BMJ Open Influencing factors of health promotion behaviour in patients with aortic dissection: a qualitative study using the **COM-B** model

Jia Gao,¹ Qiong Pan,² Sai Lan Li,¹ Shaolin Chen,³ Baolin Luo ¹,¹ Liangwan Chen ¹, ⁴ Yanjuan Lin ¹,²

ABSTRACT

To cite: Gao J, Pan Q, Li SL, et al. Influencing factors of health promotion behaviour in patients with aortic dissection: a qualitative study using the COM-B model. BMJ Open 2025:15:e076181. doi:10.1136/ bmjopen-2023-076181

Prepublication history and additional supplemental material for this paper are available online. To view these files, please visit the journal online (https://doi.org/10.1136/ bmjopen-2023-076181).

Received 30 May 2023 Accepted 03 November 2024

Check for updates

© Author(s) (or their employer(s)) 2025. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ.

¹Department of Cardiac Surgery Nursing, Fujian Medical University Union Hospital, Fuzhou, China ²Department of Nursing, Fujian Medical University Union Hospital, Fuzhou, China ³Department of Cardiology Nursing, Fuijan Medical University Union Hospital, Fuzhou, China ⁴Department of Cardiac Surgery, Fujian Medical University Union Hospital, Fuzhou, China

Correspondence to

Dr Yanjuan Lin; fjxhyjl@163.com and Professor Liangwan Chen; chenliangwan@tom.com

Objectives This study aimed to understand influencing factors of health promotion behaviour in patients with aortic dissection (AD) using the capability, opportunity, motivation, behaviour (COM-B) model of behaviour. Design A descriptive qualitative design was adopted. Data were collected using face-to-face semi-structured interviews and analysed using directed content analysis. Setting Fujian Medical University Union Hospital. Participants A purposive sample of 16 patients with AD. Results The following themes and subthemes were identified. Psychological capability: (1) lack of disease knowledge; physical capability: (1) physical function limitation; (2) fatigue; physical opportunity: (1) limited access to disease knowledge; (2) communication between providers and patients; (3) objective condition restriction; social opportunity: (1) stigma; (2) social support; reflective motivation: (1) self-efficacy; (2) perceived benefits; (3) personal and family responsibilities; automatic motivation: (1) post-traumatic growth; (2) fear of disease progression. Conclusion This study adopted a novel approach to understanding factors affecting health promotion behaviour among patients with AD. Interventions can be implemented using the Behaviour Change Wheel framework and study findings to improve health promotion behaviour in this patient population.

INTRODUCTION

Aortic dissection (AD) is an infrequent yet severe cardiovascular condition caused by a tear in the inner layer of the aorta.¹ According to the Stanford classification system, AD can be categorised into Stanford type A (involving the ascending aorta) and type B (not involving the ascending aorta). The incidence of AD in China is $2.78/100,000.^2$

In recent years, with the advancement of diagnostic and treatment techniques, the survival rate of AD has steadily improved.³ However, AD survivors still face many challenges, such as postoperative complications, impaired physical function, reduced quality of life, and psychological trauma.4-7

STRENGTHS AND LIMITATIONS OF THIS STUDY

- \Rightarrow This study used the capability, opportunity, motivation, behaviour (COM-B) model for analysis of the factors influencing health promotion behaviour in people with aortic dissection.
- \Rightarrow This study employed maximum variation sampling to recruit patients with diverse demographic and disease characteristics, allowing a wider range of perspectives to be included in the analysis.
- \Rightarrow This study relied on patients' self-reported data, which may be influenced by memory bias and social desirability bias.

Protected by copyright, including for uses related to text Health promotion behaviour refers to a series of behavioural activities undertaken i da by individuals to achieve the best health state and realise self-worth. Studies have shown that effective health promotion behaviour Ξ interventions can improve cardiac function in people with cardiovascular disease, enhance their quality of life, and reduce the risk of ≥ disease recurrence.⁸ ⁹ Health promotion behaviours that have been recommended for patients with AD include dietary control, physical activity, cessation of smoking, medication adherence, and adherence to medical recommendations (such as monitoring blood pressure and body weight daily).¹⁰ However, despite the clear importance of health technologies the behaviour following an AD, patients' adherence to these medical recommendations remains suboptimal.^{5 11}

