sciendo

The Cinderella Study: women's lived experience of bleeding disorders – CSL Behring Symposium

Debra Pollard, Kate Khair

Many of the experiences described by women 20 years ago remain prevalent today, and healthcare provision needs to change to offer better treatment and support to women in the bleeding disorder community. These were the key findings of the recently published Cinderella study, which explored the lived experience of women who bleed due to a diagnosed bleeding disorder in order to improve understanding of their unmet needs. Following a systematic literature review to establish what previous research had been carried out in women with bleeding disorders, the Cinderella study undertook an online survey and in-depth discussions (focus groups and one-to-one interviews) to further explore the lived experiences of women haemophilia carriers (WHC), women with a diagnosed bleeding disorder (WBD) and women with immune thrombocytopenia (WITP). The study demonstrated the significant impact of bleeding disorders on the daily lives of survey respondents and the challenges of accessing specialist support, particularly for WHCs. Themes discussed included difficulty obtaining a diagnosis, lack of awareness amongst and poor communication from HCPs, stress and anxiety, coping strategies and sources of support.

DEBRA POLLARD
The Haemnet Foundation, London, UK

KATE KHAIR
Haemnet Ltd, London, UK. Email: kate@haemnet.com

REPORTS FROM THE SECOND EUROPEAN CONFERENCE ON WOMEN AND BLEEDING DISORDERS

Keywords: *Women with bleeding disorders, Haemophilia, Rare bleeding disorders, Immune thrombocytopenia, Lived experience*

THE GLASS SLIPPER MEETS THE GLASS CEILING

In popular folklore, Cinderella is the tale of a girl who unexpectedly achieves recognition after a period of obscurity and neglect. There is growing recognition that women have been largely invisible in healthcare decision-making and have been overlooked and underserved, particularly in terms of involvement in clinical research and access to treatment options. Exclusion from clinical trials results in inequity in medical research and a lack of understanding of female patients, which in turn reinforces gender bias [1,2,3]. Despite rising awareness of these issues, a recent review of research funding in the US National Institutes of Health shows continuation of this bias, with diseases primarily affecting men receiving a disproportionate share [4].

Sexism likely plays a role in this scenario and we know that it this been an issue in bleeding disorders care, leading to inequity for affected women [5]. In the late 1990s, researchers at the Royal Free Hospital in London began studying the impact of bleeding disorders on women's lives, looking at quality of life (QoL), the

J Haem Pract 2022; 9(1). doi: 10.2478/jhp-2022-0018

frequency of bleeding disorders in women attending a gynaecology clinic, and assessment of blood loss in women with bleeding disorders (WBD) [6,7,8]. Later, a study of adolescent girls with bleeding disorders found they experienced isolation, bias, bullying, and psychological trauma, alongside having concerns around bleeding during sex, fertility and having babies, relationships, managing periods, not being able to engage in sports, and the impact of visible bruising on clothing choices [9].

The Cinderella Study was designed to examine what, if anything, has changed for women who bleed, with the aim of exploring their lived experience and to improve understanding of their unmet needs today. The study was non-interventional and used a mixed methods approach, incorporating a systematic review of the literature, an online survey and in-depth qualitative interviews.

SYSTEMATIC REVIEW

The aim of the systematic review was to document the lived experience of women with a bleeding disorder by assessing research findings since 1998 on quality of healthcare, socioeconomic factors, and mental health [10]. A systematic literature search was carried out in Web of Science, the Cumulative Index to Nursing and Allied Health Literature, and PubMed on 31 July 2020. Abstracts of the 2019 and 2020 congresses of the World Federation of Hemophilia (WFH), European Association of Haemophilia and Allied Disorders (EAHAD) and International Society on Thrombosis and Haemostasis (ISTH) were also searched. Key journals were screened for relevant studies published after the search date until the analysis was completed on 7 December 2020.

