV is complex (31).

The major strength of our study was the inclusion of migrant women that are generally very difficult to reach. Moreover, we developed a short, intensive intervention with minimal practice organizational change. Finally, the mentor mother supported the FD in underprivileged areas by bridging the gap between FD and difficult accessible mental health care (31). Abused women in disadvantaged areas find it hard to share psychosocial problems with health care providers (20,21,34). Matching of a mother with a non-western cultural background to a mentor from the same culture facilitates the accessibility and acceptance of help.

The potential harm of this type of intervention for abused women has not been studied yet. A recent review investigated the harm for screening women and reported no evidence of harm for abused women to participate in such an intervention programme (19). Because of the absence of a control group, we recommended a RCT with incentives after a referral by a FD to enhance the willingness to participate.

In concordance with other studies, (9,35) approximately half of the abused women were depressed at the start of the intervention programme. Dowrick (36) concluded that 30%–40% of patients with a first observed major depression recovered after 10 weeks.
and that the recovery rate was 70%–80% after a year. They estimated a lower recovery rate of 88% among patients with a chronic depression 5 years after a first episode. Our study showed a reduction of 35% in symptoms of depression in abused women. The MOSAIC study showed a recovery of 36% after 1 year, although it was not reported whether it was the first observed depressive episode. Unfortunately, our study did not also include this information. Recent research described hopelessness, a small social network, little material resources and a limited participation in society as characteristics of people with a chronic depression. These characteristics showed many similarities with our study group (37,38). In line with this, the characteristics of depressive symptoms for abused women seem more in line with chronic depression. The difference in recovery rate underlines the need of classification of depressive disorders at the start of the intervention to eliminate confounding factors. Further investigation is recommended to determine the contribution of the effects of chronic depression in abused women to the outcome of such an intervention programme. In conclusion, our study shows a reduction of exposure to partner violence by a home-visiting intervention with mentor mother support. It is a promising and easily accessible intervention programme in primary care to increase the acceptance of psychological help for mother and child.

Acknowledgements
We wish to thank the participating FDs for their generous cooperation in this study, Margriet Straver (research assistant) and Hans Bor (statistician at Department of Primary and Community Care, Radboud University Nijmegen Medical Centre) for their help.

Declaration
Funding: financial support by the Public Health Authority of the City of Rotterdam, Innovation Foundation Kinderpostzegel fonds (Children's Stamp Fund) and Stichting Volkskracht (Foundation for People's Strength). Ethical approval: upon consultation, the Ethical Committee of the Radboud University Nijmegen Medical Centre stated that ethical approval was not necessary because of the non-invasive character of the study (CCMOC111.1522/GK/ma). Conflict of interest: none.

References


37. Michon H, Weeghel J. Rehabilitationonderzoek in Nederland; overzicht van onderzoek en synthese van recente bevindingen [Rehabilitation research in the Netherlands; research review and synthesis of recent findings]. *Tijdschr Psychiatr* 2010; 52: 683–94.