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CO-CAPTAIN

Cancer prevention among individuals with mental ill-health: CO-adapting
and implementing patient navigation for primary cancer prevention

D2.1.

Synthesis Report

of barriers/facilitators for accessing to cancer preventive care for the population experiencing mental ill-health at system, provider, and individual levels in the EU context

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Mental health Europe

WP2 – Participatory co-adaptation of the Patient Navigation Model for primary cancer prevention in the European context meeting the needs of organizations, care team members, and the individuals with mental ill-health

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LIST OF ACRONYMS

ADHD	Attention deficit hyperactivity disorder
CEIM	Committee on the Ethics of Medicinal Products Research
CFIR	Consolidated Framework for Implementation Research
DGSS	Dirección General de Servicios Sociales (Directorate General of Social Services)
DILO card	The Oncology Diagnostics and Treatment Card
ELGA	Elektronische Gesundheitsakte; the electronic health record in Austria
EX-IN	Experienced involvement
FIIBAP-SERMAS	Fundación para la Investigación e Innovación Socio-Sanitaria (Foundation for Socio-Health Research and Innovation)
GDPR	General Data Protection Regulation
HCWs	Healthcare workers
IFIC	International Foundation for Integrated Care
MUL	Medical University of Lodz
MUW	Medical University of Vienna
NGO/s	Non-governmental organisation/s
OCD	Obsessive compulsive disorder

PNM	Patient Navigation Model
RE-AIM	Reach Effectiveness Adoption Implementation Maintenance
SESPA	Servicio de Salud del Principado de Asturias (Health Service of the Principality of Asturias)
WP	Work Package

EXECUTIVE SUMMARY

Background and objectives

People with mental health problems face an elevated risk of cancer and mortality. To decrease cancer morbidity and improve health outcomes, we can enhance healthcare pathways and implement evidence-based preventive strategies. The EU-funded CO-CAPTAIN project aims to introduce a novel solution using the Patient Navigation Model (PNM). The PNM is an innovative, evidence-based and patient-centred intervention, which supports patient empowerment through removal of systemic barriers, providing social support and promoting timely access to primary prevention services. By effectively adapting the PNM for people with mental health problems and including it in health policies for integrated care pathways, CO-CAPTAIN works towards reducing mental health disparities, enhancing overall health and alleviating the cancer burden.

This synthesis report forms part of Work Package 2 of the CO-CAPTAIN project. The main aim of WP2 is to co-design the project care model for the delivery of patient navigation and primary cancer prevention services for individuals with mental health problems across the physical, mental, and care systems in the EU. This is based on the findings of a qualitative study conducted across four of the project partner countries - Austria, Greece, Poland and Spain - with key stakeholders.

The overall objective of this report is to provide an overview of the health needs, barriers and facilitators for accessing cancer primary prevention services and programs for individuals with mental health problems at system, provider, and individual levels as identified by the above-mentioned study. The specific aims are as follows:

- To explore and better understand the perceived physical health and cancer risk factors in people with mental health problems;
- To investigate and better understand the relevance, knowledge, and use of cancer prevention measures;
- To assess barriers and facilitators on the individuals, institutional/organisational and systemic level to the access and use of the health care system;

- To explore the perception of and input on implementing a Patient Navigation Model for cancer prevention in people with mental health problems;
- To seek opinions on the utilization of an App as part of the implementation phase of the Patient Navigation Model.

Methodology

This study employed a cross-national qualitative design. Between June and October 2023, data were gathered through semi-structured interviews (*n* = 81) involving people with mental health problems, caregivers, care team members, representatives of mental health organisations, and representatives of service managers. Interviews were conducted simultaneously in Austria, Greece, Poland, and Spain. Data was analysed using qualitative thematic analysis using an inductive and iterative method (following an approach by Saldaña, 2021) and analysis was guided by the Consolidated Framework for Implementation (CFIR) as well as the Reach, Effectiveness, Adoption, Implementation and Maintenance (RE-AIM) frameworks. Partners at each of the four data collection sites (Austria, Greece, Poland, Spain) conducted and analysed the interviews, which were subsequently consolidated into the present synthesis report.

Key findings

Most participants rated the relevance and importance of prevention as high and named several cancer risk factors. On the other hand, the scope and level of awareness and utilization of health/wellbeing promotion and cancer prevention varied greatly with access to information overall being deemed insufficient. There are clearly variances among people with mental health problems' willingness, capacity and possibilities to translate their awareness of risks and prevention means into action. Having mental ill-health is without doubt a hindering factor as mental health problems were frequently described as having priority over physical health and/or affecting interaction with healthcare systems.

Key barriers highlighted across the four countries were stigma and discrimination in their multiple forms, multiple dysfunctions of the public healthcare systems and a lack of flexibility and adaptation to the needs of people with mental health problems. Adapting healthcare to the individual experiencing mental health problems (and not the other way round) and a positive professional-service user relationship came up as key facilitators in healthcare together with the role of a support network in aiding and guiding. Furthermore, service options should have a low threshold, be sustainable and effective and have no or little financial burden.

In addition to behavioural risk factors affecting health in general - i.e., smoking, alcohol consumption, lack of physical activity, unhealthy diet - in the case of people with mental health problems additional factors come into play: e.g., mood and drive changes, anxiety, cognitive impairment, social withdrawal, increased levels of tension and distress, sleep disturbances, and medication side-effects. Moreover, experiencing mental health problems is already so burdensome and attention-consuming that focusing on other health aspects is sometimes beyond people’s capacity. All these factors can lead to poor self-care, self-neglect, refusing or delaying medical examinations, poor adherence to appointments, treatment, and therapy.

The study gave many insights on resources and means that could be adopted to counter these barriers, namely social support, empowerment, combating social stigma, financial resources, supportive communication and interaction between the service user and healthcare provider underscored by attention to the person's overall health, are considered to be conducive to seeking healthcare and to better self-care.

Overall, the findings indicate a high degree of consistency in picturing the situation of people with mental health problems and current status of cancer prevention. Very importantly, the patient navigation model is perceived as potentially very beneficial in facilitating access to service that take a holistic approach and adapt to the specific circumstances arising from mental health problems.

INTRODUCTION

The CO-CAPTAIN Project

Cancer and mental health problems constitute leading public health problems in Europe. More than 84 million people in the European Union (EU) report living with an on-going mental health problems condition. While issues concerning mental health are of great importance, they often overshadow physical problems that people with mental health problems face[1]. Such is cancer, which is more prevalent in people with mental health problems and is also the second most common cause of death in this population[2]. People with mental health problems often have difficulties in accessing quality cancer prevention services but are also additionally overlooked in research which makes them overall an underserved population. What data is available, shows that potential reasons for these higher cancer morbidity and mortality rates are linked to more engagement in risky health behaviour (especially higher prevalence of smoking as well as overweight and obesity) [3] [4] [5] [6] but also experiences of significant barriers when accessing the highly fragmented heath care systems[7] [8] [9] [10] [11]. Timely and evidence-based preventive strategies including optimizing health care pathways provide a solution to the high cancer morbidity and could improve overall health outcomes in this disadvantaged population. One such mixed-skill strategy is Patient Navigation.

Therefore, the overall goal of the CO-CAPTAIN project is to co-adapt the Patient Navigation (PN) model focusing on primary cancer prevention and to see if this model can prove to be beneficial in supporting individuals with mental health problems through care services to reduce cancer risk factors by increasing knowledge, health literacy and empowerment. The Patient Navigation Model is an innovative, evidence-based and

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[8] 10.1177/0890117118763233
[9] 10.1111/j.1600-0447.2007.
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[11] PMID: 17539699

patient-centred intervention, which supports patient empowerment through removal of systemic barriers, providing social support and promoting timely access to primary prevention services. Based on implementation science and utilizing the CFIR as well as the RE-AIM frameworks, the CO-CAPTAIN project aims to reduce the gap in health inequalities for people with mental health problems by reducing cancer burden and improving overall health, which will, in turn, reduce associated costs across health and social care systems in Europe. Moreover, the CO-CAPTAIN project aims to harness the transformative potential of the integrated care pathways in cancer as well as provide health and social care policy recommendations for the adoption and implementation of the Patient Navigation Model across Europe.

Overall objectives of this report

The overarching aims of this report, which served as the foundation for data collection, are to explore and better understand:

- The perceived physical health and cancer risk factors in people with mental health problems;
- The relevance, knowledge, and use of cancer prevention measures;
- Barriers and facilitators on the individuals, institutional/organisational and systemic level to the access and use of the health care system;
- The perception of and input on implementing a Patient Navigation Model for cancer prevention in people with mental health problems;

Opinions on the utilization of an App as part of the implementation phase of the Patient Navigation Model.

METHODOLOGY

For this study with a qualitative research design, semi-structured interviews with individuals with mental health problems, caregivers, care team members, representatives of mental health organisations, and representatives of service managers were conducted between June and October 2023. Data was collected simultaneously in Austria, Greece, Poland, and Spain by a multidisciplinary team of researchers representing seven partner organisations.

The utilization of a qualitative research design enabled us to engage in a comprehensive exploration of the subject matter, all the while placing a strong emphasis on the perspectives, experiences, and language of the participants throughout analysis and the development of key categories. The flexibility inherent in the qualitative approach ensured that participants were given the autonomy and opportunity to convey what they personally deemed most significant and pertinent. This is particularly critical given that individuals experiencing mental health problems often face marginalization. Furthermore, given the sensitivity of the subject matter under examination, the selected method was required to facilitate the establishment of a strong rapport between the researcher and the participant. It's worth noting that the non-prescriptive nature of the qualitative interview format is recognized to make participants feel more at ease when sharing personal experiences and opinions (Bryman, 2016).

Data collection

A total of 81 participants – 27 males and 54 females between the ages of 22 and 76 – were interviewed as part of this study at the four data collection sites and consisted of the following groups:

- 34 people with mental health problems
- 10 caregivers
- 14 care team members
- 12 representatives of mental health organisations

- 11 representatives of service managers.

Participants were informed about the project and recruited for the study using various channels like verbal communications, leaflets and mailing lists as well as with assistance of relevant organisations, e.g., mental health services and NGOs representing rights of people with mental health problems. Interested potential participants had the opportunity to contact the study team directly as contact details were provided. The research teams consisted of representatives of medical and social professions (psychologists, public health specialists, social workers, healthcare managers, specialist nurses).

Interviews were conducted in person in a private or semi-private setting, e.g., at the data collection site, the participant's workplace or another place of the participant's choice, via telephone, or online via videocall depending on the participant's preference. The semi-structured interviews were guided by the use of interview guidelines that were previously discussed and agreed upon with all consortium members while receiving consultation from a person with lived experience of mental health problems. Mental Health Europe, a consortium member, further ensured suitability of language and content. The interview guidelines comprised the following topic areas:

- Sociodemographic data
- Perceived physical health and cancer risk factors in people with mental health problems
- Relevance, knowledge, and use of cancer prevention measures
- Barriers and facilitators on the individuals, institutional/organisational and systemic level to the access and use of the health care system
- Perception of and input on implementing a Patient Navigation Model for cancer prevention in people with mental health problems
- Opinions on the utilization of an App as part of the implementation phase of the Patient Navigation Model.