Identifying the determinants of health promotion behaviour in patients with AD, especially modifiable and intervenable factors, is critical to inform the development of evidence-based interventions. However, there are few studies on the influencing factors of health promotion behaviour in patients with AD. Research suggests the use of theoretical frameworks can be most effective when understanding behaviour, with

Open access

the ability, opportunity, motivation, behaviour model (COM-B model) being a recommended approach.¹² The advantage of the COM-B model is that it provides a novel and comprehensive approach to explain the barriers and facilitating factors of behaviour change, and gives a basis for the design of behavioural interventions. Therefore, the COM-B model has been applied to many clinical problems,^{13–15} but has not vet been applied to the health promotion behaviour of patients with AD. The aim of this study was to use the COM-B model to describe influencing factors of health promotion behaviour from the perspective of patient with AD.

METHODS

Patient and public involvement None

Design

A qualitative descriptive study was conducted using semistructured interviews.¹⁶ This study was reported according to the consolidated criteria for reporting qualitative research guidance.¹⁷

Setting

This study took place at Fujian Medical University Union Hospital, which is one of the largest comprehensive tertiary hospitals in Fujian Province, located in southeast China. The hospital has been designated as a National Regional Medical Centre for Cardiovascular Diseases. The Department of Cardiac Surgery performs more than 3000 cardiac surgeries annually, covering patients with a variety of cardiovascular diseases such as heart transplantation, aortic dissection, heart failure, heart valve disease, coronary artery disease, and congenital heart defects.

Sampling and recruitment

Case study sampling with maximum variation was employed to select potential participants from outpatients and wards of the Department of Cardiac Surgery at Fujian Medical University Union Hospital between October 2022 and February 2023. Eligible participants were contacted individually and informed about the study on-site by attending physicians and researchers. Inclusion criteria for this study were as follows: a diagnosis of Stanford type A or type B AD (type A was defined as any non-traumatic dissection involving the ascending aorta, and type B was defined as any non-traumatic dissection involving), age over 18, and a minimum disease duration of 3 months. Patients with severe mental illness or cognitive impairment were excluded. The sample size was determined based on the achievement of theme saturation. A total of 16 patients were interviewed for the study and assigned identification numbers 1-16 to maintain confidentiality. This study received review and approval from the Ethics Committee of Fujian Medical University Union Hospital (2022KY189).

2

Data collection

Individual semi-structured face-to-face interviews were adopted for data collection. The interview guide (online supplemental file 1) was based on literature, group discussions, and a preliminary pilot study with two patients. The interviews were conducted in an independent and private room to address the participants' privacy concerns. Prior to the interview, participants were provided with a clear explanation of the study's objectives. Written informed consent was obtained from voluntary participants, and socio-demographic data were collected. Interviews were conducted in Mandarin Chinese by JG and QP (Master's degree). Both are clinical fellows with qualitative research training. The interviewers had no prior involvement in the patients' care before the study. No one was present except **8** the participants and researchers. The interviews lasted for 30-60 min and were audio-recorded. The research team c took field notes during data collection. After the interviews, the participants had the opportunity to check the transcripts, and unclear answers were clarified in a second interview. There were no repeated interviews for this study.

Data analysis

Data collection and data analysis were conducted simultane-ously. All transcripts were imported into NVivo V.11.0 software and were independently coded by the first and second authors. Any discrepancies were discussed by the research group to reach consensus. The analysis was conducted 6 using the directed content analysis approach.¹⁸ The steps of the analysis included the followings: (1) The transcripts that reflected the influencing factors of health promotion $\underline{\bullet}$ behaviour of patients with AD were used as the minimum $\mathbf{\bar{o}}$ analysis units. (2) The initial data were reviewed and read repeatedly. (3) The COM-B model was used as a framework to categorise the unit of analysis. (4) The significant ideas and concepts in the data were coded and marked, and similar codes were classified into corresponding categories ⊳ to form themes and sub-themes. (5) The results were interpreted and analysed, and the link between the data and the results was formed. The quotations were translated into ing, and English by professional translators who were not part of the research team using the forward-backward method.¹⁹

Rigour

l simi The rigour of this study was achieved in the following ways. First, the COREO criteria were used to guide the reporting of this study. Second, a heterogeneous sample was deliberately chosen to ensure adequate representation of diverse perspectives and experiences. Additionally, field notes were consistently maintained to ensure comprehensive and detailed data collection. Finally, two researchers conducted independent data analysis and consulted with the research team to form the final coding and themes.

