

Jun 23rd, 9:00 AM - Jun 28th, 5:00 PM

## 'Design Your Menopause Life' as a Pathway to Successful Ageing

Linda Shore

*Glasgow School of Art, United Kingdom*

Grant Cumming

*Glasgow School of Art, United Kingdom*

Irene McAra-McWilliam

*Glasgow School of Art, United Kingdom*

Mel Allen

*Glasgow School of Art, United Kingdom*

Claire Hester

*Glasgow School of Art, United Kingdom*

Follow this and additional works at: <https://dl.designresearchsociety.org/drs-conference-papers>



Part of the [Art and Design Commons](#)

---

### Citation

Shore, L., Cumming, G., McAra-McWilliam, I., Allen, M., and Hester, C. (2024) 'Design Your Menopause Life' as a Pathway to Successful Ageing, in Gray, C., Ciliotta Chehade, E., Hekkert, P., Forlano, L., Ciuccarelli, P., Lloyd, P. (eds.), *DRS2024: Boston*, 23–28 June, Boston, USA. <https://doi.org/10.21606/drs.2024.203>

This Research Paper is brought to you for free and open access by the DRS Conference Proceedings at DRS Digital Library. It has been accepted for inclusion in DRS Biennial Conference Series by an authorized administrator of DRS Digital Library. For more information, please contact [dl@designresearchsociety.org](mailto:dl@designresearchsociety.org).

# 'Design Your Menopause Life' as a pathway to successful ageing

Linda Shore<sup>a,\*</sup>, Grant Cumming<sup>b</sup>, Irene McAra McWilliam<sup>a</sup>, Mel Allen<sup>c</sup>, Claire Hester<sup>d</sup>

<sup>a</sup>Rural Lab, Glasgow School of Art, Forres, Scotland, United Kingdom

<sup>b</sup> Grant Cumming, Elgin, Scotland, United Kingdom

<sup>c</sup> Moray Leisure Centre, Elgin, Scotland, United Kingdom

<sup>d</sup> Claire Hester Nutrition, Forres, Scotland, United Kingdom

\*Corresponding e-mail: l.shore@gsa.ac.uk

[doi.org/10.21606/drs.2024.203](https://doi.org/10.21606/drs.2024.203)

**Abstract:** The 'Menopause - a Pathway to successful ageing - or not?' research explores the life stage experience leading up to and following menopause and its impact on the ageing experience. Menopause is defined as a moment in time 12 months after someone's final period. Peri-menopause is a time in someone's life leading up to menopause but when symptoms or changes can be experienced. This research focusses on a time in a typical female's lifespan whereby they are managing life, career or family responsibilities while experiencing symptoms of peri-menopause and menopause. It is well documented how exercise and health awareness can optimise and affect our health and wellbeing - our Physical, Emotional and Mental (PhEM) health can be supported through activity, exercise, social engagement, and education. The 'Design your Menopause life' (DYML) solution is envisioned as a digital and physical solution that empowers women as they experience peri and menopause symptoms.

**Keywords:** Design4longevity; Menopause; Lifespan Design; Cultural Probes; UX research

## 1. Introduction

People today live longer lives than those of previous generations (Golden, 2022) with real prospect that babies born today can live to 100 (Shore, 2019; Vaupel et al., 2021). It is anticipated that work and career stages including retirement age may change due to policy and reform of pension strategies (Kuitto & Helmdag, 2021). Therefore, maintaining older employees in the workplace can support good physical and mental health (Nagarajan & Sixsmith, 2023). The environments we live, work and socialise in must provide adaptable and flexible capacity to cater for people across the lifespan (Marston et al., 2020). Perceptions to our general health may vary between women and men and provide indicative subjective markers to positive wellbeing (Chanfreau et al., 2013). Peri/Menopause symptoms and experience can benefit from targeted programs and events (Shore et al., upcoming 2024).



This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International Licence.

Menopause is a stage in life that presents precarious and less predictable experiences and outcomes (Whiley, et al., 2023). It may also expedite the advancement of chronic or age-related conditions such as cancer or osteoporosis (Lobo & Gompel., 2022). Female menopause symptoms or experiences can last between 5-10 years (Sigelman & Rider, 2021). The impact and effects of menopause can often become a medicalised stage in life, whereby bodily changes, esteem, or social connectedness are reduced to lower priorities (Ciolfi, et al., 2021). Menopause has been associated in the past as a stage of life related to decline (Coughlin, 2017), however, it is not always a late life stage experience. Statistically, in the UK, women in the workplace make up +60% of the workforce (ONS, 2024), and this presents challenges to environment, experience and relationships in the workplace across the lifespan (BSI, 2023, Moline & Clerke, 2023).

Several agencies and industry partners are responding to this change by new workplace provisions, offering more proactive support (BSI, 2023). However there is limited studies undertaken to understand how the workplace and employers can provide support to an employee experiencing menopause symptoms (Verdonk, et al., 2022; Faubion et al., 2023). The person experiencing peri-menopause or menopause is now considered as not someone with a disability, but someone that; with improved and supportive work place settings can continue to work with positive experience and support to their wellbeing (BSI, 2023). 'Healthspan' (Attia & Gifford, 2023) whereby a person's experiences and health related wellbeing including the various life stages or longevity need to be accommodated in workplace settings, and the provision of services and products (Golden, 2022).

Design and research activity relating to women's health has been limited, resulting in an argument for 'women-centered-design'(Almeida, et al., 2020). This approach would mobilise and position more purposeful solutions designed for women in areas such as health, education, etc., More proactive approaches to topics such as menopause could contribute as a strategic aspect to a positive 'healthspan' (Attia & Gifford 2023). Collaborative coalitions have demonstrated how design research produces collective outputs that benefit user groups in terms of product, service and systems design (Shore et al., 2018a; Vargas et al., 2020). Wellbeing and sense of connection can vary across our lifespan and is also an indicator of life satisfaction (De Feo, et al., 2014).

## 2. Literature review

Menopause is defined as a moment in time 12 months after someone's final period. Perimenopause is a time in someone's life leading up to menopause but when symptoms or changes can be experienced (e.g. sleep, nutrition, anxiety) (BSI, 2023). The onset of menopause can vary across race, demographics and may be induced early because of surgery or cancer (Edwards et al., 2019; El Khoudary, 2020; Atkinson, et al., 2021), or transgender women (Mohamed & Hunter, 2019), or males experiencing 'andropause' (or age-associated hypogonadism) (Sigelman & Rider, 2021).

This evidences a requirement to understand how menopause can be quite impactful to our lived experience and 'healthspan'. We know that exercise, nutrition and mental wellbeing support can assist and enhance positive experience while coming through peri/menopause (NHS, n.d.) Relationships can be challenged during and after menopause, with acknowledgement of the importance of intimacy and an active sexual life as factors to a woman's self-image, emotional and mental health and her perceptions towards future of relationship and past sexual behaviour (Cumming, et al., 2011).

The importance of exercise and maintaining a routine of activity reduces post-menopausal symptoms (Jungmann, et al., 2023). As we age, autonomy and independence remain important factors that support quality of life and physical mobility (Shore, et al., 2018b), with prioritised focus required on lifespan design approaches that encourage a pro-active autonomous experience for people as they cross life stages (Marston, et al., 2022). Previous research (Shore et al., 2018a, Shore et al., 2022) has demonstrated the value of design collaborations and activities with older adults, highlighting unmet needs and delivering innovation opportunities with products and service systems.

### **3. Research method**

Design can be a resource that defines improvements to life (Shore, 2019), and relies on making and doing (DiSalvo, 2022). This practice can have an activism that encourages democratised balance to define solutions through a "social conversation" (Manzini, 2015) and gives voice to invisible communities (McAra McWilliam, et al., 2014). As a social catalyst design has also played a key role in social and policy delivery (Clarkson & Coleman, 2015) and has been key to many innovations in healthcare – devices, products and services (Flood, et al., 2021).

The DYML initial pilot event was experiential and attended to a physical site (Glasgow School of Art, Rural campus, Altyre Estate, Forres, Scotland) which was intended to generate and provoke thought and define design directions of support at this time. Prior to the event, a 'cultural probe' (Gaver et al., 1999; Shore et al., 2018a) pack (see Figures 1-5) was issued to those people wishing to attend. The intention of this was to incorporate efficiencies of understanding and mobilise thinking or 'state of interest' by the attendees. The DYML 'team' are multi-disciplinary and a participatory mindset (Sanders & Stappers, 2012) enabled the potential barriers across these disciplines e.g., design, clinical, fitness & nutrition to evaporate, opening up collaboration as the concept of 'Design Your Menopause Life' aimed at co-designing solutions by working and designing with the attendees.