Data analysis and reporting of findings

Audio recordings of the interviews were transcribed verbatim either manually or using appropriate software, e.g., Whisper or MAXQDR. Transcribed interviews were then analysed using thematic analysis. First, initial coding was carried out at each data collection site in the respective language, i.e., researchers systematically labelled data using a code of a few words to reflect the text's meaning. Researchers at the Medical University of Vienna (MUW) started with initial coding and provided a starting list of generated codes that the other data collection sites used as a baseline and expanded upon depending on their own interviews' content. The initially coded interviews were then translated into English and put into a coding matrix consisting of the initial code, an explanation of the code, a citation of the text that the code refers to, and, if needed, an explanation of the context of the quote. The coding matrices were then reviewed by researchers at MUW and merged into categories.

In total, eight categories were extracted through analysis and give structure to the report of findings of each data collection site. The following categories were developed in line with the study objectives:

- Sociodemographic data and health
- Knowledge on and utilization of health/wellbeing promotion and cancer prevention
- Barriers to healthcare access and utilization
- Facilitators to healthcare access and utilization
- Resources and behaviour potentially beneficial for health
- Hindering factors and behaviour with potential negative (health) consequences
- Considerations for the Patient Navigation Model
- App.

Ethical considerations

The study was approved by the Ethics Committee of the MUW prior to the start of data collection. Additionally, all data collection sites applied for ethical approval at their respective ethical boards. This study was conducted in compliance with the study protocol, including EU, international and national law, the EU Charter of Fundamental Rights and the European Convention for the Protection of Human Rights and Fundamental Freedoms and its Supplementary Protocols

Prior to giving consent, all participants received a study information protocol and the opportunity to ask questions. Besides, they authorised the recording of each of the interviews. The respective researcher conducting the interview underlined the voluntary nature of participation and the participants right to not give an answer to questions that made them feel uncomfortable or that they did not want to give an answer to. Participants were also reminded of their right to stop their participation at any timepoint without any negative consequences and without the need to provide an explanation. Full and informed consent was obtained in written and verbal form prior to conducting the interview.

Data is securely stored in compliance with General Data Protection Regulation (GDPR, European Parliament and the Council, 2016 regulations). All files are encrypted and stored on password-protected computers to which duplicates are minimized. During the transcription process, information enabling identification of persons was omitted, and both interview transcripts and recorded audio files were distinguished by anonymous reference codes instead of names. Signed informed consent forms are securely stored separately from interview transcripts and recordings, to which they are linked transcripts through the anonymous reference codes. Throughout the process of writing this report, great care has been taken in the use of quotations to ensure they do not disclose identifiable information or an inappropriate level of detail about participants.

FINDINGS - AUSTRIA

Sociodemographic data and health

The sample consisted of 20 participants, including eight people with mental health problems, two caregivers, five care team members, three representatives of mental health organisations, and two representatives of service managers. Sample characteristics are summarized in Table 1.

Table 1

Participant information

ID	Age	Gender Identity	Further information
CC_VA_P01	27	Male	Nurse, in training to become a psychotherapist, Psychology student, researcher
CC_VA_P02	41	Male	Representative of an NGO, EX-IN (Experienced Involvement), active in research and teaching
CC_VA_P03	46	Female	Clinical psychologist working in oncology, researcher
CC_VA_P04	29	Male	General practitioner (medical doctor), researcher
CC_VA_P05	35	Female	Psychiatrist, representative of a psychiatrist's society
CC_VA_P06	29	Female	Caregiver
CC_VA_P07	55	Female	Head nurse in a psychiatric ward, cancer survivor
CC_VA_P08	30	Male	Doctoral student Self-reported diagnoses: recurrent depression, obsessive-compulsive disorder
CC_VA_P09	34	Female	Psychologist and currently psychotherapist in training
CC_VA_P10	75	Female	Clinical and health psychologist, psychotherapist, president of a professional association
CC_VA_P11	54	Female	Voluntary work, disability pension Self-reported diagnosis: Depression
CC_VA_P12	26	Female	Art student, minimum income Self-reported diagnosis: Emotionally unstable personality disorder (borderline), paranoid schizophrenia, schizoaffective disorder, depression, complex post-traumatic stress disorder

CC_VA_P13	33	Female	Psychotherapist in training
CC_VA_P14	42	Female	Caregiver Clinical and health Psychologist, head of self-help group
CC_VA_P15	51	Female	High school diploma, disability pension Self-reported diagnoses: bipolar disorder, binge-eating disorder Representative of an NGO supporting rights of people with mental health problems
CC_VA_P17	69	Male	Medical specialist in psychiatry and neurology, experience as head of a psychiatric department
CC_VA_P18	42	Female	Life and social counsellor, Bachelor's degree Self-reported diagnosis: Depression
CC_VA_P19	50	Female	Disability pension Self-reported diagnosis: schizophrenia
CC_VA_P20	39	Female	Apprenticeship, disability pension Self-reported diagnoses: borderline personality disorder, recurrent depression, binge eating disorder
CC_VA_P22	49	Female	Disability pension, former occupational therapist with professional experience in psychiatry Peer training Self-reported diagnoses: borderline personality disorder with suicide attempts, Bulimia

Note. ID: CC = CO-CAPTAIN, VA = Vienna, Austria, P01 = Participant number 1.

Knowledge on and utilization of health/well-being promotion and cancer prevention

Most participants rated **relevance and importance of somatic disease prevention** as high, although some stated indifference towards consequences of unhealthy behaviour or unwillingness to deal with this topic. Some participants criticized insufficient communication of the importance of prevention measures to the public. Participants generally viewed prevention measures as beneficial as they would, among others, aid with a higher quality of life and well-being. Participating in preventive activities would further enable more social interactions, and widening the social circle by, e.g., joint physical activities.

> *"In general, it (prevention) is extremely relevant. It's the most important tool we have as a society to stay healthy. (...) So I think it's something very, very important that is certainly still communicated far too little, how important it is in society. Yes, well, exactly. So I think you can simply say that prevention is always better than treatment." (CC_VA_P01)*

Furthermore, participants underlined the importance of taking a **holistic approach** to health by taking into account both physical and psychological aspects. They saw an interplay between somatic and psychological health and well-being. As such, prevention measures oriented to improving somatic health would also positively affect psychological wellbeing and increase self-worth, self-confidence, and self-responsibility, and vice versa, and as such could lead to more life stability and daily structure.

> *"And I mean, they're not separate things, that you (...) somehow say, (...) 'I know what's happening in your head sucks, but it's not completely independent of how you're doing physically. And (...) these are not necessarily two different goals. You can actually work on your physical stuff to support the goal that I know you actually have, and what's actually most important to you. Namely that what's going on in your head is no longer so stressful for you." (CC_VA_P08)*

At the same time, however, **mental health problems** were frequently described as having **priority over preventive activities and physical health**:

> *"So, she (i.e., family member with mental health problems) also calls me regularly (...) and tells me about the psychoses that are currently bothering her. And I can imagine, I'm simply suggesting or implying, that if I were in a situation like that, where I'm confronted with psychotic ideas all the time, where people are harassing me and making me uncomfortable, that I think that physical health issues would simply fade into the background for me. Because if I'm being harassed all the time, then I don't think I care about my stomach-ache for the time being." (CC_VA_P06)*

Some participants also saw problems with **using the term "cancer"** (prevention) not only as part of this research project but also in the context of preventive services in general. This could potentially increase anxiety of developing cancer in some people with mental health problems, such that some may overuse prevention measures in an unhealthy way. Alternatively, the topic could further exacerbate symptoms of anxiety disorder or depression and ultimately lead to avoidant behaviour or hypochondria.

> *"What I haven't done, for example, and I'm still struggling a bit, is everything in the area of intestine examinations and so on, I don't have that as part of all my examinations. And that's where I realize exactly what I've just told you. So, I refer to the 'I'm doing enough anyway and that's enough', and anything more is a risk that something will be found and I wouldn't know how to deal with it. With my illness, I'm also afraid of falling into a severe depression, or what can even happen to me, that it goes in the manic direction, that I become hyperactive to suppress it." (CC_VA_P15)*

Participants regarded the following as **measures promoting health**: satisfying bodily needs (e.g., nutrition, hydration, sleep), taking care of personal hygiene, being physically active, using sunscreen adequately, getting vaccinated, and avoiding or reducing illegal substance use, smoking tobacco, and drinking alcohol. The importance of self-care was also emphasized including keeping a healthy and balanced lifestyle, raising wellbeing and awareness of one's body (e.g., mindfulness), and improving self-esteem and self-compassion. Furthermore, prevention of progression of a disease was named as essential (e.g., diabetes check-up). The need for individualized instead of generalized health promotion measures was also pointed out by e.g., taking gender differences into account.

Some participants saw **problems with prevention measures**. More specifically, regarding physical activity, people with mental health problems may not be well aware of their own limits and might therefore tend to over-exercise, which could lead to injuries, pain, temporary inability to be physically active, and the necessity of a visit to the doctor.

The following **risk factors for ill-health and cancer** were named: unhealthy nutrition, physical inactivity, tobacco smoking, illegal substance use, alcohol consumption, (chronic) stress, ultraviolet (UV)-radiation, any physical abnormalities, obesity, and genetic disposition. As a precautionary measure, it was also suggested to keep a distance from people with communicable diseases. The Human Papillomavirus (HPV), weight loss, intestinal dysfunction, coughing up blood, lung pain, and conspicuous skin changes were further named as warning signs of ill-health.

> *"But, for example, another thing that comes to mind is that smoking and lung cancer are directly associated. In other words, if you eliminate the problem of smoking, then the risk of lung cancer is also very, very, very low, yes." (CC_VA_P01)*

Participants were aware of a number of **medical procedures** that could be used in preventive check-ups or for cancer screening (commonly mentioning stress cardiac testing and blood-pressure measurements, colonoscopy and various imaging techniques). They noted that the dominant focus of annual check-ups was on physical health and there was a lack of preventive programs focusing on mental health. Some suggested that a psychological check-up should be integrated and psychosocial support should be offered in case of a cancer diagnosis. Additionally, it was suggested to implement questions about previous preventive examinations during patient history taking.

Participants were aware of **access points** where they could access cancer preventive services available in Austria (both through the health care system and various programs on offer to the general public). Some participants criticized the dependence of prevention measures on NGOs and voluntary work and stated that only a few measures were taken from the government or health insurance. It was further suggested to take inspiration from preventive programs in other countries (e.g., Melbourne 5-year action plan against depression).

