



# Marketing empowerment: how corporations co-opt feminist narratives to promote non-evidence based health interventions

Promotion of non-evidence based tests and treatments using empowerment messages risks women being overdiagnosed and overtreated, argue **Tessa Copp and colleagues**

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Commercial organisations have an extraordinary influence on population health through how they engage with and shape social movements to market their products.<sup>1</sup> Corporations have historically exploited health agendas by prioritising messaging about female autonomy to encourage women's consumption of unhealthy commodities, such as tobacco and alcohol.<sup>2</sup> This phenomenon has now expanded across women's health. Feminist narratives of increasing women's autonomy and empowerment regarding their healthcare, which first arose through early women's health movements,<sup>3,4</sup> are now increasingly adopted by commercial entities to market new interventions (technologies, tests, treatments) that lack robust evidence or ignore the evidence that is available.

Increased awareness and advocacy in women's health are vital to overcome sex inequalities in healthcare, including the need for improved resources for under-researched conditions and to reverse historical biases that prevent optimal treatments for women. However, promoting healthcare interventions that are not supported by evidence, or while concealing or downplaying evidence, increases the risk of harm to women through inappropriate medicalisation, overdiagnosis, and overtreatment.

Importantly, the problem is not with the use of health technologies, tests, and treatments per se, as many women benefit greatly and gain improved quality of life from them. The problem lies in the way commercial marketing and advocacy efforts push such interventions to a much larger group of women than is likely to benefit without being explicit about their limitations (box 1). In addition, commercial use of feminist narratives to promote interventions gives the impression health and sex equality are commodities that can be bought (by those who can afford it), without acknowledging the social structures and other intersecting causes of disadvantage. We discuss two current examples, the anti-müllerian hormone (AMH) test and breast density notification, to argue how feminist discourse is being co-opted to promote non-evidence-based healthcare to asymptomatic, healthy women.

## Box 1: Examples of use of feminist discourse to promote interventions

### Screening for breast cancer

The use of "war against breast cancer" rhetoric first arose in the 1930s.<sup>5</sup> This language, including slogans such as "fight like a girl," was then adopted by the media and breast screening facilities, alongside increased industry

interest in screening technology and breast cancer charities becoming a strong political force. These messages tended to promote the potential benefits of mammography without discussing the harms while also evoking fear, guilt, or placing blame on women (eg, "If you haven't had a mammogram, you need more than your breasts examined").<sup>5,6</sup>

Some countries have adopted financial incentives for providers to increase screening, which can further jeopardise informed consent by introducing biases in the way information on the harms and benefits may be provided.<sup>7</sup>

### Hormone replacement therapy for menopause

A gynaecologist who received funding from the companies making hormone replacement therapy (HRT) published a book, *Feminine Forever*, arguing that menopause is an oestrogen deficiency disease and that HRT was a cure to maintain femininity. Although the argument was strongly opposed by some feminists, other health activists embraced the view that HRT was key to women's liberation through enabling greater control over their bodies.<sup>8</sup>

### Flibanserin for female sexual dysfunction

Using feminist arguments around unmet needs<sup>9</sup> and the fact that several drugs for male sexual dysfunction exist but none for women, a coalition of women's groups (called "Even the Score") campaigned for approval of flibanserin despite evidence showing substantial side effects and minimal benefit.<sup>10</sup> This campaign received funding from the drug company that owned the drug.<sup>11</sup>

### Menstrual tracking apps that detect reproductive conditions

Some menstrual tracking apps have introduced "pre-diagnostic tools" aiming to diagnose reproductive conditions such as polycystic ovary syndrome, promising empowerment through knowledge and control over your body,<sup>12</sup> despite limited evidence of accuracy and benefit.<sup>13</sup>

### Elective egg freezing

Adverts for fertility clinics and media coverage of elective egg freezing promote enhanced autonomy and justice, often without providing adequate information about likely outcomes and risks.<sup>14,15</sup> Some adverts also promote this procedure as a way to improve sex equality, despite it having low success rates and being accessible only to a minority of women (because of the high costs).<sup>14</sup> Some companies are now subsidising egg freezing for their employees "in the name of empowerment,"<sup>16</sup> ignoring the social reasons (eg, workplace structure, financial cost, unaffordable childcare) that are preventing women from having children when they are biologically better able.

