EVALUATION

Acceptability of Health Professionals' Address of Sexuality and Erectile Dysfunction - A Qualitative Interview Study with Men in Cardiac Rehabilitation

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ABSTRACT

Introduction: In the developing phase of the complex health intervention: Physical Activity to reduce Vascular Erectile Dysfunction (PAVED), it is crucial to explore whether men can accept the communicative component regarding information that regular aerobe Physical Activity can reduce Erectile Dysfunction (i-PAVED). This information is provided by health professionals (HPs) in cardiac rehabilitation, where sexuality issues such as erectile dysfunction (ED) are otherwise rarely addressed.

Aim: To explore how acceptance of cardiac HPs' address of sexuality, ED, and i-PAVED can be identified in men's narratives.

Methods: In this descriptive qualitative study, we conducted semi-structured individual interviews with 20 men (range 48-78 years of age) attending municipal cardiac secondary prevention and rehabilitation programmes on their acceptance of HPs' address of sexuality, ED, and i-PAVED. The Theoretical Framework of Acceptability components (affective attitude, burden, ethicality, intervention coherence, perceived effectiveness, opportunity costs and self-efficacy) and three temporal perspectives (retrospective, concurrent and prospective) were used in the concept-driven first step of a content analysis, which was followed by a thematically data-driven second step.

Main Outcome Measures: Men anticipated and experiential acceptance was identified in six out of seven components of Theoretical Framework of Acceptability.

Results: Men acceptance was identified as "expression of interest," "addressing sexuality," "attitudes and values," "understandable and meaningful," "insights" and "motivation," whereas no narratives were identified in relation to the component of opportunity costs.

Conclusion: As an aspect of the development of the complex cardiovascular health care intervention PAVED, this qualitative study showed that men attending cardiac secondary prevention and rehabilitation seemed to prospectively accept the communicative component of PAVED being HPs' address of sexuality, ED, and i-PAVED, if the HPs are professional, educated and competent in the field of sexual health. **Gerbild H, Areskoug-Josefsson K, Larsen CM, et al. Acceptability of Health Professionals' Address of Sexuality and Erectile Dysfunction - A Qualitative Interview Study with Men in Cardiac Rehabilitation. Sex Med 2021;9:100369.**

KEY WORDS: Acceptability; Cardiovascular diseases; Communication; Erectile dysfunction; Interview; Physical activity

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INTRODUCTION

Acceptability has become a key consideration in the development phase of complex interventions in health care.[1,2] Complex interventions are defined as interventions with several interacting components[1,2] and has proven to be effective in developing person-centered care.[3] Furthermore, careful development of complex interventions improve their adoption in health care.[4] Acceptability is a multi-faceted construct that reflects to which extent people receiving a health care intervention consider the intervention to be appropriate.[1] This study is part of a project developing the complex intervention: Regular aerobe Physical Activity to reduce Vascular Erectile Dysfunction (PAVED),[5-7] which implies that health professionals (HPs) address sensitive issues such as sexuality and erectile dysfunction (ED).[5,7,8] The intervention PAVED consists of two main interacting components (Figure 1).

One component is HPs' communication consisting of supervision and guidance for regular aerobe physical activity, and HP's information about the fact that regular aerobe Physical Activity can reduce Vascular Erectile Dysfunction (i-PAVED).[5,7] The other is men's action being performance of aerobe physical activity to enable the desired physiological effect: reduced vascular ED.[5-7] Regular aerobe physical activity is currently a core intervention in cardiovascular secondary prevention and rehabilitation.[9] The focus of this pre-intervention study is the communicative component, i-PAVED, and not on adherence to the core intervention of regular physical activity. The communicative component i-PAVED is less practiced and less understood because ED often remains overlooked, under-recognised, under-screened, under-diagnosed, under-treated and unaddressed by HPs.[7,10-12] Pre-intervention studies are rarely performed, and most interventions are solution-driven rather than need driven.[1] However, a pre-intervention analysis of I-PAVED from the perspectives of potential receivers can improve the understanding, development and design of the challenging component, i-PAVED, and thereby increase effectiveness of the intervention.[13]

Common barriers for HPs' address of sexuality and sexual issues such as ED are due to lack of HP education, competences and professionalism in the field of sexuality, or HPs' perception that addressing sexuality is embarrassing for patients, being too intimate, private and potentially offensive to discuss.[14-18] Furthermore, HPs' reason for not inquiring about sexual function and ED can be attributed to their impression of cardiac patients' lack of readiness and reluctance to bring up the subject.[14,18,19]. A biopsychosocial approach is significant in providing cardiac rehabilitation and addressing sexuality.[20,21]

ED is defined as the inability to attain or maintain a penile erection of sufficient quality to perform satisfactory sexual activity,[22,23] and is currently one of the most common sexual dysfunctions for men worldwide.[5,6] Studies show that ED negatively affects men's self-esteem, sex life and quality of life.[5-7,24] ED is frequently symptomatic of underlying endothelia dysfunction and arteriosclerosis,[5,7,25] and among health-related lifestyle factors, a physically inactivity lifestyle is the most important risk factor for vascular ED.[26] Physical inactivity, obesity, hypertension, metabolic syndrome and cardiovascular diseases are recognised as independent risk factors for vascular ED.[5,7] For patients with cardiovascular diseases, self-care includes self-care maintenance such as regular exercise.[27] Physical activity is suggested to be the first-line prevention and treatment option of vascular ED.[7,28] Advising about lifestyle modification is a rational first step, because next to prevention of cardiovascular events, lifestyle changes may reduce vascular ED.[28,29] Men in cardiac secondary prevention and rehabilitation are at increased risk of vascular ED.[5,25,29] ED is reported in up to 81% of these men, compared with 50% of the older population in general.[11] Good sexual functioning and performance is important to most men with cardiovascular diseases.[30] Therefore, international HPs are recommended to address sexuality and ED in cardiovascular care and rehabilitation,[31-33] but this rarely happens in daily cardiac practice.[5,34] Sexuality and sexual problems are reported to be taboo subjects[34-36] and underreported by men.[37] Men do not seek treatment or tell HPs about ED when they are not asked or

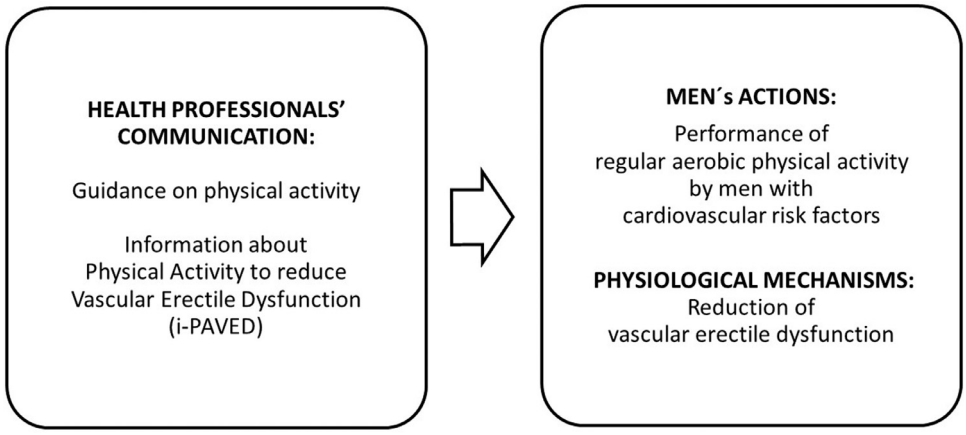

Figure 1. Components of PAVED (i-PAVED is explored in this study).

invited to do so by HPs.[10,16,17] Men with cardiovascular diseases lack knowledge and understanding of the links between cardiovascular diseases and ED.[30,38] Studies have indicated that patients with cardiovascular diseases feel that it would be helpful to discuss ED with HPs.[29,30,39] Men with ED may have different preferences depending on their perceptions of the illness and treatment.[40,41] How sexual issues are addressed in cardiac rehabilitation services has not previously been studied.[42] Thus, an overall understanding is needed regarding men's acceptance of HPs' address of sexuality and ED. It is unclear whether men attending cardiac secondary prevention and rehabilitation programmes can accept the HPs' address of sexuality, ED and i-PAVED. Development of successful interventions depends on the acceptance of the receivers.[1] At the same time, from their perspective the content, context and quality of communication may all have implications for acceptability.[1] Therefore, in the pre-intervention developing phase of PAVED it is important to explore men's prospective accept of HPs' address of sexuality, ED and i-PAVED. The aim of this study was to explore how acceptance of cardiac HPs' address of sexuality, ED and i-PAVED can be identified in men's narratives.