> *"There are quite good offers, but the problem is that it is all based on voluntary work by associations or other NGOs and that simply, yes, I, yes, that is certainly a very big problem in this context, that there are few offers that are officially, I don't know, organized by the federal government or by the federal states or by the health insurance or whatever, because, as far as I know, there are these screenings that don't do very much and probably do even less in terms of cancer prevention. Yes, there are, there are just a few screenings, but they are also very selective, so I don't know, the colonoscopy, which is only done from 50 or so or 40 on, I think. And otherwise, there's just not really anything in Austria, as far as I know." (CC_VA_P01)*

Several participants stated that there was little **knowledge on cancer prevention**. Furthermore, participants pointed out that little or no cancer prevention measures were implemented into clinical settings with a focus on mental health. While some participants expressed an interest in expanding their health literacy on cancer prevention and some expressed a wish for it to be implemented (further) into their education or training, others did not share this wish.

> *“But I think my knowledge in this area is sufficient for my field. So I think it's more about awareness than knowledge.” (CC_VA_P05)*
>
> *“But I think it's always important in medicine that you refer a patient in case of a suspected differential diagnosis correctly. You don't have to know it yourself, but you have to pass it on to the right place so that it can be examined.” (CC_VA_P17)*

Barriers to healthcare access and utilization

A prominent barrier frequently referred to by participants was **stigmatization and discrimination** of people with mental health problems in healthcare settings potentially leading to frustration, fear, aversion to seek help, and preference of self-treatment. Participants reported bad attitudes and treatment by healthcare workers (HCWs) who showed lack of knowledge, experience, appreciation, understanding, awareness, and respect towards people with mental health problems. One participant therefore recommended withdrawal from the electronic health record to keep the mental health problems diagnosis disclosed.

> *“And I would advise all people, but this is a personal opinion, to get out of ELGA, if you have physical complaints, please don't say there that you have a mental illness. (...). Then people are less prejudiced.” (CC_VA_P14; ELGA: electronic health record in Austria)*

Furthermore, people with mental health problems reportedly often did not feel taken seriously by HCWs and were instead often viewed as “crazy”, labelled as “hypochondriac”, treated as dumb, accused of being uncooperative, shouted at, being told to pull themselves together, or denied access to examination. As the following example shows, physical health problems were not taken seriously despite repeated verbalization, which could potentially lead to worsening the physical health problem:

> *“In the course of this... of her stay, she then had an intestinal blockage, but had already said days before that something should be done about it. That she needed support in terms of medication or taking other drugs. And she was not believed, it was ignored. So much so that her condition continued to deteriorate. Until finally her father had to intervene, who is a radiologist himself and was appointed to the board of... Not in the psychiatric ward itself, but in this clinic.” (CC_VA_P02)*

> *“For example, the diagnosis of depression: you should pull yourself together, the weather is nice anyway, you should go outside. 'Oh, she's back again, the patient, what's she doing - no, you can't put her on sick leave again', something like that, then even new symptoms aren't taken seriously by some doctors.” (CC_VA_P13)*

> *“But they were really traumatized by the medical staff's behaviour towards them, so I've already seen a real post-traumatic stress disorder develop as a result of the medical staff's behaviour due to something physical. (...). Yes, people are not taken seriously. Unless there are very clear markers.” (CC_VA_P14)*

While on one hand a lack of awareness for mental health issues in the healthcare system was described, on the other hand the **focus on mental health problems** was seen as another barrier. The latter was reported to hinder detection of physical comorbidities as physical symptoms were not properly examined and instead labelled as psychosomatic or attributed to mental health problems. Hence, diagnostic overshadowing occurred. At the same time, it was also hinted at the difficulty of differential diagnosis. Participants further reported HCWs refusing to treat individuals with mental health problems on a physical ward as the following examples show:

> *“And on the other hand, because then, yes, there is certainly also negative behaviour from the healthcare staff who don't have to deal with it on a daily basis and perhaps haven't been trained in it and say: that's not my business or something. First to the psychiatric ward and then we'll look at it when she's stable again or something.” (CC_VA_P04)*

> *“And the trauma surgeon went to the psychiatric ward. Yes, she [a patient] wasn't in the casualty ward at all. She was in the psychiatric ward with her completely fractured leg, where there's no trauma nursing or anything, they're all psychiatric nurses.” (CC_VA_P04)*

The other way around physical ill-health was also described as making it more difficult to organize inpatient stay or examinations for mental health problems.

The **burden** of mental health problems was seen by some as very high, such that they did not want to increase it further through additional **prevention measures**. In line with this, obligations of preventive programs were perceived by some as burdensome. The following example shows reluctance of a professional to recommend prevention measures:

> *“You're already glad that they're compliant, that they take their medication regularly. I don't know, regularly attending the day clinic or the psychosocial service or something like that.” (CC_VA_P04)*

Insufficient resources were named as another barrier to healthcare. More specifically, participants described long waiting times when visiting or calling medical doctors, lack of time of HCWs, lack of healthcare personnel, and few opportunities for HCWs to take part in further education on mental health problems. The lack of time to build patient-doctor relationships of trust further caused anxiety, insecurities, and unwillingness to address mental health problems. In addition, some criticized a failure to implement empirical findings into daily clinical practice. Low density of medical care services was described for rural areas and lack of support with carrying out doctor’s recommendations or with making appointments was criticized.

> *“But I have had what I would call 'doctor fatigue' before. When I simply said: 'I've had enough now'. I certainly did once; an example of this was during the corona period. I avoided that as much as I could. Of course, I could use corona as an excuse. I didn't have to have a guilty conscience. But that was, there was already this tiredness of going from one doctor to another and still always waiting 2-3 hours, it was too tedious for me.” (CC_VA_P15)*

Insufficient financial resources kept some participants from being able to pay for a better quality of healthcare or for support from a caregiver to visit doctors. Participants also described a lack of knowledge regarding which costs are covered by health insurance. Fees for missing appointments and difficulty of finding psychotherapy paid for by health insurance were criticized.

> *“Ideally, everyone would have access to therapy. And not only after (...) a year or so. Because if you're at a point where you say, "Okay, I need this now, I'm in a really bad way", and then someone tells you, "Okay, a health-insurance funded spot might be available in a year or so", then you think to yourself, "Okay, great". I'm already at that point now and not in a year's time, when I actually need it.” (CC_VA_P06)*

> *“(...)when I consult someone privately. They take a lot more time and this gives me much better diagnostic options. You can make a lot of diagnoses not only through - especially in the mental health area, but also in the area of other illnesses - a lot can be made through feedback from the patient. Because I can't do that without a basis of trust, so that people don't report it back, yes, the diagnosis and treatment can only get worse and not better.” (CC_VA_P15)*

Participants also described a **lack of flexibility and adaptation to the needs** of people with mental health problems in the healthcare setting. Some wished for the possibility to have a conversation via phone or online with their doctor as they experienced physical visits to the doctor’s office as a burden. Furthermore, some spoke of a lack of cooperation and exchange between different professional groups leading to a lack of interdisciplinary exchange sensitization to interactions between mental and physical health. At the same time, some participants perceived it as a burden if they were repeatedly referred from one medical doctor to the next. Others described uncertainty about healthcare processes or contact points. Language barriers in the healthcare context were also pointed out. One participant criticized attempts to contact HCWs as follows:

> *“There's just someone sitting there who doesn't know their way around. Because again, everyone only has a section. Now we are globalized, but everyone sits in their own area and has no idea about others and doesn't even want to, because if they do something in another area as well, then they might have to take responsibility and then they could be given a talking-to again.” (CC_VA_P22)*

Another barrier that was reported were **feelings of disempowerment** through the use of the healthcare system. This included medication side effects such as weight gain, loss of libido, lack of drive, concentration problems, worse perception of body and emotions, and emotional numbness. Medication use was also associated with fear of causing cancer. Not being informed appropriately and the need to self-educate to understand medical reports were also named.

> *"Unfortunately, I think you can tell that psychiatry is a very young specialty, because the medication really isn't where it needs to be yet, in my opinion. Lots of side effects, long times until people are properly adjusted, sometimes never really well adjusted because the medication simply doesn't work as it should. Some of the side effects are simply beyond good and bad, and I think that's a real shame. That's another problem for physical well-being." (CC_VA_P06)*

> *"(…) and that this 'others virtually decide whether I'm healthy or not', and that's just one hundred percent being at the mercy of others. You're already completely at the end of your tether, you can't do anything anymore anyway, you're just struggling with everything in everyday life, and then others decide whether I'm healthy or not." (CC_VA_P18)*

Facilitators to healthcare access and utilization

The necessity to **adapt healthcare to the individual** was frequently named as a facilitator. This should involve jointly making decisions tailored to the individual while taking the individual situation and preferences into account. Furthermore, HCWs should be open to take into account physical as well as mental health and to optimally adjust medication while considering comorbidities. HCWs could further summarize a doctor's visit in written form in case of concentration problems and be available for upcoming questions after the visit via email. At the same time, people with mental health problems were encouraged to be open about their diagnosis in the healthcare system to allow optimal individual adaptation.

> *"If I think this person goes into a surgery in his mania and talks to everyone there and is aloof and assaultive and maybe even aggressive if he doesn't get what he wants, then they are a massive challenge." (CC_VA_P07)*

Offers should have a **low threshold**. This could comprise telephone/online consultations, home visits, short-term appointments or visits without an appointment, anonymity, little bureaucracy, or combining several appointments in one place and time.

Participants also saw connections to the system via e.g., social workers, as helpful. Furthermore, the financial burden should be kept as low as possible and psychotherapy should be enabled quickly and paid for by insurance.

> *“So, what I, as an affected person, also experience as good is when I am docked somewhere: set an anchor. Set an anchor, either to another place or set the anchor there again. Because, for example, in the past, if I didn't make an appointment with my doctor straight away, it took me months to make another appointment. Either I wasn't feeling well or I was busy with something. So, setting anchors is very, very important to me.” (CC_VA_P22)*

Another facilitator described was the **knowledge, sensitization and characteristics of HCWs**. Participants wished for interested, respectful, and empathic HCWs with sufficient resources of time, awareness of mental and physical ill-health, and trust in people with mental health problems. HCWs should try to balance autonomy, self-reliability, and caregiving and talk about problems transparently without causing fear. At the same time, participants would expect discretion regarding the diagnosis as well as any information entrusted from them. HCWs should also be aware of their own limits and make use of the opportunity of a referral. As part of their education as well as at later stages in their career, they should gain knowledge and experience in the psychiatric context, which would be beneficial also in terms of the contact hypothesis.

> *"We've tried time and again, even with other subjects, to get colleagues to visit psychiatry, inpatient psychiatry. You always get the feeling that there are zombies running around or that 'One Flew Over the Cuckoo's Nest' is still the example of psychiatry and that things are so terrible there. But that's not the case." (CC_VA_P17)*

Interprofessional cooperation could be advantageous in the forms of e.g., multiple professionals respectfully working together in one place (e.g., a joint practice or a hospital) or building a network of different professionals. Additionally, help navigating the healthcare system and coordinating healthcare considerations was regarded as beneficial. As such, assistance with making an appointment with a specialist doctor and with maintaining a healthy lifestyle was suggested. Furthermore, EX-IN (experienced involvement) workers, who have personal experience with mental health problems and additionally completed a specific training, could also be implemented into the system and help improve quality of care. Additionally, ELGA, i.e., the electronic health record in Austria, was seen as enabling interprofessional cooperation.

