

Co-design of Culturally Appropriate Educational Materials for Cardiovascular Health Promotion in Hairdressing Salons: BELONG Study

Shouq Aldharman^{1*}, Marjorie Lima de Vale Phd¹, Clare Coultas Phd², Louise Goff Phd³, Ms Ashlyn Mernagh-iles HND, Veline L'Esperance MSc¹, Alexis Karamanos PhD¹, Salma Ayis PhD¹, Vasa Čurčin, PhD¹, Stevo Durbaba MSc¹, Mariam Molokhia, Phd¹ and Seeromanie Harding PhD¹

1. Department of Population Health Sciences, King's College London;
2. School of Education, Communication & Society, Institute of Psychiatry, Psychology & Neuroscience
3. Leicester Diabetes Centre, University of Leicester



Find us at <https://www.belongstudyuk.com/>



Background

- CVD -significant contributor to morbidity, disability, and mortality in England, with ethnic disparities^{1, 2}
- Emerging community-based delivery through beauty salons and hairdressers for educational programmes to improve women's knowledge and enable behavioural changes³
- Evaluating appropriateness of educational material and refine so culturally acceptable for ethnically diverse women⁴
- The “Double Diamond” approach: users at the centre, co-creation, visual communication⁵
- Used in to co-design services in public health and frameworks to change policies with stakeholder input ^{6,7}

Stages:

1: Discover: Focus of the materials, users' experiences and preferences

2: Define: Most important issues

Aims and Objectives

- **Overall Aim:** Co-design culturally appropriate CVD educational materials for ethnically diverse women in partnership with hairdressing and beauty salons.
- **Research Question:** What are culturally appropriate interfaces and preferences of hairdressers regarding educational materials addressing cardiovascular health awareness in ethnically diverse women?
- **The study Objectives:**

Phase 1: Discover

1. Identification and appraisal of available educational resources
2. To identify the available educational materials that targets CVD promotion and culturally appropriate for ethnically diverse women
3. To identify hairdressers' preferences regarding health apps (design, functions, messages, and images) and educational materials.

Phase 2: Define:

1. To prioritise and chose design requirements, functions, messages, and images that will be used to develop the health app and educational resources.

Methodology

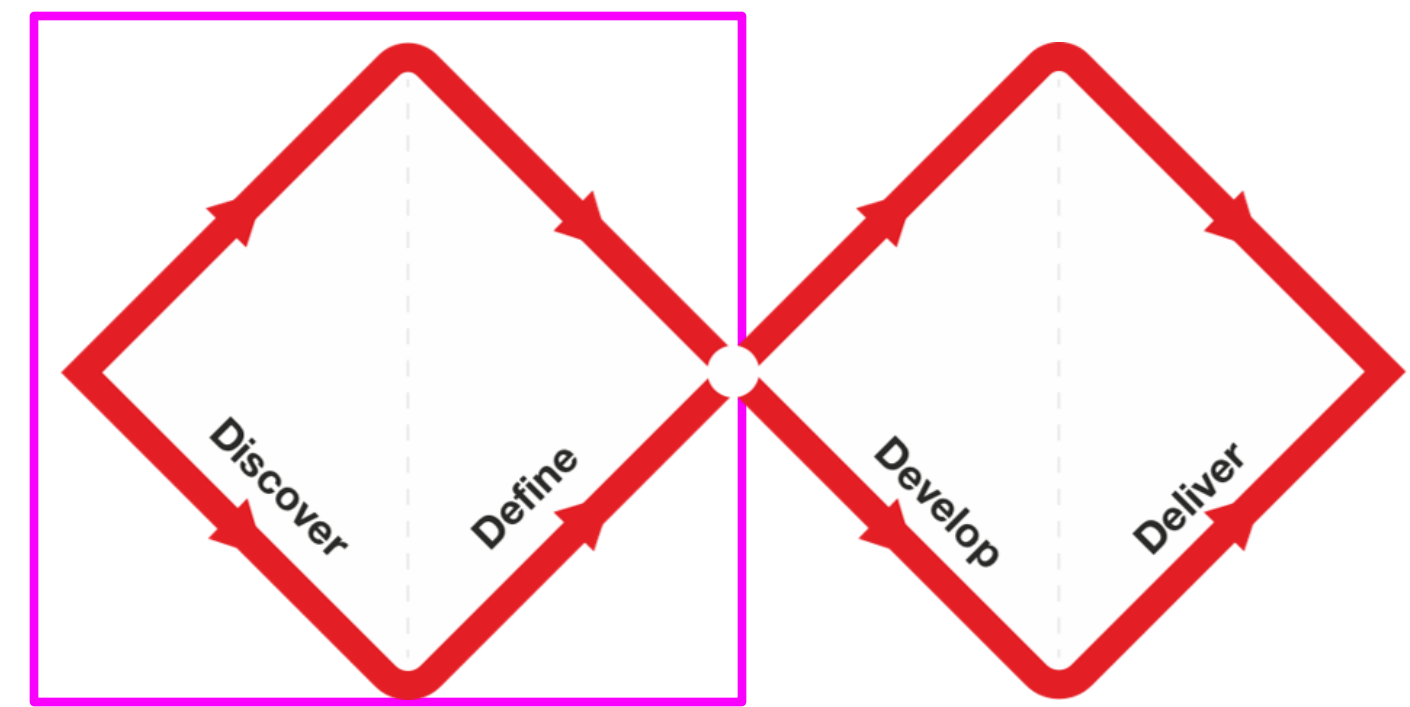
Framed by the initial two phases of the Double Diamond Framework