RESULTS

Participant characteristics

Table 1 shows the characteristics of participants. The sample included 16 participants (25 participants were

Бu

Table 1 Participant characteristics (n=16)	
Variables	
Age, years (range)	47.06 (23–75)
Time of AD diagnosis, months (range)	23.66 (4–84)
Gender	
Male	10 (62.5)
Female	6 (27.5)
Education levels	
Primary school or below	3 (18.75)
Middle school	7 (43.75)
High school	3 (18.75)
College or above	3 (18.75)
Classification of AD	
Stanford type A	9 (56.25)
Stanford type B	7 (43.75)

approached but nine did not fulfil inclusion criteria or refused to participate): 10 men (67.50%) and six women (32.50%). Ages ranged from 23 to 75 years (mean 47.06, SD 14.53). Time of AD diagnosis ranged from 4 months to 7 years.

Themes

The themes and subthemes based on the COM-B model are presented in table 2.

Capability

Capability refers to an individual's physical and psychological capability to engage in relevant activities. Psychological capability refers to the knowledge and psychological

Table 2 Themes and subthemes		
Themes	Subthemes	
Capability Psychological	Lack of disease knowledge	
Physical	Fatigue	
	Physical function limitation	
Physical	Limited access to disease knowledge	
	Communication between providers and patients	
	Objective condition restriction	
Social	Stigma	
	Social support	
Reflective	Self-efficacy	
	Perceived benefits	
	Personal and family responsibilities	
Automatic	Post-traumatic growth	
	Fear of disease progeression	
	emes and subth Themes Psychological Physical Physical Social Reflective Automatic	

skills involved in necessary thinking processes. Physical capability refers to physical skills, strength or endurance.

Psychological capability

Lack of disease knowledge

Many patients exhibited a lack of essential knowledge and understanding regarding the diverse causes and associated risks of AD. Some patients expressed that they had been completely unaware of AD prior to this experience.

I had never heard of this disease. I had consistently regarded myself as being in good health. Could it potentially be a misdiagnosis by the doctor? (No 3, female, mid 30s)

Protected by copyright, including Some patients were aware of the importance of dietary modification and physical activity in promoting their general well-being. However, their knowledge in these areas was inadequate. Due to a lack of nutritional knowledge, some patients adopted harmful dietary patterns.

I attributed my illness to obesity. Consequently, I rigorously followed a vegetarian diet and markedly decreased my meat consumption. (No 9, male, late 50s)

for uses related to text and Some patients reported that they did not know about the kind of exercises required for this condition and expressed their concern about potential adverse effects following physical activity.

I used to run regularly, but I recently stopped due to concerns about the potential risk of over-exercising triggering a relapse. (No 14, female, early 20s)

Physical capability

Fatique

data mining, Some patients indicated that the physical symptoms Al training, associated with the disease, such as fatigue, considerably hinder their ability to participate in daily activities, thus detrimentally affecting their quality of life and mental well-being.

Previously, I was capable of working continuously throughout the day, yet currently, I easily feel fatigued after only a short period of work. (No 8, female, late 40s)

Physical function limitation

and similar technologies. Some patients reported that they faced many challenges when starting the health promotion programme due to decreased physical function and comorbidities.

I am eager to participate in the suggested exercises. However, my advanced age and visual impairments pose considerable challenges. Furthermore, following a stroke I suffered 2 years ago, my mobility has been negatively impacted, making it difficult to maintain a consistent daily exercise regimen. (No 7, male, mid 70s)

Opportunity

Opportunity refers to external factors that enable or prompt the behaviour, including physical opportunity (time, resources, etc) and social opportunity (perceptions, interpersonal influence, etc).

Physical opportunity

Limited access to disease

Because of insufficient exposure to AD, medical staff emerged as the primary source of disease knowledge for patients. Many patients, particularly the elderly and those with lower levels of education, faced challenges in obtaining information from diverse sources.

My formal education is constrained, and I am neither literate nor able to access the internet. Therefore, I primarily acquire knowledge through interactions with healthcare professionals such as doctors and nurses. (No 4, female, early 50s)

Communication between providers and patients

It was observed that there was inadequate communication between medical staff and patients. Most patients complained that they could not obtain sufficient information about their diseases and treatments from medical staff because they were occupied with their work most of the time.