Enhancing health literacy of people with mental health problems, caregivers, and society in general could also constitute a facilitator as it could lead to higher health awareness, lower scepticism regarding medicine, and emphasize the importance of prevention. It could further help empower people to demand closer investigation more persistently, verbalize a problem, and ask for help.

> *“And since then, I've somehow become more self-confident about it and say: “Although I'm mentally ill, that doesn't mean that I'm not also physically ill”, a sentence I now say. “(CC_VA_P12)*

Finally, the healthcare system should be structured and built participatively, such that people with mental health problems also have a say.

Hindering factors and behavior with potential negative (health) consequences

Symptoms of mental health problems were described as hindering factors by participants. These included lack of energy or drive, emotion regulation problems, concentration problems, mistrust or paranoia, self-neglect, somatization, and self-harming behaviour. Furthermore, fear of medical examinations and of being ill were described as well as struggles with managing daily life, difficulty to judge the severity of one’s physical ill-health, low self-esteem, and lack of body awareness (leading to late recognition of somatic symptoms and consultation of a physician).

> *“If it's depression, then it's a lack of drive, so to speak, or not being able to overcome something, if it's mania, then he feels so great that he doesn't need it. If it's schizophrenia, he feels impaired or influenced, or he doesn't want to admit it. Or he exaggerates it in a different direction, so that he thinks he is seriously ill. And then of course he does it, but then it's not really prevention in the sense that you say: 'Look after your health.'” (CC_VA_P17)*

> *“It just affects motivation, because if I think to myself, "Well, I don't care if I live or die anyway", then I don't necessarily think, “Okay, I'll take some preventative measures or something”. I don't know, if you're feeling bad and you just think, “I don't know, maybe I'll die by suicide at some point anyway, why should I worry about this or that now, health-wise?” (CC_VA_P08)*

Mental health problems may further be associated with **physical health problems**, such as pain, accelerated heartbeat, and worsening of immune system functioning due to stress. At the same time, people with mental health problems may deal with physical health problems differently (e.g., a lack of adherence to diabetes treatment) and may neglect or trivialize physical symptoms. The other way around, physical ill-health may also cause psychological problems.

> *“A lady who came to me in the outpatient clinic, precisely because of depression, said she had sensations in her breast, in the nipple, and thought it was psychosomatic. And since the outpatient clinic was well integrated into the clinic, I immediately referred her for an examination. And unfortunately, it was a very rare but serious breast cancer. It was very bad, so the prognosis was correspondingly poor. And because of the depression, she thought it was part of the depression, so to speak, interpreted it psychologically and in reality, it was unfortunately a very progressed breast cancer.” (CC_VA_P10)*

> *“However, with a really serious physical history, psychological problems can also be added to the mix, simply due to the extreme stress caused by a long-term serious illness.” (CC_VA_P14)*

Medication intake can further be experienced as a hindering factor as it may e.g., hinder physical activities. Some participants reported using self-medication (e.g., substance abuse), or worsened mental health problems due to medication taken for physical health problems or being afraid of potential side effects.

> *“There were definitely times when I chose other paths, let's put it that way. That was the time when I said, yes, I prefer alcohol. And I (...) nobody can help me anyway. And I'd rather be dead than alive. [...] Because just this, yes, being put in this drawer was so bad too.” (CC_VA_P20)*

Undesired health behaviour was reported, such as smoking tobacco. Difficulties keeping appointments and refusal of medical treatment despite cancer symptoms were also described.

> *“I quit smoking twice and managed to do it for 3 or 4 months, and that's exactly when someone in my family passed away. At some point I was so afraid to stop. As if someone else in my family would die if I quit again. Unfortunately, my brother has now passed away and I haven't stopped. So, you can see that I wasn't right. Because that was probably also a strategy to find excuses why you can't stop.” (CC_VA_P15)*

> *“Exactly, because I now have a patient who actually has a (...), something tumour-like on her breast and they've actually told her it's probably breast cancer and she doesn't want to undergo treatment, for example.” (CC_VA_P13)*

Lack of social contacts and support as well as **stigmatization** were further named hindering factors. Participants described that a lot of people with mental health problems were socially withdrawn and felt uncomfortable in groups. However, social contacts could also potentially have a bad influence and lead to undesired health behaviour. In addition, participants described stigmatization, prejudices, downgrading, and social exclusion because of a mental health problems diagnosis. Self-stigmatization, self-blame, and feelings of guilt and shame regarding mental health problems were also described as issues.

> *“Yes, well, it's really my own fault because I do nothing, nothing and I just want to rot obviously.” (CC_VA_P12)*

> *“I'm obviously (...) impaired, which is really unpleasant for me, I don't want to walk through the city (cries). I just have to stay in my apartment (cries).” (CC_VA_P12)*

Another proposed hindering factor was **unemployment** and little **financial resources**. Furthermore, depending on living in a city or rather a rural area, access to sports was described as more difficult due to e.g., the necessity of a long drive.

Resources and behavior potentially beneficial for health

The **Resources** named comprised social support, financial resources, intrinsic motivation, perseverance in spite of tiredness and exhaustion, self-determination, sufficient sleep, a healthy diet, and experiencing self-efficacy. Furthermore, positive experiences were seen as a resource, including physical activity (e.g., going for a walk), reading, and creative activities. Developing coping strategies was also reported as a resource (e.g., skills training) as well as paying attention to one's own health and taking self-initiative.

Considerations for the Patient Navigation Mode

Participants were in agreement that the idea of a patient navigation model (PNM) tailored to people with mental health problems would be a good idea. They had several ideas regarding the **role of the patient navigator** who should receive adequate training, have professional experience in the psychosocial field and with mental health problems. The patient navigator should take on a coordinating role and work together with other professionals, caregivers, and trusted persons. They could also offer further training to other professional groups and thereby help sensitization and promote interdisciplinary cooperation. The patient navigators could come to various support bases (e.g., fully assisted living) to reach people with mental health problems, including people with diverse cultural and national backgrounds.

The **relationship between the person with mental health problems and the patient navigator** should be built at eye level and characterized by trust. The patient navigator should be sensible, respectful, motivating, and flexible and strengthen self-esteem and self-care. The patient navigator should be aware of the individual problem history and family history as well as individual needs. The patient navigator should offer appropriate information and options of social support patiently in a nice atmosphere, use simple, comprehensible language, and provide sufficient resources. The patient navigator should further be aware and have an understanding that people in the acute phase of a mental illness do not focus on prevention. The patient navigator should stay in contact, offer regular meetings, and communicate openly as was suggested in the following example:

> *"I actually think it can also be a benefit if I communicate as the treating person: 'I don't know what to do with this situation right now, please help me' or 'What do you think about this? I think that can also be really important - it doesn't always have to be a constructive answer, but I think it's really important to be open about it and not hide behind this professional cloak, which is really just a deceptive façade anyway." (CC_VA_P06)*

The **patient navigator tasks** could consist of providing information on already existing programs, offering health counselling, and promoting prevention, while not only focusing on cancer prevention but health promotion in general. In addition, patient navigators could help to prepare and evaluate medical appointments, send appointment reminders (e.g., via text or email), and accompany people with mental health problems to appointments.

> *"I find it [Appointment reminder] very, very important to stay on track. To make a commitment, to set an anchor, possibly where a commitment is attached. Because you are more likely to do something if you are committed to others than if you are committed to yourself." (CC_VA_P22)*

Participants mentioned several potential **barriers** hindering the patient navigation model. Insufficient resources and financial costs were named as well as a focus of the healthcare system and politics on having sufficient surgeons and nurses and a lack of focus on people with mental health problems or prevention. Participants also saw a potential difficulty in motivating people with mental health problems to participate and they emphasized that it would be important to accept rejection of help. Another potential barrier on the individual level could be anxiety induced by the term "cancer" and of a potential cancer diagnosis, which could prevent people from attending preventive examinations. Difficulties were also perceived in association with mental health problems due to e.g., limited resources to care about cancer prevention, or difficulties with smoking cessation without therapy. A lack of understanding of the importance of preventive measures was perceived in society in general and not limited to people with mental health problems. Other named barriers included the feeling of only being a part of a study, language, data protection, and that the project's success is only possible years later.

> *"It shouldn't be financially burdensome, because if it is financially burdensome, then it's quickly over for many people. Because I keep hearing that many people tell me that they're really only working to be able to afford their therapies and so on. And that's a disaster, of course. That I only have to go hacking full-time so that I can afford my life and these therapies."* (CC_VA_P18)

Regarding **facilitators**, participants described a good fit and sympathy between people with mental health problems and patient navigators and a fixed contact person as helpful. The meetings should be fun, and include a variety of offers, breaks, and rewards to raise awareness of success. Patient navigators should ask for contact details to be able to offer support in case the person stops attending appointments. Coordination efforts could also involve peer workers (e.g., people with their own mental health problems experiences, former smokers) and other parties (e.g., NGOs) and therefore aim at a participatory and inclusive design. The patient navigation should be low threshold, without costs for the people with mental health problems or with the option for financial support, characterized by little commitment (i.e., being able to join or stay absent), and high flexibility (e.g., establish contact via phone or email). There should be options to ask questions and receive recordings or notes on the most important points of a meeting and the program should be easily understandable and offer additional meetings, if necessary. A follow-up evaluation to assess the success of the model was recommended.

Participants saw **advertising and high visibility of the patient navigation model** as essential to its success. They proposed (trendy) campaigns with cool slogans, target group-oriented advertisement, communication of the relevance of prevention to society via the media, and work with existing organisations who could refer clients.

People with mental health problems could **benefit from patient navigation** as they should gain social support, strengthen personal resources, build self-care in times of crisis, and replace maladaptive with beneficial coping strategies all of which may positively affect mind and body. Participants also suggested implementing additional benefits for people with mental health problems (e.g., free lunch). Success in improving the health of people with mental health problems could be beneficial for patient navigators' work motivation and learning. On the system-level, the model could help reduce cancer incidence and early detection. Long-term benefits include saving costs (e.g., fewer treatments necessary), reducing sick leave and early retirement, which would lead to a relief for the healthcare system. Furthermore, society could benefit from individual self-care which would lead to a healthier and more satisfied society as a whole as well as to de-stigmatization.

> *"(…) then the human right to health, especially for this target group." (CC_VA_P10)*

App

With one exception, most participants expressed an interest and openness towards **utilization of an app** as part of the CO-CAPTAIN project but stated specific conditions that would be of importance to them for implementation. The structure should be simple and attractive and the app utilization should take little effort. Furthermore, it would be advantageous to enable customization of the app and to combine several features into a single app. Support and help with using the app could be provided by HCWs, although this could lead to resistance from HCWs and be seen as an additional burden. An app for HCWs similar to ELGA (electronic health record in Austria) was also suggested.

