

## Depressive symptomatology and grief in Spanish women who have suffered a perinatal loss

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### Abstract

**Background:** Perinatal grief differs from other types of mourning. Two goals were set: to describe the progression of the process of grief and the symptoms of depression throughout the year following perinatal loss, and to study its association with socio-economic and obstetric factors.

**Method:** The study involved the participation of 70 women who had suffered a medical termination of pregnancy or a prenatal/postnatal death. Three assessments were made after the loss (after 1 month, 6 months and 1 year) with the Perinatal Grief Scale (PGS) to assess grief and the Beck Depression Inventory (BDI) for depressive symptomatology.

**Results:** Symptoms pertaining to grief and depression were observed in the first month after the loss, and a significant decrease in scores over the two follow-ups. No significant differences were observed in grief and depression depending on the type of loss, no significant associations were found with the age of the mother, her socioeconomic level, or obstetric factors (week of gestation of the loss, having a child or having suffered a previous miscarriage).

**Conclusions:** Perinatal grief is a complex construct, with multiple variables involved, and one which involves significant emotional discomfort.

**Key-words:** Depression, perinatal grief, medical interruption of pregnancy, perinatal Grief Scale.

### Resumen

**Sintomatología depresiva y duelo en mujeres españolas que han sufrido una pérdida perinatal.** **Antecedentes:** el duelo perinatal difiere de otros tipos de duelo. Se plantearon dos objetivos: describir la evolución del proceso de duelo y la sintomatología depresiva a lo largo del año que sigue a la pérdida perinatal y estudiar su asociación con factores socioeconómicos y obstétricos. **Método:** participaron 70 mujeres que habían sufrido una interrupción médica del embarazo o una muerte prenatal/postnatal y se realizaron tres evaluaciones tras la pérdida (1 mes, 6 meses y 1 año) con la *Perinatal Grief Scale* (PGS) para evaluar el duelo y el *Beck Depression Inventory* (BDI) para la sintomatología depresiva. **Resultados:** se observó sintomatología propia del duelo y depresiva en el primer mes de la pérdida y una disminución significativa de las puntuaciones a lo largo de los dos seguimientos. No se observaron diferencias significativas en el duelo y la depresión en función del tipo de pérdida, ni se encontraron asociaciones significativas con la edad de la madre y su nivel socioeconómico o los factores obstétricos (semana de gestación de la pérdida, tener un hijo o haber padecido un aborto previo). **Conclusiones:** el duelo perinatal es un constructo complejo, con múltiples variables implicadas y que comporta un malestar emocional significativo.

**Palabras clave:** depresión, duelo perinatal, interrupción médica del embarazo, perinatal Grief Scale.

Miscarriage affects 10-20% of all clinically recognized pregnancies (Borrell & Stergiotou, 2013) and the perinatal mortality rate in Spain in the last decade was around 5 per 1000 live births (IDESCAT, n.d.). The study of perinatal bereavement is important, because medical advances make it possible to detect more and more early defects or alterations in pregnancy that present couples with the decision to terminate or continue with the pregnancy.

Perinatal grief, like other bereavements, is a process that goes through different phases, can last several months or years, and changes over time. On receiving the news, the person feels a strong

sense of shock, followed by great emotional distress accompanied by anxiety, guilt and rage. While this distress continues through an intense state called grief work, feelings of envy and desire for the baby are experienced (Leppert & Pahlka, 1984; Lindberg, 1992). It is thought that the duration of the process depends on many variables that intervene and create different patterns of response: anticipated sorrow, lack of social support, a low socio-economic status and a shortage of coping strategies by the survivor, among others, can lengthen the grief (Lok & Neugebauer, 2007; Stroebe & Schut, 1999).

The moment in the life cycle at which these deaths occur, the absence of a visible person to cry over, the difficulty in sharing experiences and memories with the family and the social environment, as well as the sudden irruption of the news at a moment in which life and death coincide in time, and the youth of the progenitors are just some of the factors that may complicate the process of emotional adaptation to the loss (Ben Soussan, 1999; David & Gosme-Séguret, 1996; Oakley, McPherson, &

Roberts, 1990; Robinson, Baker, & Nackerud, 1999; Stirtzinger & Robinson, 1989).