MATERIALS AND METHODS

Study Design

A descriptive qualitative design,[43] using semi-structured interviews based on The Theoretical Framework of Acceptability (TFA) construct with receivers can help guide decisions about the form, content and delivery mode of the proposed intervention components.[1] Therefore, the study was a qualitative study based on 20 semi-structured individual interviews with men attending municipal cardiac secondary prevention and rehabilitation programmes. The analysis was inspired by a concept-driven approach.[44] The TFA, a distinct construct that captures key dimensions of acceptability,[1] was used as a conceptual frame (Figure 2). The interviews were analysed through qualitative content analysis.[44,45] The reporting followed the Consolidated Criteria for Reporting Qualitative Research.[46]

Participants and Recruitment

The participants were recruited from municipal cardiac secondary prevention and rehabilitation programmes in Denmark; exclusion criteria were cognitive disabilities. Cognitive function was evaluated by the interviewer based on whether the men revealed in a conversation noticeable cognitive disabilities, not being able to give informed consent. Men meeting these criteria were consecutively selected and approached as potential participants by staff at each programme. The staff informed potential participants about the topic of the study in general. In cooperation with the staff, at meetings at the municipal cardiac secondary prevention and rehabilitation, the researcher gave potential participants verbal information about the study, its purpose and procedure, as well as information about the researcher's professional background and position. Men, who were interested in the study and volunteered to participate, received written information, and were asked for permission to be contacted by telephone by the first author. During the phone call, information about the study was repeated. If the men then consented to participate in the study, interviews were scheduled. In total, twenty men (mean age 60.9 years of age) participated in the study. None of the potentially interested men were excluded on the basis of cognitive disabilities, but one man had to refuse to participate due to lack of permission from his partner. The participants' characteristics are presented in Table 1.

Procedure

Data Collection. The 20 interviews were conducted on the basis of a semi-structured interview guide with open questions

Affective attitude	Burden	Ethicality	Intervention Coherence	Opportunity Costs	Perceived Effectiveness	Self-efficacy
How an individual feels about the intervention	The perceived amount of effort that is required to participate in the intervention	The extent to which the intervention fits well with an individual's value system	The extent to which the participant understands the intervention and how it works	The extent to which benefits, profits or values must be given up to engage in an intervention	The extent to which the intervention is perceived as likely to achieve its purpose	The participant's confidence in the behaviour(s) required to participate in the intervention

Prospective acceptability	Concurrent acceptability	Retrospective acceptability
Pre-intervention delivery (prior to any expose to the intervention)	During intervention delivery (concurrent assessment of acceptability)	Post-intervention delivery (after participation in the intervention)

Figure 2. The components of the theoretical framework of acceptability, inspired by Sekhon et al, 2017.[1]

Table 1. Characteristics of the participants

ID	Age	PROs Erectile function	PROs vascular risk factors for ED	In a relationship	Municipality programme experiences
1	48	No ED	Non IHD	No	Rehabilitation
2	48	ED	Ex-smoker, PiA, obesity, DLP, DM2, IHD, MI	Yes	Rehabilitation
3	57	ED	Ex-smoker, PiA, HNT, DM2, IHD, MI	Yes	Rehabilitation
4	54	ED	Ex-smoker, PiA, obesity, HNT, DLP, IHD, MI	Yes	Rehabilitation
5	66	Former ED	Ex-smoker, HNT, aortic bifurcation prosthesis, IHD	No	Prevention & Rehabilitation
6	57	ED	Ex-smoker, PiA, obesity, HNT, DLP, IHD	Yes	Rehabilitation
7	58	ED	Ex-smoker, PiA, IHD	Yes	Rehabilitation
8	65	ED	PAi, obesity, HNT, type 1 diabetes, IHD	No	Rehabilitation
9	47	Former ED	Ex-smoker, PiA, obesity, HNT, DLP, aorta rupture	Yes	Prevention
10	62	ED	Ex-smoker, PiA, obesity, HNT, DLP, MetS, IHD	Tes	Prevention
11	65	ED	Non IHD	No	Prevention
12	50	ED	HNT, heart failure	No	Rehabilitation
13	59	No ED	Aortic Valve Replacement	Yes	Rehabilitation
14	68	No ED	Ex-smoker, PiA, obesity, IHD	Yes	Prevention & Rehabilitation
15	78	ED	Ex-smoker, IHD	Yes	Rehabilitation
16	78	ED	Atrial fibrillation, HNT, DLP	Yes	Prevention
17	72	ED	Ex-smoker, PiA, HNT, DLP, IHD, COPD	No	Prevention
18	55	No ED	Smoker, HNT, DLP, IHD	No	Prevention
19	65	No ED	Ex-smoker, PiA, DLP, IHD	Yes	Prevention
20	66	ED	Ex-smoker, PiA, HNT, DLP, DM2	Yes	Prevention
Mean age 60,9		13 /20 had ED		13 / 20 in a relationship	10 Rehabilitation, 8 Prevention, 2 Prevention & Rehabilitation

Age = in years; COPD = Chronic Obstructive Pulmonary Disease; DLP = Dyslipidemia; DM2 = Diabetes Mellitus type 2; ED = erectile dysfunction; ED = Patient reported outcomes vascular risk factors for erectile dysfunction; HTN = hypertension; ID = Informant number; IHD = Ischemic Heart Disease; IM = Myocardial Infarction; MetS = metabolic syndrome; PiA = Physically inactive; PROs Erectile function = Patient reported outcomes of erectile function; PROs vascular Risk factors for Ex-smoker = former smoker.

based on the aim of the project and research in the field[47] (Table 2).

The interview guide was pilot tested at the first interview, which was subsequently considered to be suited for inclusion. The first author conducted the interviews. To protect the rights and well-being of the participant, it was clearly stated in the beginning of the interview that the participants could decide not to answer questions, without given any explanations of why they did not wish to answer. As an introduction, the participants were asked to present themselves by describing how they had experienced being afflicted by heart disease. Initial questions covered experiences related to the participants' attendance at the cardiac secondary prevention and rehabilitation programmes. The interview themes focused on the participants' experiences, attitudes, feelings, preferences and boundaries in relation to HPs addressing issues related to cardiovascular diseases, sexuality, ED and i-PAVED. The semi-structured individual interviews allowed participants to bring up topics or express thoughts that they considered important for their potential acceptance of HPs addressing the mentioned issues. The interviews took place either in a meeting room at the municipal cardiac preventive or rehabilitative facilities or in the participants' private homes, according to the participants' choice. Only the participant and the researcher were present at the interviews, which were audio recorded and lasted 45−120 minutes. Data was collected May-November 2019; all participants were interviewed once and data collection continued until meaning saturation was reached.[48] All interviews were transcribed verbatim in Danish by the first author.

Data Analysis and Theoretical Framework. The interviews were analysed in two steps. First, the transcribed material underwent a concept-driven coding.[44] Concept-driven coding is a deductive strategy for building a coding frame using a pre-existing source such as theory, prior research, or logic.[44] In this study, the concept-driven approach drew upon the TFA, which is based on anticipated or experienced cognitive and emotional responses to the studied intervention.[1] The first author coded the text into the 21 categories derived from the 3 temporal perspectives of "prospective," "concurrent", and "retrospective" acceptability and the seven components of "Affective Attitude," "Burden," "Ethicality,"

Table 2. Interview guide

Research question	Interview themes
What is men's acceptance on HPs' address of sexuality, ED and i-PAVED when attending cardiac prevention and rehabilitation programmes?	Are you aware that ED is common for men with (symptoms of) heart disease? • If yes, where have you heard about that? • Has any HP addressed this topic? If yes, was it acceptable for you? After brief verbal information about the link between heart disease and ED: • Would it be acceptable for you to get this information from the municipal HPs? • Would you prefer address of sexuality and the link between heart disease and ED? Has your erectile function been affected by (symptoms of) heart disease? • How is your erectile function now? Do you know anything about how physical activity affects the erectile function? • Have any HPs addressed the link between physical activity and erectile function? After a brief verbal information about that, physical activity can reduce vascular ED (i-PAVED): • Would it be acceptable for you if the HPs provided i-PAVED? • Could this information affect your motivation in relation to physical activity? Have you talked about sexuality and erectile function with any HPs? • If not, would it be acceptable for you if the HPs addressed sexuality and ED?