Participants had several ideas for **app features**, such as receiving information (e.g., cancer prevention), offers for physical activities and social interactions, instructions for meditation or implementing changes in daily life, a (mood-)diary, gratefulness exercises, an option to track one's own progress, a chat function coordinated by a patient navigator, self-help groups, a discussion forum, and a feature to quickly ask for medical help. For the app contents, a holistic approach to prevention should be aimed at.

Participants saw **potential advantages** in the app as a low-threshold tool that would be easily integrable into daily life and could function an orientation aid (e.g., as a pedometer) with the potential of enabling a feeling of being seen and raising motivation (e.g., for physical activity). Furthermore, the app has a large data pool potential that could aid in motivating health policy actions.

> *“Why? Because you can browse through it anonymously and get information, and then you might even dare to make use of it.” (CC_VA_P17)*

Participants also saw **potential disadvantages** including long phone-use durations, questionable adequate access for all groups (e.g., due to concentration difficulties), questionable reliability (e.g., crashing), data protection issues, and potential problems due to mental health issues (e.g., paranoid feelings of being controlled or pursued). Furthermore, it was seen as unhelpful to derive political guidelines from the app; instead, individual clinical issues should be improved upon with the app.

> *“There are special patient groups within psychiatry who could then process this in a paranoid way, that someone is looking in there and processing everything, and 'I've become a public figure' and so on. And who have fears.” (CC_VA_P17)*

Regarding **app acceptance**, participants thought that it might depend on the age group. The requirement of owning a smartphone could be problematic. While the app could convey security, data protection and transparency regarding utilization of data would be important and vulnerability and potentially bad past experiences should be considered. Data collection should be treated as an 'add on' instead of being mandatory. Additionally, it would be important for the app to be financially affordable. Acceptance could further be raised by creating a user manual.

FINDINGS - GREECE

Sociodemographic data and health

The sample comprised of 21 participants, including 10 people with mental health problems, three care team members, three representatives of mental health organisations, three representatives of service managers, and two caregivers. Sample characteristics are displayed in Table 2.

Table 2

Participant information

ID	Age	Gender Identity	Further information
CC_AG_P01	30	Male	A social worker, who has a Master of Science (MSc) in Psychotherapy
CC_AG_P02	46	Male	A care team member, a psychologist, whose studies are in psychology (Bachelors and MSc)
CC_AG_P03	39	Female	A care team member, a social worker, who has an MSc in Psychotherapy
CC_AG_P04	58	Female	A representative of a public mental health care canter, a psychologist, with a PhD
CC_AG_P05	36	Female	A representative of an NGO providing medical and psychosocial support to migrants/ refugees facing mental health issues, a psychologist, with studies in psychology and a MSc in public health
CC_AG_P06	47	Female	A representative of an NGO that provides psychosocial support to refugees. Previously she was working as a researcher in an NGO active in the field of public health, a psychologist, with studies in psychology (Bachelor & MSc)
CC_AG_P07	62	Male	A service manager, a psychiatrist, (Md & PhD)
CC_AG_P08	67	Male	A service manager, a psychiatrist, (Md & PhD)
CC_AG_P09	55	Male	A service manager, a psychiatrist, (Md & PhD)
CC_AG_P10	70	Female	A carer, a mother, who is a pensioner (previously a painter)
CC_AG_P11	76	Female	A carer, a mother, who is a pensioner (previously a schoolteacher)
CC_AG_P12	44	Female	Patient, who is a janitor. She is diagnosed with psychosis and schizoaffective disorder
CC_AG_P13	40	Male	Patient. With a Master’s degree, Unmarried, lives with sister and mother. Undiagnosed

CC_AG_P14	59	Male	Patient. Has a bachelor’s degree, works in the public sector, married with two children. He is diagnosed with depression
CC_AG_P15	54	Male	Patient. High school graduate, public employee as a guard at a library. He is diagnosed with schizophrenia.
CC_AG_P16	64	Female	Patient. Survivor of GBV, attended private school. Uninsured. She is diagnosed with depression.
CC_AG_P17	44	Female	Patient. Master in management of tourism, now works part time at a social co-op. She is diagnosed with recurrent depressive disorder and anxiety disorder.
CC_AG_P18	29	Female	Patient. High school graduate, disabled at 67%, has been through the committee twice. She is diagnosed with borderline personality disorder
CC_AG_P19	58	Female	Patient. Used to work but doesn’t anymore, unmarried. Diagnosed with depression, panic attacks and phobias.
CC_AG_P20	61	Male	Patient. Previously a physicist. Not working for 6 years now; on disability retirement due to mental health problems. Diagnosed with bipolar disorder.
CC_AG_P21	57	Male	Patient. High school graduate; works in the public sector, with two children. Diagnosed with depression.

Note. ID: CC = CO-CAPTAIN, AG = Athens, Greece, P01 = Participant number 1.

Knowledge on and utilization of health/well-being promotion and cancer prevention

Regarding people with mental health issues, the majority of the participants mentioned that knowledge on cancer prevention and prevention awareness are very important factors concerning cancer preventive strategies. They seem to be aware of preventative measures and exams that can reduce the risk of developing cancer or detect it at an early, treatable stage.

> *“I have heard that those who have a family history, after the age of 40 should be tested for their prostate.”* (CC_AG_P14)

The majority have basic knowledge and understanding regarding measures aimed at avoiding or minimizing specific risks or diseases. People with mental health issues highlighted the importance of diet on physical and mental health problems prevention as well. Many participants stated that they may benefit from taking proactive measures to avoid or mitigate problems, risks, or undesirable outcomes.

> *“Prevention is key. And of course, it also means lower costs for the services of the state, the health services, for the patient who, if he does not get sick, will be spared the psychological burden and the cost of drugs and possibly this environment. All this. It is crucial, in my opinion.” (CC_AG_P14)*

> *“I have been to dieticians; it was a good experience. I have also done a program where they send you meals to your home and to the gym, they helped me a lot, physically and mentally.” (CC_AG_P19)*

> *“Prevention is important to stop something that could come, or help you address it easier. Prevention is always helpful.” (CC_AG_P19)*

However, some of them reported lack of knowledge and awareness about strategies and practices that can reduce the risk of developing cancer or detect it at an early, treatable stage. Some of them do not possess enough knowledge on physical health issues.

> *“I don’t know much about cancer, almost nothing, that is, all I know is that in most forms of cancer that no suitable drug has been found to cure this deadly disease.” (CC_AG_PP18)*

Moreover, a minority of the participants concerning the group of people with mental health problems, reported that they conduct all required examinations to monitor their health and receive health promotion education. A handful of participants also stressed the importance of prevention programs and other prevention opportunities.

> *“I try every year to do a blood test and try to do the Pap-test for women, I did the bone mass test last year, which is preventative, and done once every two years.” (CC_AG_P12)*

> *“For patients who attend day hospitals, day centres, and have group psychotherapy there should be experts, health professionals who know about cancer, or a dietician, and talk to patients and give them guidelines on a healthy*

> *diet, cancer prevention. They should approach patients in a nice way, so that they can work together for the good of physical health and by extension mental health.” (CC_AG_PP18)*

Participants discussed their motives to take action to avoid or reduce the risk of a particular problem, disease, or undesirable outcome through proactive measures and behaviours.

> *“Even though I’m scared, I go [to the doctor] ... I go because I have to go, it’s important. Is it logical to sit and suffer and not go to the doctor?” (CC_AG_P16)*

The thought of cancer in in people experiencing mental health problems will also burden their psychology, as cancer is associated with death.

> *“I’m scared what the doctors will tell me, because of what happened to my mother it could make me faint.” (CC_AG_P16)*

Concerning professionals that participated in the study, service managers are aware of cancer risk factors, and they stated that the main factors that can lead to cancer are smoking and weight gain. Smoking cessation promotion was highlighted, and knowledge of smoking cessation programs within the workplace and referring people with mental health problems to them, was also mentioned as an important issue.

> *“It's very likely that a patient is smoking more and more, more and more. Nicotine is a stimulant drug and it wakes him up. That's one reason. Another reason is obesity. That's another reason for cancer.” (CC_AG_P09)*

> *"I am aware, from my work, of the smoking cessation clinics available in public hospitals, and I have referred patients to them.” (CC_AG_P04)*

Most of the participants regarding the health professionals’ groups seemed to be aware of the impact of stress on physical health. According to them, possibly, there is an increased risk of cancer development in individuals with mental health problems due to high levels of stress.

> *"Because stress levels are very high. I have seen such individuals manifesting cancer.” (CC_AG_P03)*

This fact suggests a close relationship of mental health problems to physical health problems. They also referred to risk factors other than smoking, such as substance abuse; however, a service manager pointed out that there is lack of systematic information on cancer issues from the professional environment. Inadequate information about cancer issues was mentioned as a problem according to care team members. Information is mainly sought due to personal interest. A care team member mentioned that no adequate information is provided to professionals regarding behavioural changes or programs related to cancer prevention, thus their knowledge of the actions regarding cancer prevention does not come from their work in this particular organisation.

> *"To be honest, no... There isn't any information at a professional level. It's more of my own personal interest... Because someone close to me is sick with cancer." (CC_AG_P07)*

> *"Certainly, there are relevant actions I am aware of... The truth is, I am not aware of them within my professional specialization. We do not receive information through other channels or from our organisation, neither through the regulatory bodies, namely the Ministry of Health." (CC_AG_P01)*

The importance of acquiring knowledge related to cancer prevention in individuals with mental health problems, was also pointed by some of the participants, as they stated that there may be lack of knowledge about cancer issues, and information may be acquired due to personal interest.

> *"My information is somewhat occasional and situational. My wife is a doctor, so we tend to discuss certain things. I also have personal interest and experiences with cancer in my own environment." (CC_AG_P02)*

Some of them, mentioned that knowledge may arise from the social environment about breast cancer prevention actions.

> *"I do know about campaigns that are conducted for breast cancer." (CC_AG_P04)*

Participants in the carers' group recognize the importance of prevention in general, as well as the importance of preventive measures for the physical health of people with mental health problems due to their status and the medication they are taking. For example, a carer organizes the necessary preventive examinations for her son every year. Another carer referred to the importance of motivation for prevention.

Carers also mentioned that people with mental health problems realize the importance of cancer prevention, leading them to undergo preventive examinations, such as gynaecological examinations whenever necessary. It was also mentioned that promoting smoking cessation may benefit them in regard to cancer prevention.

> *"Generally, prevention in health matters is important for my son. It is important for all of us, but even more so for my son because he takes a lot of medication." (CC_AG_P10)*
>
> *"In my case, my daughter used to smoke and she no longer does, exactly because she fears cancer - while of course thinking of her child as well. If she didn't have any children, it probably wouldn't bother her and she would continue smoking a lot. I had told her that smoking puts her at risk for cancer, and even though she would understand it, she would continue to smoke. Fortunately, she has now quit." (CC_AG_P11)*
>
> *"She will go for the Pap test, and a breast check-up as well. She is quite aware."*

Barriers to healthcare access and utilization

Health professionals reported that people experiencing mental health problems often **do not engage in systematic preventative check-ups**; thus, when diagnosis is received it tends to be at a late stage. Several participants with mental health problems also reported **delaying seeking healthcare** and medical attention, either due to **fear** of hospitals, clinics or fear of diagnosis.