#### **3.1 Ethical considerations and recruitment of attendees**

Ethics approval was granted through Glasgow School of Art and attendees were invited through advertisement and promotion at Moray Leisure Centre. The recruitment was aimed towards those members of Moray Leisure Centre that were attending some of the menopause focused classes (cardio, strength, social and peer to peer support) held in the leisure centre studios and social space e.g., café, training room. All attendees shared and spoke

about their peri and post-menopausal experience and varied in age range from 30-60+. There was no restriction to attendees age, it was a targeted purposive group already involved in the menopause program of activities at Moray Leisure Centre. This ensured that the attendees were central to the output development, which can optimise user experience (Lee, et al., 2023). The event relied on qualitative and design anthropological approaches that would:

- A) Document experiences expressed and shared by the attendees on the day.
- B) Define and inform development of a new menopause health and fitness program that supports individuals as they progress through a life stage of peri/menopause.
- C) Discover new directions to support overall development of the 'DYML' concept.

The research was motivated by four research questions:

1. What is the relationship between physical activity and good mental wellbeing for peri/menopausal individuals?
2. What potential impact can be experienced in the Moray region because of a Peri/menopausal focused health and exercise program?
3. Can this be a transferrable health and exercise program offered across the Region and Nationally/Internationally?
4. How do individuals currently manage peri/menopause symptoms and day to day life?

### 3.2 Design Approach

The 'Design your Menopause Life' (DYML) solution is envisioned as 1) a physical solution to empower females as they experience peri and menopause symptoms 2) a digital holistic health tool. We continue developing the physical experience event solution following the positive impact of the initial pilot of DYML. We have identified a need to explore and develop the digital solution for individual women and as an industry type event focus to commercialise wellness support to peri/menopause health in the workplace (incorporating it to a future planned digital holistic health tool). Workplace satisfaction can be optimised by introducing co-design as an activity that enhances health and wellbeing in the workplace (Myerson & Ramster, 2017). Artifacts, tools and games facilitate thinking through design as an influential element to generating design solutions (Peters, et al., 2021). Cultural probes deliver insights to the worlds of people and shared in a unique way that provides qualitative expression and inspires design direction (Sanders & Stappers, 2012) Traditionally, relying on items such as cards, or disposable cameras supports the gathering of research material through cultural probes (Gaver et al., 1999), and have been utilised in digital formats for design research purposes (Rodríguez, et al., 2020). Due to the efficient utilization of the probe pack material for the 'Design Your Menopause Life' event, this presents opportunity to develop a solution modelled on and incorporating elements of constructivist Grounded Theory

(Charmaz, 2014) and thematic development through the findings expressed and shared on the completed cultural probe packs and constant comparison to iterate DYML.

#### 4. DYML: Initial in-person event

The in-person pilot event involved bringing attendees to the GSA rural campus at Altyre estate Campus, Forres, Scotland. It incorporated participation, talks on female health peri/menopause delivered by retired Gynaecologist Dr. Grant Cumming, a light exercise session experienced collectively and led by Ms. Mel Allen an expert menopause fitness instructor, a nutrition specific talk delivered by Ms. Claire Hester expert menopause nutritionist. This was followed by a lunch provided and based on the foods and food types discussed during the nutrition talk and served in a picnic style by a local food vendor. Following the lunch, the participants were invited to a co-design session at 'The menopause wall' (Figure 6 number six location) where we worked together to co-design and build important draft elements to the first Moray 'Meno-festo'.

##### 4.1 Planning and design of the cultural probe pack

Designing the cultural probe pack required consideration to the topic of menopause and the event planning. It was structured to be inviting and colourful and visually different for each of the diary pages. The elements of the event, including design, health talks, physical activity and food interaction informed also the layout. The planning and thinking about the storytelling element regarding 'Artifactuality' was an important tangible aspect encouraging the attendees to share further their menopause experience through artifact and narrative. The colours, font and layout planning intended to compliment and present PhEM as statements (A4 size, Helvetica bold and regular). PhEMinine reflections phonetically sounded 'Feminine reflections' but read differently and had targeted thoughtlines e.g., Ph=Physical wellbeing. The selection of palette and colours intends to relate the organic aspect of living and life stages, and how other elements can affect that, hence:

Ph – Physical Wellbeing is a warm yellow, not quite glowing as the sun but a warmth that energizes and inspires.

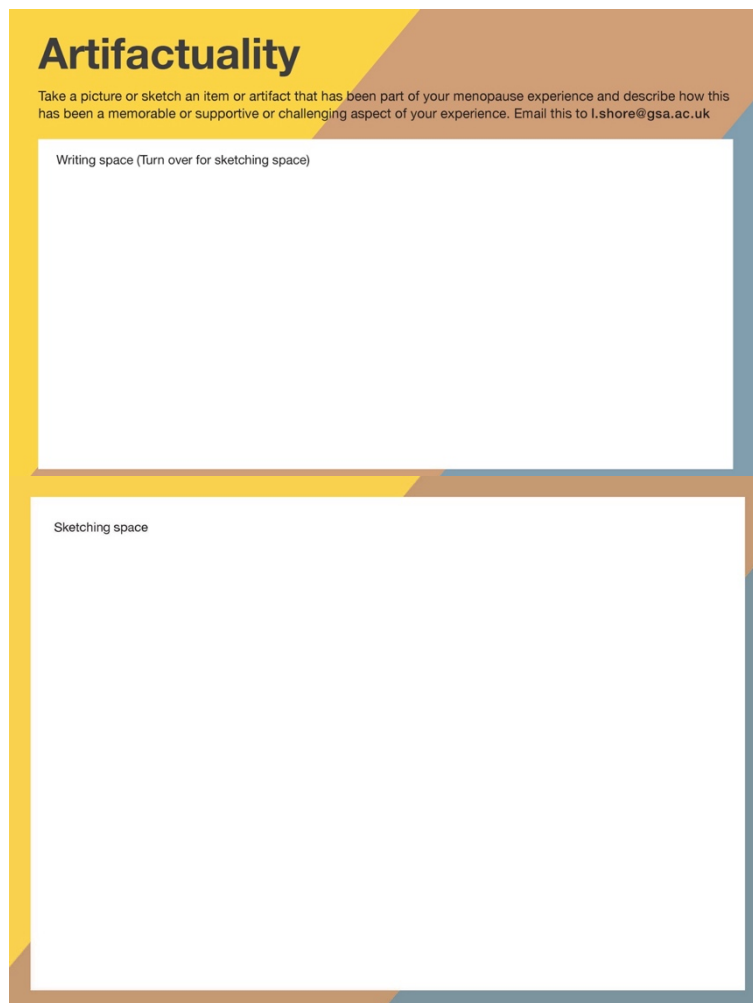
E – Emotional Wellbeing is an organic earthy tone that is intended to relate to emotional journey and life and that the earth can assist us to ground and respond to our emotions.

M – Mental Wellbeing and the blue was to represent the sky, and relate how despite clouds or sunshine or rain, the blue in our sky can be retained through actions that enhance our challenges offering balance.

It was hoped the attendees would be intrigued and curious to complete the pack ensuring to do it in advance of the DYML event. The 'Artifactuality' was purposefully considered to be A5, and act as a standalone but connected part of the pack, the smaller size of this card was hoped to encourage sketching particularly by those who don't feel comfortable to sketch or state 'I can't draw'.

The pilot event was advertised in Moray Leisure Centre and invited those members that were already engaged in a menopause exercise program on site. In advance of the day, those that signed up were issued with a cultural probe pack that included the following design preparatory items (figs. 1-5):

**Artifactuality Card** (Figure 1) – Attendees were invited to sketch, upload a picture of an item or artifact that has been part of their peri/menopause experience which would assist with building self-awareness and connection awareness to the life stage by writing a short passage on how this has been a memorable or supportive or challenging aspect of her peri/menopause experience.



The image shows the front and back of an 'Artifactuality Card'. The front side (top) has a yellow header with the title 'Artifactuality' in bold black text. Below the title is a small instruction: 'Take a picture or sketch an item or artifact that has been part of your menopause experience and describe how this has been a memorable or supportive or challenging aspect of your experience. Email this to l.shore@gsa.ac.uk'. The main body of the card is a large white rectangle with a thin blue border, labeled 'Writing space (Turn over for sketching space)'. The back side (bottom) is a large white rectangle with a thin blue border, labeled 'Sketching space'. The card is framed by a yellow border on the left and top, and a brown border on the right and bottom.