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Cite this as: *BMJ* 2024;384:e076710  
<http://dx.doi.org/10.1136/bmj-2023-076710>

Anti-müllerian hormone test

Levels of AMH in the blood are associated with the number of eggs in a woman’s ovaries, which is inversely related to age. High levels indicate the presence of more eggs and, in theory, higher fertility potential. It can be a useful test for women having fertility treatment as it roughly indicates the number of eggs that may be retrieved in a stimulated cycle. Age related infertility is becoming more prevalent in high income countries because of the rising age of first time mothers,<sup>17</sup> and some have argued that universal AMH screening (that is, in women without infertility) would empower women to reduce their risk of unintentional childlessness.<sup>18</sup> In a 2016 Australian survey of attitudes to screening, 28% of the 147 participants reported they would start trying for a family immediately and 39% that they would freeze their eggs if they were told that their AMH levels were low.<sup>18</sup> Similarly, in an Irish qualitative study of 10 women having investigations for difficulty conceiving, some described feeling empowered by their AMH result with knowledge they could act on.<sup>19</sup>

However, the notion that AMH testing can enable women to make informed reproductive decisions rests on the incorrect assumption

that the test reliably predicts fertility. The evidence now consistently shows that the AMH test cannot reliably predict likelihood of pregnancy, time to pregnancy, or specific age of menopause for individuals.<sup>20–23</sup> For example, a prospective cohort study (2008–16) in the US among women aged 30–44 years without a history of infertility, found that women with low (n=84) and normal AMH levels (n=579) had similar predicted probability of conceiving after six (65% v 62%) or 12 cycles (84% v 75%).<sup>22</sup> For this reason, the American College of Obstetricians and Gynaecologists strongly discourages AMH testing in women not undergoing in vitro fertilisation (IVF).<sup>24</sup>

Despite clear evidence of its lack of utility, some women are getting the test thinking it can tell them their chances of conceiving,<sup>25</sup> and both fertility clinics<sup>26</sup> and online companies<sup>27</sup> now market and sell the test to the general population. Persuasive feminist rhetoric is being used on upmarket websites to conceal or gloss over the test’s limitations, as well as the commercial incentives behind the test’s promotion, espousing empowerment through personalised insights into women’s fertility and reproductive timeline (table 1).<sup>26 27</sup>

Table 1 | Examples of feminist rhetoric promoting the AMH test online

Country	Website type	Example quote from website
UK	Direct to consumer <sup>28</sup>	“You’re not ovary-acting. Understand your hormones and fertility, be the boss of your symptoms and get the expert care you deserve—every step of the way.” “Whether you’ve been trying for a while, or are just starting to think about your future family options, you deserve to know exactly what’s going on inside your body—ovaries and all.”
UK	Fertility clinic <sup>29</sup>	“We hope that by giving you a window into your fertility levels, you are in a better position to make informed decisions about your future.”
US	Direct to consumer <sup>30</sup>	“Whether you are years away from having children or have already started trying, you deserve to know your reproductive potential.”
Australia	Fertility clinic <sup>31</sup>	“Information is power and lets you take charge of your fertility.”
Australia	Direct to consumer <sup>32</sup>	“Whether you’re years away from kids or thinking of trying soon, we’ll guide you through your fertility hormones now so you have options later. A simple blood test and an online GP consult later, you’ll have personalised insights about ... your menopause timing, reproductive timeline and more.” “Some of the information you can get from this test is vital to making plans for your future.”