> *"We have seen many times that some individuals who face problems with cancer often receive their diagnosis at an advanced stage. This is primarily because they don't undergo preventive screenings. They do not consider the necessity of undergoing preventive examinations. However, some other women who went for gynaecological screenings discovered that there was a more serious issue." (CC_AG_P06)*
>
> *"Sometimes, I may leave something if I don't see that I have certain symptoms ... I may leave it for a certain time period and see that the symptoms continue or the*

> *pain comes back or something else specific. I won't go with something small and start looking into it." (CC_AG_P13)*

Moreover, many of them also indicated that they **prioritize the monitoring of their mental health over physical health**.

> *"The psychological, psychiatric issues take priority, as it is definite that there is a problem there so I first prioritize my psychiatric issues and then the rest of my health." (CC_AG_P12)*

Health professionals also cited the **health system** itself as a barrier to access and use of health care, since there is dysfunction in the healthcare system, at all levels, including regarding systematic cancer prevention actions.

> *"The public healthcare services in Greece operate like war zones. Limited personnel and too many cases. This makes preventive services challenging." (CC_AG_P01)*

Certain participants reported feeling othered when interacting with some health professionals as a result of their mental health problems. Therefore, cancer prevention becomes more challenging for individuals with mental health problems**.**

> *"The way the system operates often makes you feel like you're fighting alone for a person, and it can be exhausting because you can't achieve the results you'd like. You're not effective. For example, if you've managed to persuade a severely depressed patient to schedule a mammogram, and the appointment is set for four months from now... you feel a sense of futility. This person is unlikely to follow through after four months." (CC_AG_P01)*

> *"The stigma surrounding mental illnesses, such as psychosis, can lead to social isolation and even make it difficult for individuals to engage with or seek help from the healthcare system. Healthcare professionals might also exhibit bias or stereotypes, affecting their interactions with these individuals."* (*CC_AG_P05)*

Participants with mental health problems also referred to the **healthcare system** as a barrier itself. More specifically, they mentioned (a) **long wait times in public health system,** (b) **shortage of personnel/resources,** (c) **stigma,** (d) **previous negative experiences when visiting physicians working in the public sector,** and (e) **lack of**

stakeholder collaboration to ameliorate the overall health and wellbeing of the service user.

> *"What bothers me is the long wait times. For many specialties, you have to wait months before booking an appointment. Maybe if I mentioned I have a mental health issue, I'd have easier access and communication with a doctor." (CC_AG_P21)*
>
> *"There should be more doctors, nurses, and health professionals, more holistic care, more beds." (CC_AG_P19)*
>
> *"My weight, because I used to be 139 kilos. I remember I had one cardiologist and he looked at me funny and told me that as I am [fat] I must have many problems with my heart that he thought would be difficult to address if I didn't lose a lot of weight." (CC_AG_P18)*
>
> *"A professional has asked me 'ok, and what do you want from me?', which ok you don't ask a mentally ill patient that…attitudes can be aggressive" (CC_AG_P17)*
>
> *"There are little health systems that have pathologists and psychiatrists and psychologists. It is a barrier, especially as is concerned with medication side effects." (CC_AG_P18)*

Other barriers mentioned by health professionals concerned people with mental health problems. In some cases, poor mental health leads to the **absence of social autonomy and social skills**, which complicates prevention and treatment. At the same time, it makes mediation necessary.

> *"Some people may feel anxious about going alone, not having someone to accompany them, or lacking the social skills to navigate a hospital visit, including waiting in a queue. This is where the need for assistance from the organisation comes in."* (*CC_AG_P02)*

Moreover, many people with mental health problems display a **fear and aversion to hospitals,** with carers and health professionals confirming this aversion. Therefore, they are confronted with difficulties in navigating the healthcare system on their own and this fact hinders cancer prevention.

"So, there was always this fear that they would go alone to a foreign place where some doctors will simply give them strict directions without explaining anything to them." (CC_AG_P06)

"They won't even go near hospitals, they're too scared. 'I won't go,' he tells me, 'I won't go.' The only thing he'll tolerate is going to his doctor." (CC_AG_P10)

Participants with mental health problems also argued on barriers that are related to their mental health: (a) **medication side effects,** such as obesity, (b) **lack of capability and mood for physical activity**, (c) **high levels of anxiety.** Healthcare professionals as well as carers also mentioned that medication affects their health and, at the same time, leads to obesity.

"Following the big surgery, I cannot [work out]" (CC_AG_P14)

"I started taking pills here…. they opened my appetite, I used to eat a lot and I became like this..." (CC_AG_P15)

"The last two years, I have many pulses, I went to the cardiologist and they told me that I don't have anything and it's related to anxiety." (CC_AG_P16)

"Some patients with depression receive treatment, specifically taking certain antidepressant pills that are responsible for obesity. Therefore, there is an increased likelihood of cancer." (CC_AG_P05)

"Yes, the medications do affect his health. They gained a lot of weight because of them, especially the one they had blood tests every six months for, which their doctor discontinued for potentially causing health issues later on." (CC_AG_P10)

Facilitators to healthcare access and utilization

A consistent theme highlighted by most health professionals revolved around the significance of integrating **physical health** into the care of people being followed for mental health problems. They stressed the pivotal role played by mental health professionals in motivating these individuals to also prioritize their physical wellbeing. This all-encompassing approach includes practices like regular blood tests, self-care routines, hygiene, the adoption of healthy behaviours, and making necessary lifestyle adjustments.

> *"In psychotherapy, self-care is one of the early topics of discussion. Self-care is a foundation that starts with the basics, such as sleep, personal hygiene, diet, and addressing issues like smoking. Following this, we address medical examinations, such as blood tests, thyroid, which have a direct relation to one's mood. Then, for a woman, we will discuss preventive gynaecological examinations, and for a man, depending on age, we talk about colonoscopy and prostate health, respectively." (CC_AG_P02)*

Additionally, in the context of **cancer prevention** for those with mental health problems, there is a recognized need for a multifaceted approach. This approach encompasses various elements such as dietary considerations, smoking cessation, regular physical activity, and preventive screenings, all aimed at promoting self-care. The recommendations for active participation in these comprehensive programs are seen as a substantial means to enhance healthcare access and utilization.

> *“The actions for cancer prevention in mental health patients should be multidimensional. One should address diet, smoking, exercise, and preventive screenings. They are multifaceted because all these have a common denominator: self-care encouragement." (CC_AG_P04)*

Motivation for prevention was a recurring theme among participants with mental health problems, emphasizing its significance. A personal commitment and a sense of duty to promote physical health and engage in preventive measures were recognized as powerful motivators for individuals to actively seek healthcare services and take proactive steps to prevent health issues. Additionally, participants acknowledged that people within this group may require guidance and support to reignite their motivation for prevention. Support from healthcare professionals and the motivation to take proactive steps were identified as essential components in this process. Furthermore, several participants mentioned the importance of an open and adaptable healthcare system. This system should take into account the individual circumstances of individuals, including their career, motivation, and the provision of robust support systems. Effective communication emerged as a crucial factor for engaging people with mental health problems in this context.

> *“Someone has to work on it with me, for it to get back in my head now.” (CC_AG_20)*

Most of the participants with mental health problems emphasized the significant role of **social support** in promoting healthcare access and utilization. They highlighted that those individuals with a strong support network, which may include friends, family or community resources, are more likely to engage in preventive health checks. Also, this support system has been recognized beneficial for helping them to navigate health services, including appointment scheduling and ensuring individuals receive the necessary healthcare services. Furthermore, in some cases, family members and social support networks may need to be involved to address issues related to drug or alcohol use and provide referrals for rehabilitation.

> *“[Asking for support navigating health services] isn’t difficult, because my environment, my wife is supportive, she guided, helped, researched, and with her there was no obstacle.” (CC_AG_P14)*

Participants further discussed the value of **connecting people with mental health problems** with others who have faced similar health challenges. This buddy system or peer support can make it easier for them to address their healthcare concerns and gain insights into managing their health.

> *“If someone is in contact with someone else with a similar problem, it’ll become something that they can more easily address, if there is communication amongst those in the system.” (CC_AG_P13)*

Furthermore, access to **psychosocial support services**, such as volunteer psychologists, was identified as valuable assistance for individuals with mental health problems.

> *“I used to call on the phone a service, their volunteer psychologists would help. They were very good.” (CC_AG_P16)*

Multiple participants across the different groups emphasized the importance of **accompaniment** in enhancing healthcare access and utilization. This involves providing support, guidance, or company to individuals during healthcare activities, particularly for individuals lacking social autonomy or facing challenges in navigating the healthcare system independently. Healthcare providers play a crucial role in accompaniment by mediating appointment scheduling and ensuring access to services, as it fosters a willingness to engage in preventive healthcare services when accompanied by a designated person.

> *“He would listen to what you would tell him, he would go to the appointment, but only if I were with him. Otherwise, I don't think he would go. Neither on his own completely, nor with the person who would mediate." (CC_AG_P10)*
>
> *“I am alone, and definitely need another person who can help me navigate [the health system/cancer prevention care].” (CC_AG_P16)*

Furthermore, the concept of a **fixed contact person** was underscored by some participants. A constant, reliable point of contact is deemed crucial, establishing a personal connection, gaining individuals’ trust, and ensuring understanding and comfort with healthcare interventions, especially in cancer prevention for individuals with mental health problems. The fixed contact person serves as a key element in addressing questions, providing ongoing support, and easing challenges associated with healthcare navigation, ultimately enhancing access to healthcare services.

> *"You should assign someone whose focus is on cancer prevention in individuals with mental illnesses, like my son, for example. If this person tells him, 'Within the scope of this initiative, we will undergo preventive examinations for lung cancer -or- we’ll go for preventive screenings for colorectal cancer,' he will listen and only go if he feels comfortable with them. All as long as he knows about it beforehand, is accustomed to it, and understands that they care." (CC_AG_P10)*

Several healthcare professionals emphasized the pivotal significance of **trust** in the patient-professional relationship, especially in the context of managing physical health. People exhibit a higher likelihood of adhering to advice and recommendations when they sense genuine interest and trust within the therapeutic relationship. This trust not only aids in the effective management of physical health but also fosters people' willingness to accept healthcare guidance. This sentiment is echoed by several participants with mental health problems, underscoring the critical importance of trust and feeling secure within the healthcare system for their active engagement. Immediate access to assistance and a comforting environment for seeking care are integral aspects.