Figure 1 Artifactuality card front and back issued as part of the DYML cultural probe pack - Authors own

**'PhEMinine Reflection' Diary** (Figure 2) - The diary encouraged the women to consider the elements of wellbeing that are working well during this stage and those elements that could do with support or other solutions that would offer benefit.

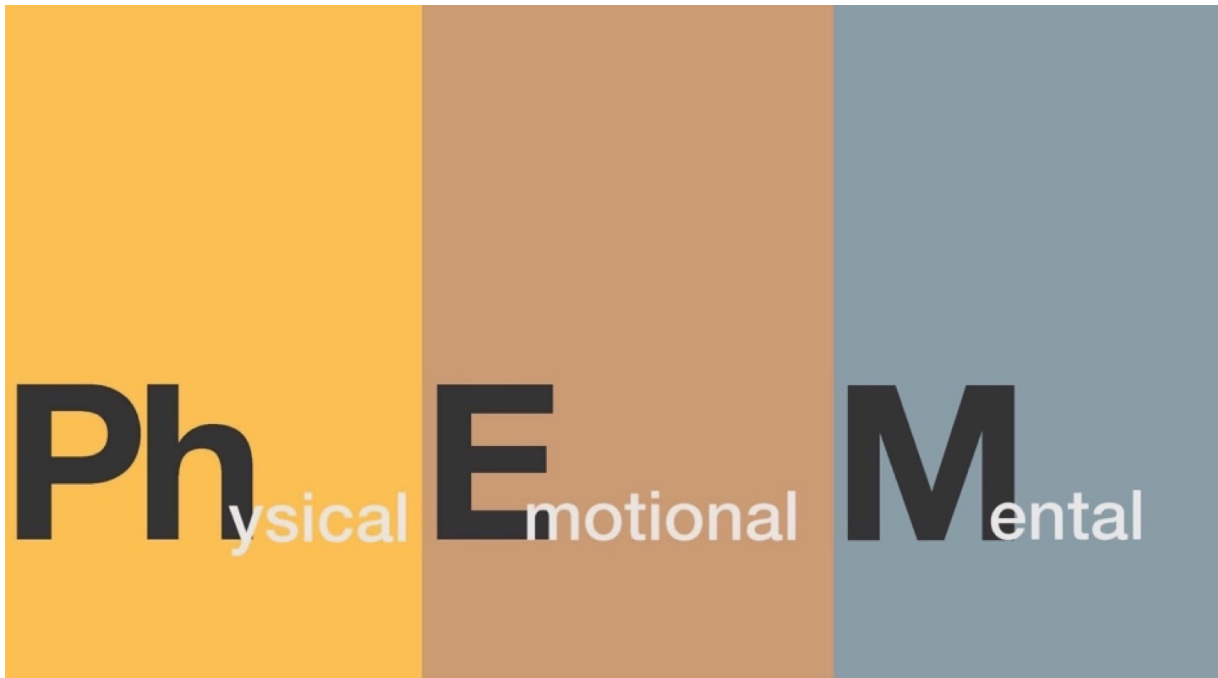


Figure 2 Cover page of the 'PhEMinine Reflections Diary - Authors own

*Physical* (Figure 3) - Eating well and exercising can assist our mental & emotional wellbeing During the time of menopause and change; consider and reflect on how you manage this in your daily life?

what foods do you think help with your energy levels at menopause?

Who can offer guidance to your food intake and exercise regime?

When do you notice energy levels change or lower in a day?

Where is your physical wellbeing focussed mainly - exercise or food?

**Ph**ysical

Eating well and exercising can assist our **mental & emotional wellbeing**

During the time of **menopause** and change, consider and reflect on **how** you manage this in your daily life?

please share some thoughts below:

**What** foods do you think help with your energy levels at menopause?

**Who** can offer guidance to your food intake and exercise regime?

**When** do you notice energy levels change or lower in a day?

**Where** is your physical wellbeing focussed mainly?  
exercise or food  
(please circle one and share a thought)

**Why** do you exercise?

Figure 3 Physical Wellbeing page of 'PhEMinine Reflections Diary - Authors own



*Emotional* (Figure 4) - Considers how we deal with experiences, stress, and relationships as we go through life. There are times it can be challenging, and times of great emotional joy...

Where has the menopause experience had an effect on your life?

Challenge ball - what emotional challenges has menopause presented?

Joy ball – has menopause presented times of joy at this stage of life?

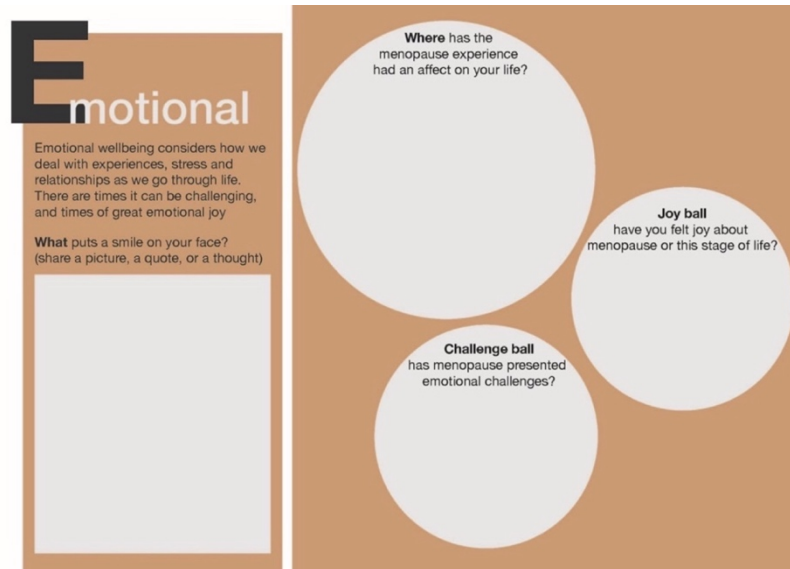


Figure 4 Emotional Wellbeing page of 'PhEMinine Reflections Diary - Authors own

*Mental* (Figure 5) – What way has your mental wellbeing & ability to live/work during menopause changed?

Dealt with situation well?

Dealt with a situation not so well?

New situations?

Forgetting tasks to do?

**M**ental

Mental wellbeing can be affected by how we process information and deal with new situations. Hormonal changes can also impact our mental wellbeing

What way has your mental wellbeing & ability to live/work during menopause changed?

When you are issued this pack, please check in on the table below daily relating to your mental wellbeing experience before the 'Design your menopause life' event

(use to add a circle and add to the dashed line each time; if any, one of the events below happens)

|                                     |
|-------------------------------------|
| Dealt with situation well?          |
| -----                               |
| Dealt with a situation not so well? |
| -----                               |
| New situations?                     |
| -----                               |
| Forgetting tasks to do?             |
| -----                               |
| Notes or thoughts to share?         |

Figure 5 Mental Wellbeing page of 'PhEMinine Reflections Diary - Authors own

The material that informed each of the diary pages PhEM were based on literature and evidence of aspects of menopause and female health experiences and challenges with some symptoms. They purposefully were designed to avoid 'medicalizing' menopause and engage more day-to-day activities or experiences to document and reflect upon.

The event plan had the following agenda (Figure 6):

Initial Greeting and welcome, gathering of the Cultural Probe items and positioning them on the menopause wall (courtyard of campus).

Female health talk given by esteemed Gynaecologist (Dr. Grant Cumming) which was humanised and at times offered humorous and engaged discussion (The Granary building).

Exercise light session and discussion with Ms. Mel Allen expert menopause fitness instructor – walk 3km around the Loch with markers to position and support distance/time understanding (relating e.g., thirteen minutes to walk a Kilometre) (Loch of Blairs route as marked in clockwise direction)

Nutrition talk delivered by Ms. Claire Hester, expert menopause nutritionist and offered time to discuss various elements of nutrition, meal planning and moods, emotions, energy etc. (The Granary building)

Lunch prepared and served by local food vendor ('Planta', Elgin, Moray, Scotland) who had worked with the nutritionist to present an array of foods that were healthy, delicious, and satisfying and tailored to menopause, with access for a picnic. (The Kitchen and courtyard area was set for picnic outdoors)

Co-Design session to frame the initial draft version of the Moray 'Meno-festo' (this will iterate as a tool that can be individual or group related e.g., 'my 'Meno-festo' – 'our workplace 'Meno-festo') (Design Studio of campus).