Misleading marketing using feminist rhetoric that encourages women with no signs or symptoms of infertility to seek AMH testing to check their fertility or to inform their reproductive planning ultimately undermines empowerment and informed decision making as current evidence shows the test is invalid for these purposes. This may also lead to serious harms. Aside from the unnecessary financial cost, potential consequences of inappropriate testing include a false sense of security about delaying pregnancy for those receiving a normal or high result,<sup>33</sup> and unwarranted anxiety for those receiving a low result. This could potentially pressure women to conceive earlier than desired or freeze their eggs.<sup>19 34</sup> A survey of 96 women who had had elective egg freezing at a large Australian fertility treatment centre from 1999 to 2014 found 9% froze their eggs following AMH testing believing the test indicated their capacity to conceive was limited.<sup>34</sup> Further, the qualitative study from Ireland of 10 subfertile women found that although participants valued the information they received from AMH testing, it also

caused distress and created a sense of urgency and haste about fertility treatment.<sup>19</sup>

Breast density notification

Mammographic breast density is one of several independent risk factors for breast cancer.<sup>35</sup> High breast density also reduces mammographic sensitivity, increasing the chance of cancer being missed by routine screening.<sup>36 37</sup> Valid concerns about these risks have led to growing international calls to notify all women having screening about their breast density,<sup>38</sup> ostensibly to enhance their knowledge about their health and increase supplemental screening in women with dense breasts. Arguments emphasising women’s “right to know” have largely driven the recent legislation in the US requiring that all women are notified of their breast density,<sup>39</sup> with similar movements observed in other countries.<sup>40 41</sup> Consumer advocacy groups, often sponsored by large companies with a vested interest in measuring and notifying breast density,<sup>42</sup> argue that all women must be informed of their breast density to enhance their

knowledge and health.<sup>43</sup> Clinicians have also argued that concealing information about women's bodies may lead to poor policy and practice,<sup>44</sup> and that women can handle nuanced information surrounding breast density and supplemental screening.<sup>43</sup>

Concerns about population-wide notification include the relatively non-modifiable nature of breast density and the lack of evidence that clinical pathways for women with dense breasts are beneficial. Specifically, although supplemental screening using ultrasound and magnetic resonance imaging (MRI) increases cancer detection in women with dense breasts,<sup>45 46</sup> long term effects on the rates of advanced breast cancers and mortality have not been adequately assessed or reported,<sup>45-47</sup> bringing into question the issue of overdiagnosis. In addition, harms from supplemental screening include high rates of false positive results<sup>48</sup> and extra financial costs.

Breast density notification can also increase women's anxiety, confusion, and intentions to seek supplemental screening.<sup>49 50</sup> In a systematic review of 29 studies from 2007 to 2020 on the effect of breast density notification, all 17 studies that reported on breast density anxiety or concern found that women had some level of anxiety or concern.<sup>49</sup> This largely stemmed from misunderstandings (eg, women thinking they had cancer) and confusion about the implications, including next steps related to supplemental screening. Furthermore, an online randomised trial in 2021 among 1420 women of screening age (40-74 years) in Australia found that a significantly greater proportion of women who were notified about breast density reported feeling anxious (49% notified v 14% not notified), confused (24% v 8%), and worried about breast cancer (quite/very worried: 16-17% v 7%) compared with those who were not notified.<sup>50</sup>

The unreliability of breast density measurement, which varies across time and by assessor, is another major concern. In a systematic review evaluating reproducibility, 13-19% of women moved between the dense and non-dense categories at a second screen (reflecting both temporal and assessor variability).<sup>45</sup> Alongside this, a systematic review from 2022 identified limited evidence regarding the efficacy of automated breast density measurement software, which is becoming more widely used, as a predictor of breast cancer risk, including interval cancers.<sup>35</sup> There is also no evidence indicating whether one software is better than another.<sup>35</sup>

### Isn't more information and knowledge always power?

Some proponents, including those for breast density measurement, have argued that technological advances, more information, and increasingly individualised care can still advance women's knowledge and health even when there is no clear evidence that the benefits outweigh the harms.<sup>38</sup> Specifically, given that women's health is underfunded and under-researched, acting in the absence of evidence may be warranted to ensure women benefit from medical advances at the same pace as men. However, although we fully support stronger patient autonomy, we argue that marketing and campaigning for interventions and provision of information without stating the limitations or unclear evidence of benefit (or in the case of the AMH test, with clear evidence of no benefit<sup>27</sup>) risk causing more harm than good and therefore may go against the empowerment being sought. Growing evidence shows an extensive network of financial and non-financial ties between industry and major healthcare parties,<sup>51</sup> including that industry sponsorship of consumer advocacy organisations is common.<sup>52 53</sup> This increases the risk of bias that favours the interests of sponsors rather than women. Greater scrutiny of conflicts of interests<sup>54</sup> is needed to

minimise commercial influence, as well as more transparency around the risks and uncertainties in the evidence.