ED = erectile dysfunction; i-PAVED = information about Physical Activity to reduce Vascular ED; HPs = Health professionals

"Intervention Coherence," "Opportunity Costs," "Perceived Effectiveness" and "Self-efficacy" in the TFA.[1] These temporal perspectives and components have explicit definitions, and the coding frame was designed based on the definitions of each temporal perspective and component (Figure 2). After the first concept-driven step, the next data-driven step was to analyse items separately using qualitative thematic content analysis as described by Schreier and by Graneheim et al.[44,45,49] The text was coded for both manifest and latent identified[49,50] content[45,49] of men's expressions regarding acceptance of HPs' address of sexuality, ED, and i-PAVED (50 pages of identified narratives). The first and the last author highlighted meaningful units, condensed the content of the sentence units, and coded meaning units. Content that shared commonality was categorised. Based on interpretations and discussion in the research team, the underlying meanings were separated into themes and sub-themes. The research team included a registered nurse (last author); three physiotherapists (first, second, and third author); three specialists in the field of sexology (first, second, and last author) of whom two are part-time clinicians (first and last author). All researchers are female and experienced researchers in sexology, rehabilitation and co-production. The data was processed in NVivo 2 (NVivo qualitative data analysis software; QSR International Pty Ltd. Version 12, 2018.).[51] Themes are illustrated with participant quotations, which are identified by participant number as presented in Table 1.

Ethical Considerations. Ethical considerations followed the directions of the Helsinki Declaration.[52] All participants were informed about the study and confidentiality was ensured. Following recommended procedures to ensure consent and voluntariness,[53,54] the men were given verbal and written information that their participation was voluntary, before they gave their written consent to participate in the study. Only the involved researchers had access to the recorded and transcribed material. The study was reported to and approved by the Danish Data Protection Agency (Journal Number: UCL-2015-57-0016-040). Data was anonymised using letters and stored securely. None of the researchers were involved in the participants' health care.

RESULTS

The results are presented in line with the aim of this study: to explore how acceptance of cardiac HPs' address of sexuality, ED, and i-PAVED can be identified in men's narratives. The results are organised following the components of the TFA, and presented by themes and subthemes. An overview of themes, subthemes and examples of identified narratives are presented in Table 3.

Expression of Interest

Affective attitudes were interpreted in terms of the theme: men's expressions of interest in HPs' address of sexuality and identified in the men's narratives as a broad range of emotions, varying between the subthemes: feelings of motivation, openness, shyness, speechlessness and frustration

Motivation and Openness. Typically, the men had retrospectively not experienced receiving information about sexuality:

> *"After all, it is off limits. No information [about sexuality] has been given to me"* (6).

Table 3. Overview of themes, subthemes and examples of identified narratives

Theme Interpreted	Subtheme Interpreted	Examples of identified narratives Coded	Temporal perspective Coding category	TFA Component Coding category
Expression of interest	Motivation and openness	*"After all, it is off limits. No information [about sexuality] has been given to me" (6).*	Retrospective	Affective attitude
		"I think it is allowed to ask that — it is very natural" (13).	Retrospective	
	Shyness	*"Well, that's just something I find it really difficult to talk about." (11)*	Retrospective	
	Speechlessness and frustration	*"It's a little bit strange, so we have 2019 and sexuality is still a taboo, and they (HPs) can't talk about it. I think it is strange, it still puzzles me" (12).*	Retrospective	
		"If you can talk so much about smoking and wrong food and unsaturated fatty acids, why the hell should we not be able to talk about these things (i-PAVED)?" (5).	Prospective	
Addressing sexuality	Not bothersome or offensive	*"It was not bothersome … I was not offended by it" (9).*	Retrospective	Burden
		"There is nothing compromising about that" (15).	Prospective	
	Individual sessions	*"An individual consultation to get a deeper talk… It could be an HP who is actually trained to handle those conversations; then I think it would be okay" (5).*	Prospective	
Attitudes and values	Educated and competent HPs	*"But I think you [HPs) could have talked about it [sexuality and ED] a little more dignified instead of just casually: "Well, just try these [PDE5-i]". A doctor and a nurse should be able to do that. I find it strange that it is not part of basic education, both for doctors and nurses and others" (3).*	Retrospective	Ethicality
	Caring for integrity	*"But as I said, there may be some who find it more difficult than others to talk about such things. I can only speak for myself. Maybe some will be offended that they [HPs] ask questions about their sex life. It would not bother me, but some might think: it is none of your business" (7).*	Prospective	
Understandable and meaningful	Vascular ED was understandable	*"All of it makes a lot of sense; that it (penis) did not want to get up and that it has lasted so long. I have had ED for 5-10 years. I have had heart problems for a long time. So, it has not developed in 5 minutes — the arteriosclerosis — it has probably been there all 10 years. It is certainly relevant. You get so much information and much of it is about heart problems, and there is nothing about that [ED] in those leaflets. It could have been nice if she [the nurse] had said that [atherosclerosis] could be the reason why you can't get an erection, that atherosclerosis was all over in the body, instead of just right there in the heart" (6).*	Concurrent Retrospective Prospective	Intervention coherence
	i-PAVED was meaningful	*"No, I did not know"; well, it actually makes sense. Of course, if you have those blood circulation problems, they also appear 'down there' [in the penile swelling bodies]. Of course, they do — in that area of the body. That exercise can help alleviate those inconveniences. It makes good sense, then. That is common sense. Yes, it makes perfect sense" (12).*	Concurrent	
Insights	Better understanding of my ED	*"It is important to know how it all works, and especially if you go around speculating about a whole lot of things [ED]. Then I could have avoided that, if I had known something about it; therefore, it is necessary and important to get information on all aspects of life — also this [sexuality and ED]" (15).*	Retrospective Prospective	Perceived Effectiveness
	My partner could understand me better	*"Yes, but I think so, because my wife also tries to guess what is the cause [of ED], and I also think it would be nice to "lay some ghosts to rest"; that it's not her fault, so I think that would be completely relevant. Because I also know that my wife is just as affected as I have been and still am, and I have felt sorry for my wife. So, in that way I think, it would be extremely relevant" (3).*	Retrospective Prospective	
Motivation	Preventing or reducing ED	*"It is not enough to tell about the [ED] problems, and then stop there. What most people would like to hear is if you can do something about it. Otherwise, men collect dust; men wrap it up and hide it. Dialogue is important, because then men come to think of something that they can do themselves. You can talk about it [ED] or describe it [ED] so men can see, though I am on my way there, what can I do to turn it around before it's too late. Leaflets should be available, like dietary guidance — a potency guide, what can you do about it yourself ". (10)*	Prospective	Self-efficacy
	Improving physical activity	*"Yes, I think so, of course - just to be reminded that it [physical activity] has an effect … down there [in the penile swelling bodies] also, when … yes: 'well it might be a good idea if I go for a run'. Because there are many, it may be that they are told that you live a year or two longer, but that is out in the future" (7).*	Prospective	

The men's expression of interest was identified in their motivation in participating in the interview knowing that it involved a conversation about their sexuality. The men had experienced ED as a huge problem. They expressed feelings of motivation to discuss how their cardiovascular diseases had affected their erectile function, and concurrently nearly all of them explained that the opportunity to talk about their sexual problems was in fact their primary motivation to participate in the interview.