Phase 1: Discover

- i) Appraisal of existing materials using the suitability assessment of materials (SAM)
- ii) Analysing seven semi-structured interviews with nine hairdressers using reflexive thematic analysis with NVivo 12 software

Phase 2 : Define

- i) The design requirements that have been identified have been prioritised for developing educational materials



Methodology

Phase 1: Discover

Sources:

Internet search

I used a combination of two keyword sets.

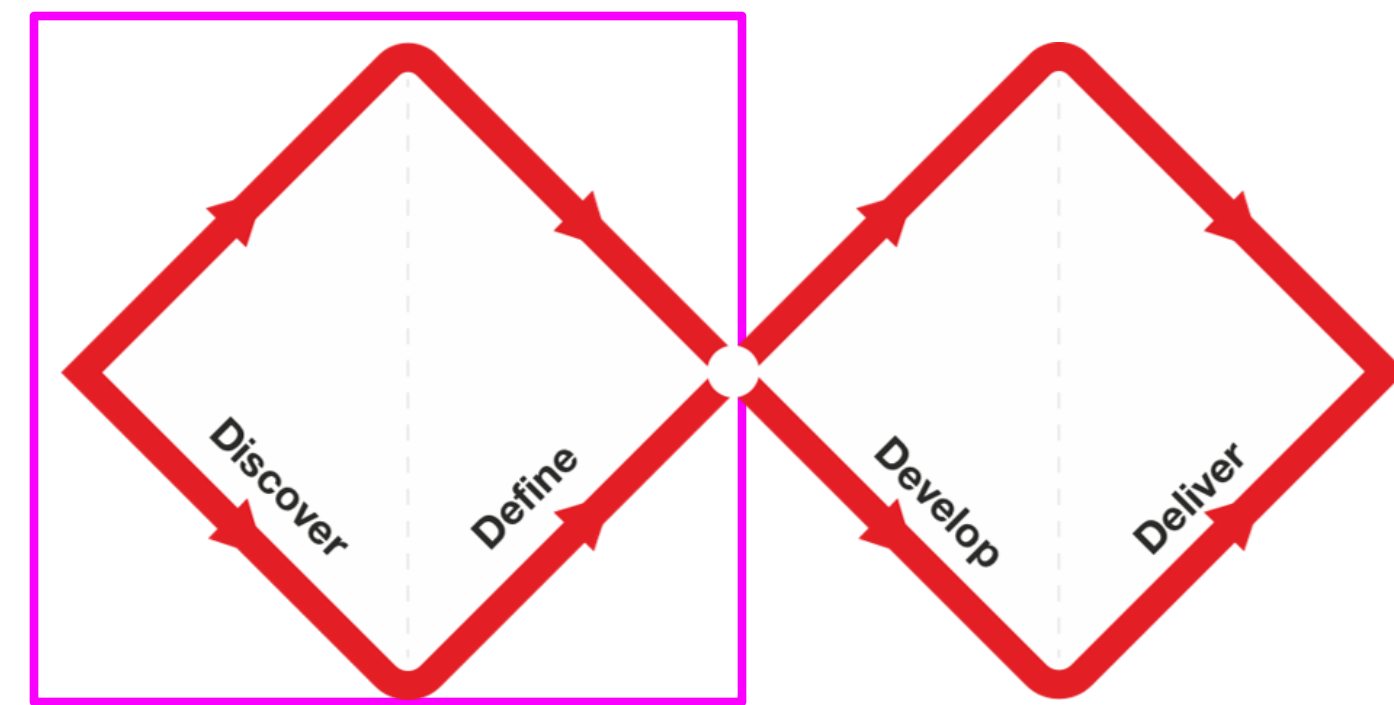
Set 1: 'cardiovascular disease', 'stroke and heart disease', 'hypertension', 'diabetes', 'cholesterol', 'alcohol', 'smoking', 'healthy lifestyle', and 'physical activity'.