## Design Your Menopause Life | Event Visualisation June 2023

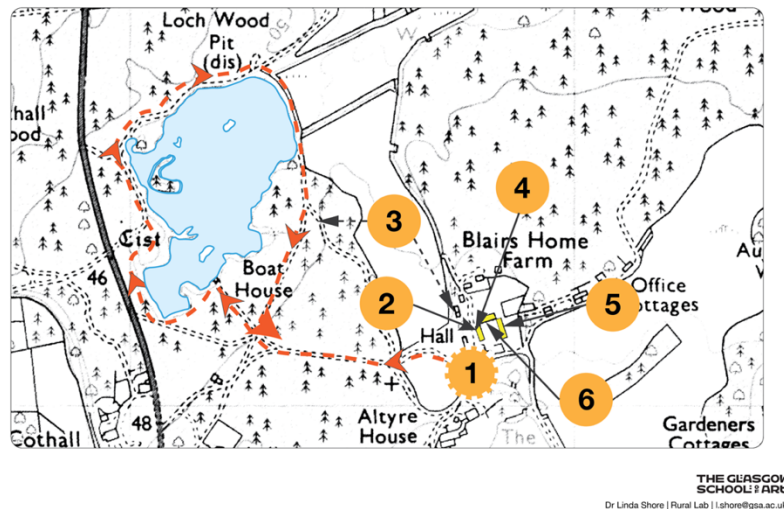


Figure 6 Event Visualization - Authors own.

### 5. Results of initial pilot at Altyre Estate

The DYML event resulted in overall a sense of empowerment and engagement with the attendees. The speakers and the design team collaborated to develop a draft “Meno-festo”. The ‘Meno-festo’, was a collective piece of work resulting in several themes that could be communicated and developed as a succinct tool to enhance understanding by policy makers, industry and social groupings to consider life stages and healthspan approaches to day-to-day experiences.

The attendees were issued with the cultural probe pack in advance of attending the event. They were transported from Moray Leisure Centre to the GSA rural campus at Forres. The buses arrived with 27 women full of chat and contemplation of the event. There had been some advance emails sent in by the attendees with images of their ‘Artifactuality’. Upon greeting the attendees who were very positive and bubbly, they were asked “have you all done your homework?” by the design researcher; to which there was a collective and humorous “Yes” response (Figure 7).



Figure 7 Some of the attendees being greeted by the design researcher - Authors own

The packs were gathered up, one of the more noticeable 'Artfactuality' was a woman who disembarked the bus, carefully carrying a cactus plant. It was such a strong observation, she prompted the response, "I have written on my card about this, and have brought this from the office". (Figure 8)

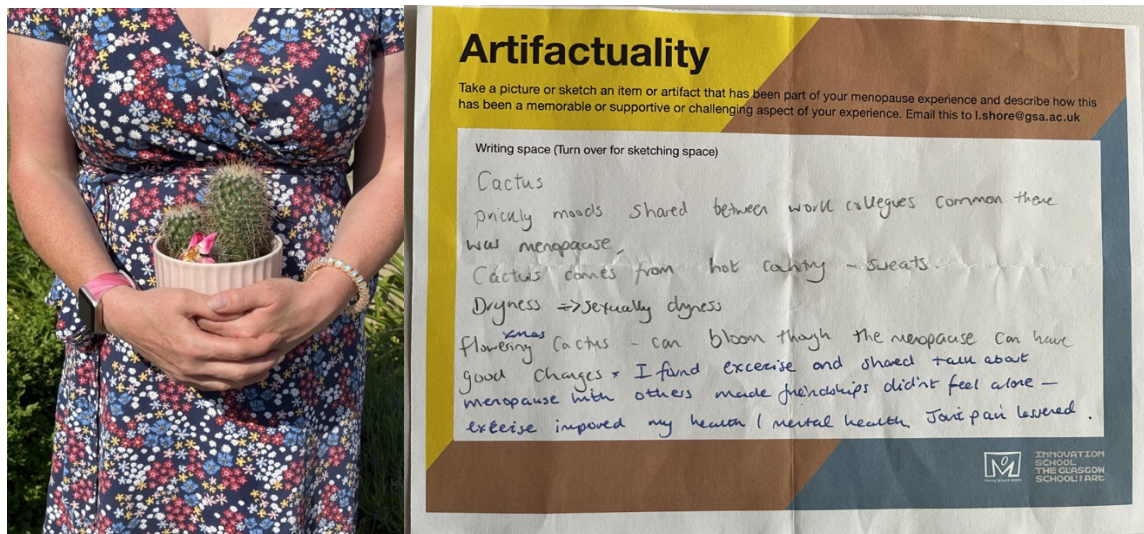


Figure 8 Attendee with her cactus Artfactuality - Authors own

Once the attendees were comfortable and had been welcomed, they were welcomed by the Deputy Director of Research & Innovation, Glasgow School of Art Professor Irene McAra McWilliam, and the first talk on the topic of female health across the lifespan and peri / menopause by Dr Grant Cumming was introduced. This talk was humanised and at times offered humorous and engaged discussion and times for questions asked by the attendees.

Following this the attendees joined Ms. Mel Allen an expert fitness instructor who is in Moray Leisure Centre and specializes in female health and exercise, particularly relating to



menopause. Mel was encouraging and checked in with the attendees regarding their fitness to the walk planned, all the attendees joined in and over the course of approximately 45 minutes' walk around the forest and 'Loch of Blairs' (see '3' on Figure 6) located on the campus.

The Nutrition talk was delivered by Ms. Claire Hester, an expert menopause nutritionist and she articulated the importance of various food groups, planning meals, and reminded the attendees to enjoy food! The attendees were able to ask about elements of food and meals and planning during busy times of the day/week.

This was followed by a taste what we have just been talking about lunch (Figure 9) was prepared and served by local food vendor who had worked with the nutritionist to present an array of foods that were healthy, delicious, and satisfying and tailored to menopause, with access for a picnic outdoors on the campus at Forres.



Figure 9 Some of the healthy and menopause themed foods and treats provided as part of the event - Authors own

### 5.1 Artifactuality

The intention of the 'Artifactuality' element was to provoke thinking in relation to everyday lives, as shared, there was noticeable excitement for the event, The cards with completed sections relating to Artifactuality revealed narrative and pictures or sketches about day-to-day menopause experience, stories about weight -

“...my weighing scales hold memories of a very low time when I was overweight and too fatigued to exercise, then on the plus side I have now lost weight and enjoy stepping onto them weekly. They play a big part of my menopause journey” (Figure 10)



Figure 10 Attendees weighing scales 'Artfactuality' - Authors own

...or stories relating to uncertainty of symptoms -

"I don't know if I'm 'Peri' but despite being on the pill, I have heavy breakthrough sporadic bleeds, which no pad or tampon can contain – TMI ?!" - [TMI=Too Much Information?]

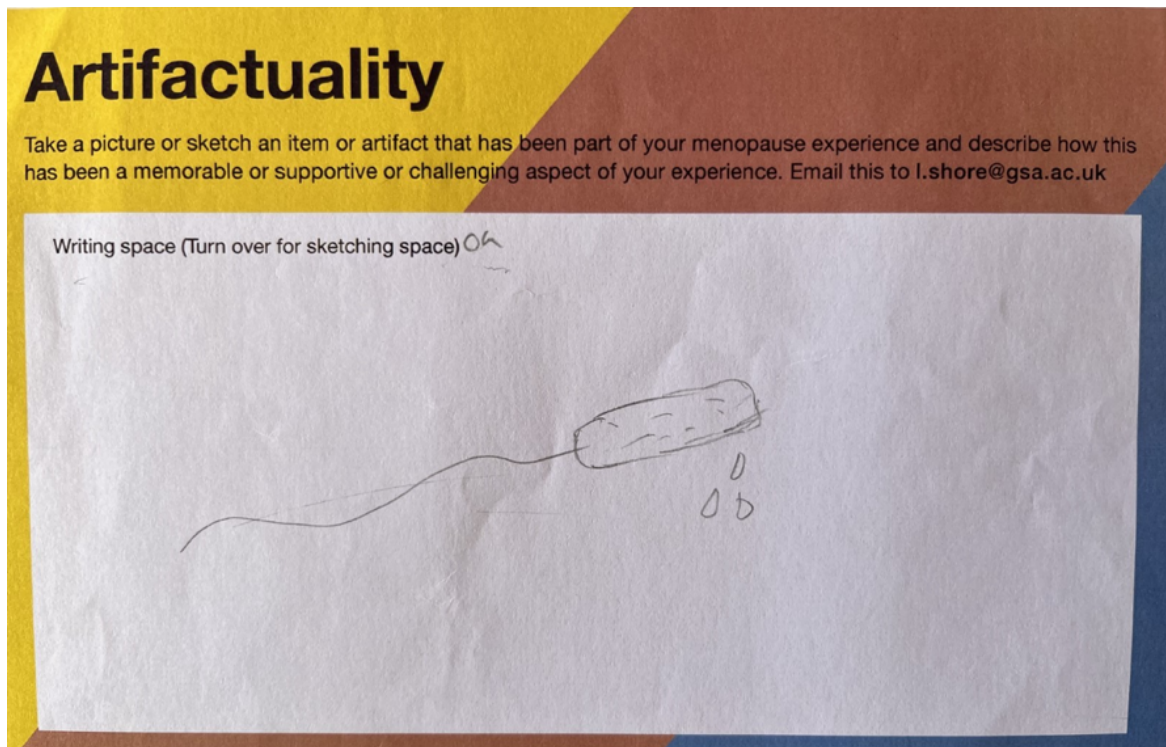


Figure 11 Sketch of tampon as part of attendees 'Artfactuality' - Authors own

Artifactuality offered insight to understanding the daily experience and reflection the attendees had in relation their Peri and Menopause symptoms/experience. Other artifacts discussed or shared included feminine sanitary pads, medications, artwork, sport shoes. There were several common threads expressed however the following themes were documented:

- Body & Psychological Changes – as displayed earlier, a few of the attendees expressed changes relating to energy levels, weight and memory or capacity to articulate information. Expressions of embarrassment due to symptoms or experience were also shared.
- Importance of activities – this was expressed with activities such as painting, rowing and the gym being mentioned in addition to the importance of the social aspect of these activities, the bond of having peers in a position like you.
- Work Experience – expression of being not heard or menopause symptoms impact not understood, on the other side expression of how workplace colleagues could be supportive to, and with each other.
- Personal relationships – being impacted, with poignant expression of disjointed experiences between wife and husband, and the support medication played at this time.

## 5.2 Physical wellbeing

Physical wellbeing cards were completed, and shared by the attendees, they appeared to comfortably link exercise and foods and food types/supplements. However, despite the benefits listed overall, boost to mental health, strength training importance at this stage in life, there was also comments relating to the 'financial cost' to exercise and the barrier it potentially could be. Furthermore, there appeared to have expression that the NHS could position well to support nutrition and exercise needs requirement to woman at Peri/Menopause time.

Exercise was described as an important part of day-to-day life, alleviating symptoms, boosting energy levels and offsetting body changes because of peri/menopause. Some of the feedback that has benefitted further planning of DYML events, would be that Nutrition itself plays a part as a feature of the cultural probe pack. Information about meal planning, nutrition, e.g., protein, fibre, water and supplements, e.g., whey isolate, collagen, creatine etc. Shopping for foods and managing family diets and costs could be helpful in further studies.

## 5.3 Emotional wellbeing

Emotional wellbeing cards had three main focal points but significant to the attendees' day to day lives prior to, and post menopause. There were three key areas of enquiry on the cards offering the following insights:

### **Where has the menopause experience had an effect on your life?**

There were common responses on the cards regarding sleep disturbance, forgetfulness, weight gain, relationships or simply 'everywhere'. There was also expression of how confidence had reduced and an experience of panic attacks at work, and an acknowledgement of this as a stage of life –

*"...but I think it's an ongoing journey which I'm doing not bad with now...I think"*

### **Challenge ball: What emotional challenges has menopause presented?**

Various life stage challenges were expressed in this area of the card, with impact of dealing with menopause symptoms and divorce/parental responsibilities, sleep patterns. Confidence was again mentioned in addition to anxiety.

### **Joy ball: Has menopause presented times of joy at this stage of life?**

There was expression of joy stated as a result of no more periods, or starting HRT, but there was a sense of 'it is what it is' or *"I'm in the same boat as lots of other ladies"* with some expressing not much in terms of joy – but *"glad to be here"*

#### 5.4 Mental wellbeing

The structure of the Mental wellbeing card was intended to acknowledge how there are times whereby hormonal changes can alter our sense of autonomy, confidence or general mental wellbeing *"I changed departments at work because of the brain fog and anxiety"*

There were expressions of how attendees often adapted e.g., making lists to avoid episodes of forgetfulness. The expressions of anxiety were also accompanied by narrative relating to reduced self-esteem, inability or challenge to making decisions, and increased brain fog.

#### 5.5 Moray 'Meno-festo'

The Moray 'Meno-festo', was the final phase of the day and was facilitated following the lunch/picnic outdoors. There was still a positive, energized and upbeat feel that the attendees were enjoying the event, and the dynamic was good natured within the group.

The attendees were invited to join the team at the 'Menopause Wall' (Figure 12) and at this point there was discussion around a typical day in the life, aspects of challenge relating to work, energy levels, access to health supports and nutrition.



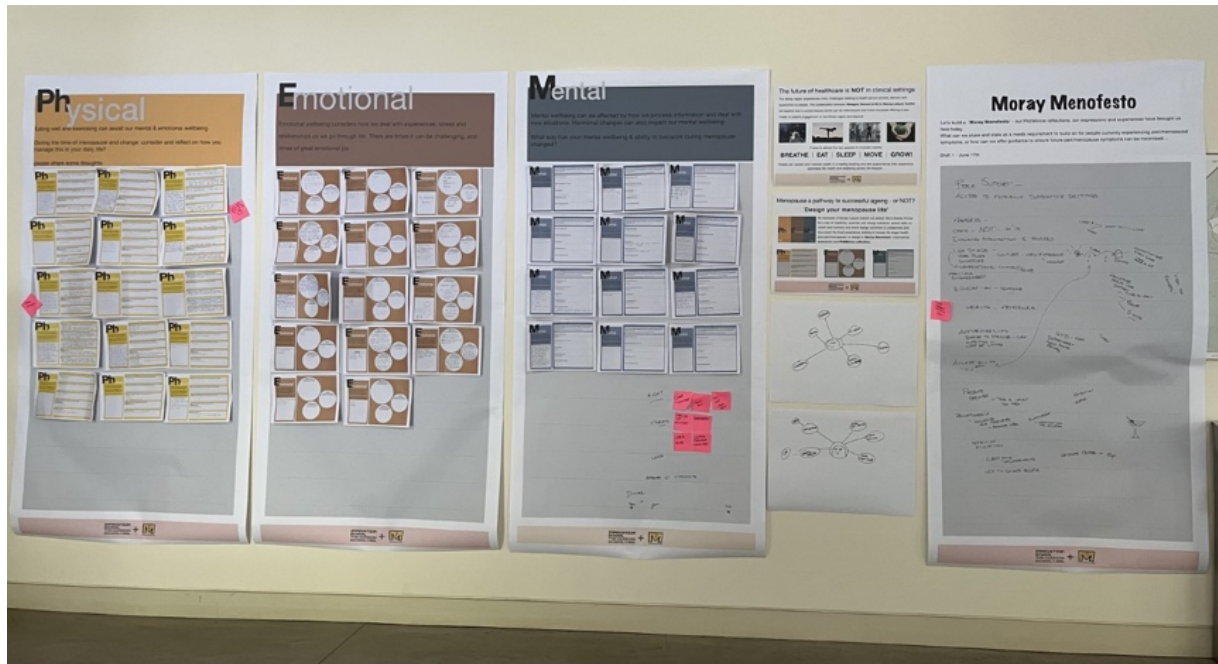


Figure 12 'Menopause wall' following design collaboration with the attendees - Authors own

Some of the main themes that emerged were:

- Peer Support - there was expression about the importance of peer-to-peer support, but also how relationships had changed, intimate ones with partners or husbands, and even work colleagues
- Culture & societal – perceptions of what it is to be a 'menopausal woman' within community and society and how that can impact self-esteem, confidence, sense of contribution.
- Accessibility – to health services, health and exercise activities – joining or attending a gym and feeling a sense of intimidation as a perceived 'older woman.'
- Affordability – services and supports such as gyms or leisure, how fitness, health maintenance can come at a cost – gym membership, gym clothing and intimate products that assist with bladder control or 'flooding' etc.
- Workplace and management – some attendees had changed roles in their workplace or left work due to anxiety or stress.
- Nutrition education – was perceived as a good support to understand body changes and how we can alleviate symptoms or weight gain through good nutrition awareness and education.
- Knowledge and learning about healthspan – some expressions were shared to discuss menopause openly with people of all ages, and in the workplace as an awareness and policy guide was perceived to be helpful