Of 635 potentially eligible publications identified, 27 were selected for review after screening [10]. Most studies were of moderate to high quality but meta-

Figure 1. Age profile of respondents to the Cinderella online survey (n=280) [11]

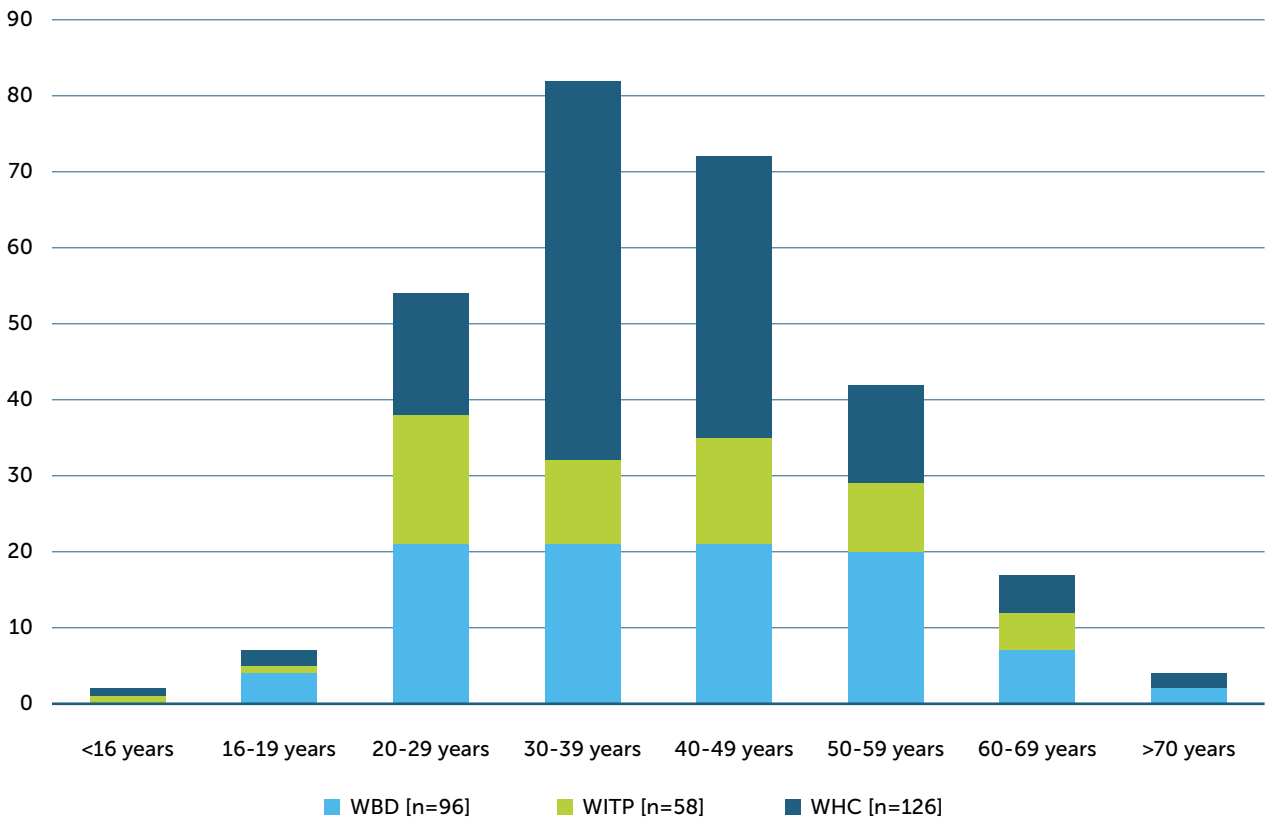
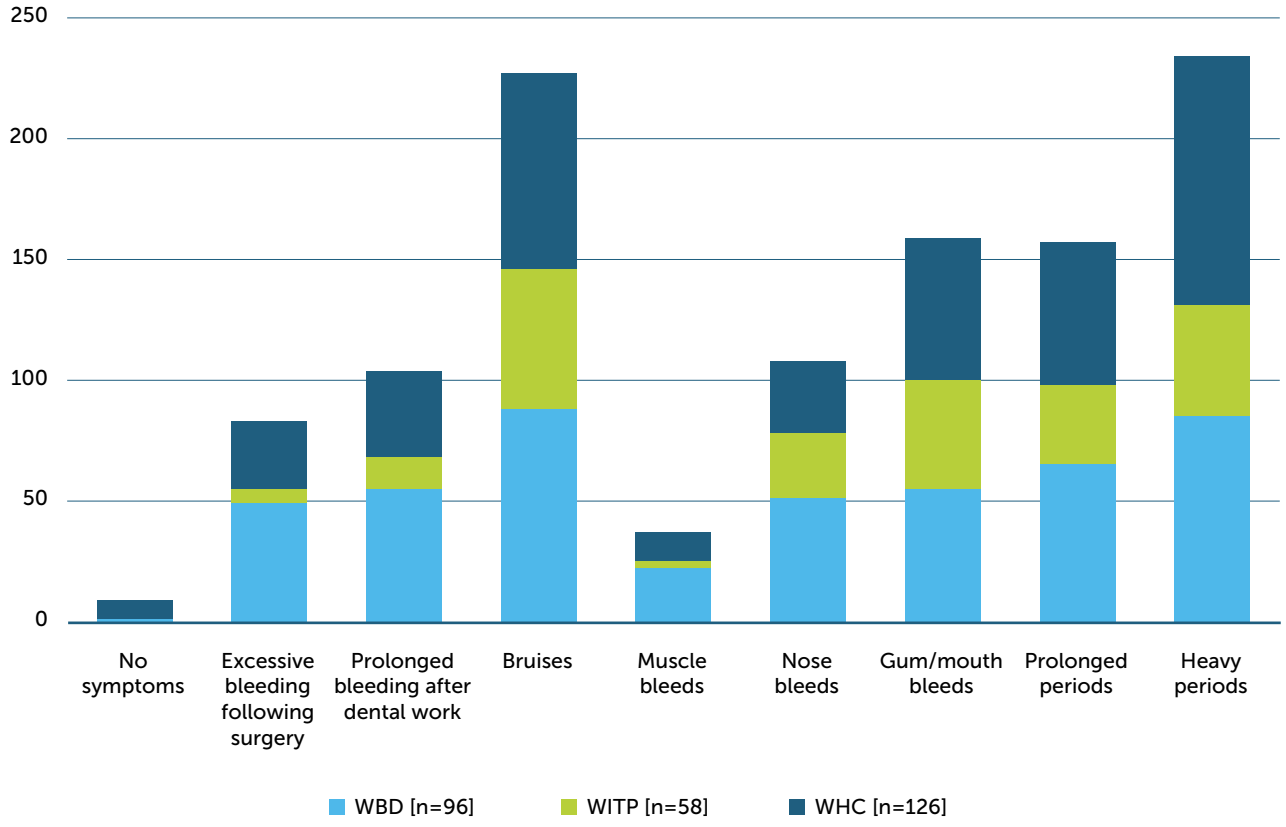