Set 2: 'leaflet', 'booklet', 'educational materials', 'culturally and ethnically diverse women'. Specifically to 'ethnically and culturally diverse women'.

The different combinations of keywords produced 23 unique searchers

First 50 results (sufficient to cover most results ^{8 9 10}) in each were scanned for downloadable materials including secondary source or material

Focus on educational materials that could be both physically printed and distributed, as well as signposted on the app.



Phase 2 : Define

Interviews to define the design requirements that have been identified have been prioritised for developing educational materials based on hairdressers preferences



1. Existing Educational Materials

- Out of 1000 web pages scanned, 23 eligible educational materials were evaluated; 86% of those were designated as ‘superior’ using a validated SAM score.
- Although the overall SAM score for all the educational materials was categorised as ‘superior’ (80%)

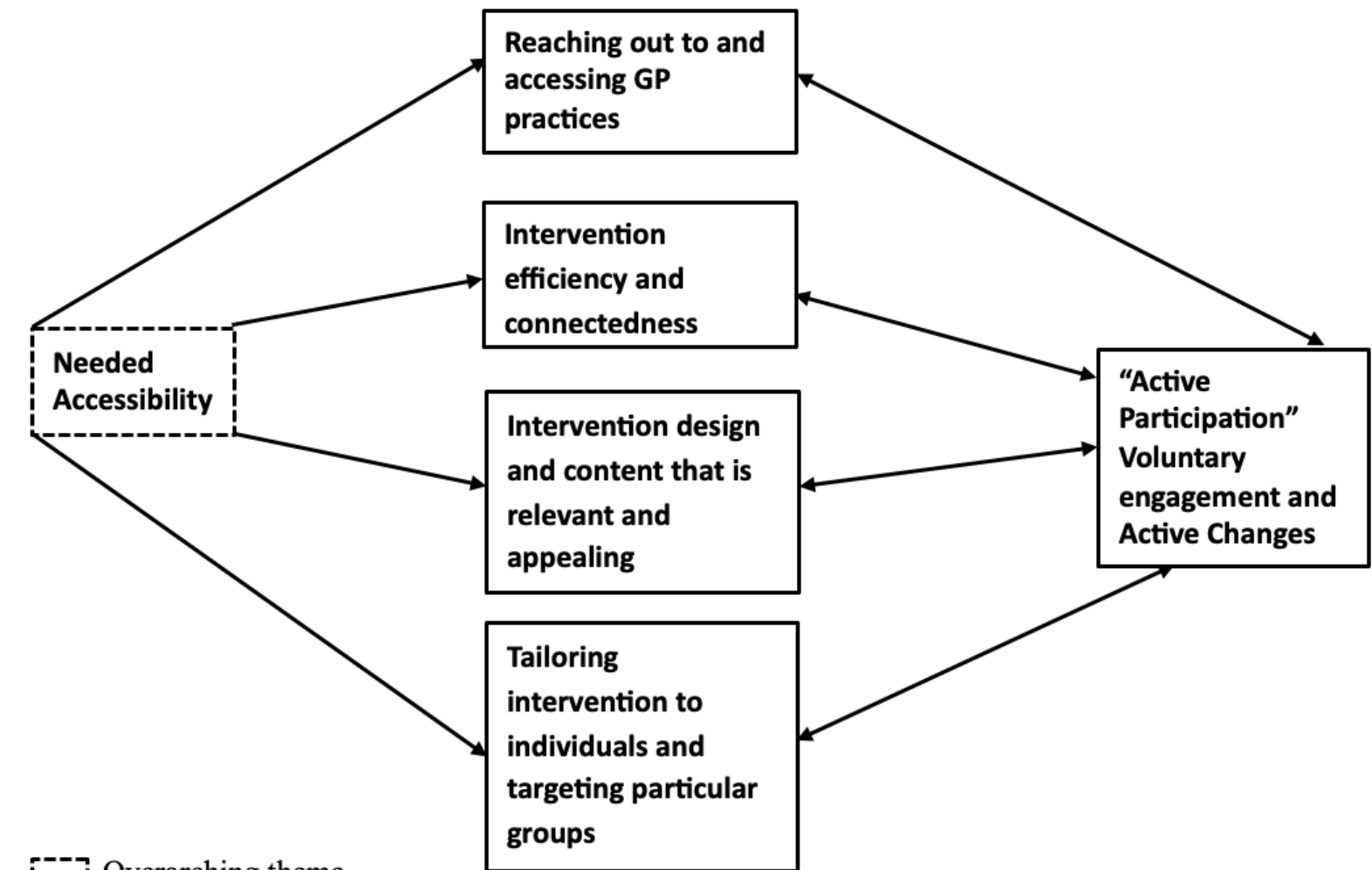


2. RTA Five Core Themes

1. Existing Educational Materials

- Overall “superior” SAM score (80%)
- Three areas were lacking:
 - Appropriate reading levels
 - Stimulation
 - Summary