The psychological and emotional symptoms of grief may be confused or overlap with those of major depression, but are distinguished by symptomatic criteria and by the duration of the episode, as set forth in the Diagnostic and statistical manual of mental disorders-text revision- 5th edition ([DSM-5] American Psychiatric Association [APA], 2013). Symptoms of depression are present in between 20% and 55% of women who have just suffered a miscarriage, with decreasing percentages in the following months (Carrera, 1995; Janssen, Cuisinier, Hoggduin, & DeGraw, 1996; Iles & Gath, 1993; La Roche et al., 1984; Neugebauer, 2003).

We can distinguish two kinds of loss: the losses due to a medical termination of pregnancy (MTP) and prenatal/postnatal losses. One aspect that distinguishes them is that in terminations there is a more active involvement of the women, in the sense of having to decide whether to end or continue with the pregnancy. There are several dilemmas that a woman may experience with this kind of loss (Sandelowski & Barroso, 2005) and this aspect significantly affects personal guilt and self-reproach, confronting the woman with the contradiction of halting and ending the life that she herself has created, at a time when, with the pregnancy being more or less advanced, she feels the vitality of the foetus. In prenatal and postnatal deaths (up to 28 days of life), there is normally no opportunity to prepare for the loss, since they tend to happen unexpectedly; in terms of postnatal deaths, especially so, since the baby has already been born and an emotional bond initiated (Berbel & Pi-Sunyer, 2001).

The aims of this study are: a) to describe the progress of the grieving process and the symptoms of depression throughout the period of a year after suffering a perinatal loss, taking into account the type of loss (MTP versus prenatal/postnatal death), and b) to study which factors are associated with worse/better results in the long run in terms of grief and depression, considering socio-demographic aspects (age and socioeconomic status) and obstetric aspects (presence of miscarriages and children prior to the loss and the weeks of gestation in which they occur). The expectation is to observe levels of symptomatology pertaining to grief and depression in the month of the loss, which will diminish during the follow-up period. With respect to the type of loss, it is expected to find that women who have suffered a prenatal or postnatal loss will present more symptoms of grief and depression than those who have carried out a termination. There was no expectation to find associations with regard to the experience of grief and the socio-economic level and age of the participants; on the other hand, women who have had previous miscarriages and those who have suffered loss in later weeks of gestation would present higher grief and depression, while women who already have children would present fewer symptoms.

## Method

### Participants

We contacted 125 women who had suffered a perinatal loss, attended in the Vall d'Hebron Maternal and Infant-care Hospital in Barcelona (Spain). The criteria for inclusion were for the perinatal loss to have occurred at any time during pregnancy or in the first weeks of postpartum (up to 28 days), and that the participants had

a minimum level of education and understood Spanish. A total of 70 women (57.9%) agreed to participate and sent written informed consent and the corresponding questionnaires filled in at the first follow-up (a month after the loss). There were no significant differences regarding type of loss ( $p = .872$ ), couple status ( $p = .137$ ), socioeconomic level ( $p = .171$ ), previous miscarriages ( $p = .151$ ), healthy children ( $p = .192$ ), weeks of gestation ( $p = .539$ ), or age ( $p = .540$ ) between participants and refusals. Of the 70 women participating, 41 made the second follow-up (at six months) and 36 made the third follow-up (after a year). 71% (50) of the participants at the start had suffered a perinatal loss due to a medical termination of pregnancy, and the average number of weeks of gestation at which the loss occurred was 22.4 weeks ( $SD = 5.61$ ). For the group that had suffered a perinatal death not due to MTP, the average number of weeks of gestation for the prenatal death of the foetus was 25.7 weeks ( $SD = 4.77$ ) and 35 ( $SD = 3.21$ ) in the case of postnatal death (preterm births,  $Md = 4.5$  days of postnatal life). Other characteristics of the sample are presented in Table 1.

## Instruments

*Demographic data form.* A form created ad hoc in which the obstetric history of the participant and the socio-demographic data were collected. The socio-economic level was ranked as high, medium or low based on the occupation and level of education (Hollingshead, 1975). The obstetric variables collected included the weeks of gestation in which the loss occurred, whether the participants had previously suffered a loss or miscarriage, and the number of children.

