

Screening and Utilization of Treatment in Mothers with Postnatal Depression in Germany

Carl-Ludwig v. Ballestrem, Martina Strauß, Steffen Häfner and Horst Kächele

Center for Psychotherapy Research, Stuttgart, Germany

Keywords: postnatal depression, screening, utilization of treatment

Abstract: Using a longitudinal screening-model, 772 mothers were screened for postnatal depression after delivery. This model contains the Edinburgh Postnatal Depression Scale (EPDS) and the Hamilton Depression Scale (HAMD). The first screening was 6–8 weeks after delivery with the EPDS. Mothers with high scores in first screening had a second screening 9–12 weeks after delivery with the EPDS. Time between first and second screening was at least three weeks. Mothers with high scores in both screenings were investigated with the Hamilton Depression Scale (HAMD). Classification was performed with the DSM IV. After observation until the 3rd month after delivery 3.6% (N = 28) of the 772 mothers were diagnosed with postnatal depression. Different methods of therapy were offered to those mothers. 18% (N = 5) accepted one or more of these methods of treatment. The rest of the mothers with postnatal depression refused – mostly for factual or practical reasons. 13.4% of the mothers showed high scores in the first screening but not in the second. For those mothers a longitudinal observation is currently being performed to distinguish between a depressive episode and a depression with oscillating symptoms.

Zusammenfassung: *Screening und Versorgungsmodalitäten von Müttern mit postpartaler Depression in Deutschland.* Mit einem longitudinalen Screening-Modell wurden 772 Mütter nach der Geburt auf postpartale Depressionen untersucht. Dieses Modell enthält die Edinburgh Postnatale Depressions Skala (EPDS) und die Hamilton Depressions Skala (HAMD). Das erste Screening fand 6–8 Wochen postpartum mit der EPDS statt. Mütter mit auffälligen Werten wurden 9–12 Wochen postpartum nochmal mit der EPDS untersucht. Der Mindestabstand zwischen dem ersten und dem zweiten Screening betrug 3 Wochen. Mütter, die zu beiden Screening-Zeitpunkten auffällige Werte zeigten, wurden mit der Hamilton Depressions Skala (HAMD) interviewt. Es erfolgte eine Einklassifizierung nach dem DSM IV. 3,6% (N = 28) der 772 Mütter zeigten nach der Beobachtung bis zum dritten Monat nach der Geburt eine postpartale Depression. Diesen Müttern wur-

Correspondence to: Dr. med. C.L. v. Ballestrem, Center for Psychotherapy Research, Christian-Belser-Straße 79a, 70597 Stuttgart, Germany, Telephone +49 711 6781400, Telefax +49 711 6876902, E-mail ballestr@psyres-stuttgart.de

The Dr. Nelly-Hahne-Stiftung and the Stiftung für Bildung und Behindertenförderung support the project.

den therapeutische Möglichkeiten angeboten. 18% (N = 5) nahmen eines oder mehrere dieser Angebote an. Die restlichen betroffenen Mütter lehnten alle Möglichkeiten ab – meist aus sachlichen oder organisatorischen Gründen. 13,4% (N = 104) der Mütter zeigten bei der ersten Screening-Untersuchung einen auffälligen und beim zweiten Screening einen unauffälligen Wert. Sie werden derzeit einer Langzeitbeobachtung unterzogen, um zu unterscheiden, ob es sich dabei um depressive Verstimmungen handelt oder um Depressionen mit oszillierendem Symptomverlauf.

*

Introduction

There is a difference between postnatal depression and the so-called baby blues. The main symptoms of baby blues are sadness and affect-lability. About 50% of mothers suffer from Baby Blues after delivery [16]. Mostly symptoms appear between the 2nd and 5th day after delivery and disappear soon after. Where the depressive symptoms persist or appear after the first ten days after delivery they can last for weeks or months or in severe cases for years. For a safe diagnosis of a postnatal depression symptoms should begin during the first two months after delivery.

According to mostly Anglo-American literature, postnatal depression occurs in about 10% of delivering mothers [6]. Some authors have indicated higher rates of occurrence. Harris found depressive episodes in 15% of mothers at the end of the 2nd month after delivery [11]. Reighard [21] found 19.9% of observed mothers with a postnatal depression at the end of the 2nd month after delivery. Other research groups had lower rates. For instance Lee in Hong Kong found 5.5% mothers with postnatal depressions [17]. In a literature review Riecher-Rössler reports a rate of 10–15% of delivering mothers having depressive symptoms or developing a depression after delivery [22].