The doctor only told me that I need to take these medications for life. I wanted to know more details from them, but they were always very busy. (No 9, male, late 50s)

Objective condition restriction

Due to financial and geographical constraints, patients were restricted to choosing nearby hospitals, and they were unable to access higher-quality medical services.

I had originally intended to go to the hospital. However, I chose to remain silent as I understood our situation at home and acknowledged that we could not afford the necessary treatment. (No 16, male, early 50s)

Social opportunity

Stigma

Some patients were afraid to disclose their disease because of social stigma. People with AD are often considered weak and unable to live normally.

I am afraid that my relatives and friends might tease me about my disease, so I prefer to be alone. I feel inferior and ashamed. (No 3, female, mid 30s)

Social support

Most patients identified the importance of social influence through support from family and friends as important facilitators of health behaviour participation.

My mother specially learnt nutrition knowledge, and combined with my taste preferences and physical conditions, carefully selected various kinds of healthy food for me. (No 11, male, late 20s)

Sincere support from peers can offer significant emotional and psychological assistance, thereby enabling patients to approach their condition with a more optimistic perspective.

I joined the patients association, where I met numerous members who faced similar challenges. We provided mutual support and encouragement. This collective strength significantly bolstered my confidence in recovery. (No 2, male, early 30s)

Motivation

Protected by copyright, including for uses related Motivation refers to the brain processes that energise and direct behaviour, which is divided into reflective motivation (planning and evaluation) and automatic motivation (emotions, impulses, etc).

Reflective motivation

Self-efficacy

Self-efficacy was most commonly mentioned as a barrier or facilitator of health-related behaviour change. A high level of self-efficacy could effectively stimulate patients' subjective initiative, motivating them to actively adopt and maintain health behaviour rather than merely complying passively.

The process of smoking cessation was inherently challenging. Whenever I experienced a craving for smoking, I redirected my attention by listening to music. (No 12, male, late 30s)

Conversely, patients with low self-efficacy tended to take no action or give up easily when facing challenges.

Controlling excessive eating has always been a formidable challenge for me. It might be possible to persist for a while, but not in the long term. (No 13, male, early 40s)

Perceived benefits

to text and data mining, AI training, and similar technologies. Some patients reported that they experienced observable effects such as significant weight loss, improved physical condition or a reduction in medication prescriptions, which were beneficial and facilitated health behaviour change.

I practiced Tai Chi every morning, which helped me achieve physical and mental relaxation, and enhanced my body coordination and mental clarity. (No 5, male, early 60s)

Personal and family responsibilities

Some patients exhibited a strong intrinsic motivation to engage in behaviour change, which was driven by personal and family responsibilities.

As the primary financial provider for my family, I could not afford to endure similar health crises again. I had to take effective measures to protect my health. (No 6, male, late 30s)

Automatic motivation

Post-traumatic growth

Although AD is a stressful, challenging and traumatic event, this difficult experience may promote personal growth for AD survivors, known as post-traumatic growth. Some patients reported that the diagnosis and surgery had provided them with motivation to engage in new possibilities for health behaviour to avoid future complications and appreciate the value of life.

My illness has served as a catalyst for personal growth and has made me realise the importance of appreciating life, because you never know what's going to happen. (No 2, male, early 30s)

Fear of disease progression

Some patients expressed that their fear of disease progression motivated them to take effective secondary and tertiary prevention strategies in order to control or eliminate risk factors associated with complications.

AD was a significant wake-up call. I'm afraid of a relapse, so I tried to eat healthier to prevent it. (No 12, male, late 30s)

DISCUSSION

To our knowledge, this is the first qualitative study to apply the COM-B model to explore the influencing factors of health promotion behaviour in patients with AD. These findings will contribute to the development of an appropriate and feasible behaviour change intervention to promote behaviour change in patients with AD.