> *"You care about building a trusting relationship with the patient, and over time, you see that what you say is taking hold. The same applies to matters of physical health when you advise them on such issues. They listen to the therapist more than someone they don't know or have only seen briefly." (CC_AG_P01)*

This **trusted relationship** is crucial for managing the prevention of physical health issues, as highlighted by most participants. Messages and guidance from healthcare providers, including physicians, psychologists, and social workers, play a pivotal role in motivating people to participate in preventive healthcare programs. Effective communication was underlined in multiple instances. Some participants emphasized that when therapists encourage people to care of their physical health this builds trust and serves as an enabler in the therapeutic relationship. Others note that improved communication fosters positive interactions and plays a significant role in building trust. Establishing a face-to-face relationship is deemed important for effective navigation of the healthcare system and addressing health issues.

> *"Those who have received treatment find something caring when you advise them to take care of their health. It shows interest for them. They come with the need to trust you, so talking to them about healthcare is a way." (CC_AG_P02)*

> *“They have to cultivate proper communication so that each patient can feel comfortable to perform preventative tests that are needed’ (CC_AG_P13)*

> *“The relationship between the professional and patient is important. They will guide the patient.” (CC_AG_P16)*

Seeking **professional help**, especially from trained and qualified professionals like psychotherapists and psychiatrist, is encouraged, serving as a vital facilitator for addressing mental health concerns.

The importance of **sustainable and effective programs** for cancer prevention in individuals experiencing mental ill-health was underscored by both participants from this group and by health professionals. Emphasizing the need for long-term, targeted campaigns, they highlighted that such sustained efforts serve as motivators, fostering changes in attitudes towards cancer prevention. This perspective acknowledges that short-term interventions might not yield significant results, necessitating therefore a focus on enduring actions. Another critical factor affecting program effectiveness is the level of distress caused by mental health problems. When distress is high, people may be unprepared to engage in preventive measures for cancer or self-care. Collaborating closely with mental health professionals becomes crucial to accurately assess the situation and tailor healthcare interventions accordingly.

> *"If you tell someone not to smoke, they won't necessarily stop smoking. But if you implement systematic and targeted actions, something can change. And time matters for mentally ill individuals. Long-term actions are necessary to see results." (CC_AG_P04)*

Emphasizing the importance of clear and simple communication in **health education** delivery, health professionals underscored its critical role in enhancing understanding, preventing misinterpretations, and improving overall healthcare access. Additionally, the recommendation for training sessions and seminars for self-development, particularly for professionals like social workers and psychiatrists, was reiterated by several participants with mental health problems, highlighting the value of enhancing mental health professionals' competence in health promotion communication. In the context of health education, promoting awareness through essential training sessions or classes on health and wellness was highlighted, aiming to shape attitudes and increase knowledge at both individual and community levels. Furthermore, some participants with mental health problems suggested diverse approaches, such as videos and discussions with individuals who have faced similar health challenges, so that they can share solutions and insights drawn from their lived experiences.

> *"The use of simple language during communication would be a fundamental element for its success, not only to make what is presented easily understandable but also to avoid any misinterpretations." (CC_AG_P05)*

> *“Even via video, with someone with a similar problem asks for solutions. The individual can see that this person with a similar problem as me went there and addressed it in this way which I may need.” (CC_AG_P13)*

Highlighting the significance of **competency** among healthcare professionals in serving individuals with mental health problems, both the latter and health professionals stressed the importance of education and training in this field. Some emphasized the need for professionals to possess a comprehensive understanding of mental health issues and having specific training to address the unique needs of these specific service users. Others focused on the importance of training programs, including seminars that address approaching service users with mental health problems, utilizing effective tactics, and adhering to behaviour protocols. The collective objective of these efforts would be to improve the adoption of preventative behaviours and actions for individuals experiencing mental health problems.

> *"Social workers and psychiatrists should do seminars for themselves as well, for self-development and awareness." (CC_AG_P12)*

The collective viewpoint of participants with mental health problems highlights the crucial significance of an **individualized approach** in healthcare programs. Recognizing the diverse needs and circumstances of each person, they emphasized the importance of tailoring interventions based on factors such as psychological state, educational level, age, willingness to cooperate and overall health. This person-centred approach also extends to considerations of the person's environment and the level of support available, thus not only helping to prevent misunderstandings but also to ensure that the specific needs, concerns, and preferences of the person are taken into account, ultimately contributing to improved healthcare access and utilization.

> *"It should take into account the patient's psychological state, educational level, age, willingness to cooperate and tend to their general health. It's also good to have contact with the patient's environment to see if it's supportive or not because I imagine the model will be modified in case there is a problem" (CC_AG_P14)*

Addressing mental health issues involves a dual focus on **sensibilization** and combating **stigma**, as highlighted by participants with mental health problems. They emphasized the importance of raising awareness and reducing stigma linked to mental health through public information and education. Creating an environment where individuals feel encouraged to approach the healthcare system without fear is deemed crucial. Treating with equal respect individuals with mental health issues is seen as instrumental in diminishing negative stereotypes and discrimination, fostering a more inclusive and supportive societal perspective.

> *"A person who has a mental illness should be treated more humanely, so that we don't have the stigma of a crazy person." (CC_AG_P16)*

Participants with mental health problems advocated for proactive **recommendations** to enhance preventive measures, particularly in the context of mental health. They proposed the creation of a comprehensive record, whether in the form of a card, booklet, or digital document, detailing previous examinations including dates, locations, and frequencies. This personalized medical history would assist them in monitoring their health and ensuring timely preventive tests. Moreover, they emphasized the importance of providing recommendations for individuals to engage in prevention programs. This outreach could be achieved through group health promotion education conducted in various settings like day centres, psychiatric clinics, and hospitals. These educational sessions will aim to inform individuals about crucial health topics such as cancer prevention and smoking cessation, fostering a proactive approach to health maintenance and promoting trust in the healthcare system through in-person communication.

> *'There can be a card that says the regular mammogram exam? Tick. Pap test? Done then, and done then again, so there could be records. Like a booklet that describes what tests have been done and where. Not necessarily on paper. It should be there as data." (CC_AG_P12)*

> *"With the communicative (face to face) component, you can change someone's perspective about how a doctor is, the healthcare system, what it provides, and get into their head that a little bit that you can benefit from their support." (CC_AG_P13)*

The discussions on **medication adherence** among this same group highlighted the critical role it plays in healthcare access and utilization. While some patients have found stability through the right medications, adherence remains a challenge for others, with resistance to medication intake observed in certain cases. The intervention of caregivers is recognized as essential in ensuring proper adherence. Participants expressed satisfaction with their consistent adherence to medication, deeming it a facilitator for healthcare access. They stressed the importance of adherence, particularly in high-stress periods or when facing influences that may negatively impact their mental health. Overall, adherence to medication emerges as a pivotal factor influencing healthcare outcomes and access.

> *“I am very satisfied and I am taking my treatment steadily. Of course, in the past, there have been episodes when I had stopped.”* (CC_AG_P14)

Hindering factors and behavior with potential negative (health) consequences

Almost all participants reported the impact of mental health problems on their health to be substantial. This was attributed to the physical influences of mental health related issues, such as tiredness and fatigue. More specifically, mental health problems seemed to decrease motivation, deteriorate memory, increase tiredness, and to be linked to phobia/irrational fear of physical disease. These effects lead to constant disappointment, both due to the feeling of being useless as well as due to the feeling of burdening loved ones.

> *“You have a sense that you can’t respond, you want to constantly demonstrate certain abilities, but you struggle with memory, if you forget, if you remember one thing, you are tortured…it is a situation that brings you down very much psychologically, it makes you almost feel useless, you cannot help your loved ones, you burden them psychologically because they see you in a situation they are not used to.”* (CC_AG_P14)

> *“When I am in bad shape psychologically and I wake up in the morning from bed, I wake up with half a heart, with no motivation to get up.”* (CC_AG_P19)

Furthermore, in half of the participants, the level of distress of the mental health problem has been shown to impact the effectiveness of the program. In particular, ineffectiveness of the action may occur if people were in phases with high levels of distress since it impacts their willingness to accept help and enforce behavioural changes. In these phases, even the smallest of tasks may be impossible to carry out, while each relapse becomes harder to recover. The therapeutic goals wouldn’t consequently be cancer prevention or self-care, and these individuals would not be able to engage in preventive measures for cancer.

> *“If you are in the early stages of your diagnosis and have not stood on your two feet yet, then even a phone call is extremely difficult (to healthcare provider). You may not have the number or know what to say to the operator.” (CC_AG_P12)*

> *“And while I was going through all of that. I found that every time there was a relapse the situation got worse, it was harder to recover. Especially in this last relapse it took me several months. It took me, it took me close to a year. Not to mention almost a year to fully recover, meaning how I was feeling myself. I learned, of course, from that.” (CC_AG_P14)*

Some participants neglected self-care, mostly due to being too apathic and depressed to be able to set up appointments and perform regular diagnostic tests, to an extent that it threatened their health. Importantly, this was also reported by almost half of the healthcare professionals, who stated that there is a risk of cancer development in individuals with mental health problems, especially in cases where they do not take care of themselves, meaning they may not eat properly, not engage in physical activity, smoke heavily, and may not undergo the necessary medical examinations. Interestingly, healthcare professionals mentioned that participants connected cancer and mental health due to neglect of physical health prevention, especially in cases of more severe mental ill-health, such as chronic or severe depression.

> *"People with mental health disorders, especially those who neglect self-care due to their mental illness, have an increased risk of developing cancer. They won't go for their check-ups."(CC_AG_P04)*

Delaying seeking healthcare and medical attention was described as an additional hindering factor by around half of the participants.

> *“There has been a time when I haven’t asked for support or delayed seeking care. It was a difficult decision to make to ask.” (CC_AG_P21)*

Similarly, around one third of healthcare professionals highlighted the fact that service users show difficulty adhering to recommendations for physical health, i.e., putting their therapists’ recommendations for taking care of their physical health into practice.

> *"Now, there's a big difference between us suggesting it and them deciding to do it and asking us to make an appointment that they actually do end up going to.*

> *Because many times we make appointments and they don't go for various reasons of their own. Maybe they regret it, maybe they forget, maybe they think something else is more important at that time and that preventive stuff isn't that important after all." (CC_AG_P6)*

Some participants were also found to stand in their own way, by being unwilling to change perspective, attitudes, and behaviours. Furthermore, participants reported the feeling of fear regarding hospitals and worsening of physical health.

Importantly, risk factors for poor health have been underlined by both service users and healthcare professionals. Those refer to characteristics, behaviours, or conditions that increase the likelihood of a negative outcome or the occurrence of a specific problem or disease. Participants with mental health problems acknowledged various risk factors, such as weight gain, eating unhealthy food, smoking and drinking. Professionals reported that people experiencing mental health problems sleep a lot, lead a sedentary lifestyle, are heavy smokers and drink too much coffee. The factors that influence the development of cancer in this group are lack of good personal hygiene, poor diet, smoking, and absence of a supportive social network.