"Yes, it's only now [that I'm talking to an HP], that's also why I said, 'yes, thank you' [to participate in the interview]! It may be in the back of my mind that it [ED] has been a big problem and when the opportunity then presents itself" (4).

However, the men who had attended the cardiac preventive programme had retrospectively experienced that a nurse had briefly addressed the topics of sexuality and ED in a group session:

"A nurse brought up the subject in a group session, but we never got to the heart of the matter [ED]" (17).

In the men's view, the nurse did not address the core of sexual issues and ED, which can be interpreted as an interest to open up and talk more in depth about them. Men's interest was also identified in their openness, and retrospectively they seemed to have experienced a quite open-minded atmosphere in the group session:

"Well, I was impressed, because it is not often that people want to talk about something like that. She told us about ED and something like that, because we were all cardiac patients. So nearly all of us had the same problem" (16).

The men who had not retrospectively experienced HPs' address of sexuality said that they were prospectively open for HPs' address of sexuality in a group session and used words like "natural" to describe their feelings of acceptance, which can be interpreted as sexuality being something biologically fundamental for human beings and the address of sexuality being something that can be expected:

"I think it is allowed to ask that — it is very natural" (13).

Shyness. However, a minority of the men expressed retrospective feelings interpreted as shyness. They found sexuality extremely hard to talk about in groups, and stressed that the way the nurse addressed sexuality was acceptable, as they had the opportunity to keep quiet:

Responder: *"Well, that's just something I find it really difficult to talk about."*

Interviewer: *"Did the nurse talk about sexuality in a way that you thought was okay?"*

Responder: *"Yeah, definitely. We talked about it, some expressed something, and I just think I kept my head down. Then it is good in the way that they invite dialogue, that some get something out of it, and someone like me, maybe I just kept my head down"* (11).

Men perceived as shy seem to accept HPs' address of sexuality, which can be interpreted as an expression of interest regarding HPs' address of the topic.

Speechlessness and Frustration. Retrospectively, the men had experienced that sexuality still is a taboo and an ignored topic in health care and cardiovascular rehabilitation, and some of them expressed feeling speechless:

"It's a little bit strange, so we have 2019 and sexuality is still a taboo, and they (HPs) can't talk about it. I think it is strange, it still puzzles me" (12).

Some of the men used strong language when reflecting on whether prior address of i-PAVED could be potentially beneficial, and they expressed that when the HPs can address very personal lifestyle issues, why should they not address i-PAVED — the latter being equally important.

"If you can talk so much about smoking and wrong food and unsaturated fatty acids, why the hell should we not be able to talk about these things?" (5).

The strong language may indicate that the men felt frustrated at not having received specific suggestions how to reduce their vascular ED. These men's speechlessness and frustration can be interpreted as an indication that their interest in HPs addressing relevant information regarding sexuality, cardiovascular diseases and ED was retrospectively not met.

To sum up, the men had experienced that HPs either had not addressed or only briefly addressed sexuality and ED. However, the men seemed to be interested, motivated and open-minded in relation to HPs' address of these sexual issues. When it comes to addressing sexuality in group sessions, as men in the cardiac secondary prevention programme had experienced, it was important for the shy men to have the possibility to keep quiet. If HPs do not address relevant topics regarding sexuality such as i-PAVED, it might cause men with ED to experience feelings of speechlessness and frustration.

Addressing Sexuality

Potential burden was interpreted in terms of the theme HPs' address of sexuality not seeming to be bothersome for the men.

Not Bothersome or Offensive. The men who had experienced a nurse addressing the topic of sexuality expressed that the address of sexuality was not retrospectively bothersome or harmful for them.

"It was not bothersome … I was not offended by it" (9).

Men who were perceived as shy seem not offended either:

Responder: *"I am not good at expressing feelings about myself, but I'm probably not the only man to feel that way."*

Interviewer: *"But was it also okay for you that those who wanted to say something, that they said something?"*

Responder: *"Yes yes yes yes. Yes. It did not bother me"* (11).

Typically, the men had not experienced HPs addressing the links between lifestyle, arteriosclerosis, cardiovascular diseases and ED, and i-PAVED; however, they expressed the relevance of addressing these topics and did not perceive such themes as annoying:

"*Of course, it is generally relevant to us who have some defect in our blood circulation*" (1).

"*There is nothing compromising about that*" (15).

Individual Sessions. Although it was retrospectively acceptable for the men to talk about sexuality in general terms during group sessions, talking about their own sexuality can be an emotional effort for men. Prospectively, all the men showed every sign of being interested in participating in conversation with HPs about sexuality and ED, if individual sessions could be an option:

"An individual consultation to get a deeper talk. Because I do my own thinking, too. I just think I parked it [sexuality] somewhere. It could be an HP who is actually trained to handle those conversations; then I think it would be okay" (5).

To summarise, retrospectively HPs' address of sexuality seemed not to be annoying, bothersome or offensive for the men. Prospectively, HPs' address of the links between lifestyle, arteriosclerosis, ED and i-PAVED as well as individual sessions with HPs that are trained in communication in the field of sexology could be acceptable and fulfil an unmet need for the men.

Attitudes and Values

Ethicality was identified in terms of the theme HPs' address of sexuality, ED, and i-PAVED fitting well with men's attitudes and values.

Educated and Competent HPs. Retrospectively, the men had experienced HPs' address of sexuality and ED as insufficient, and some of the men seemed to be disappointed, as their expectations and hopes to be seen as a sexual beings were not met.

"I was told that it is important that you go to the clinic; these are the experts. So, I would expect that it was 'something like that' [ED] that HPs addressed in the clinic, and, in my case at least I think it would be obvious to say that one must expect that there is probably some sexuality − something active around it. However, sexuality was never addressed. I addressed it" (12).

Emphasizing that the men themselves and not the HPs addressed sexuality can be interpreted as an indication that address of sexuality and ED should have been an ethical requirement for the HPs. Prospectively, the men stated that their attitude was that HPs should address sexuality and ED in a more proper way, and they expressed that HPs should be professional and educated in addressing sexuality and ED

"But I think you [HPs) could have talked about it [sexuality and ED] a little more dignified instead of just casually: "Well, just try these [PDE5-i]". A doctor and a nurse should be able to do that. I find it strange that it is not part of basic education, both for doctors and nurses and others, because it is clear that I am not the only one who has had a problem in my life, and probably not the last, and they ask about all other sorts of things" (3).

Caring for Integrity. HPs' address of sexuality and ED fits well with the men's values regarding integrity. Men stressed the address as being crucial, and therefore prospectively it would be okay and essential to talk about the link between cardiovascular diseases, sexuality and ED

"*I think it is very important. I think it is really, really important that it is done*" (15).

Despite being a private and to some extent taboo topic, the men typically were open-minded and considered themselves as such. At the same time, they were aware that other men could be less relaxed and bold regarding sensitive issues such as sexuality and ED, which require careful steps:

"I think that … [long pause] After all; it is with cautious steps … many of the men I know have a very soft spot regarding [ED]. I learned at a very early age not to be bashful" (2).

The more open-minded men cared about other men's integrity and possible boundaries in connection with HPs' prospective address of ED and i-PAVED. They also seemed to be careful only to speak on their own behalf, and to pay attention to other men's integrity, boundaries and possible reluctance to address the subject:

"I certainly think so. But as I said, there may be some who find it more difficult than others to talk about such things. I can only speak for myself. Maybe some will be offended that they [HPs] ask questions about their sex life. It would not bother me, but some might think: it is none of your business" (7).

To sum up, HPs' address of sexuality, ED and i-PAVED was found to be in harmony with men's attitudes and values. The men expected HPs to be professional and educated in addressing sexuality, ED and i-PAVED, and they cared for their own and other men's integrity and boundaries.

Understandable and Meaningful

Intervention Coherence was identified in terms of the theme being understandable and meaningful and i-PAVED being interpreted as understandable, relevant and meaningful.

Vascular ED was Understandable. HPs providing relevant information about cardiovascular risk factors and sexuality is an essential part of cardiovascular clinical guidelines and recommendations. Retrospectively, it seems that no HPs had provided the men with information about the links between lifestyle, arteriosclerosis, cardiovascular diseases and ED, and none of the men had knowledge about the links:

> *"The nurse, she mentioned it briefly; however, it was not something we addressed, we did not"* (6).