Figure 2. Summary of bleeding symptoms reported by respondents to the Cinderella online survey (n=280) [11]



analysis of quantitative studies was not possible due to differences in outcomes and assessment. However, the analysis did show that WBD experienced obstacles to accessing care, difficulties living with their disorder including interference with schooling and work, and poor mental health. Diagnostic delay and lack of recognition of symptoms meant that treatment and support might not be available. Where comparisons with controls were made, women's negative experiences were greater than those of men.

ONLINE SURVEY

An online survey was promoted to women via the social media accounts (Twitter, Facebook) of UK-based patient organisations (The Haemophilia Society, Local Families with Bleeding Disorders, The Immune Thrombocytopenia (ITP) Support Association) and Haemnet. Women who carry the haemophilia gene (WHC), WBD and women with immune thrombocytopenia (WITP) were invited to participate [11]. Parents/carers of girls aged <16 years also completed the survey on behalf of their affected daughters. The survey was open for three months from June to August 2020 and comprised over 70 questions, including demographics, family history, diagnostic pathway and treatment.

The survey was completed by 280 respondents (WHC=126, WBD=96, ITP=58). Most respondents were aged 20-59 years, i.e. of menstruating age (Figure 1). The most frequently reported symptoms were heavy periods (81%) and bruising (81%) (Figure 2).