*Perinatal Grief Scale - reduced version* (PGS; Potvin, Lasker, & Toedter, 1989). This assesses perinatal grief and consists of 33 self-reported items distributed in three subscales of 11 items each with a Likert-type response format with five choices of response, from *completely disagree* (1) to *completely agree* (5). The Active grief subscale corresponds to normal grief reactions and includes items relating to feelings of sadness, miss the baby and cry for it; the Difficulties of coping subscale includes items on the presence/absence of symptoms of depression and guilt, the lack of social support and problems in the relationship between the partners, difficulties in resuming the daily activities and personal relationships; and the Hopelessness subscale includes symptoms

Table 1  
Sample characteristics for included participants ( $N = 70$ )

Categorical variables		n (%)
Type of loss	Medical termination of pregnancy	50 (71.4)
	Prenatal/postnatal death	20 (28.6)
Couple status	Married	58 (82.9)
	Live with couple	10 (14.3)
Socioeconomic level	Single	2 (2.9)
	Low	31 (44.3)
	Medium	29 (41.4)
	High	10 (14.3)
Quantitative measures		$M (DE)$
Previous miscarriages		0.54 (1.03)
Healthy children		0.36 (0.57)
Weeks gestation		22.40 (5.61)
Age (years)		32.12 (4.68)

that endure over time and are dependent on the person's coping resources. Both on a subscale level and a total score level, a high score is indicative of a greater presence of the assessed construct. For the total score, a score equal to or greater than 91 would indicate the presence of grief; in relation to the subscales, the cut-off points are as follows: 34 for Active grief, 30 for Difficulties in coping and 27 for Despair (Davies, Gledhill, McFayden, Withlow, & Economides, 2005; Toedter, Lasker, & Janssen, 2001). The version adapted to Spanish by Capitulo, Ramirez, Grigoroff-Aponte and Vahey (2010) was used in this study. The internal consistency in this sample for the follow-ups was satisfactory, with Cronbach's alpha values between .85 and .96.

*Beck Depression Inventory* (BDI; Beck, Rush, Shaw, & Emery, 1979). This assesses the presence of symptoms of depression. The adaptation for Spanish-speakers by Sanz and Vázquez (1998) was used. It consists of 21 items with four alternative answers. Each item is valued from 0 to 3, and so the total score can range from 0 to 63, with 17 points being the cut-off point for depressive symptomatology (APA, 2013). The BDI has a good internal consistency (Beck & Steer, 1984; Beck, Steer, & Garbin, 1988; Ruiz & Bermúdez, 1989) and makes it possible to appreciate the overall level of depression, as well as overall emotional changes over time. In our sample the internal consistency was satisfactory, with Cronbach's alpha values between .89 and .90 in the three follow-ups.

*Procedure*

The design used prospective length. Three evaluations were carried out during the study: at one month, at six months, and a year after the loss. The study was approved by the ethical committee of the Vall d'Hebron Maternal and Infant-Care Hospital in Barcelona. The medical team provided a weekly list of the patients with abortions, MTP and pre/postnatal deaths. A first contact with participants was made by telephone to ask them to enrol in the study; permission to send a research information letter was also asked for. If women agreed to participate, and once the written informed consent was signed, socio-demographic and perinatal data and data relating to the loss were collected by telephone interview and by consulting the hospital's medical files. Then, participants received the questionnaires by postal mail, at the corresponding times, together with a pre-paid envelope in which participants deposited and returned the material once completed. Those women who did not return the study material at the first follow-up were excluded from the study and no more questionnaires were sent to them, on the understanding that they did not wish to be included in the study. Those who returned the first follow-up but not the second or third were sent the questionnaires again because of their previous agreement to form part of the follow-up.

*Data analysis*

Data were stored in a Microsoft Office Access 2000 database and statistical analysis was carried out with the program SPSS 17. In order to describe how the grieving process evolved over a year after the loss, distinguishing the two groups of type of loss (MTP and prenatal/postnatal death) an analysis of the variance was carried out, considering a 2 x 3 mixed design (group x moment). The size of the effect with the Cohen *d* was calculated to quantify

the magnitude of the differences found. The criteria proposed by Cohen (1988) were followed in order to interpret it: up to 0.20 null, 0.20 to 0.50 small, 0.50 to 0.80 medium, and more than 0.80 large. Multiple linear regression models were applied to assess the association between the predictors considered to be related to obstetric and sociodemographic factors, with the criteria, grief and depression scores.