> *"I did not know it. We didn't go into it in detail; it was very superficial"* (10).

To gain insight into the acceptability, comprehensibility and relevance of the intervention, the interviewer provided the men with some brief information on the links between arteriosclerosis, cardiovascular diseases and ED. Generally, the men already had knowledge about the link between lifestyle, cardiovascular risk factors, arteriosclerosis and their cardiovascular diseases. Then, when talking about the vascular mechanism in a penile erection, it was concurrently easy for the men to understand how cardiovascular risk factors can lead to vascular ED even a long time before a cardiac event, and the men seemed to consider the information as understandable, meaningful, relevant and desirable:

> *"All of it makes a lot of sense; that it (penis) did not want to get up and that it has lasted so long. I have had ED for 5-10 years. I have had heart problems for a long time. So, it has not developed in 5 minutes − the arteriosclerosis − it has probably been there all 10 years. It is certainly relevant. You get so much information and much of it is about heart problems, and there is nothing about that [ED] in those leaflets. It could have been nice if she [the nurse] had said that [atherosclerosis] could be the reason why you can't get an erection, that atherosclerosis was all over in the body, instead of just right there in the heart"* (6).

i-PAVED was Meaningful. According to the comprehensibility of i-PAVED, no HPs had provided the men with i-PAVED. Therefore, the men were given some brief i-PAVED by the interviewer. Regardless of whether they had potential vascular ED or not, the men concurrently expressed that i-PAVED was understandable and meaningful and that HPs prospectively providing i-PAVED was relevant:

> *"No, I did not know"; well, it actually makes sense. Of course, if you have those blood circulation problems, they also appear 'down there' [in the penile swelling bodies]. Of course, they do − in that area of the body. That exercise can help alleviate those inconveniences. It makes good sense, then. That is common sense. Absolutely. It makes good sense. Yes, it makes perfect sense, I think"* (12).

> *"Yes, I think that is okay. Yes, because I have accepted that it is a good idea if I want to continue to be [sexually] active for many years to come, then I have to exercise and live healthily"* (19).

To summarise, the men found that the links between cardiovascular diseases and vascular ED as well as i-PAVED were understandable, meaningful, relevant and desirable.

Insights

Perceived effectiveness was identified in terms of the theme insigths, as the men expected that HPs' prospective address of the links between cardiovascular diseases, sexuality and ED would contribute to a better understanding of their ED.

Better Understanding of my ED. None of the men who had ED had retrospectively received any diagnosis or possible cause of their ED. However, the men with ED had many worries and seemed to look for explanations and meaning. Meanwhile, when discussing the links between cardiovascular diseases and ED, the men retrospectively seemed to expand their perspectives and reflected on alternative causes of their ED related to their cardiovascular diseases. The men seemed to achieve a better understanding of how their arteriosclerosis and (earlier stages of) cardiovascular diseases potentially could have contributed to the (early onset of) ED.

> *"I can recognize that because before I got this aortic prosthesis surgery [bypass from the aorta to a.iliaca] . . . at that time, I had a sweet girlfriend for a while. I think it had become a little difficult . . . to get an erection. I could not cope, so I gave up the relationship. I could not explain it; 'It is not because I don't feel like it, but what is it exactly?' I did not know that, and I damn well could not say that: because I have atherosclerosis and some more gymnastics is needed. I can say that now. However, after having the aortic prosthesis surgery, it is just as if I have had more blood flow in the lower body. I got my left leg back and got my cock back. I must honestly admit that"* (5).

> *"It is important to know how it all works, and especially if you go around speculating about a whole lot of things [ED]. Then I could have avoided that, if I had known something about it; therefore, it is necessary and important to get information on all aspects of life − also this [sexuality and ED]"* (15).

My Partner Could Understand Me Better. The men preferred that their partner (if any) should receive information and/or participate in sessions where HPs address the links between cardiovascular diseases, sexuality and ED. Prospectively, the men imagined that their partner's improved insights could contribute to puncturing myths, decreasing guilt, sorrow and misunderstandings between the couple and providing their partner with a better understanding:

> *"Yes, but I think so, because my wife also tries to guess what is the cause [of ED], and I also think it would be nice to "lay some ghosts to rest"; that it's not her fault, so I think that would be completely relevant. Because I also know that my wife is just as*

affected as I have been and still am, and I have felt sorry for my wife. So, in that way I think, it would be extremely relevant" (3).

"Some partners could say: Now, I've better not [initiate sex]. You have to look after your heart. It is not good for you that we are so active right now. You have to look after your heart. But really, the human body benefits from getting the bloodstream running. So, I definitely think so" (1).

In the men's view, HPs addressing the link between cardiovascular diseases, sexuality and ED seems to be beneficial since it could help achieving insights and promoting a better understanding of vascular ED, both for the men themselves and for their possible partners, as well as better communication between couples.

Motivation

Self-efficacy was identified in terms of the theme men's motivation, as i-PAVED may improve the men's self-care to prevent or reduce vascular ED and motivate them to improve their physical activity level.

Preventing or Reducing ED. The men expressed a need for HP-facilitated information, dialogue, nuanced discussions, constructive advice and written material dealing with treatment options and self-care in order to improve the confidence and ability to perform the actions required to prevent or reduce ED:

"Yes, well, it probably requires some sort of follow-up to be given more priority. Now, you are almost only informed that the problems are there and that you are not alone with them. There is not so much information on what you can do about it." (11)

"It is not enough to tell about the [ED] problems, and then stop there. What most people would like to hear is if you can do something about it. Otherwise, men collect dust; men wrap it up and hide it. Dialogue is important, because then men come to think of something that they can do themselves. You can talk about it [ED] or describe it [ED] so men can see, though I am on my way there, what can I do to turn it around before it's too late. Leaflets should be available, like dietary guidance – a potency guide, what can you do about it yourself. They can be available like other leaflets, and those who dare to take them – they will take them". (10)

Improving Physical Activity. The men had retrospectively experienced that they had the ability to improve their physical activity level. Prospectively, the men expected that i-PAVED would motivate them to increase their own physical activity level because the prospect of reduced vascular ED seemed to be more attractive than the prospect of a longer life. The men also expected that prospective i-PAVED would increase men's motivation to improve their self-care and change their lifestyle by increasing their level of physical activity.

"Yes, I think so, of course - just to be reminded that it [physical activity] has an effect … down there [in the penile swelling bodies] also, when … yes: 'well it might be a good idea if I go for a run'. Because there are many, it may be that they are told that you live a year or two longer, but that is out in the future" (7).

"I think you might wake up some people by saying, 'you can actually do something yourself if you take care of your own body. You cannot wake up everybody. But I also really think you can wake up a lot of people and turn the ship around or just get an eye opener, yes, definitely" (12).

To summarise, prospectively, the men accepted that HPs provide information, dialogue, self-care advice and written material about treatment options and self-care to prevent or reduce vascular ED. HPs' address of i-PAVED may be a potential facilitator for men's self-efficacy by increasing their motivation to be more physically active and thereby reduce their ED and improve their cardiovascular rehabilitation.

In this deductive analyses, using the seven components of TFA, men's anticipated or experiential acceptance was identified as "Expression of interest" (affective attitude), "Not bothersome" (burden), "Attitudes and values" (ethicality), "Understandable and meaningful" (intervention coherence), "Insights" (perceived effectiveness) and "Motivation" (Self-efficacy), whereas no narratives were found in relation to the component of opportunity costs. The results are summarised in Figure 3.