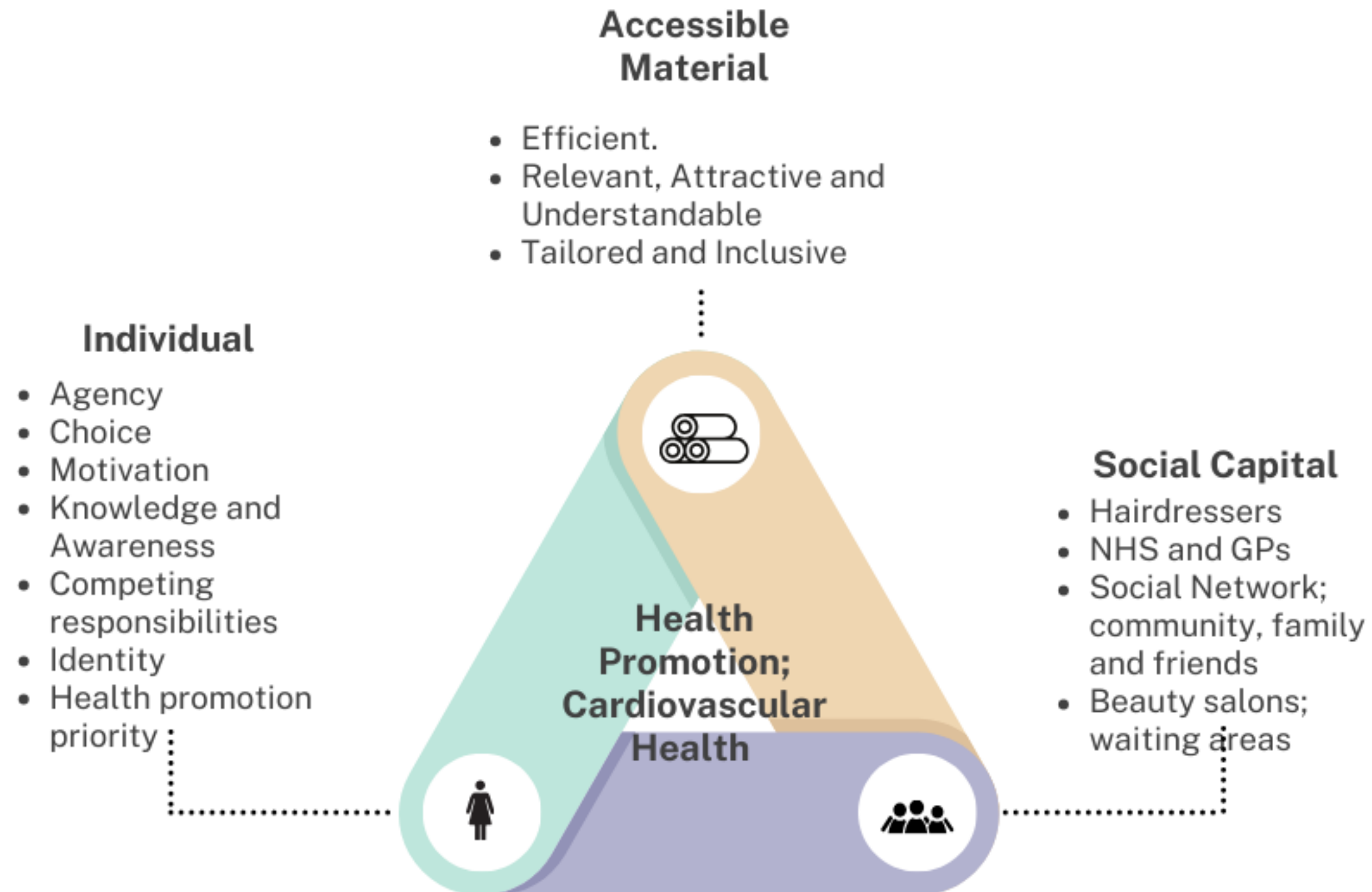
Figure 1. The relationship between the themes



- ⋮ Overarching theme
- ▭ Core theme
- ↔ relationship between themes
- relationship between overarching theme and a the



Phase 1: Discover



Results

Phase 2 : Define

Table 5. Requirements for a Health App or Educational Material Based on the Hairdressers' Preferences

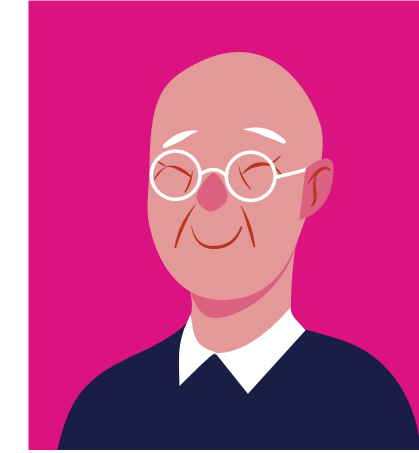
Design	
Most feasible	<ul style="list-style-type: none"> • Attractive: using bright colours and simple messages and sentences. • The use of familiar pictures that illustrate the message. • Use QR code for better access. • Avoid small font.
Less feasible	<ul style="list-style-type: none"> • Prioritise information by having essential information like the behaviour changes and the importance on the first page. • Avoid using formal writing or the absence of pictures.
Context	
Most feasible	<ul style="list-style-type: none"> • Use simple language use and avoid jargon. • Include consequences of both behaviour changes and screening tests. • Explain health check and screening program information such as the process, eligibility and outcomes. • Avoid length information.
Less feasible	<ul style="list-style-type: none"> • Include warning signs. • Include early signs of a disease. • Add risks backed by statistics.
Functions to Consider	
Most feasible	<ul style="list-style-type: none"> • Provide health advice and information on health services.