**Results**

*Presence of depression and grief, and the evolution of symptoms depending on the type of loss*

Tables 2 and 3 show, respectively, the grief and depression scores throughout the three follow-ups after the loss, and the results of the ANOVA for the five measures considered. The only statistically significant effect was the time factor, with two different types of profile being observed. The BDI scores and the Difficulty with Coping and Despair subscales of the PGS decreased significantly between the first and the following assessments, whereas for the total score of the PGS and the Active grief subscale a statistically significant decrease between each follow-up and the next and/or later one was observed.

Although there was no statistically significant difference between the groups, we evaluated the effect size and found moderate differences in the BDI scores, with the group which has experienced a pre/postnatal death being the one which scored higher on average (*d* = 0.50). For the PGS grief scale we found only small or null effect sizes between the groups (*d* ≤ 0.30).

*Association with sociodemographic and obstetric factors*

The results of the two regression models under consideration are presented in Table 4. Both models with socio-demographic factors (age and socioeconomic level) and obstetric factors (weeks of gestation in which the loss occurs, presence of children and previous miscarriages) as predictors of BDI and PGS scores a month after the loss were statistically nil, although a positive and significant association between the weeks of gestation and BDI scores after a month was observed ( $\beta = .29; p = .018$ ).

Measure	Group	Observed means (standard deviation)		
		1 month	6 months	12 months
BDI: Depression	Pre/post loss	16.55 (9.91)	10.55 (7.19)	9.18 (8.68)
	MTP	12.56 (7.36)	9.20 (8.25)	7.40 (6.54)
PGS Total	Pre/post loss	94.91(27.09)	81.55(30.79)	68.73 (30.59)
	MTP	89.29 (22.55)	77.88 (26.33)	72.25 (24.93)
PGS Active grief	Pre/post loss	40.36 (9.81)	34.73 (11.93)	27.09 (12.46)
	MTP	37.83 (8.20)	32.46 (11.07)	27.96 (10.07)
PGS Coping difficulties	Pre/post loss	26.82 (10.28)	23.18 (10.68)	20.64 (10.05)
	MTP	25.92 (8.52)	23.50 (9.33)	22.21 (8.20)
PGS Despair	Pre/post loss	27.73 (9.49)	23.64 (10.02)	21.00 (9.33)
	MTP	25.54 (9.16)	21.92 (8.14)	22.08 (8.32)

MTP: Medical Termination of Pregnancy

*Table 3*  
ANOVA results for depressive symptoms and grief scores over follow-ups by type of loss

Measure	ANOVA: F test (p)		Contrasts: t-test (CI 95% for mean differences)			
	Interaction	Time	Group	T1 vs. T2	T1 vs. T3	T2 vs. T3
BDI: Depression	0.70 (.408)	22.63 (<.001)	0.89 (.352)	4.68 (1.96; 7.40)**	6.26 (2.96; 9.57)*	
PGS Total	1.62 (.212)	36.30 (<.001)	0.05 (.831)	12.39 (5.81; 19.0)**	21.6 (12.6; 30.6)**	9.22 (3.41; 15.0)**
PGS Active grief	0.86 (.360)	39.95 (<.001)	0.15 (.699)	5.51 (2.32; 8.69)**	11.57 (6.97; 16.2)**	6.07 (2.81; 9.33)**
PGS Coping diff.	1.18 (.285)	18.87 (<.001)	0.01 (.918)	3.03 (0.86; 5.20)*	4.95 (2.08; 7.81)**	
PGS Despair	1.41 (.243)	13.71 (.001)	0.10 (.754)	3.86 (1.07; 6.64)*	5.09 (1.63; 8.55)*	

\*  $p < .01$ ; \*\*  $p < .001$ ; CI: confidence interval

*Table 4*  
Regression models valuating the association between sociodemographic and obstetric variables and depression and grief scores

