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## CLINICAL ARTICLE

## Prevalence of heavy menstrual bleeding and experiences of affected women in a European patient survey

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## ABSTRACT

**Objective:** To examine the prevalence and impact of heavy menstrual bleeding (HMB) among women in Europe, and their experience of HMB assessment and management. **Methods:** An internet-based survey was conducted among women (aged 18–57 years) in five European countries between January and February 2012. The prevalence of HMB among the general population was determined in a short survey, and women who had been diagnosed with HMB were then asked to complete an extended survey about their diagnosis and symptoms. **Results:** Overall, 4506 women responded, of whom 1225 (27.2%) had experienced two or more predefined HMB symptoms within the previous year. Of these women, 564 (46.0%) had never consulted a physician. Among 330 women who completed the detailed survey, 208 (63.0%) had ever been diagnosed with iron deficiency or iron-deficiency anemia. Symptoms associated with iron deficiency were used to help confirm a diagnosis in 83 (39.9%) women. Only 152 (46.1%) of the 330 patients with confirmed HMB had received prescription medication for iron deficiency. **Conclusion:** Many women affected by HMB do not seek medical help, and few of those who do consult physicians report that they have received appropriate treatment. HMB continues to be underdiagnosed and poorly treated.

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## 1. Introduction

Heavy menstrual bleeding (HMB) is defined either from a research perspective as blood loss of more than 80 mL per cycle [1], or clinically as “excessive menstrual blood loss leading to interference with the physical, emotional, social, and material quality of life of a woman” [2]. It is thought to affect approximately 30% of women of reproductive age [3,4], but only one-third of these women are confirmed to have underlying pathology of a type widely recognized to cause HMB [2,5,6].

HMB has been shown to have a profound negative impact on many aspects of a woman's quality of life, affecting energy levels, mood, work productivity, social interactions, family life, and sexual functioning [7–12]. The reduced quality of life for women with HMB also arises from the clinical consequences of prolonged, excessive blood loss [9]. Excessive menstrual bleeding depletes iron stores and circulating levels of available iron over time, leading to iron deficiency, and ultimately to iron-deficiency anemia [13,14].

Iron is essential for healthy cellular activity and is involved in numerous vital functions [13], such as cellular and mitochondrial respiration, which directly affects an individual's energy levels. Prolonged iron deficiency brings about adaptive responses in the body, with changes in cellular metabolism, gene expression, activation of signaling pathways, cell cycle regulation, cell differentiation, and cell death [13]. These adaptations eventually manifest as clinical symptoms of iron deficiency—i.e. fatigue, weakness, impaired cognition, impaired sexual functioning, and psychological morbidity [9,14].

Iron deficiency and HMB share many presenting symptoms. Indeed, HMB is recognized as the primary cause of iron deficiency and iron-deficiency anemia among women in routine clinical practice [15]. In a large US survey of hospital inpatients [16], 25% of all women hospitalized for gynecologic disorders associated with HMB were found to be anemic. HMB clearly warrants careful management, and effective treatments are available to alleviate symptoms and improve quality of life [2,10,17].

Evidence suggests that most women with HMB symptoms do not seek medical help [2,18,19]. The prevalence of HMB in self-reported studies is much lower than that in primary clinical studies [2,18], and community and consensus-based estimates suggest that only approximately 6% of women with HMB consult a physician about their symptoms [19]. Many women with HMB do not perceive their heavy

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menstruation as a problem, and young women who seek help from a primary-care physician might not be given sympathetic advice or support, leading to a future reluctance to seek medical help.

The aim of the present study was therefore to measure the perceived prevalence of HMB among a representative sample of women of reproductive age from five different European countries by using a questionnaire to gather information about their perceptions of the diagnosis and management of HMB.

## 2. Materials and methods

The present internet-based survey was conducted between January 1 and February 29, 2012. Representative samples of female adults (aged 18–57 years) were taken in five European countries (France, Spain, Germany, Netherlands, and Switzerland), which were chosen to provide a geographic range for the study encompassing the south, center, and north of Europe. The surveys were carried out by a market-research company (A + A Healthcare Market Research, Lyon, France) using a representative consumer panel of anonymous volunteers. The study was neither interventional nor observational, and participant feedback was anonymous; therefore, ethics committee approval and informed consent were not required.

The present study comprised a 3-minute prevalence survey of the general adult female population, and a more detailed 20-minute survey of those with identified symptoms suggestive of HMB. Participants were invited to complete the prevalence survey via an email link and were paid by a points-based credit system according to the length of interview (approximate cash value €2 per participant).