Compared to the group as a whole:

- More WBD took time off work or school due to symptoms
- More WBD had discussed symptoms with a healthcare professional (HCP)
- More WBD had seen a nurse, gynaecologist and/or GP
- WITP were more likely to have consulted a haematologist
- WHC were least likely to be screened for a bleeding disorder or seen in a specialist setting, even where there was a known history of bleeding within the family
- WHC were significantly less likely to use treatment (including tranexamic acid and oral contraception) for their bleeding symptoms
- WHC were less likely than WITP to be satisfied with their treatment (p=0.0383).

J Haem Pract 2022; 9(1). doi: 10.2478/jhp-2022-0018

Across the groups, respondents rated themselves equally well informed about bleeding disorders, but those who had seen a specialist rated their understanding significantly lower than those who had not (mean 6.755 vs 8.743; p=0.00249). Those who had seen a specialist may have had greater insight around the gaps in their knowledge, or greater awareness of the severity of their disorder may have brought more uncertainty or anxiety.

QUALITATIVE INTERVIEWS

Thirteen women participated in focus groups (n=11) or individual interviews (n=2). Seven were WHC (two clinically recognised as having haemophilia), three were WITP and three were WBD (two with von Willebrand disease [type 1 and type 3]) and one with factor VII deficiency).

Concerning bleeding symptoms, interview participants spoke of difficulty obtaining a diagnosis and lack of awareness and competence among HCPs. WHC and WITP reported normalisation of symptoms by non-specialist clinicians. A lack of awareness within families contributed to an inability to identify bleeding symptoms. Female family members had not questioned the fact that they also had heavy periods, and they experienced difficulties finding out what is 'normal' bleeding during periods.

WHC discussed maternal guilt about passing on haemophilia to their sons, and issues related to the misconception that only boys and men can have haemophilia. Some did not think of themselves as having a bleeding disorder, often despite reporting bleeding symptoms, and WHC commonly minimised the importance of their own condition in comparison to that of a son or daughter affected by haemophilia. Others with symptoms felt that they were ignored by HCPs when, on occasion, their symptoms were arguably worse than those of men with haemophilia.

Participants diagnosed as children described missing school time and not being able to take part in activities in the same way as their peers. For some, career choices and work had been affected by their condition. Networking, socialising, educating others, and being insistent and inquisitive were important to all those interviewed.

Poor communication and lack of information were frequently discussed in respect of clinic visits and medical care. There was also evidence of poor communication between HCPs and lack of continuity of care. Some women reported having to explain their condition repeatedly, even within a specialist healthcare setting. Participants valued supportive HCPs, consistency and communication with doctors, and good psychological support.

©Shutterstock/arbit

OVERALL FINDINGS AND STEPS TOWARDS PARITY OF CARE

The Cinderella study findings identify unmet needs associated with the care of women with bleeding disorders and add to a growing body of evidence highlighting inequities in access to support and care [5,12-16]. They show that women with bleeding disorders experience major negative effects on daily life and mental well-being as a result of their condition, and many of the challenges identified in earlier research are still evident today.

Recent developments point to a move in the right direction. In August 2021, the International Society on Thrombosis and Haemostasis (ISTH) Scientific and Standardization Committee (SSC) published a new nomenclature to define haemophilia in women and girls [17]. Alongside women and girls with mild, moderate and severe haemophilia, the new nomenclature identifies symptomatic haemophilia carriers and asymptomatic carriers, recognising both the bleeding phenotype of women and girls who carry the haemophilia gene, and thereby defining them as a person affected by haemophilia – not just the mother, daughter or sister of a man or boy with haemophilia. The European Principles of Care for Women and Girls with Inherited Bleeding Disorders were also published in August 2021, emphasising the importance of comprehensive, multidisciplinary, family-centred care throughout all life stages, and the right to equitable access and quality of care for all people with bleeding disorders [18]. Widespread implementation of these principles as a framework for the care of WBD would have a positive impact on their health, wellbeing and quality of life.