The Edinburgh Postnatal Depression Scale (EPDS) is widely used for screening postnatal depressive mothers. The Edinburgh Scale is a 10-item questionnaire to be completed by the mother herself. It was presented first by the Scottish psychiatrist Cox [7]. Sensitivity of the original scale was 86% and the specificity was 78%. Harris [11] could show, that the Edinburgh Postnatal Depression Scale had higher sensitivity and specificity in screening for postnatal depression than the Beck Depression Inventory (BDI). In several countries translations exist, that have proved to have sufficient validity [2, 4]. Bergant [2, 8] used the research criteria of the ICD 10 for depressive illness to validate the German translation.

Symptoms of postnatal depressions do not differ from symptoms of depressions occurring at any other time of life. We think that the title “postnatal” is nevertheless justified for several reasons:

- a. The delivery of a child and the time immediately after that causes a lot of psychosocial stress for the mother (e.g. new situation, change of relationship) that is not present in other phases of life.
- b. Depressions and psychotic diseases start more often during the first months after delivery than at any other time in the life of women [20].

- c. A correlation between hormonal changes during the first weeks after delivery and the beginning of depressions was observed in several investigations [19].
- d. Some authors found that child development is affected in case of postnatal depression of a mother [23].

Study Participants and Method

Screening

The study was performed in collaboration with the Marienhospital in Stuttgart (Germany) and two community midwives. Mothers were screened in the same order in which births occurred. Mothers who did not speak German were excluded. In the first week after delivery all mothers were investigated for obstetric and social parameters. Interviews were held in the hospital or by telephone. The first screening for postnatal depression was 6–8 weeks after delivery. At that time the mother had to fill in the Edinburgh Postnatal Depression Scale (EPDS 1). The questionnaire was either sent to the mothers or completed by a telephone call. All scores above 9.5 were categorised as high. All mothers with high scores in EPDS 1 were reinvestigated 9–12 weeks after delivery. The time between first and second screening was at least 3 weeks. In case of a second high score a Hamilton interview (HAMD) was performed [5]. With this interview DSM IV classification was possible [1]. As far as possible the clinical interviews were performed in the Centre for Psychotherapy Research in Stuttgart. In cases of practical complications for the mother the clinical interview was performed in their house. Figures 1 and 2 show the exact structure of the investigations.

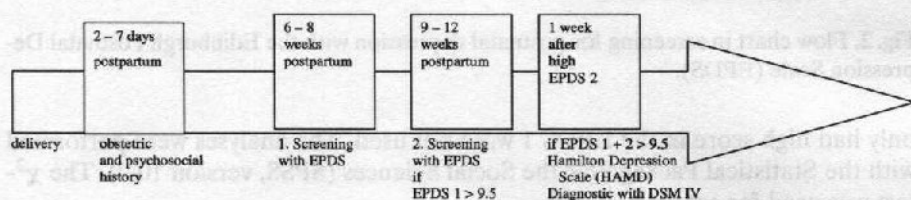


Fig. 1. Time progress in screening for postnatal depression with the Edinburgh Postnatal Depression Scale (EPDS).

Therapeutic Help for Depressive Mothers

Therapeutic help was offered to those mothers with a postnatal depression with DSM IV criteria. This help consisted of a self-help group, outpatient psychiatric treatment, outpatient psychotherapy or inpatient therapy. The reaction of the mothers was documented. In those cases where all therapeutic possibilities were refused, the reasons given by the mothers were noted.

Statistical Analysis

The group of mothers without high screening scores and mothers with clinical diagnosis of postnatal depression were used for statistical analysis. Mothers who