For the prevalence survey, target samples of 1000 women per country were randomly selected from a representative consumer panel and asked to complete a short questionnaire about their menstrual periods. The women came from the general female population and were aged between 18 and 57 years. For the prevalence survey, symptoms typical of HMB were defined as flooding through clothes or on to bedding, a need for frequent changes of sanitary towels or tampons (every 2 hours or less, or 12 sanitary items per day), need for double sanitary protection (tampons and towels), and passing large blood clots. The prevalence of HMB was determined as the percentage of women who had experienced two or more of the predefined HMB symptoms in the past 12 months.

Women from the prevalence survey who had been diagnosed with HMB by a physician were subsequently enrolled in an extended survey about their diagnosis and symptoms. Questions covered women's awareness of HMB, first consultation, diagnosis and confirmation of

HMB, type of HMB treatment received, impact of HMB on their daily life, and diagnosis of iron deficiency and treatment. The target sample size was 75 women from France, Germany, and Spain; only 50 women would be needed from Switzerland and the Netherlands, owing to their smaller populations. The women were selected by their willingness to answer the longer survey and by their rapidity of completing the survey.

Data were reported in Microsoft Excel 2007 (Microsoft, Redmond, WA, USA) as simple statistics, including number (percentage). Means comparison and proportion test comparison statistical testing was then performed with Microsoft Excel 2007.

## 3. Results

During the study period, 4506 women responded to the prevalence survey. The target sample of 1000 women was achieved in all countries except Switzerland, where only 500 women were recruited because of the smaller population size. Most women were aged 40 years or less (Table 1).

Almost half of respondents claimed to have experienced unusual levels of fatigue tiredness or exhaustion in the previous 12 months that they directly attributed to HMB, with similar proportions seen in all five countries (Table 2). One in five women had experienced tiredness and fatigue that affected their daily life, and shortness of breath that affected their physical activity (Table 2).

Overall, 1225 (27.2%) of the women surveyed had experienced at least two of the predefined HMB symptoms within the previous 12 months. The prevalence varied by country: 304 (30.3%) of 1004 from France reported at least two HMB symptoms, compared with 245 (24.5%) of 1001 from Germany, 329 (32.9%) of 1000 from Spain, 222 (22.2%) of 1001 from the Netherlands, and 125 (25.0%) of 500 from Switzerland.

The 1225 women who had at least two of the predefined HMB symptoms in the prevalence survey were asked to provide further details about their condition. Overall, 564 (46.0%) women had never consulted a physician about their symptoms. In the Netherlands, 135 (60.8%) of 222 women had never sought medical help, whereas in Spain, 115 (35.0%) of 329 women had not sought help (Fig. 1). Of the 502 women who had consulted a physician in the previous 12 months, 267 (53.2%) were not prescribed medication.

Of the 1225 women reporting two or more predefined HMB symptoms in the previous 12 months, 686 (56.0%) had not had HMB confirmed. Of these women, 185 (27.0%) had consulted a physician in the previous 12 months in relation to their symptoms.

**Table 1**  
Ages of respondents.<sup>a</sup>

Age group	Total (n = 4506)	France (n = 1004)	Germany (n = 1001)	Spain (n = 1000)	Netherlands (n = 1001)	Switzerland (n = 500)
18–30 y	1281 (28.4)	301 (30.0)	273 (27.3)	287 (28.7)	290 (29.0)	130 (26.0)
31–40 y	1210 (26.9)	260 (25.9)	269 (26.9)	271 (27.1)	271 (27.1)	139 (27.8)
41–50 y	1118 (24.8)	252 (25.1)	259 (25.9)	241 (24.1)	240 (24.0)	126 (25.2)
51–60 y	897 (19.9)	191 (19.0)	200 (20.0)	201 (20.1)	200 (20.0)	105 (21.0)

<sup>a</sup> Values are given as number (percentage).

**Table 2**  
Symptoms of heavy menstrual bleeding experienced in the past 12 months.<sup>a</sup>

Symptoms	Total (n = 4506)	France (n = 1004)	Germany (n = 1001)	Spain (n = 1000)	Netherlands (n = 1001)	Switzerland (n = 500)
Unusual levels of tiredness, fatigue, or exhaustion affecting daily life	2011 (44.6)	421 (41.9)	470 (47.0)	470 (47.0)	460 (46.0)	190 (38.0)
Breathlessness or shortness of breath affecting physical activity	1346 (29.9)	371 (37.0)	310 (31.0)	280 (28.0)	250 (25.0)	135 (27.0)
Unusual levels of tiredness, fatigue, or exhaustion affecting daily life, and breathlessness or shortness of breath affecting physical activity	906 (20.1)	231 (23.0)	220 (22.0)	190 (19.0)	180 (18.0)	85 (17.0)

<sup>a</sup> Values are given as number (percentage).

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