Criterion (1 month)	Predictors	B (CI 95%)	$\beta$	p	F(p)	R <sup>2</sup>
Depression (BDI)	Age	-0.27 (-0.82; 0.29)	-.14	.337	1.45 (.210)	.038
	SES low	-0.82 (-5.56; 3.92)	-.05	.731		
	SES high	3.75 (-3.01; 10.51)	.14	.272		
	Weeks of gestation	0.46 (0.06; 0.85)	.28	.024		
	Children (yes)	3.28 (-2.11; 8.66)	.17	.228		
	Miscarriages (yes)	2.33 (-2.55; 7.20)	.12	.343		
Grief (PGS Total)	Age	-0.80 (-2.62; 1.02)	-.13	.382	0.63 (.705)	.058
	SES low	-2.19 (-16.92; 12.54)	-.04	.767		
	SES high	1.96 (-18.52; 22.44)	.03	.849		
	Weeks of gestation	0.94 (-0.26; 2.13)	.20	.121		
	Children (yes)	2.99 (-13.50; 19.50)	.05	.717		
	Miscarriages (yes)	7.76 (-7.04; 22.56)	.14	.298		

BDI: Beck Depression Inventory; PGS: Perinatal Grief Scale; SES: socioeconomic status; B: parameter regression; CI: confidence interval,  $\beta$ : standardized parameter regression; R<sup>2</sup>: R-square

### Discussion

With regard to the first goal of describing the evolution of the grief and the symptoms of depression throughout the year after perinatal loss, our results are consistent with the findings of authors such as Beutel et al. (1995), Carrera (1995), Janssen et al. (1996), Korenromp, Page-Christiaens, Van den Bout, Mulder, and Visser (2009), Lok and Neugebauer (2007) and Lok, Shing-Kai, Tak-Sing, Sahota, and Kwok-Hung (2010), who found symptoms of depression in the short term after the loss. Our results partially support the hypothesis that BDI scores would decrease significantly throughout the follow-up process, because we only found statistical differences between the first and the subsequent assessments. In fact, our results are aligned with those found by Janssen et al. (1996), who reported a recovery of depression symptomatology at the end of one year post-loss and by Lok et al. (2010), who observed a larger reduction for BDI scores within the first three months post-miscarriage, whereas subsequent reductions through 6 and 12 months did not reach statistical significance. This result supports the argument that the psychological and emotional symptoms of grief can sometimes be confused with or overlap with those of a major depression, although they are distinguished by symptomatic criteria and the duration of the episode. The symptoms of depression that we have observed in our sample were shorter, and decreased between the first follow-up and the subsequent ones without any therapeutic intervention being carried out.

As for grief, our results are in line with those of Iles and Gath (1993), Janssen, Cuisinier, DeGraw, and Hoogduin (1996), Korenromp et al. (2009), and Lasker and Toedter (1991) and confirm the hypothesis that a statistically significant decrease in symptoms of grief would be observed throughout the year. The differences in the evolution of the scores of the PGS subscales could be related to the different aspects of the construct that each of them assesses. The Active grief subscale assesses the “normal” reactions of grief, such as feelings of sadness, missing the baby and crying over it, with the result that the scores after a year are lower than those after six months, and these are lower than those observed a month after the loss. In contrast, the other two scales (Difficulties in coping and Despair) assess other aspects related to grief, such as difficulties in coping with loss, the presence of symptoms of depression and the difficulties in resuming daily activities; aspects that, in the majority of people who suffer a loss, are present initially only to subside after a few months (Lasker & Toedter, 1991).

We expected to find differences between the two loss types considered in the way the resolution of grief progressed, in line with various authors (Cuisinier, Kuijpers, Hoogduin, De Graauw, & Janssen, 1993; Goldbach, Dunn, Lasker, & Toedter, 1991; Janssen et al., 1996; Neugebauer et al., 1992). However, our results do not confirm this hypothesis, and are in accordance with the results of Carrera (1995) and Peppers and Knapps (1980), who observed no differences concerning the type of loss either. However, in terms

of how the scores evolved, our results are in line with those found by Iles and Gath (1993), who observed differences at 6 months among women who decided on an MTP and those who did not, in the sense that those who found themselves faced with the sudden loss and did not have the opportunity to decide whether to continue or end the pregnancy were more distressed after 6 months, although there were no differences between the groups after a year. In this sense, it seems that the PGS scores do not diminish as progressively in the terminations group; an aspect that we think might have to do with this more active involvement of the woman in the termination. There is a possibility that initially in women in the MTP group the loss is accompanied by a certain sense of release or ending of the terrible waiting, but in the longer term there appear feelings of personal guilt or self-reproach. These results confirm the importance of giving value to these types of losses and of monitoring them and offering support after the loss, because as Robinson (2011) argues: "these couples may struggle with a great deal of ambivalence, guilt and shame and they wonder if they should have or could have continued the pregnancy and managed to raise a disabled child". Counselling couples on the explanations they will give to others, on how to cope with the pain and how to deal with going back home and to work could improve the grief process.