DISCUSSION

To our knowledge, this is the first study exploring how acceptance of cardiac HPs' address of sexuality, ED and i-PAVED can be identified in men's narratives. One of the overall goals of qualitative research is to give voice to participants.[55] In this study, a deductive analysis, using the concept of TFA was applied, to specifically explore how acceptance of cardiac HPs' address of sexuality, ED, and i-PAVED can be identified in men's narratives. The lack of findings related to the TFA component of opportunity costs – meaning the extent to which benefits, profits or values must be given up to engage in an intervention,[1] – may indicate that the men did not give up any specific values to participate in HPs' address of sexuality, ED, and i-PAVED. However, the men had prerequisites, which were identified in the component of ethicality. Thus, ethical aspects of HPs' address of sexuality, ED and i-PAVED were in harmony with the men's attitudes and values if HPs are professional, educated and competent in the field of sexuality. That men with cardiovascular diseases have HPs' professionalism as a prerequisite for accepting their address of sexuality and ED is an important novel result concerning the overall detailed understanding of men's acceptance of HPs' address of sexuality, ED, and i-PAVED. At this point, men's desires, demands and expectations are often beyond the expected competences of HPs, since previous studies showed

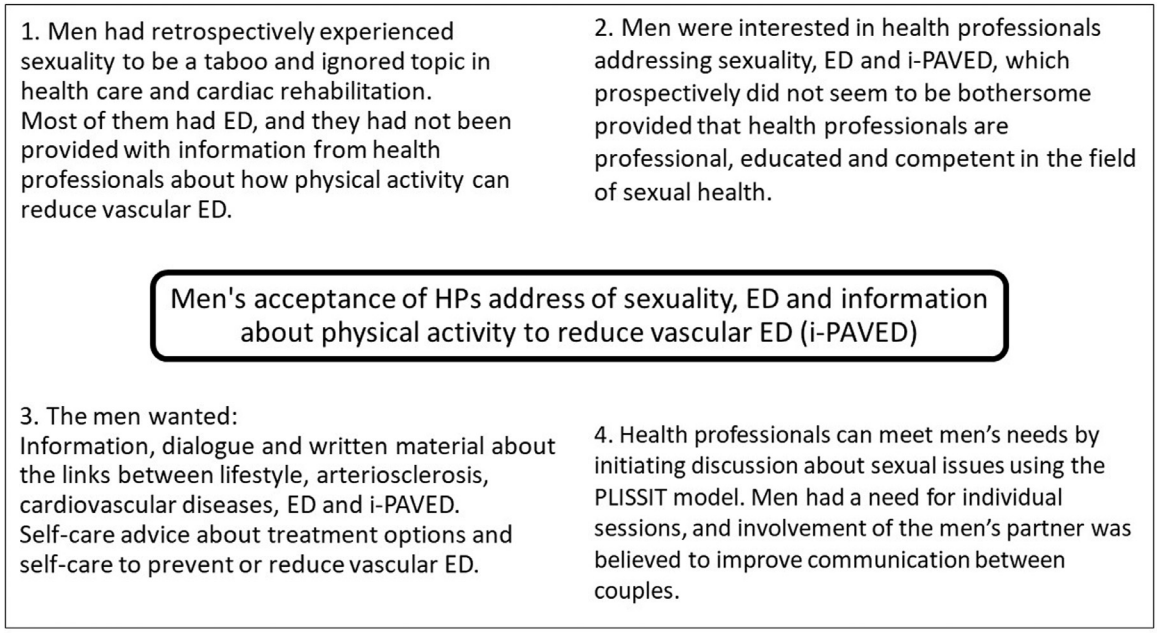

Figure 3. Summarising results.

that HPs lack education and competences in the field of sexuality.[15-18] To meet the needs of men in cardiovascular secondary prevention and rehabilitation, HPs should be professional, educated, and competent in this field. Another ethical aspect was the men's concerns about their own and other men's integrity and boundaries regarding HPs' address of sexuality, ED and i-PAVED. One way to address sexuality while not overstepping the boundaries of the individual is the well-known PLISSIT model or the Ex-PLISSIT model,[56,57] the latter extending the original model by further emphasising the role of permission-giving.

The dominant pattern of men's experience was that HPs had not addressed sexuality and ED in the cardiac rehabilitation and had only briefly addressed the topic in the cardiac secondary prevention programme. Unaddressed sexuality is substantiated by a study showing that sexuality is a taboo topic in healthcare system,[16,36] and cardiac HPs rarely or never address sexuality.[18] However, in general the men were interested in HPs addressing these issues, which is interpreted as an indication of acceptance, and their affective attitudes varied between feeling motivated, open-minded and shy, in addition to feeling speechless and frustrated if HPs do not address relevant topics regarding sexuality such as ED and i-PAVED. Men's affective attitudes regarding those issues have not previously been studied in such detail. However, previous studies have shown that patients, regardless of age, feel embarrassed if the HPs lack understanding of their sexual health,[58,59] and that patients with cardiovascular diseases express positive feelings and attitudes towards HPs addressing sexual issues.[29,30,34] We found that HPs' address of sexuality and ED was not experienced as a burden, bothersome, annoying or offensive; this is in line with the before mentioned studies indicating cardiac patients' positive attitudes towards HPs addressing sexual issues.[29,30,34] Neither did shy men perceive HPs' address of sexuality as annoying, bothersome or offensive, which is an important new finding because the fear of offending their patients is a well-known barrier for HPs in addressing sexuality.[14,15,60] Attending group sessions where HPs address sexuality could be a potentially emotional effort for some of the men; however, even the shyer men accepted the address of sexuality in group sessions by choosing to keep their head down. Thus, the shy men would never themselves initiate a conversation about sexuality and therefore it is of great importance that the HPs initiate communication on sexuality and ED, and how they address the topic, listen to and work with patients to create a comprehensive management plan regarding sexual problems. Providers' responsibility to initiate discussions regarding sexual issues with cardiac patients has been stablished in several studies over the last decade.[29,30,58,60] Therefore, minimising barriers, promoting, facilitating and preparing HPs to address sexuality is a recommendation.

The men found that the intervention coherence of i-PAVED explained through brief summary of the mechanism of vascular ED was easy to understand and acceptable. This new finding is remarkable since information about the negative impact of modifiable cardiovascular risk factors on sexual health is recommended to be included in education programmes for men with cardiovascular diseases.[7,61] The men found that i-PAVED was potentially meaningful, relevant and acceptable. The understanding must be seen in the light that none of the men had any knowledge of these links before the interview. The men's lack of knowledge regarding modifiable lifestyles factors, including physical activity to fight ED, corresponds with studies[61,62] finding poor knowledge in patients with cardiovascular diseases about health-

promoting lifestyle and its positive effects on ED. The studies also establish that only a small number of patients with cardiovascular diseases were aware that a low physical activity level contributed to the development of ED. Of all the factors connected with ED, the patients were least informed on the effect of leisure-time physical activity on penile erection.[61,62] The men themselves do not draw the parallel that physical activity reduces both their arteriosclerosis and at the same time their (risk of developing) vascular ED. Therefore, cardiac HPs are recommended to address how and why the PAVED intervention works.

The perceived effectiveness of the HPs addressing the link between cardiovascular diseases, sexuality and ED may be beneficial in promoting insight in form of a better understanding of vascular ED for the men themselves as well as their possible partner; this is interpreted as men's acceptance of HPs' address of sexuality and ED. We found that most of the men with ED had experienced not receiving any diagnose or possible cause of their ED; this is supported by ED being under-diagnosed in cardiac rehabilitation.[10,12] The men had experienced that their inexplicable ED could lead to miscommunication between partners, and a systematic review has found that sexual concerns often affect the relationship following cardiovascular disease.[63] It seemed to be crucial and essential for the men with ED to achieve understanding of potential causes of their ED. Thus, together with other diagnostic examinations, HPs' dialogue with men regarding cardiovascular risk factors for ED seemed to facilitate a better understanding of their ED.