## 5.6 Results summary of the initial pilot at Altyre Estate

These preliminary findings present early indicators and opportunity to iterate or develop the DYML tool further as a physical immersive event at a location that enhances a sense of well-being and focus to the individual, creativity and peri/menopause support and empowerment. In addition, it presented an opportunity to develop a consider how DYML as an 'event' could be digitalised for the workplace. This digital solution concept offers an individual who cannot or might prefer not, access a physical but access the DYML approach as a resource and support as they self-manage symptoms and seek or identify support where needed. It is planned to include this in the upcoming (online series of DYML) Pilot Study 2 in November 2023 with staff colleagues from Glasgow school of Art. These outputs have informed iterative development and preparation for pilot study 2 to include 'Nutrition' (Figure 13) as another page in the PhEMiniNe Reflection Diary (also noting the 'N' is now also capitalised, compared to PhEMinine Reflection Diary in Pilot Study 1). Information about meal planning, nutrition, e.g., protein, fibre, water and supplements, e.g., whey isolate, collagen, creatine etc. Shopping for foods and managing family diets and costs could be helpful as an iterative addition to DYML.

| DAILY                   | WEEKLY                  | WEEKEND                 |
|-------------------------|-------------------------|-------------------------|
| Nutrition Highs & Lows? | Nutrition Highs & Lows? | Nutrition Highs & Lows? |
| Shopping                | Shopping                | Shopping                |
| Cooking                 | Cooking                 | Cooking                 |
| Eating                  | Eating                  | Eating                  |

How might you?  
(complete this in the context of your pre-menopause self)  
understand your menopause nutrition needs more?  
-----  
focus or guide someone on menopause nutrition planning?  
-----

Do you notice times when what you eat affects your energy levels or mood?  
(complete when or how you notice nutrition affecting your day to day)

|        |       |
|--------|-------|
| Energy | How?  |
| -----  | ----- |
| Mood   | How?  |
| -----  | ----- |

Figure 13 Nutrition card introduced for Pilot Study 2 with Glasgow School of Art staff colleagues - Authors own.

## 6. DYML online: A case study with GSA colleagues

Glasgow School of Art HR Dept and members of the 'Menospace' group (a peer network of support for people regarding menstrual health and menopause) contacted the design researcher as we explored how to deliver a DYML event following on from the physical event on the Altyre Estate campus in June.

The Glasgow School of Art main campus in Glasgow is 173 miles of approx. 4 hours travel on primary roads that are often impacted by weather or travel conditions. This challenge focused on how we could deliver an event, accessible for all staff and colleagues who would be interested in participating. One challenge initially considered was online access and the delivery time duration of an online event, discussing further with HR and GSA monospace colleague we decided to generate online sessions of two hours duration over a series of four weeks.

This initiative would be promoted as part of World Menopause Day (October 18<sup>th</sup>) HR communications in GSA, with the series of events beginning in November 2023. Ethical considerations were discussed with the research office and participants were invited as professional peers and persons of interest to the research activity and development of DYML. One of the considerations for the DYML team was which way to build an agenda, that could put people at ease and to feel comfortable with expression. From a constructivist Grounded Theory perspective, this activity would endorse opportunity for constant comparison, document through memo writing to identify gaps or things that worked well.

It was agreed to having a relaxed but focussed approach and the initial opener session was titled 'A podcast-sort of' aiming to set the ambience and not present as a 'lecture type delivery'. This session would encourage discussion by the researcher and fitness instructor sharing professional and personal experiences and the group online joining in the conversation.

Over the 4 weeks there was engagement by up to 12 colleagues online, with each week providing a theme of interest, and relatable to the PhEMiniNe reflection diary.

- Week 1 – a podcast – sort of with Linda & Mel (Ph)
- Week 2 – Linda introduced Dr Grant Cumming Gynaecologist (E, M)
- Week 3 – Linda introduced Claire Hester, Nutritionist (N)
- Week 4 – Reflection and evaluation – discussions on 'Artifactuality'

The online series of DYML offered a 'digital cultural probe' pack and a physical pack if required which could be collected and completed by hand. It provided opportunity for diarizing and self-resourcing components and observe what way her symptoms were affecting her life and experience during peri and menopause time. This reflection and diarizing (Figure 14) would then be revisited as part of the agenda for each week.

**Physical**

Eating well and exercising can assist our **mental & emotional wellbeing**

During the time of **menopause** and change; consider and reflect on **how** you manage this in your daily life?

please share some thoughts below:

i don't really manage this very well at all.

I am post-menopausal (hysterectomy in late 30s) and have found that i gain weight more quickly and find it much harder to lose weight.

i have to control my calorie intake quite carefully - limiting carbs though i find i crave salt and sugar and caffeine

i have lots of bloating / water retention with my weight fluctuating by 4-5 lbs in a day

I also get heart palpitations occasionally which can be very scary

**What foods do you think help with your energy levels at menopause?**  
Low carb foods  
Chicken and eggs

**Who can offer guidance to your food intake and exercise regime?**  
I use the Internet a lot for this - various food tracker apps to manage carb/ protein/ fat

**When do you notice energy levels change or lower in a day?**  
mid afternoon is the worst time for me

**Where is your physical wellbeing focussed mainly? exercise or food**  
*(please circle one and share a thought)*  
more on food and how to limit what i eat

**Why do you exercise?**  
I do little exercise - mostly walking the dog / walking to work etc

Figure 14 completed Physical wellbeing card - Authors own

Each of the sessions online would offer access to a Miro board that provided space whereby attendees could work on during the sessions or reflect and perhaps find a time to access outwith the sessions (Figure 15).

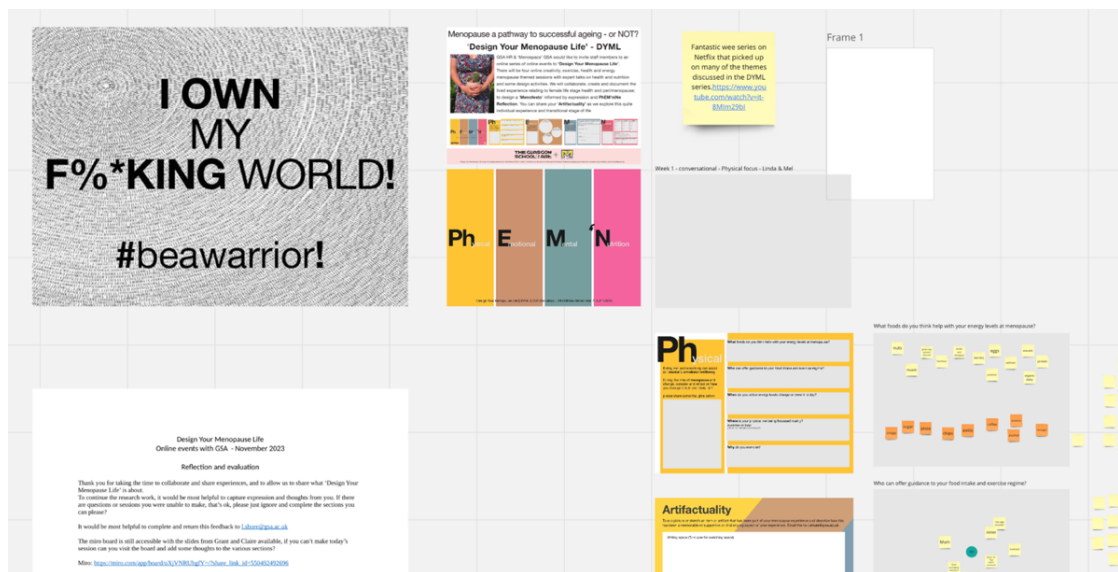


Figure 15 Screenshot of part of the Miro board with some additional elements created by the Design researcher – Authors own.

Following on from the 'podcast' topics discussed, attendees worked around the board, discussing experiences, sharing points that were helpful to them, and building that peer-to-peer network and dynamic of trust. Each week the attendance varied, which in part was due to work commitments by the colleagues and other duties.

The attendees who were unable to attend a session would share this by email. They had not been requested to do so, but was on their initiative, they would ask if slides etc. would be available to access on Miro, which they were.

Some of the feedback offered as part of an evaluation sheet indicates the need for holistic supports as part of the menopause journey, and desire to have attended the physical, in-person session;

“Really interesting holistic approach to healthcare through the initiatives described up in Forres”.

“I was delighted to hear about this initiative in Moray and surprised it is not used anywhere else. I have taken elements of this to introduce to my fitness to improve fitness and wellbeing; Can we see more of this in other areas of Scotland?”

The Artfactuality card was completed by some of the attendees, one sharing (Figure 16) a visual narrative of her peri-menopause experience, note this was drawn by hand then shared digitally back to the design researcher.