Less feasible	<ul style="list-style-type: none"> • Health data record services. • Access to other health services; managing appointments.
Usage	
Most feasible	<ul style="list-style-type: none"> • Easy to operate and use.
Less feasible	<ul style="list-style-type: none"> • Easy registration and access; usage of face ID on smartphones. • Feedback and instructions on how to use.
Inclusivity	
Most feasible	<ul style="list-style-type: none"> • Have pictures that are inclusive of ethnicity, age and gender. • Have different plans and suggestions that fit different lifestyles. • Address different behavioural changes and plans, smoking, and physical activity due to different needs.
Less feasible	<ul style="list-style-type: none"> • Include different learning methods: audio, pictures, reading and quizzes. • Have illustrative pictures and design combine different styles, simple and more complex like pictures.
Tailoring and Personalisation	
Most feasible	
Less feasible	<ul style="list-style-type: none"> • Personalised plans by ethnicity, age, gender and health needs and concerns.
Interactive	
Most feasible	<ul style="list-style-type: none"> • Focus on choice and active voice in messaging. • Include small actionable advice to build self-efficacy.
Less feasible	<ul style="list-style-type: none"> • Add elements that involve others, such as sending a link to others and behavioural suggestions to do with others. • Have quizzes, questions and answers that are updated frequently.