Self-efficacy was identified as men's motivation. The men wanted and prospectively accepted the HPs' information, dialogue, self-care advice, treatment options and written information about potential self-care to prevent and reduce vascular ED. This finding is significant as previous studies from the perspective of patients with cardiovascular diseases recommend information regarding ED and its treatment, as well as sex counselling and written information.[18,29] In the men's prospective perspective, HPs' information may improve their belief in their own capabilities with regard to acting on to their erectile function and sexual life, which was interpreted as beneficial for the men's self-efficacy regarding their sexual performance and relationship. These results correspond with a previous study of men's experiences of participating in a hospital sexual rehabilitation programme after heart disease, which helped develop their self-efficacy with regard to their sexual performance and relationship.[34] The men accepted HPs' prospective address of sexuality, ED and i-PAVED; however, they requested broad and detailed information and individual sessions. The HPs' address should cover various aspects of sexuality and be tailored to the men's life situation. The men's needs for tailored interventions initiated by the HPs is in line with reviews[63] recommending proper tailored sexual counselling for patients with cardiovascular diseases to increase their quality of life. Generally, the men expected that the address of i-PAVED might increase their own and other men's motivation and self-efficacy in terms of being more physically active. These findings are interesting as i-PAVED is intended as a potential motivator for men to increase their level of physical activity and thereby improve their lifestyle and overall cardiovascular health.[5-7] The results can be useful in designing the i-PAVED component by presenting the men's perspectives (Figure 3) A previous study used acceptability as an important criterion in implementation of an intervention focusing on sexual health for patients with cardiovascular diseases.[64]

Strengths and Limitations

The TFA component Opportunity Costs was not identified in the interviews; however, the deductive concept-driven strategy using the constructs of the TFA[1] strengthened the achieved detailed insight into the various experienced and prospective aspects of men's acceptance of the intervention. Consistency between the data presented and the findings strengthened the validity of the study. The interviewer's professionalism in relation to conversations about sexuality was a strength in the study as it probably increased the men feeling comfortable in the interview situation and confident that their integrity and boundaries were respected, and thus the situation allowed the men to provide deeper reflections in the interviews. The men's lack of experience and knowledge regarding HPs' address of sexuality, ED, and i-PAVED can be expected in a preintervention study; and it influenced the study in several ways. Firstly, in terms of the men's acceptance, the prospective perspective is dominant in this phase of developing i-PAVED. Secondly, the interviews inevitably took the form of transformative interview,[65] considering that the men seemed to gain improved understanding of vascular ED and develop their self-efficacy related to i-PAVED. Thirdly, the men's lack of experience showed the need for further development, pilot testing and implementation of HPs' address of sexuality, ED and i-PAVED. A possible limitation of the study is that the transcribed interviews or citations were not returned to the participants for comments, which could have influenced some of the men's expressions. A conversation about sexual issues can be challenging, especially taking into account the relative inexperience among the participants. However, reading what was expressed about sensitive topics in the interview transcripts, when trust and security were created in the interview situation, can be even more challenging for the participants.[66] Therefore, we assessed that greater credibility would be achieved by relying on the men's statements in the interview situation. This sample included men from a Danish municipality's cardiac secondary prevention and rehabilitation programme, and the transferability of the results may be limited to men and to similar contexts. However, the key findings are probably useful also in other settings, such as for example in primary health care.

Recommendations for Further Research

I-PAVED provided by HPs seemed to be prospectively acceptable, relevant and desirable for men, which is important

for future piloting of PAVED. Prerequisites for piloting the complex intervention PAVED are that HPs have knowledge of the relationships between atherosclerosis, cardiovascular diseases, aerobe physical activity, ED and sexuality as well as communication competences in the field. Since HPs often lack competences in the field of sexual health, it should be expected that HPs need appropriate professional development courses before providing the complex intervention PAVED, and before the communication component i-PAVED can be further developed, pilot tested and feasibility tested.

Clinical Implications

The results of the study indicate a need to prepare pilot testing of PAVED in cardiac secondary prevention and rehabilitation, as the communicative intervention i-PAVED seems to be prospectively acceptable to men. Further, the results identify a need to ensure that HPs have competences in the field of sexual health. It is recommended that cardiac HPs are offered continuous professional development in the field of sexual health. Sexual health is recommended to be included as compulsory theme in the basic HP educational programmes.

CONCLUSION

As an aspect of developing the complex cardiovascular health care intervention PAVED, this qualitative study showed that men attending cardiac secondary prevention and rehabilitation seemed to prospectively accept the communicative component of PAVED, being HPs addressing of sexuality, ED and i-PAVED, if HPs are professional, educated and competent in the field of sexual health.

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REFERENCES

1. Sekhon M, Cartwright M, Francis JJ. Acceptability of healthcare interventions: an overview of reviews and development of a theoretical framework 2017;17:1-13
2. Bleijenberg N, de Man-van Ginkel JM, Trappenburg JCA, et al. Increasing value and reducing waste by optimizing the development of complex interventions: Enriching the development phase of the medical research council (MRC) framework. **Int J Nurs Stud 2018;79:86–93.**
3. Olesen ML, Duun-Henriksen A, Hansson H, et al. A person-centered intervention targeting the psychosocial needs of gynecological cancer survivors: a randomized clinical trial 2016;10:832-841
4. O'Cathain A, Croot L, Duncan E, et al. Guidance on how to develop complex interventions to improve health and healthcare 2019;9:e029954
5. Gerbild H, Larsen CM, Graugaard C, Areskoug Josefsson K. physical activity to improve erectile function: a systematic review of intervention studies 2018;6:75-89
6. Gonzáles A, Carvalho Td, Andreato L, et al. Physical exercise in the management of erectile dysfunction in patients with heart failure. **Int J Cardiol 2019;32:418–427.**
7. Allen MS. Physical activity as an adjunct treatment for erectile dysfunction. **Nat Rev Urol 2019;16:553–562.**
8. Green R, Kodish S. Discussing a sensitive topic: nurse practitioners' and physician assistants' communication strategies in managing patients with erectile dysfunction. **J Am Acad Nurse Pract 2009;21:698–705.**
9. Corrà U, Piepoli MF, Carré F, et al. Secondary prevention through cardiac rehabilitation: physical activity counselling and exercise training: key components of the position paper from the cardiac rehabilitation section of the European Association of Cardiovascular Prevention and Rehabilitation. **Eur Heart J 2010;31:1967–1974.**
10. Shabsigh R, Stone B. Understanding the needs and objectives of erectile dysfunction patients. **World J Urol 2006;24:618–622.**
11. Jaarsma T. Sexual function of patients with heart failure: facts and numbers. **ESC Heart Fail 2017;4:3–7.**
12. Hatzichristou D, Tsimtsiou Z. Prevention and management of cardiovascular disease and erectile dysfunction: toward a common patient-centered, care model. **Am J Cardiol 2005;96:80M–84M.**
13. Slattery P, Saeri AK, Bragge P. Research co-design in health: a rapid overview of reviews 2020;18
14. Wang P, Ai J, Davidson PM, et al. Nurses' attitudes, beliefs and practices on sexuality for cardiovascular care: a cross-sectional study. **J Clin Nurs 2019;28:980–986.**
15. Fennell R, Grant B. Discussing sexuality in healthcare: a systematic review. **J Clin Nurs 2019;28:3065–3076.**
16. Ezhova I, Savidge L, Bonnett C, et al. Barriers to older adults seeking sexual health advice and treatment: a scoping review 2020;107:103566
17. Engelen MM, Knoll JL, Rabsztyn PRI, et al. Sexual health communication between healthcare professionals and adolescents with chronic conditions in Western countries. **An Integrative Review 2020;38:191–216.**
18. Byrne M, Doherty S, Murphy AW, et al. Communicating about sexual concerns within cardiac health services: do service