Capability

The psychological capability of patients was primarily hindered by inadequate knowledge and misconceptions regarding AD. Consistent with a previous study,⁵ patients with AD in this study often had an insufficient understanding of the disease, its progression and its management, coupled with a desire for further knowledge. Knowledge and cognition play a crucial part in seeking treatment and changing behaviour. These abilities can be effectively enhanced by providing knowledge education and coping strategy training based on the Behaviour Change Wheel.¹² This study found that barriers related to physical capability, such as treatment side effects, fatigue and comorbidities, were the main limitations to engaging in health promotion behaviour, similar to previous findings in other populations.^{20 21} Fatigue is a common symptom experienced among patients with AD and has a severe impact on quality of life.²² Patients reported experiencing fatigue that interfered with their ability to

participate in daily life activities, resulting in an inability to live and work normally. Fatigue was also associated with a range of psychological disorders, such as anxiety and cognitive impairment.^{23 24} Given the impact of fatigue, measuring and attending to fatigue may be important in promoting early intervention. Interventions should focus on cognitive behavioural therapy, exercise-related interventions or energy management education to alleviate fatigue.^{25 26} Comorbidities were a frequent barrier for patients participating in health promotion.²⁷ It is crucial to tailor personalised health promotion programmes for patients with AD and specific comorbidities.

Opportunity

Protected by copyright, In this study, we identified that specific physical opportunities associated with healthcare systems and medical staff may contribute to delays in diagnoses and irregular follow-ups. To improve the healthcare system, continued financial and healthcare support is needed, as well as increased establishment of mobile health service platforms, telemedicine, and other accessible forms of healthcare. Communication between providers and patients was identified as one of the most important uses rela barriers to behaviour change in terms of physical opportunity. Consistent with a previous study, this study found that staff failed to meet patients' needs for communication and adequate information.²⁸ This may be due to the staff's demanding workloads or a lack of time and consultation skills. In China, the shortage of human resources text and the heavy workload have seriously hindered the effective communication between medical staff and patients. Therefore, training in communication skills should be provided to medical staff, enabling them to implement $\overline{\mathbf{a}}$ strategies to overcome communication barriers with Ξ patients. An alternative solution to this problem may be to use mobile phone text messages to enhance treatment compliance,²⁹ or to train allied health professionals or nurses in counselling services.³⁰ Although stigma has been identified as a barrier to seeking care and adhering to treatment,³¹ to the best of our knowledge, this study is the first to document the adverse impact of stigma on health promotion behaviour change in patients with AD. Some patients reported that it is difficult to talk about their concerns with friends due to fears of being perceived as disabled, viewed differently and treated unfairly. There-fore, addressing the psychological burden, improving disclosure skills, and raising public awareness of AD are essential. Studies have adopted the health stigma and g discrimination framework in diverse contexts to address **g** barriers associated with stigma in behaviour change.³² Social support was the primary barrier or facilitator in health behaviour change.³³ Consistent with a prior study, this study found that especially partners and family play an indispensable role in disease management and support.³⁴ Furthermore, peer support was important.³⁵ Therefore, involvement of family and peers should be considered an important intervention for improving health behaviour change.

Motivation

Self-efficacy was a significant determinant influencing behaviour change and maintenance within AD, which is in line with the findings of previous studies.^{36 37} Patients with low self-efficacy reported a lack of confidence in their ability to adhere to dietary recommendations and engage in physical activity. Therefore, interventions should focus on improving self-efficacy to promote long-term behaviour change. This can be achieved through behaviour change techniques, such as setting specific goals and self-monitoring.³⁸ Perceived benefits were identified as facilitators related to reflective motivation. This is consistent with previous studies on chronic disease and cancer populations.^{39 40} Interestingly, fear of disease progression was a motivating factor for health behaviour change in patients with AD. Some patients indicated that fear of AD recurrence is often present and leads to motivation to make changes to promote their health in order to reduce the risk of recurrence. Previous studies have also emphasised that the fear of disease progression is one of the common psychological reactions and facilitators in patients with stroke.^{36 41} This study found that changes in patient motivation were a process of calculated risk, similar to the findings of a sexual health behaviour study, where risk-benefit analyses influence motivation.¹⁴ Therefore, patients' awareness of personal risks and the impact of potential disease should be raised to motivate them to adhere to changes in health behaviour at an early stage. Furthermore, post-traumatic growth was identified as a facilitator. After a traumatic illness experience, AD survivors showed closer intimate relationships, positive changes in spirituality, and an increased appreciation of life. Such findings are consistent with previous studies conducted in cancer populations.^{42 43} Previous studies have also shown that posttraumatic growth is strongly associated with health-related behaviour changes.44 45 So far, interventions have focused on other patient and survivor groups, and more research is needed to learn more about particularities in survivors of AD. A recent meta-analysis focusing on patients with cancer showed that psychosocial interventions including supportive group psychotherapy and multiple health behaviour change interventions increased post-traumatic growth.⁴⁶

Limitations

This study has some limitations. First, the study was qualitative and failed to explore the extent to which ability, opportunity and motivation factors influenced patients' health promotion behaviour. Second, it relied on patients' self-reported data, which may be influenced by memory bias and social desirability bias. In addition, the sample was small and patients were recruited from the hospital, while patients from other settings, such as communities, were not recruited. Therefore, generalisability of findings to other settings may be limited. In the future, quantitative and longitudinal studies are needed with large samples to further explore the research results.