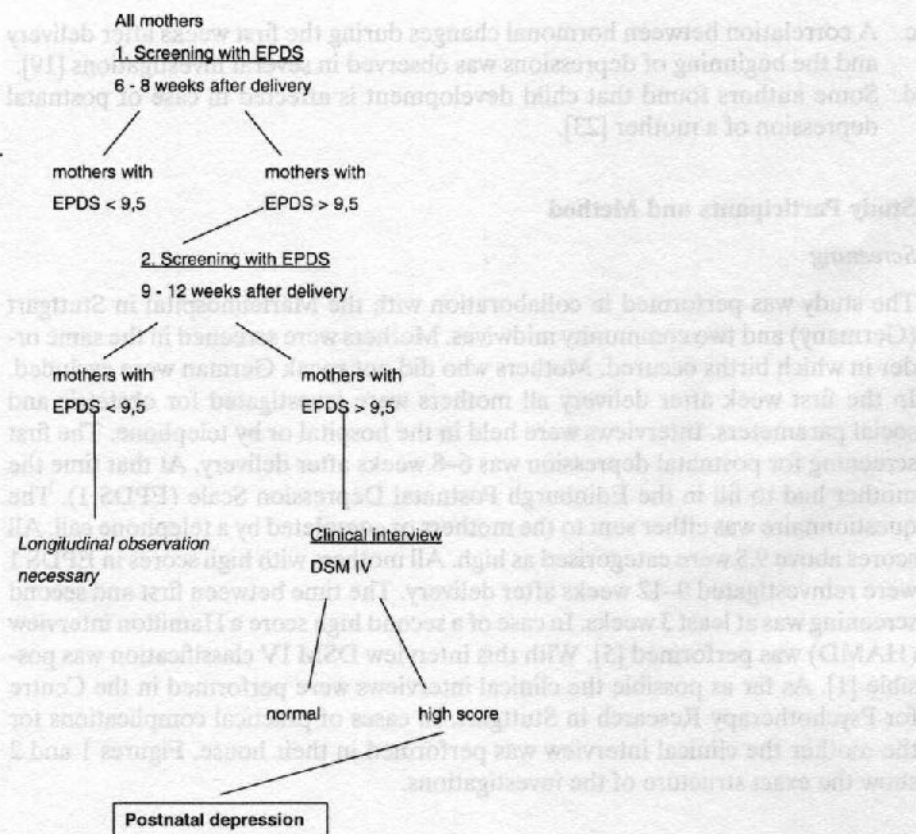


Fig. 2. Flow chart in screening for postnatal depression with the Edinburgh Postnatal Depression Scale (EPDS).

only had high score in the EPDS 1 were not used. The analyses were performed with the Statistical Package for the Social Sciences (SPSS, version 10.0). The χ^2 -test was used for categorical data.

Results

Screening

The investigations were performed from 1998–2000 over a period of 18 months. During this time 2990 children were delivered in the Marienhospital. The community midwives delivered 149 children. All together 1102 German-speaking mothers were asked to participate in the study. 812 (73.7%) of them decided to participate. 772 had all investigations that were necessary for useful data. The dropout rate was 4.9%.

Table 1 shows sociodemographic data of the 772 investigated mothers. In the first screening with the Edinburgh Postnatal Depression Scale (EPDS 1) 132 mothers (17%) showed high scores over 9.5. 640 mothers had normal scores. The second screening of the 132 mothers, who had a high score in the first screening, showed

Table 1. Sociodemographic parameters of the investigated mothers (N = 772)

Summary of investigated mothers		772
Nationality		
German		84.2%
other countries		15.8%
First pregnancy		47.7%
Mean age (mean value)	31.3 years (minimum 17, maximum 45)	
Deliveries in hospital		96%
Deliveries at home		4%
Married		83%
Not married / in partnership		11.8%
Alone		5.2%
Sex of the newborn		
male		49.2%
female		50.8%

that 28 mothers (3.6%) had high scores in the Edinburgh Postnatal Depression Scale (EPDS 2) again. All of these mothers had DSM IV criteria for depression.

Comparison of psychosocial and obstetric parameters showed, that the group of mothers without depressive symptoms and the mothers with postnatal depression had differences in some factors but no differences in others (Table 2). The mode of delivery had little influence on the prevalence of postnatal depression. Mothers delivered by caesarean section had lower rates of postnatal depression than mothers that delivered spontaneously. The difference was not significant. Mothers with postnatal depression slightly more often showed symptoms of baby blues. But the difference was not significant. The status of partnership had little influence on prevalence of postnatal depression. However the difference concerning support by the partner of the mother was significant. Those mothers who had a postnatal depression, complained more often about low or no support by the partner (39.3%) than mothers without depressive episodes after delivery (12.3%). This difference was highly significant.