For WBD to achieve parity of care it is essential that the bleeding disorder community continues to raise awareness. Individual stories are powerful – sharing them and bringing them together through studies such as Cinderella contributes greatly to the evidence, which will help to drive change. Girls and women with bleeding disorders should continue to advocate for themselves, including through patient organisations, to ensure that they are systematically included in clinical care.

More widely, health economics can help show the impacts of being a woman affected by a bleeding disorder. This is important from a broad economic point of view, but also in terms of focusing on individual life impacts, for example the impact of a bleeding disorder on missed potential as a result of missing school time and its impact on ability to go on to tertiary education, or inability to work.

DISCUSSION

When asked about their response to the Cinderella findings, speakers expressed disappointment that so little has changed in recent decades of multidisciplinary care and that WBD report the same issues in clinic a quarter of a century later. In the Cinderella study interviews, women shared similar experiences, irrespective of the haemophilia centre at which they were being treated.

In some countries, it has become more difficult to set up multidisciplinary clinics because of increased bureaucracy, such as departmental cross charging. Variations in services and available treatment across Europe mean that care for WBD is disparate and can be almost non-existent. By joining together, patient organisations will have more negotiating power to effect change. The impact of the World Federation of Haemophilia Humanitarian Aid Program, which addresses the needs of thousands of people with haemophilia (mostly male) in need of factor, is encouraging and has shown that change is possible. The European Principles of Care for Women and Girls with Inherited Bleeding Disorders have identified key issues within health systems and, if adhered to, have the potential to make that much needed change. Patient organisations, clinicians and other stakeholders can use them to support campaigns for improvements in care.

Is it time to stop talking about women and men with bleeding disorders and talk about people with bleeding disorders? This is something to aspire to, but there are too many unrecognised and unmet needs for WBD (e.g. heavy menstrual bleeding (HMB)) at this point. It is therefore important to continue to advocate on behalf of WBD.

Some younger men with bleeding disorders are becoming more open about HMB and are prepared to discuss it in relation to their daughters' current and future needs. There was general agreement among the audience that such issues need to be discussed gradually with girls and boys with bleeding disorders so that they do not come as a shock during teenage years. Patient- and family-centred care are clearly the way forward but HCPs must not forget that every patient is an individual and all discussions need to be carefully tailored to their needs.

Asked whether all babies should be screened at birth for inherited bleeding disorders, speakers felt this was logistically difficult at present as cord blood samples would be needed and factor levels can vary between pre-term, term and post-term babies. However, advances in genomic testing mean that it could soon

be possible to check for bleeding disorders in heel prick tests currently used to diagnose phenylketonuria and other rare disorders.

TOP THREE TAKE-AWAYS

- Women with bleeding disorders continue to experience inequities in access to support and care, which impacts their daily life and mental wellbeing
- Ongoing awareness-raising and advocacy for women with bleeding disorders is essential in bringing about change – this should include sharing individual stories and the collective efforts of patient organisations
- Widespread implementation of the European Principles of Care would have a positive impact on the health, wellbeing and quality of life of women with bleeding disorders

ACKNOWLEDGEMENTS

The authors have advised no interests that might be perceived as posing a conflict or bias.

The Cinderella Study was funded by an unrestricted grant received from CSL Behring.

This paper does not contain any studies involving human participants or animals performed by any of the authors.

ORCID

Debra Pollard https://orcid.org/0000-0002-7797-3500
Kate Khair https://orcid.org/0000-0003-2001-5958