Conclusions

This study adopted a qualitative approach and conducted interviews with 16 patients with AD to analyse the

influencing factors of their health promotion behaviour based on the COM-B model. This study demonstrated that psychological capability, physical and social opportunity, and reflective and automatic motivation are crucial factors for explaining health promotion behaviour in patients with AD. These findings can be applied to design interventions for practice and further research to promote better implementation of health behaviour.

Acknowledgements The authors are very thankful to the participants for their contributions to this study.

Contributors YL acts as the guarantor. LC and YL designed the study. JG and QP performed data collection and analysis and wrote the original draft of the manuscript. SLL, SC and BL were involved in the data analysis. LC and YL revised the draft critically. All authors commented on the manuscript and approved the final manuscript.

Funding This study was supported by grants from Toint Funds of Science and Technology of Fujian Province (2021Y0023) and the The Fifth Batch of Hospital Key Discipline Construction Projects-Clinical Nursing (2022YYZDXK01).

Competing interests None declared.

Patient and public involvement Patients and/or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this research.

Patient consent for publication Not applicable.

Ethics approval This study involves human participants and was approved by The Ethics Committee of the Fujian Medical University Union Hospital (2022KY189). Participants gave informed consent to participate in the study before taking part.

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement Data are available upon reasonable request.

Supplemental material This content has been supplied by the author(s). It has not been vetted by BMJ Publishing Group Limited (BMJ) and may not have been peer-reviewed. Any opinions or recommendations discussed are solely those of the author(s) and are not endorsed by BMJ. BMJ disclaims all liability and responsibility arising from any reliance placed on the content. Where the content includes any translated material, BMJ does not warrant the accuracy and reliability of the translations (including but not limited to local regulations, clinical guidelines, terminology, drug names and drug dosages), and is not responsible for any error and/or omissions arising from translation and adaptation or otherwise.

Open access This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited, appropriate credit is given, any changes made indicated, and the use is non-commercial. See: http://creativecommons.org/licenses/by-nc/4.0/.

ORCID iDs

Baolin Luo http://orcid.org/0000-0001-7486-6278 Liangwan Chen http://orcid.org/0000-0002-9359-4754 Yanjuan Lin http://orcid.org/0000-0002-6890-7552

REFERENCES

- 1 Isselbacher EM, Preventza O, Hamilton Black J 3rd, et al. 2022 ACC/ AHA guideline for the diagnosis and management of aortic disease: A report of the American Heart Association/American College of Cardiology Joint Committee on Clinical Practice Guidelines. J Thorac Cardiovasc Surg 2023;166:e182–331.
- 2 Tang X, Lu K, Liu X, et al. Incidence and Survival of Aortic Dissection in Urban China: Results from the National Insurance Claims for Epidemiological Research (NICER) Study. Lancet Reg Health West Pac 2021;17:100280.
- 3 Pape LA, Awais M, Woznicki EM, et al. Presentation, Diagnosis, and Outcomes of Acute Aortic Dissection: 17-Year Trends From the International Registry of Acute Aortic Dissection. J Am Coll Cardiol 2015;66:350–8.
- 4 Chemtob RA, Fuglsang S, Geirsson A, et al. Stroke in acute type A aortic dissection: the Nordic Consortium for Acute Type A Aortic Dissection (NORCAAD). Eur J Cardiothorac Surg 2020;58:1027–34.