Therapeutic Help for Depressive Mothers

Therapeutic help was offered to those mothers who showed postnatal depression during a 3 months period after delivery. 5 of these mothers (18%) accepted one or more of these therapeutic possibilities. The remaining women gave mostly factual or practical reasons for refusal of therapeutic help. 39% of the mothers refused for factual reasons (for instance: "I refuse all psychiatric or psychotherapeutic help, because I don't think they help me."), 26% refused for practical reasons (for instance: "I don't have time."). 35% of these mothers didn't give any reason for refusing therapeutic help.

Case Reports from the Group of High Scored Women

Three exemple cases are described below. To keep anonymity metaphors were used to characterise the women.

Table 2. Comparison of psychosocial and obstetric parameters in mothers without depressive symptoms and mothers with postnatal depression.

Parameter	without depressive symptoms N = 640	postnatal depression N = 28	χ^2 -test p-value
Mode of delivery			
spontaneous delivery	63%	71%	≥ 0.05 n.s.
forceps	8%	7%	≥ 0.05 n.s.
caesarean section	29%	21%	≥ 0.05 n.s.
Number of deliveries			
para 1	58%	36%	not possible
para 2	31%	50%	not possible
para >2	11%	14%	not possible
Location of delivery			
hospital	96.7%	92.9%	> 0.05 n.s.
home	3.3%	7.1%	> 0.05 n.s.
Breast-feeding	92.8%	96.4%	> 0.05 n.s.
Baby Blues	39.1%	46.4%	> 0.05 n.s.
Sex of the newborn			
male	49.8%	35.7%	> 0.05 n.s.
female	50.2%	64.3%	> 0.05 n.s.
Mode of partnership			
alone	4%	7%	> 0.05 n.s.
partnership / not married	12%	14%	> 0.05 n.s.
married	83%	79%	> 0.05 n.s.
support from the partner low or not present	12.3%	39.3%	≤ 0.01 **
History			
with depressive episode during the pregnancy	2.8%	10.7%	≤ 0.05 *
with psychic illness in the history with depressive episode in the history	12%	32%	≤ 0.05 *
with depressive episode in the history	7.0%	21.4%	≤ 0.05 *
Family disposition (parents, brothers and sisters)	21%	29%	> 0.05 n.s.

n.s.: not significant *: significant **: highly significant

Case Report 1 – "The sad, black swan"

The first time mother is 34 years old, a southerner, married and busied in a social worker job. A couple of years ago she was in a Gestalt psychotherapy because of relationship problems with her partner. She found the psychotherapy to be a positive experience for her. At that time she had another partner. Until the fifth month of pregnancy she suffers from vomiting and from time to time she must stay at home from job. Her son is born by Caesarean section at a weight of 4300 gram. At first she feels well, from the fourth day postpartum she has nightmares and feelings of anxiety, so that the clinical psychologist

has to come twice. At the first screening she has high scores, at the second screening she feels much worse – she is very depressive. She comes to a clinical interview and fulfills DSM-IV criteria. Apart from her husband nobody knows about her bad state. He supports her, but being self-employed he has little time. They argue frequently. During the interview professional help is offered to her. She decides for behavioural psychotherapy at that psychologist, who saw her in the hospital. We make the contact for her; in spite of a good previous psychotherapy experience, she needs help from the research team to make this step. The psychotherapy takes a successful course and is finished about one year after delivery. She feels much better, is engaged in her job and is very active in her free time.

Case Report 2 – “The glossing over woman”

The Dutch woman is over thirty and has a daughter of three years. She is married. She remembers a longer depressive mood six years ago. After a job change she feels better and her relationship works better, too. She is out of work since the birth of her daughter three years ago. Her husband comes home from work late in the evening – so his support is low. She has a good pregnancy and delivers her son at home without complications. She is exhausted after the birth. Her daughter is jealous. She has high scores in the first screening – she suffers from fear, mourning guilty and depressive feelings; sometimes she has thoughts of suicide. At the second screening she has high scores again. Subsequently she tries to gloss over her state at the first screening. The clinical interview takes place at home – no symptoms existing two weeks ago can be established. Her state is astonishingly much better. So we offer no treatment. The midwife however reports that the woman repeatedly has depressive phases. The mother has experienced a postnatal depression with oscillating course. Maybe the interview took place in a good phase; we had the impression that she tended to gloss over her state. Therapy was out of question for her.