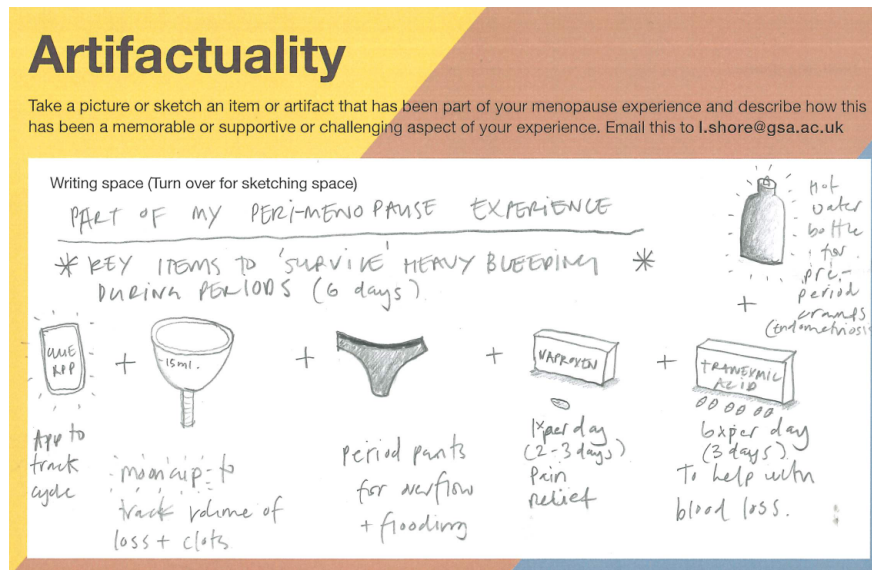


Figure 16 visual narrative of elements of an attendee's peri-menopause journey - Authors own

It was helpful to request feedback from the colleagues on how DYML online was perceived to assist with the iteration and development of DYML online series. Some further expression is documented below:

"Incremental changes to food prep and balance of food types. A little more exercise and I have purchased (yet to use!) a weighted skipping rope. Have got my weights out from under the bed and have them beside my desk. I also have an appointment with GP in the new year to discuss a move from current HRT to a patch + coil which I know carries less risks than my current tablets. Also, mentally it was really nice to meet with other women across campus going through similar issues."

"I feel more informed to speak to my GP (who is a very supportive male GP) about what it is I need and personal preferences on the options. Being informed in this way allows it to be a dialogue and agreed approach, rather than being told what to do and handed a prescription. It's so important to feel in control of this phase of life and to have autonomy of the choices of HRT or to not take HRT also".

"I think to know that you are not alone for this journey is key. That there is a community that can be there to share, to listen and to offer some sisterly advice. It also has provided conversation with my sisters and my partner".

What is becoming quite clear and evidenced by the expression of attendees from both events, that peer to peer or sisterhood is key to sharing, normalising peri- and menopause stage of life. This has prompted further introductory discussions with primary care and GP practitioners, to discuss developing DYML as a holistic health tool. One GP commenting how support for menopause and symptoms appointments have increased by 400% in recent times. In design terms, 'Affect' combined with emotion can trigger responses crucial to everyday decision making (Norman, 2004).

From a UX design perspective, there is opportunity here to develop a novel tool, as a physical event you attend, or an online series of events for people in the workplace, but crucially to introduce DYML as a holistic health tool. This tool is derived from User Centred Design,



co-design and Grounded Theory. It has further opportunity to develop it as a digital cultural probe format that offer responsive wayfinding on a journey. This digital holistic health tool (Figure 17) could be accessed by patients who contact primary care seeking menopause support of information. It could onboard them immediately and encourage self-management and self-awareness through the activities of DYML and work as a two-way communication piece between primary care and the patient, but support with holistic way finders and supports along this life stage journey.

It is also envisioned that this tool could provide opportunity to innovate how patients are onboarded in the future at GP Practice and primary care for health and conditions that benefit from holistic approaches also, e.g., endometriosis, pregnancy, low level mental health and migraine.

### Design Your Menopause Life | Tool development wireframe Remote and Rural Health & Wellbeing



Figure 17 preliminary low fidelity wireframe of DYML - Authors own

## 7. Limitations

DYML is a relatively new concept, it has been delivered as an in-person event and an online series of events. Some limitations have presented none more so than considering the person experiencing peri and menopause symptoms and unsure of which direction or how to navigate this new stage of life. Access to DYML will best serve individuals across the workplace, social spaces and through their primary care/GP Practice. A couple of considerations when planning online series of events is the availability of people to commit to a series of four events. However, by delivering material and allowing access to the Miro board and documenting on the PhEMiniNe reflections diary, this is hoped to reduce that challenge.

Another relating to the geographical location of Altyre estate and Moray region in Scotland informs that opportunity for attendees to come to in-person events needs to develop a transferrable model that can be delivered and accessed all over Scotland, the UK and beyond. Developing the digital holistic health tool to be implemented and available to GP Practice and patients will take time, and alongside this development the ongoing delivery of in-

person events and workplace online events will alleviate the urgency somewhat for the person, however there is a need to consider the burden currently being experienced in healthcare and Primary care, a solution or hybrid of DYML by being promoted in the Practice may assist people to consider other ways to manage their symptoms, in turn reducing stress for the practitioner.

## 6. Conclusion

The initial 'Design Your Menopause Life' (DYML) event documented expression from the attendees through the cultural probe pack preparation and diarizing before the event to 'prime' the attendees. It presented unintentionally also as an icebreaker when the attendees arrival being greeted and asked 'if they had their homework?'. The interactions and knowledge exchange on the day provided rich opportunity to share and reflect on peri and menopause experience. The design activity provided opportunity for release of expression and collective drive to consider what way we could best 'Design Your Menopause Life' and what supports were missing through the creation of a menofesto.

This equates to a prospect of 'supported menopausal experiences can relate to a positive ageing experience' and awareness of the impact Physical, Emotional, Mental and Nutrition wellbeing can have as we age. Delivering DYML as an online series of events with colleagues at Glasgow School of Art, feedback from the attendees indicates a need to deliver this type of event and program to enhance peri and menopause experience in the workplace, and as part of a self-management digital holistic health tool.

'Design Your Menopause Life' affords the person to diarise and engage with peer and other supports as they navigate their journey from peri-menopause to ageing successfully – potentially offsetting chronic or age-related conditions such as cancer or osteoporosis. It provokes, inspires and calls the individual to contemplate peri/menopause as a stage in life that they own, have a say in and can express or determine outcomes as part of their interaction with events or the digital holistic health tool.

An inclusive HR policy regarding menopause in the workplace, including the facilitation of DYML events could enhance longevity and older workers to remain engaged and at ease in the workplace despite symptoms of peri/menopause. This would reduce challenges to environment, experiences and relationships in the workplace by those experiencing symptoms of peri and menopause. Menopause does not need to be perceived as a stage of life related to decline, but as one that generates empowerment, autonomy, and a sense of continuing to contribute effectively to society.

**Acknowledgements:** We express sincere thanks to The Glasgow School of Art for funding the initial Pilot Study at Altyre Estate. The members of Moray Leisure Centre who participated and shared great insights to informing the development of DYML. The HR Dept, colleagues, & members of 'Menospace' in The Glasgow School of Art for their engagement despite the challenges of timetables, schedules, and life! Thank you all!