Open access

- 5 Chaddha A, Kline-Rogers E, Braverman AC, et al. Survivors of Aortic Dissection: Activity, Mental Health, and Sexual Function. *Clin Cardiol* 2015;38:652–9.
- 6 St. Pierre EC, Orelaru F, Naeem A, et al. Quality of Life Worsens After Surgical Repair of Acute Type A Aortic Dissection. Semin Thorac Cardiovasc Surg 2022;34:399–407.
- 7 Pasadyn SR, Roselli EE, Artis AS, *et al.* From Tear to Fear: Posttraumatic Stress Disorder in Patients With Acute Type A Aortic Dissection. *JAHA* 2020;9:e015060.
- 8 Zhu Y, Zhao Y, Wu Y. Effectiveness of mobile health applications on clinical outcomes and health behaviors in patients with coronary heart disease: A systematic review and meta-analysis. *Int J Nurs Sci* 2024;11:258–75.
- 9 Yu DS-F, Li PW-C, Li SX, et al. Effectiveness and Cost-effectiveness of an Empowerment-Based Self-care Education Program on Health Outcomes Among Patients With Heart Failure: A Randomized Clinical Trial. JAMA Network Open 2022;5:e225982.
- 10 Arnett DK, Blumenthal RS, Albert MA, *et al.* 2019 ACC/AHA Guideline on the Primary Prevention of Cardiovascular Disease: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. *Circulation* 2019;140:e596–646.
- 11 Tu J, Wang F, Yin F, et al. The relationship between quality of life and health promotion behavior in patients with type B aortic dissection: a cross-sectional study. J Cardiothorac Surg 2023;18:23.
- 12 Michie S, van Stralen MM, West R. The behaviour change wheel: a new method for characterising and designing behaviour change interventions. *Implement Sci* 2011;6:42.
- 13 Ee C, MacMillan F, Boyages J, et al. Barriers and enablers of weight management after breast cancer: a thematic analysis of free text survey responses using the COM-B model. *BMC Public Health* 2022;22:1587.
- 14 Madhani A, Finlay KA. Using the COM-B model to characterize the barriers and facilitators of pre-exposure prophylaxis (PrEP) uptake in men who have sex with men. *Br J Health Psychol* 2022;27:1330–53.
- 15 O'Donovan B, Mooney T, Rimmer B, et al. Advancing understanding of influences on cervical screening (non)-participation among younger and older women: A qualitative study using the theoretical domains framework and the COM-B model. *Health Expect* 2021;24:2023–35.
- 16 Sandelowski M. Whatever happened to qualitative description? *Res Nurs Health* 2000;23:334–40.
- 17 Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *Int J Qual Health Care* 2007;19:349–57.
- 18 Hsieh HF, Shannon SE. Three approaches to qualitative content analysis. Qual Health Res 2005;15:1277–88.
- 19 Al-Amer R, Ramjan L, Glew P, et al. Translation of interviews from a source language to a target language: examining issues in crosscultural health care research. J Clin Nurs 2015;24:1151–62.
- 20 Doughty HC, Hill RA, Riley A, *et al.* Barriers to and facilitators of physical activity in adults living with and beyond cancer, with special emphasis on head and neck cancer: a systematic review of qualitative and mixed methods studies. *Support Care Cancer* 2023;31:471.
- 21 Patel A, Schofield GM, Keogh JW. Barriers to physical activity in prostate cancer survivors. *N Z Med J* 2021;134:60–7.
- 22 Breel JS, de Klerk ES, Strypet M, et al. What Really Matters to Survivors of Acute Type A Aortic Dissection-A Survey of Patient-Reported Outcomes in the Dutch National Aortic Dissection Advocacy Group. J Clin Med 2023;12:6584.
- 23 Dinh PC Jr, Monahan PO, Fung C, et al. Cognitive function in longterm testicular cancer survivors: impact of modifiable factors. JNCI Cancer Spectr 2024;8:pkae068.
- 24 Cheung YT, Lee HH-L, Chan A. Exploring clinical determinants and anxiety symptom domains among Asian breast cancer patients. *Support Care Cancer* 2013;21:2185–94.
- 25 Mustian KM, Alfano CM, Heckler C, et al. Comparison of Pharmaceutical, Psychological, and Exercise Treatments for Cancer-Related Fatigue: A Meta-analysis. JAMA Oncol 2017;3:961–8.