Case Report 3 – “The blocked power woman”

The 33-year old married dynamic graduate delivered her first child. Her relationship exists a long time and is very positive. Objectively seen her husband helps her with the child enough – subjectively seen however it is not enough. Her job is important to her and she likes it – she seems to be successful and ambitious. In her case history she had a psychoanalytic treatment because of a bulimia; she is no longer bulimic, however her view of the psychotherapy is ambiguously. She has a good pregnancy. Her daughter is born by Caesarean – the anaesthetic was a nightmare for her, followed by hallucinations and in her week on the gynaecology ward she is all mixed up, cries a lot. There is a long talk with us in the ward with the offer to turn to us if needed. So she calms down. The daughter gets three-month-colics. At the first screening she has high scores, she suffers from anxiety and feelings of being over-challenged and sometimes has thoughts of suicide. At the second measurement she feels much better and has very low scores. 13 months postpartum she contacts us again because of her bad state. She comes to an intensive talk and it becomes clear that she has had a severe depression in the last thirteen months with an oscillating course. She says it would have been better to get professional help. Now she intends to take psychotherapy; but after Christmas she feels much better and she stabilises. This case is a pointer that following the symptoms beyond the third month makes sense.

Discussion

Frequency of Depressions

Basing on WHO data depressions are one of the important diseases in developed countries. The “Kompetenznetz Depressionen” assumes that in Germany about

5% of the population, or 4 million people, suffer from a depression, which should be treated [13]. Using self-appraisal instruments for the calculation of frequencies the numbers vary between 11% and 26% [9]. Using clinical interviews the frequency is clearly lower – 2% to 13% [12]. The data for women are double those for men. Wittchen and v. Zerssen indicate a 6-month-prevalence of 3% for men, 4.5% to 9.3% for women [24].

Frequency of Postnatal Depressions

Many studies have only one point in time to measure the occurrence of postnatal depression. This point is mostly at the end of the second month. In our study there is a second screening in the third month after delivery. Cox [7] recommends this procedure. In our group most mothers with high scores at screening 1 (EPDS 1) have normal scores in the course of third month postpartum. This is the observation of Cox [7], too. In our opinion this second screening is important to differentiate women with depressive mood from women with postnatal depression.

A depressive mood could also be an indicator for an oscillating symptom course. At the moment we have long-term observations with as many women with high scores at the first screening as possible to decide this question.

The prevalence of postnatal depressions based on DSM-IV criteria by observing women three months after postpartum is 3.6%. This could be an indicator that postnatal depressions have a lower frequency in Germany than in Anglo-American countries; there the prevalence data are mostly about 10% [6] or higher [14]. The newest data from Bavaria show a prevalence of 3.3% over the whole first year after delivery basing on DSM-IV criteria [15]. These data fit well to our findings. However one must take into consideration that in the Bavarian study the diagnosis is given retrospectively, seven years after delivery.

Some authors suppose that a Caesarean section is a risk factor for getting postnatal depressive symptoms [19]. Such correlation could not be found in our sample. Mothers with Caesarean sections and spontaneous deliveries showed about the same rate of high scores. It is possible that caesarean section not always has an influence on postnatal mood.

Utilization of Therapeutic Treatment

There are many studies about utilization of therapeutic alternatives concerning mental disorders. The “Mannheim Cohort Project on Prevalence and Course of Psychogenic Disorders” – a study about the occurrence of mental diseases in the general population – found the following: only 3% of those persons who were considered as needing to be treated decided for psychotherapeutic treatment on their own. Where motivated the rate was 33% [10a, 10b]. In the “Upper-Bavarian Field-Study” the utilization of psychiatric treatment by people having a depression was examined [18]. It was found that only 23.9% get treatment. Maybe the motivation of women with postnatal depression is lower because of their special situation after delivery. In an American study 21.4% of women with postnatal depression got therapy [3]. This corresponds to the 18% of women in our sample, who used therapeutic help.