## 8. References

- Almeida, T., Balaam, M., & Comber, R. (2020). Woman-centered design through humanity, activism, and inclusion. *ACM Transactions on Computer-Human Interaction (TOCHI)*, 27(4), 1-30.
- Atkinson, C., Beck, V., Brewis, J., Davies, A., Duberley, J. (2020). Menopause and the workplace: New directions in HRM research and HR practice. *Hum Resour Manag J.* 2021; 31: 49–64. <https://doi.org/10.1111/1748-8583.12294>
- Attia, P., & Gifford, B. (2023). *Outlive: The Science and Art of Longevity* (First edition). Harmony.
- BSI. (2023). BS30416 Menstrual and menopausal health in the workplace <https://standardsdevelopment.bsigroup.com/projects/2022-02009#/section>
- Chanfreau, J., Lloyd, C., Byron, C., Roberts, C., Craig, R., De Feo, D., & McManus, S. (2013). *Predicting wellbeing*. London: NatCen Social Research.
- Charmaz, K. (2014). *Constructing grounded theory*. sage.
- Ciolfi Felice, M., Søndergaard, M. L. J., & Balaam, M. (2021). Resisting the medicalisation of menopause: Reclaiming the body through design. In *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems* (pp. 1-16).
- Clarkson, P. J., & Coleman, R. (2015). History of inclusive design in the UK. *Applied ergonomics*, 46, 235-247.
- Coughlin, J. F. (2017). *The Longevity Economy: Unlocking the World's Fastest Growing, Most Misunderstood Market* (First edition). Public Affairs.
- Cumming, G.P., Mauelshagen, A.E., and Parrish, M.H. (2011). Postmenopausal sexual dysfunction. *The Obstetrician & Gynaecologist*, 12(1), pp.1-6.
- De Feo, D., Barrett, J., Edwards, J., Hurst, M., Green, J. (2014). Wellbeing, why it matters to health policy – UK Govt., <https://www.gov.uk/government/publications/wellbeing-and-health-policy>
- DiSalvo, C. (2022). *Design as democratic inquiry: putting experimental civics into practice*. MIT Press.
- Edwards, H., Duchesne, A., Au, A. S., & Einstein, G. (2019). The many menopauses: searching the cognitive research literature for menopause types. *Menopause* (New York, NY), 26(1), 45.
- El Khoudary, S. R. (2020). Age at menopause onset and risk of cardiovascular disease around the world. *Maturitas*, 141, 33-38.
- Faubion, S. S., Enders, F., Hedges, M. S., Chaudhry, R., Kling, J. M., Shufelt, C. L., ... & Kapoor, E. (2023). Impact of menopause symptoms on women in the workplace. In *Mayo Clinic Proceedings* (Vol. 98, No. 6, pp. 833-845). Elsevier. 32(2).
- Flood, M., Ennis, M., Ludlow, A., Sweeney, F., F., Holton, A., Morgan, S., Clarke, C., Carroll, P., Mellon, L., Boland, F., Mohamed, S., de Brún, A., Hanratty, M., Moriarty, F., (2021). "Research methods from human-centered design: Potential applications in pharmacy and health services research," *Research in social & administrative pharmacy: RSAP*, vol. 17, no. 12, pp. 2036–2043. doi: 10.1016/j.sapharm.2021.06.015
- Gaver, B., Dunne, T., & Pacenti, E. (1999). Design: cultural probes. *interactions*, 6(1), 21-29.
- Golden, S. W. (2022). *Stage (Not Age): How to Understand and Serve People Over 60, The Fastest Growing, Most Dynamic Market in the World*. Harvard Business Review Press.
- Jungmann, S., Hettchen, M., Kohl, M. and Kemmler, W. (2023). Impact of 3 months of detraining after high intensity exercise on menopause-related symptoms in early postmenopausal women—results of the randomized controlled actlife project. *Frontiers in Sports and Active living*,



- Kuitto, K., & Helmdag, J. (2021). Extending working lives: How policies shape retirement and labour market participation of older workers. *Social Policy & Administration*, 55(3), 423-439.
- Lee, S.-H., Yang, M., de Weck, O. L., Lee, C., Coughlin, J. F., & Klopfer, E. (2023). Macro-Trend Study Under Service System: Preliminary Research in Service Innovation and Emerging Technology. In U. Z. A. Hamid & M. Suoheimo (Eds.), *Service Design for Emerging Technologies Product Development: Bridging the Interdisciplinary Knowledge Gap* (1st ed.). Springer Cham. <https://link.springer.com/book/9783031293054>
- Lobo, R. A., Gompel, A., Management of menopause: a view towards prevention. (2022) *Lancet Diabetes Endocrinol.* 2022 Jun;10(6):457-470. doi: 10.1016/S2213-8587(21)00269-2. Epub 2022 May 5. PMID: 35526556.
- Marston, H. R., Shore, L., & White, P. J. (2020). How does a (smart) age-friendly ecosystem look in a post-pandemic society? *International journal of environmental research and public health*, 17(21), 8276.
- Marston, H.R., Shore, L., Stoops, L. and Turner, R.S. (2022). *Transgenerational Technology and Interactions for the 21st Century: Perspectives and Narratives*. Emerald Group Publishing.
- McAra-McWilliam, I., McHattie, L. S., & Broadley, C. (2014). *Flourish: Personhood and Collective Wellbeing*.
- Mohamed, S., & Hunter, M. S. (2019). Transgender women's experiences and beliefs about hormone therapy through and beyond mid-age: An exploratory UK study. *International Journal of Transgenderism*, 20(1), 98-107.
- Moline, K., & Clerke, T. (2023). Design research for menopause: a scoping review. *Design for Health*, 7(3), 348-365.
- Myerson, J., & Ramster, G. (2017). Workplace health and wellbeing: can greater design participation provide a cure? *Design for Health*. New York: Routledge, 347-357.
- Nagarajan, N. R., & Sixsmith, A. (2023). Policy initiatives to address the challenges of an older population in the workforce. *Ageing International*, 48(1), 41-77.
- NHS (n.d.) Menopause. <https://www.nhs.uk/conditions/menopause/things-you-can-do/>
- Norman, D. A. (2004). *Emotional design: Why we love (or hate) everyday things*. Civitas Books.
- Office for National Statistics., Female employment rate (aged 16 to 64, seasonally adjusted): % ONS., (2024) <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/timeseries/lf25/lms>
- Peters, D., Loke, L., & Ahmadpour, N. (2021). Toolkits, cards and games—a review of analogue tools for collaborative ideation. *CoDesign*, 17(4), 410-434.
- Rodríguez, I., Puig, A., Tellols, D., & Samsó, K. (2020). Evaluating the effect of gamification on the deployment of digital cultural probes for children. *International journal of Human-Computer studies*, 137, 102395.
- Sanders, E. B. N., & Stappers, P. J. (2012). *Convivial toolbox: Generative research for the front end of design*. Bis.
- Shore, L., Kiernan, L., DeEyto, A., D Bhaird, N. A., Connolly, A., White, P. J., & Fahey, T. (2018a). Older adult insights for age friendly environments, products and service systems. *Design and Technology Education: An International Journal*.
- Shore, L., Power, V., De Eyto, A. and O'Sullivan, L.W. (2018b). Technology acceptance and user-centred design of assistive exoskeletons for older adults: A commentary. *Robotics*, 7(1), p.3.
- Shore, L. (2019). Development of a design tool to optimise acceptance of exoskeletons by older adults (Doctoral dissertation, University of Limerick).

- Shore, L., Hurrydass, S., Thompson, R., Salzano, R., Marsh, J., Marchewka, Z., ... & Ellis, M. (2022). Ageing collaborations: co-designing future technology opportunities. In DS 117: Proceedings of the 24th International Conference on Engineering and Product Design Education (E&PDE 2022), London South Bank University in London, UK. 8th-9th September 2022.
- Shore, L., Cochrane, R., McAra-McWilliam, I. (2024 in draft/upcoming) Breathe, Eat, Sleep, Move & GROW! – a kinetic chain approach to designing for healthcare futures.
- Sigelman, C. K., & Rider, E. A. (2021). Life-span human development, Cengage Learning.
- Vargas, C., Whelan, J., Brimblecombe, J., & Allender, S. (2022). Co-creation, co-design, co-production for public health: a perspective on definition and distinctions. Public health research & practice, 11(1), 1-11.
- Vaupel, J. W., Villavicencio, F., & Bergeron-Boucher, M. P. (2021). Demographic perspectives on the rise of longevity. Proceedings of the National Academy of Sciences, 118(9), e2019536118.
- Verdonk, P., Bendien, E., & Appelman, Y. (2022). Menopause and work: A narrative literature review about menopause, work and health. Work, 72(2), 483-496.
- Whiley, Lilith A., Wright, Ashley, Stutterheim, Sarah E., and Grandy, Gina (2023) "A Part of Being a Woman, Really": Menopause at Work as "Dirty" Femininity." Gender, Work & Organization: 30(3), 897–916 <https://doi.org/10.1111/gwao.12946>

#### About the Authors:

**Dr Linda Shore** is a UX designer/researcher, research interests and expertise regarding ageing experience, womens health, perceptions towards emerging technology, applied research methodologies, and future focused design solutions that enhance quality of life and the lived experience across Humanity, Society, and Policy themes.

**Dr Grant Cumming** [retired] was a consultant in obstetrics and gynaecology with research interests in menopause, miscarriage and health webscience.

**Professor Irene McAra-McWilliam** has international experience of creative leadership having worked as Director of Design Research for the multinational Philips Electronics. She is currently Deputy Director Research & Innovation at The Glasgow School of Art and was responsible for establishing GSA's Highlands and Islands Campus in Moray and the GSA's new Innovation School. Irene was awarded an OBE in recognition of her work in Higher Education, Innovation and Design.

**Ms Mel Allen** has worked as a fitness instructor for over 35 years. She has developed a bespoke Menopause fitness program at Moray Leisure Centre that provides tailored classes, ongoing education and a support network helping women of peri/ menopause life stage.

**Ms Claire Hester** is a MSc Nutritionist with over 10 years' experience. She runs an online nutrition & mindset coaching business supporting ladies to take their nutrition to the next level so that they can supercharge their health, living life to the fullest!