providers and service users agree? **Patient Educ Couns 2013;92:398–403.**

19. Salehian R, Khodaeifar F, Naserbakht M, et al. Attitudes and performance of cardiologists toward sexual issues in cardiovascular patients. **Sex Med 2017;5:e44–e53.**
20. Graugaard C. Sexuality as a health-promoting factor - theoretical and clinical considerations. **Nat Rev Urol 2017;14:577–578.**
21. Kreikebaum S, Guarneri E, Talavera G, et al. Evaluation of a holistic cardiac rehabilitation in the reduction of biopsychosocial risk factors among patients with coronary heart disease. **Psychol, Health Med 2011;16:276–290.**
22. ICD-10.data.com. 2020 ICD-10-CM diagnosis code F52.21, male erectile disorder. Available at: https://www.icd10data.com/ICD10CM/Codes/F01-F99/F50-F59/F52-/F52.21. Accessed November 5, 2020.
23. Mulhall JP, Giraldi A, Hackett G, et al. The 2018 revision to the process of care model for evaluation of erectile dysfunction. **J Sex Med 2018;15:1280–1292.**
24. Diaconu CC, Manea M, Marcu DR, et al. The erectile dysfunction as a marker of cardiovascular disease: a review. **Acta Cardiol 2019;75:286–292.**
25. Baumann F, Hehli D, Makaloski V, et al. Erectile dysfunction - overview from a cardiovascular perspective. **Vasa 2017;46:347–353.**
26. Allen MS, Walter EE. Health-related lifestyle factors and sexual dysfunction: a meta-analysis of population-based research. **J Sex Med 2018;15:458–475.**
27. Jaarsma T, Strömberg A, Ben Gal T, et al. Comparison of self-care behaviors of heart failure patients in 15 countries worldwide. **Patient Educ Couns 2013;92:114–120.**
28. Moyad MA, Park K. What do most erectile dysfunction guidelines have in common? No evidence-based discussion or recommendation of heart-healthy lifestyle changes and/or Panax ginseng. **Asian J Androl 2012;14:830–841.**
29. Nicolai MPJ, van Bavel J, Somsen GA, et al. Erectile dysfunction in the cardiology practice - a patients' perspective. **Am Heart J 2014;167:178–185.**
30. Kalka D, Karpinski Ł, Gebala J, et al. Sexual health of male cardiac patients - present status and expectations of patients with coronary heart disease. **Arch Med Sci 2017;13:302–310.**
31. Burnett AL, Nehra A, Breau RH, et al. Erectile dysfunction: AUA guideline. **J Urol 2018;200:633–641.**
32. Lindstrom Egholm C, Rossau HK, Nilsen P, et al. Implementation of a politically initiated national clinical guideline for cardiac rehabilitation in hospitals and municipalities in Denmark. **Health Policy 2018;122:1043–1051.**
33. Hackett G, Kirby M, Wylie K, et al. British society for sexual medicine guidelines on the management of erectile dysfunction in men—2017 2018;15:430-457
34. Palm P, Missel M, Zwisler A, et al. A place of understanding: patients' lived experiences of participating in a sexual rehabilitation programme after heart disease. **Scand J Caring Sci 2020;34:370–379.**
35. Steinke EE, Jaarsma T. Sexual counseling and cardiovascular disease: practical approaches. **Asian J Androl 2015;17:32–39.**
36. Traumer L, Jacobsen MH, Laursen BS. Patients' experiences of sexuality as a taboo subject in the Danish healthcare system: a qualitative interview study. **Scand J Caring Sci 2018;33:57–66.**
37. Frost M, Wraae K, Gudex C, et al. Chronic diseases in elderly men: underreporting and underdiagnosis. **Age Ageing 2012;41:177–183.**
38. Shabsigh R, Kaufman J, Magee M, et al. Lack of awareness of erectile dysfunction in many men with risk factors for erectile dysfunction 2010;10:18
39. Byrne M, Doherty S, Murphy A, et al. The CHARMS Study: cardiac patients' experiences of sexual problems following cardiac rehabilitation. **Eur J Cardiovasc Nurs 2013;12:558–566.**
40. Ciocanel O, Power K, Eriksen A. Interventions to treat erectile dysfunction and premature ejaculation: an overview of systematic reviews. **Sex Med 2019;3:251–268.**
41. Stamogiannou I, Grunfeld EA, Denison K, et al. Beliefs about illness and quality of life among men with erectile dysfunction 2005;17:142-147
42. Byrne M, Doherty S, Fridlund BGA, et al. Sexual counselling for sexual problems in patients with cardiovascular disease. **Cochrane Database Syst Rev 2016;2:CD010988.**
43. Kim H, Sefcik JS, Bradway C. Characteristics of qualitative descriptive studies: a systematic review. **Res Nurs Health 2017;40:23–42.**
44. Schreier M. Qualitative content analysis in practice. Washington DC: Sage: Los Angeles; London; New Delhi; Singapore; 2012.
45. Graneheim UH, Lindgren BM, Lundman B. Methodological challenges in qualitative content analysis: a discussion paper. **Nurse Educ Today 2017;56:29–34.**
46. 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;19:349–357.**
47. Kallio H, Pietilä A, Johnson M, et al. Systematic methodological review: developing a framework for a qualitative semi-structured interview guide. **J Adv Nurs 2016;72:2954–2965.**
48. Hennink MM, Kaiser BN, Marconi VC. Code saturation versus meaning saturation: how many interviews are enough? **Qual Health Res 2017;27:591–608.**
49. Graneheim UH, Lundman B. Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. **Nurse Educ Today 2004;24:105–112.**
50. Braun V, Clarke V. Using thematic analysis in psychology 2006;3:77-101
51. Alfasoft. NVivo. Available at: https://alfasoft.com/en/products/statistics-and-analysis/nvivo.html. Accessed November 5, 2020.

52. Datatilsynet. The danish data protection agency. Denmark: The Danish Data Protection Agency; 2019. Available at: https://www.datatilsynet.dk/english/legislation. Accessed November 5, 2020.
53. Sundheds- og Ældreministeriet. Bekendtgørelse af lov om videnskabsetisk behandling af sundhedsvidenskabelige forskningsprojekter og sundhedsdatavidenskabelige forskningsprojekter [Promulgation of law on scientific ethics treatment of health science research projects and health data science research projects]. Denmark: Ministry of Health and the Elderly; 2020. Available at: https://www.retsinformation.dk/eli/lta/2020/1338. Accessed November 5, 2020.
54. Justitsministeriet. Lov om ændring af lov om retshåndhævende myndigheders behandling af personoplysninger, lov om massemediers informationsdatabaser og forskellige andre love [Law amending the law on the processing of personal data by law enforcement authorities, law on mass media information databases and various other laws]. Denmark: Ministry of Justice; 2018. Available at: https://www.retsinformation.dk/Forms/R0710.aspx?id=201317. Accessed November 5, 2020.
55. Larkin M, Watts S, Clifton E. Giving voice and making sense in interpretative phenomenological analysis 2006;3:102–120.
56. Annon JS. The PLISSIT model: a proposed conceptual scheme for the behavioral treatment of sexual problems. **J Sex Educ Ther 1976;2:1–15.**
57. Taylor B, Davis S. The extended PLISSIT model for addressing the sexual wellbeing of individuals with an acquired disability or chronic illness. **Sex Disab 2007;25:135–139.**
58. Schaller S, Traeen B, Kvalem IL. Barriers and facilitating factors in help-seeking: a qualitative study on how older adults experience talking about sexual issues with healthcare personnel 2020;32:65–80
59. Bauer M, Haesler E, Fetherstonhaugh D. Let's talk about sex: older people's views on the recognition of sexuality and sexual health in the health-care setting. **Health Expect 2016;19:1237–1250.**
60. Haesler E, Bauer M, Fetherstonhaugh D. Sexuality, sexual health and older people: a systematic review of research on the knowledge and attitudes of health professionals. **Nurse Educ Today 2016;40:57–71.**
61. Kalka D, Zdrojowy R, Womperski K, et al. Should information about sexual health be included in education directed toward men with cardiovascular diseases? **Aging Male 2018;21:243–250.**
62. Kalka D, Gebala J, Borecki M, et al. Return to sexual activity after myocardial infarction - an analysis of the level of knowledge in men undergoing cardiac rehabilitation. **Eur J Intern Med 2017;37:e31–e33.**
63. Dalteg T, Benzein E, Fridlund B, et al. Cardiac disease and its consequences on the partner relationship: a systematic review. **Eur J Cardiovasc Nurs 2011;10:140–149.**
64. Mc Sharry J, Murphy PJ, Byrne M. Implementing international sexual counselling guidelines in hospital cardiac rehabilitation: development of the CHARMS intervention using the behaviour change wheel. **Implement Sci 2016;11:134.**
65. Roulston K. Considering quality in qualitative interviewing. **Qual Res 2010;10:199–228.**
66. Kvale S, Brinkmann S. Interview: det kvalitative forskningsinterview som håndværk [Interview: the qualitative research interview as a craft]. **Hans Reitzel: Kbh 2015:246.**