Finally, with regard to demographic factors, as we expected we found no associations with socio-economic level, results that are in line with Klier, Geller and Neugebauer (2000), Korenromp et al. (2009), Prettyman et al. (1993) and Thapar and Thapar (1992), who found no relationship between the socioeconomic level and emotional adaptation after the miscarriage. With regard to the age of the mother, we did not find a statistically significant relationship, as with most of the studies reviewed (Beutel et al., 1995; Friedman & Gath, 1989; Klier et al., 2000; Neugebauer et al., 1992; Prettyman et al., 1993).

As for the obstetric factors, our results indicate that a more advanced state of gestation at the time of the loss is associated with higher level of depressive symptoms a month after the loss. These results support those found by Janssen et al. (1996), Neugebauer et al. (1992), Neugebauer (2003) and Swanson (2000). Initially the weeks of gestation are an important aspect for those measures which assess aspects relating to sadness, depression and crying for the baby, but in the longer term they become less relevant.

One of the limitations of this study is the difficulty of carrying out follow-ups from six months onwards. A possible explanation for this could be how painful it is for women to recall certain aspects of the loss, but issues related to the data collection probably also have an influence, as shown in other studies in which contact with the participants was made in the hospital, or even in participants' homes, and which reported higher participation. Another limitation was the low number of participants included, above all in the group of pre/postnatal deaths.

It has been difficult to find recent studies with which to compare our results, especially regarding distress evolution differences according to the type of perinatal loss suffered, as the most recent studies have focused on evaluating the impact of earlier gestational losses (Korenromp et al., 2009; Lok et al., 2010; Swanson, 2000;

Swanson, Connor, Jolley, Pettinato, & Wang, 2007) or on exploring whether patients who were more distressed immediately after miscarriage behaved differently in the year after the miscarriage than those who were less distressed (Lok et al., 2010).

As strengths we can point to having been able to carry out a prospective study during a year of loss and having used specific scales of grief adapted to the Spanish-speaking population. We believe that the results are relevant for health professionals working with women who have suffered a perinatal loss, since they make it possible to offer them information about the emotional impact and the evolution that this type of deaths involve, and may encourage the creation and implementation of preventive intervention protocols.

In conclusion, the symptoms of depression are observed above all in the time closest to the loss, while the symptoms pertaining to the grief assessed with the Active grief subscale and with the total score of the PGS scale decrease more gradually throughout the year following the loss. In contrast, the type of loss is not related to a better or worse evolution of either grief scores or of those of depression. Lastly, none of the socio-economic and obstetrical factors studied have been associated with a greater or lesser presence of the symptoms of grief and depression, with the exception of the weeks of gestation in which the loss occurs and the BDI scores after a month.

As a general conclusion, the data from the study lead us to consider that perinatal grief is a complex construct, with multiple variables involved and with a great weight placed on the inter-subjectivity of everyone who goes through the process. This type of grief involves distress with regard to the loss, although this refers to a person not yet known, and we believe that the results indicate the importance of following up women who suffer this type of loss, with the aim of improving their mental health. The use of scales assessing the emotional implications of grief, like the PGS, could improve the detection of those individuals most likely to suffer complications throughout the grief process. The implementation of psychological counselling and follow-up in obstetrics and neonatal units could help to prevent emotional sequelae. Additionally, it would be of great interest to assess the involvement of coping strategies and perceived stress among couples who face such losses, as recently performed by Kersting, Kroker, Schlicht, Baust and Wagner (2011) and Korenromp et al. (2009). Further research is needed to better understand the long-term effects of women's reproductive events on mental health.

#### Acknowledgements

We would like to thank Dr. Pi-Sunyer, Dr. Carreras and Dr. Perapoch and the professionals of the Prenatal Diagnosis Unit and the Neonatology Unit of the Vall d'Hebron Hospital in Barcelona for the support offered in carrying out this study.

This work is part of IR PhD thesis at the Universitat Autònoma de Barcelona, within the program *Doctorat en Psicopatologia Infantojuvenil* (Departament de Psicologia Clínica i de la Salut and Departament de Psicobiologia i Metodologia de les Ciències de la Salut).

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