- 26 Wendebourg MJ, Poettgen J, Finlayson M, et al. Education for fatigue management in people with multiple sclerosis: Systematic review and meta-analysis. *Eur J Neurol* 2024;31:e16452.
- 27 Sealy MJ, Stuiver MM, Midtgaard J, et al. Perception and Performance of Physical Activity Behavior after Head and Neck Cancer Treatment: Exploration and Integration of Qualitative and Quantitative Findings. Int J Environ Res Public Health 2021;19:287.
- 28 Cvetanovska N, Jessup RL, Wong Shee A, *et al.* Patients' perspectives of factors influencing active participation in healthcare interactions: A qualitative study. *Pat Educ Couns* 2023;114:S0738-3991(23)00188-X.
- 29 Belete AM, Gemeda BN, Akalu TY, *et al.* What is the effect of mobile phone text message reminders on medication adherence among adult type 2 diabetes mellitus patients: a systematic review and meta-analysis of randomized controlled trials. *BMC Endocr Disord* 2023;23:18.
- 30 Kappes M, Espinoza P, Jara V, et al. Nurse-led telehealth intervention effectiveness on reducing hypertension: a systematic review. BMC Nurs 2023;22:19.
- 31 Scott N, Crane M, Lafontaine M, et al. Stigma as a barrier to diagnosis of lung cancer: patient and general practitioner perspectives. *Prim Health Care Res Dev* 2015;16:618–22.
- 32 Stangl AL, Earnshaw VA, Logie CH, et al. The Health Stigma and Discrimination Framework: a global, crosscutting framework to inform research, intervention development, and policy on healthrelated stigmas. BMC Med 2019;17:31.
- 33 Tincopa MA, Wong J, Fetters M, et al. Patient disease knowledge, attitudes and behaviours related to non-alcoholic fatty liver disease: a qualitative study. *BMJ Open Gastroenterol* 2021;8:e000634.
- 34 Cardol CK, Boslooper-Meulenbelt K, van Middendorp H, et al. Psychosocial barriers and facilitators for adherence to a healthy lifestyle among patients with chronic kidney disease: a focus group study. BMC Nephrol 2022;23:205.
- 35 Wan X, Chau JPC, Mou H, et al. Effects of peer support interventions on physical and psychosocial outcomes among stroke survivors: A systematic review and meta-analysis. Int J Nurs Stud 2021;121:S0020-7489(21)00148-6.
- 36 Brouwer-Goossensen D, den Hertog HM, Mastenbroek-de Jong MA, et al. Patient perspectives on health-related behavior change after transient ischemic attack or ischemic stroke. Brain Behav 2021;11:e01993.
- 37 Holloway A, Watson HE. Role of self-efficacy and behaviour change. Int J Nurs Pract 2002;8:106–15.
- 38 Silveira SL, Riemann-Lorenz K, Heesen C, et al. Current and Long-Term Physical Activity Among Adults with Multiple Sclerosis in the United States: COM-B Variables as Explanatory Factors. Int J Behav Med 2021;28:561–74.
- 39 Rogers SN, Lowe D, Midgley AW. Patients' views of physical activity whilst living with and beyond head and neck cancer. Int J Oral Maxillofac Surg 2022;51:323–31.
- 40 McCarthy M, Yan J, Jared MC, *et al.* Cardiovascular health in emerging adults with type 1 diabetes. *Eur J Cardiovasc Nurs* 2022;21:213–9.
- 41 Townend E, Tinson D, Kwan J, et al. Fear of recurrence and beliefs about preventing recurrence in persons who have suffered a stroke. *Psychosom Res* 2006;61:747–55.
- 42 Matsui T, Taku K. Relationship between posttraumatic growth and help-seeking behavior in use of psychosocial support services among patients with cancer. *J Cancer Surviv* 2024;18:1771–81.
- 43 Wang Z, Chen X, Zhou J, et al. Posttraumatic growth in colorectal cancer survivors: A systematic review. *Clin Psychol Psychother* 2023;30:740–53.
- 44 Hefferon K, Grealy M, Mutrie N. Post-traumatic growth and life threatening physical illness: a systematic review of the qualitative literature. *Br J Health Psychol* 2009;14:343–78.
- 45 Morris BA, Shakespeare-Finch J, Scott JL. Posttraumatic growth after cancer: the importance of health-related benefits and newfound compassion for others. *Support Care Cancer* 2012;20:749–56.
- 46 Vrontaras N, Koulierakis G, Ntourou I, et al. Psychosocial interventions on the posttraumatic growth of adults with cancer: A systematic review and meta-analysis of clinical trials. *Psychooncology* 2023;32:1798–826.