References

- [1] Ballestrem CL, Strauß M, Häfner S, Kächele H (2001) Ein Modell für das Screening von Müttern mit postpartaler Depression. *Nervenheilkunde* 6 (20): 352–355
- [2] Bergant AM, Nguyen T, Heim K, Ulmer H, Dapunt O (1998) Deutschsprachige Fassung und Validierung der „Edinburgh Postnatal Depression Scale“. *Deutsche Medizinische Wochenschrift* 123: 35–40
- [3] Campbell SB, Cohn JF (1997) The timing and chronicity of postpartum depression: implications for infant development. In: Murray L, Cooper PJ (eds.) *Postpartum Depression and Child Development*. Guilford Press
- [4] Carpiniello B, Pariante CM, Serri F, Costa G, Carta MG (1997) Validation of the Edinburgh Postnatal Depression Scale in Italy. *Journal of Psychosomatic Obstetric and Gynaecology* 18: 280–285
- [5] Collegium Internationale Psychiatricae Salarum (1986) *Internationale Skalen für Psychiatrie*. Beltz, Weinheim
- [6] Cooper PJ, Murray L (1998) Postnatal Depression. Clinical review. *British Medical Journal* 316: 1884–1886
- [7] Cox JL, Holden JM, Sagovsky R (1987) Detection of Postnatal Depression. Development of the 10-item Edinburgh Postnatal Depression Scale. *British Journal of Psychiatry* 150: 782–786
- [8] Dilling H, Mombour W, Schmidt MH, Schulte-Markwort E (1994) *Internationale Klassifikation Psychischer Störungen ICD-10, Forschungskriterien*. Verlag Hans Huber, Bern Göttingen Toronto Seattle
- [9] Eaton WW, Kessler LG (1981) Rates of depression in a national sample. *American Journal of Epidemiology* 114: 528–538
- [10a] Franz M, Schiessl N, Manz R, Fellhauer R, Schepank H, Tress W (1990) Zur Problematik der Psychotherapiemotivation und der Psychotherapieakzeptanz. *Psychotherapie, Psychosomatik, Medizinische Psychologie* 40: 369–374
- [10b] Franz M (1997) Der Weg in die psychotherapeutische Beziehung. Vandenhoeck & Ruprecht, Göttingen
- [11] Harris B, Huckle P, Thomas R, Johns S, Fung H (1989) The use of rating scales to identify postnatal depression. *British Journal of Psychiatry* 154: 813–817
- [12] Hautzinger M, Bailer M (1993) *Allgemeine Depressions Skala*. Beltz, Weinheim
- [13] Hegerl U (1999) *Kompetenznetz Depression, Suizidalität*. Presseinformation
- [14] Kumar R, Robson KM (1984) A prospective study of emotional disorders in child-bearing women. *British Journal Psychiatry* 144: 35–47
- [15] Kurstjens S, Wolke D (2001) Postnatale und später auftretende Depressionen bei Müttern: Prävalenz und Zusammenhänge mit obstetrischen, soziodemographischen sowie psychosozialen Faktoren. *Zeitschrift für Klinische Psychologie und Psychotherapie* 30(1): 33–41
- [16] Lanczik M, Brockington IF (1999) Das postpartale dysphorische Syndrom. *Fortschritte der Neurologie – Psychiatrie* 67: 60–67
- [17] Lee DT, Yip SK, Chiu HF, Leung TY, Chan KP, Chau IO, Leung HC, Chung TK (1998) Detection of postnatal depression in Chinese women. Validation of the Chinese version of the Edinburgh Postnatal Depression Scale. *British Journal of Psychiatry* 172: 433–437
- [18] Meller I, Fichter M, Weyerer S, Witzke W (1989) The use of psychiatric facilities by depressives: results of the Upper Bavarian Study. *Acta Psychiatr Scand* 79(1): 27–31
- [19] Nispel P (1996) *Mutterglück und Tränen*. Herder, Freiburg
- [20] O'Hara MW (1997) Introduction to postpartum depressive disorder. In: Murray L, Cooper PJ (eds.) *Postpartum Depression and Child Development*. The Guilford Press, New York London

- [21] Reighard FT, Evans ML (1995) Use of the Edinburgh Postnatal Depression Scale in a southern, rural population in the United States. *Prog. Neuropsychopharmacol. Biol. Psychiatry* 19(7): 1219-1224
- [22] Riechler-Rössler A (1997) Psychische Störungen und Erkrankungen nach der Entbindung. *Fortschritte in Neurologie und Psychiatrie* 65: 97-107
- [23] Sharp D, Hay DF, Pawlby S, Schmücker G, Allen H, Kumar R (1995) The impact of Postnatal Depression on Boys' Intellectual Development. *Journal of Child Development* 36(8): 1315-1336
- [24] Wittchen HU, Zerssen D v (1988) *Verläufe unbehandelter und behandelter Depressionen und Angsterkrankungen*. Springer-Verlag, Berlin Heidelberg New York