In addition to underplaying harms and overemphasising potential benefits of interventions, persuasive messaging that uses the guise of feminist health advocacy can be difficult to criticise, as legitimate critique may be misconstrued as misogynistic or paternalistic. For example, withholding breast density information may limit women's potential involvement in health decisions.<sup>43</sup> However, breast density notification is currently being used to promote supplemental screening without robust evidence (and without mentioning the lack of evidence) that it prevents breast cancer deaths. We argue that only with a transparent, balanced and evidence based approach can women's autonomy be respected and advanced.<sup>14</sup>

### Ensuring the goals of feminist health advocacy are not undermined

Women's health is vital and cannot be allowed to be hijacked by vested interests. The public, patients, clinicians, policy makers, and journalists all need to be more aware of how feminist language can be co-opted to promote or create new care needs that are not based on solid scientific evidence. Health consumers and clinicians need to be wary of the simplistic narratives that any information and knowledge is always power. Communication between women and their clinicians is a key aspect to addressing this. The Choosing Wisely campaign<sup>55</sup> and the UK Human Fertility and Embryology Authority traffic light rating systems for add-on treatments for IVF<sup>56</sup> are two examples of initiatives to help support the dialogue between women and clinicians on technologies, tests, and treatments that are not supported by high quality evidence.

Commercial entities also influence the research agenda, affecting the evidence base which underlies health policy and practice decisions.<sup>57</sup> Without the involvement of a broad range of stakeholders free from vested interests, there is a risk that marketing of unproved women's health interventions will increase inequalities. For example, media reports suggest women are increasingly accessing their retirement savings to pay for egg freezing.<sup>58</sup> Companies selling women's health tests and treatments position themselves as socially progressive while promoting narratives of personal or individual responsibility, rather than tackling the upstream drivers of sex inequality.<sup>59</sup>

Importantly, individual responsibility alone will never tackle inequalities in healthcare. It can also not be solely the responsibility of women targeted by these narratives to understand all potential benefits and harms and make an informed decision. Given that information provided by reputable sources is often difficult to read,<sup>60</sup> simple persuasive messages from commercial sources may be more engaging and easy to digest uncritically. Health professionals and governments have a responsibility to educate and counter commercially driven messages.<sup>61</sup> Marketing of medical interventions should also be strongly regulated.<sup>62</sup> However, regulation is not without its challenges, and even where recommendations to stop aggressive and inappropriate marketing are endorsed (such as the International Code of Marketing of Breastmilk substitutes), exploitative marketing can still occur.<sup>63</sup>

In areas of women's health where evidence is missing or unclear, high quality clinical trials are needed—ideally before new interventions are introduced—with continued mandatory reporting of adverse events or harm once implemented. In the case of breast density notification, countries currently considering universal breast density notification still have the opportunity to first gain robust evidence on the consequences and minimise potential harm.<sup>64</sup> In



conclusion, we need to ensure the goals of feminist health advocacy are not undermined through commercially driven use of feminist discourse pushing non-evidence based care.

### Key messages

- Feminist health narratives are being co-opted by commercial interests to market new technologies, tests, and treatments that are not backed by evidence
- Such marketing behaviour risks harming women through inappropriate medicalisation, overdiagnosis, and overtreatment
- Greater wariness is needed of simplistic health messages that any knowledge is power
- Health professionals and governments must ensure that easily understood, balanced information is available based on high quality scientific evidence

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Public and patient involvement: LH, a women's health consumer representative in Queensland, coauthored the article.

Competing interests: We have read and understood BMJ policy on declaration of interests and declare the following: TC and BN are supported by the National Health and Medical Research Council of Australia. TC is a member of the Scientific Committee of Preventing Overdiagnosis. BN and KP are members of the ECR Committee of Preventing Overdiagnosis.

Provenance and peer review: Not commissioned; externally peer reviewed.

We thank Ray Moynihan and Kirsten McCaffery for helpful discussion.

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