REFERENCES

1. Holdcroft A. Gender bias in research: how does it affect evidence based medicine? *J R Soc Med* 2007; 100(1): 2-3. doi: 10.1258/jrsm.1001.1.2.
2. Liu KA, Dipietro Mager NA. Women's involvement in clinical trials: historical perspective and future implications. *Pharmacy Practice* 2016; 14(1): 708. doi: 10.18549/PharmPract.2016.01.708.
3. Sundari Ravindran T, Teerawattananon Y, Tannenbaum C, Vijayasingham L. Making pharmaceutical research and regulation work for women. *BMJ* 2020; 371: m3808. doi: 10.1136/bmj.m3808.
4. Mirin AA. Gender disparity in the funding of diseases by the U.S. National Institutes of Health. *J Women's Health* (Larchmt) 2021; 30(7): 956-963. doi: 10.1089/jwh.2020.8682.
5. Weyand AC, James PD. Sexism in the management of bleeding disorders. *Res Pract Thromb Haemost* 2021; 5(1): 51-54. doi: 10.1002/rth2.12468.
6. Kadir RA, Sabin CA, Pollard D, Lee CA, Economides DL. Quality of life during menstruation in patients with inherited bleeding disorders. *Haemophilia* 1998; 4(6): 836-41. doi: 10.1046/j.1365-2516.1998.00208.x.
7. Kadir RA, Economides DL, Sabin CA, Owens D, Lee CA. Frequency of inherited bleeding disorders in women with menorrhagia. *Lancet* 1998; 351 (9101): 485-9. doi: 10.1016/S0140-6736(97)08248-2.
8. Kadir RA, Economides DL, Sabin CA, Pollard D, Lee CA. Assessment of menstrual blood loss and gynaecological problems in patients with inherited bleeding disorders. *Haemophilia* 1999; 5(1): 40-8. doi: 10.1046/j.1365-2516.1999.00285.x.
9. Khair K, Holland M, Pollard D. The experience of girls and young women with inherited bleeding disorders. *Haemophilia* 2013; 19(5): e276-81. doi: 10.1111/hae.12155.
10. Sanigorska A, Chaplin S, Holland M, Khair K, Pollard D. The lived experience of women with a bleeding disorder: A systematic review. *Res Pract Thromb Haemost* 2022; 6: e12652. doi: 10.1002/rth2.12652.
11. Khair K, Pollard D, Steadman L, Jenner K, Chaplin S. The views of women with bleeding disorders: Results from the Cinderella study. *Haemophilia* 2022; 28: 316–325. doi: 10.1111/hae.14514.
12. Noone D, Skouw-Rasmussen N, Lavin M, van Galen KPM, Kadir RA. Barriers and challenges faced by women with congenital bleeding disorders in Europe: Results of a patient survey conducted by the European Haemophilia Consortium. *Haemophilia* 2019; 25(3): 468-474. doi: 10.1111/hae.13722.
13. van Galen K, Lavin M, Skouw-Rasmussen N, et al. Clinical management of women with bleeding disorders: A survey among European haemophilia treatment centres. *Haemophilia* 2020; 26(4): 657-662. doi: 10.1111/hae.14043.
14. Presky KO, Kadir RA. Women with inherited bleeding disorders – Challenges and strategies to improved care. *Thromb Res* 2020; 196: 569-578. doi: 10.1016/j.thromres.2019.07.004.
15. Arya S, Wilton P, Page D, et al. "They don't really take my bleeds seriously": Barriers to care for women with inherited bleeding disorders. *J Thromb Haemost* 2021; 19(6): 1506-1514. doi: 10.1111/jth.15311.
16. Byams VR, Miller CH, Bethea FM, et al. Bleeding disorders in women and girls: state of the science and CDC Collaborative Programs. *J Women's Health* 2022; 31(3): 301-309. doi: 10.1089/jwh.2022.0008.
17. van Galen K, d'Oiron R, James P, et al. A new hemophilia carrier nomenclature to define hemophilia in women and girls: Communication from the SSC of the ISTH. *J Thromb Haemost* 2021; 19(8): 1883-1887. doi: 10.1111/jth.15397.
18. van Galen K, Lavin M, Skouw-Rasmussen N, et al.; the European Haemophilia Consortium (EHC) and the European Association for Haemophilia and Allied Bleeding Disorders (EAHAD). European principles of care for women and girls with inherited bleeding disorders. *Haemophilia* 2021; 27(5): 837-847. doi: 10.1111/hae.14379.

HOW TO CITE THIS ARTICLE:
Pollard D, Khair K. The Cinderella Study: women's lived experience of bleeding disorders – CSL Behring Symposium. *J Haem Pract* 2022; 9(1): 137-142. *https://doi.org/10.2478/jhp-2022-0018*