Conclusion

- Despite the suitability of some of the educational materials, most lacked appropriate readability, stimulation, and summaries for end users.
- RTA suggested the necessity of accessible material that is efficient, relevant, and tailored with elements of agency and social networking that can address the individual needs of diverse populations.



References:



1. Public Health England. Health matters: combating high blood pressure, 2017 [Available from: <https://www.gov.uk/government/publications/health-matters-combating-high-blood-pressure/health-matters-combating-high-blood-pressure>].
2. Commission on Race and Ethnic Disparities. Ethnic disparities in the major causes of mortality and their risk factors – a rapid review 2021 [Available from: <https://www.gov.uk/government/publications/the-report-of-the-commission-on-race-and-ethnic-disparities-supporting-research/ethnic-disparities-in-the-major-causes-of-mortality-and-their-risk-factors-by-dr-raghib-ali-et-al>].
3. Tedesco LM, Di Giuseppe G, Napolitano F, Angelillo IF. Cardiovascular diseases and women: knowledge, attitudes, and behavior in the general population in Italy. *Biomed Res Int.* 2015;2015:324692.
4. Kaneri P, Molokhia M, Harding S. The use of hairdressing and beauty salons as health-promotion environments for the prevention and management of non-communicable diseases in ethnically diverse women. *The Lancet.* 2021;398:S58.
5. Council D. What is the framework for innovation? Design Council's evolved Double Diamond: Design Council; 2021.
6. Daniel Wolstenholme, Cheryl Grindell & Andrew Dearden (2017) A co- design approach to service improvement resulted in teams exhibiting characteristics that support innovation, *Design for Health*
7. Daly-Smith, Andy & Quarmby, Thomas & Archbold, Victoria & Corrigan, Nicola & Wilson, Dan & Resaland, Geir & Bartholomew, John & Singh, Amika & Tjomsland, Hege & Sherar, Lauren & Chalkley, Anna & Routen, Ash & Shickle, Darren & Bingham, Daniel & Barber, Sally & Sluijs, Esther
8. Bonner, C., Patel, P., Fajardo, M. A., Zhuang, R., & Trevena, L. (2019). Online decision aids for primary cardiovascular disease prevention: systematic search, evaluation of quality and suitability for low health literacy patients. *BMJ Open*, 9(3), e025173.
9. Eysenbach, G., & Köhler, C. (2002). How do consumers search for and appraise health information on the world wide web? Qualitative study using focus groups, usability tests, and in-depth interviews. *BMJ*, 324(7337) 573-577. <https://doi.org/10.1136/bmj.324.7337.573>
10. Peterson, G., Aslani, P., & Williams, K. A. (2003). How do consumers search for and appraise information on medicines on the Internet? A qualitative study using focus groups. *J Med Internet Res*, 5(4), e33. <https://doi.org/10.2196/jmir.5.4.e33>

Thank-you!

NIHR | National Institute
for Health Research

SAPC
Society for Academic Primary Care



Find us at <https://www.belongstudyuk.com/>