> *"We start with the aspects related to their personal hygiene, their diet, meaning that they tend to eat unhealthy foods. Then we move on to their personal relationships; usually, there is no social support network, or their relationships are not good. Some of them smoke heavily. All of these factors affect the risk of cancer." (CC_AG_P1)*

Finally, social isolation was found to be an important factor with negative health consequences, as reported by a few healthcare professionals. This refers to an individual’s absence of social connectedness, limited interaction with others, a sparse network of social interactions, and a shortage of satisfying and meaningful relationships. These elements can indeed impact the prevention of cancer in this group, as their presence can be catalytic in motivating these individuals to follow a healthier lifestyle.

> *"You know, these people don't have many friends. [A patient’s] social life is somewhat limited. People like them have trouble with friendships. They don't have many social circles." (CC_AG_P11)*

Resources and behavior potentially beneficial for health

Named resources include **empowerment**, **combating social stigma**, and **promoting active living**, as well as fostering **trust through a supportive network**, offering **family therapy**, **financial aid**, and **comprehensive social support**. Additionally, prevention strategies are all-encompassing, encompassing **creative endeavours**, **regular exercise**, and **medication**. Creative pursuits, the adoption of healthful habits, taking personal charge of health, **self-care**, understanding the repercussions of mental health issues, consistent communication with healthcare providers, physical exertion, drive, self-guidance, artistic undertakings, and dietary habits are deemed paramount.

With regards to artistic endeavours, individuals find profound fulfilment in **creative pastimes** like comic design, authoring books and knitting, which serve as outlets for knowledge sharing and imaginative expression. They also partake in Greek dancing, promoting both mental and physical vitality.

> *"I love Greek dancing; it gives me energy and helps me mentally and physically." (CC_AG_P20)*
>
> *"I used to cook before the depression, I found it as a creative pursuit." (CC_AG_P20)*
>
> *"I design comics, I've written some books, I find a release. It interests me to create something, to provide my knowledge and share it through some groups I'm a part of." (CC_AG_P14)*
>
> *"I am an avid music listener; I listen to music for 5 hours a day." (CC_AG_P20)*

Communication between service user and healthcare provider is also extremely beneficial for health. The healthcare provider's compassionate conduct, characterized by warmth, reassurance, and tailored attention, such as the formulation of an intricate nutrition guide, significantly bolsters the individuals' confidence and openness to medical counsel. This supportive interaction, underscored by attention to the person's overall health, solidifies their favourable view of the healthcare received and the significance of heeding professional guidance.

> *"When I was in the emergency room, a resident showed me great kindness and understanding, and spoke to me for a long time and we avoided hospitalization…She gave me time, she gave me spice."* (CC_AG_P17)

Physical activity is also imperative and potentially beneficial for health. Caregivers vigorously encourage people with mental health problems to partake in physical exercises, including communal walks. Individuals partake in a variety of physical activities such as walking, playing football, basketball, cycling, swimming, and hiking, which serve the dual purpose of health benefits and pleasure. These pursuits, from daily walks to group sports and explorations of the great outdoors, are dedicated to health and wellbeing.

> *"Every day or every other day, I go for a 40—50-minute fast walk." (CC_AG_P18)*

> *"Yes, I swim, I also go hiking and walk. It helps my physical health and my mental health." (CC_AG_P19)*

> *"I usually do my best effort, so that I don't put myself in a situation where I am not doing physical exercise." (CC_AG_P18)*

Proactive health management was also underscored as a healthy behaviour that people going though mental health issues may require support with. People are actively involved in health surveillance through required check-ups and the pursuit of health education. They adopt an anticipatory stance, particularly when adapting to life changes like new employment opportunities, by seeking added health support to prevent potential setbacks.

> *"Generally, I asked for support. For instance, now with my new job, I asked the doctor to see me for a few hours, because there is always the risk of relapse." (CC_AG_P12)*

Self-care was discussed with all participants with mental health problems regarding its importance to mental and physical health and wellbeing. Individuals are actively involved in practices such as meditation and journaling, amongst others, to bolster their physical and mental health, showing determination and autonomy. These practices range from refraining from alcohol and other substances to keeping a health journal, meditating, participating in traditional dances, enjoying nature walks, and indulging in creative cooking, all contributing to their comprehensive wellness and enjoyment of life.

> *"I do it practically, I started to keep a diary, write down my days and commitments, as to improve my body and my physical health."* *(CC_AG_P18)*

> *"Following studying, I would meditate."* *(CC_AG_P12)*

> *"I meditate, I do different exercises. I've seen a huge improvement in the way I work through emotions."* *(CC_AG_P18)*

Personal accountability was further discussed in the ways it benefits the people's health. Participants with mental health problems acknowledged and took ownership of their role in health maintenance, content with their diligence given their physical state. They also recognized the transformative impact of therapy on their mental distress, which has encouraged them to confront and manage their health concerns more holistically.

> *"In my case, my daughter used to smoke and she no longer does, exactly because she fears cancer, while of course thinking of her child as well. If she didn't have any children, it probably wouldn't bother her and she would continue smoking a lot."* *(CC_AG_P11)*

> *"Because I've been really bad with my psychiatric issues and I didn't take care of them when I should have, I know it is important to be careful. I don't mean to be extremely stressed or anxious, but as prevention. Something I might have, I see it, act on it, prevent it."* *(CC_AG_P12)*

> *"I consider it a hobby to address my mental illness and other illnesses and to learn about what it is that can help me."* *(CC_AG_P17)*

Participants displayed intrinsic motivation, dedication, and **autonomy** to personal advancement, notably in sustaining their mental and physical health. They exhibited tenacity and a resolve to bypass adverse experiences, engage in health-preserving physical activity, and maintain a psychologically self-aware state that endorses their healthcare endeavours.

> *"Generally, I have everything in my mind and I put it in order, I don't leave anything. I tried, even during the bad time periods. Ok when I was in a very terrible*

place, I might haven't got out of bed for a day. But I tried and I didn't let go of the issues. I put them in order and evaluated them." (CC_AG_P14)

"I had a really bad time period, but I promised myself to never go through that again." (CC_AG_P16)

"I don't drink alcohol or any other addictive substances." (CC_AG_PP18)

Family support is also incredibly beneficial to the health of people with mental health problems. Participants declared receiving substantial support from their family network, which provides aid, solace, and motivation to overcome life's hurdles and stress. This support, emanating from parents, siblings, and offspring, is essential in their health management, urging them to solicit assistance and providing practical aid like meals, substantially enhancing their wellbeing and resilience.

"I live with my mother, who is 70, and we have a harmonious life together. Up until 9 years ago, I also lived with my grandma, my mother's mother." (CC_AG_P18)

"I have my mother, my father, and sister, who support me tremendously. If it wasn't for my mother, I may not have asked for help about my physical health." (CC_AG_P12)

"[Asking for support navigating health services] isn't difficult, because of my environment. My Wife is supportive, she guided, helped, researched, and with her, there was no obstacle." (CC_AG_P14)

Considerations for the Patient Navigation Mode

Healthcare professionals argued on the **Patient Navigation Model** potential to capture the interest of mental health organisation employees, since it could strengthen their care offer as well as allowing for the interconnection with other services.

"The proposed action has the potential to generate interest and receive a response from mental health organisations." (CC_AG_P02)

> *"Anything we can add in our work, we want it. This action will still be something more that we will be able to offer to our patients and yes, it fits within our operating framework." (CC_AG_P10)*

> *"In Greece, the interconnection of health services is not easy, and it is not institutionally provided for. Therefore, it either does not happen or it is not easily achievable. Although interconnection is crucial, if the proposed action is implemented in our unit, it will not only strengthen our work but also the aspect of interconnection." (CC_AG_P07)*

Participants with mental health problems expressed their **interest** in the program and their willingness to participate. They also imagined it as having *"patient navigators who would make some appointments with patients, discuss prevention measures so that the patients are also informed, and put them in touch with services. This would be a very good thing" (CC_AG_P18).*

> "*I'm open to it" (CC_AG_P16)*

> *"What I can do on my own, at home, of course I'd be interested and I'd follow it." (CC_AG_P20)*

For the successful implementation of the model healthcare professionals stressed the fact that there is a need for it to become part of the therapeutic plan for mental health service users, since**:** (a) the therapeutic plan takes place in a neutral setting, for example, it is not a specialized cancer hospital, (b) there is a relationship of trust between mental health organisations and people benefitting from their services, and (c) concurrently, it constitutes an opening for establishing a human connection.

> *"Because it is a therapeutic space that the patient turns to when seeking something for their mental health. It is a neutral space, primarily in terms of symbolism... it's not a discussion about cancer at Agios Savvas (cancer hospital in Athens)." (CC_AG_P03)*

> *"You should get in touch with mental health organisations and collaborate with them. They, in turn, will connect you with the patients, who will trust you because you come from an organisation that has already built a relationship of trust with them." (CC_AG_P06)*

According to healthcare professionals some key facilitators towards the PNM’s successful implementation were the following:

A) Address service users who have found the treatment that works well for their mental health and are now able to show interest and follow actions for wellbeing and maintaining a healthy lifestyle.

> *"The key to the success of this action lies in how well-regulated the illness is. For example, it's one thing for a severely mentally ill individual to be at the beginning of their treatment, and another for them to be in the process of changing treatments, and yet another for them to have finally found the treatment that suits them. To help you understand even better, a person who is well-regulated in terms of managing their illness, medically speaking, will show interest in such an action. You'll be able to work with them." (CC_AG_P05)*

B) The person responsible for the linkage in the proposed action should be aware of the particularities of each person. This can be achieved by attending some of the sessions with the doctors, psychologists and social workers. Moreover, based on healthcare professionals' and service users’ testimonies it is necessary for the trainers/mediators to have experience working with mental health, as challenging situations may arise during the implementation of the action, and also to be able to build a relationship of trust with the patients.

> *"The person conducting the action, informing the patients, should be experienced in order to handle any challenging situations that may arise during the information session." (CC_AG_P05)*

> "*But mainly, the person responsible for the linkage needs to get to know the person in front of them and how they function. Our interpreters, in some way, have gotten to know these people, because they attend the appointments, the sessions, and listen to what the patients say to the therapist. So, at some point, they understand how this person thinks. They have also understood, in collaboration with the doctor or the psychologist, how to manage something that the patient might say, something that might trouble them during the visit. Certainly, they come back, go to the psychologist or the doctor, and report what happened during the appointment, what was said, and, more specifically, what*

> *the patient said. This way, they can understand and manage possible reactions from the patient more effectively." (CC_AG_P06)*

> *"There needs to be trust in the whole process, trust and collaboration for the model to be functional." (CC_AG_P17)*

> *"There should be a solid relationship between the patient and the patient navigators." (CC_AG_P18)*

C) A combination of individual and group work with those with people with mental ill-health. Moreover, during the action, it is important for them to be able to discuss any questions they have about cancer.

> *"It is important to listen to the voices of the patients during the action. It shouldn't be just a sterile information session where experts inform the beneficiaries about cancer and the importance of prevention. Patients should be able to ask any questions they have, as they may have many misconceptions in their minds." (CC_AG_P01)*

> *"For some patients the individual approach would work, while for some others the group approach would work better. Through the group, one would be influenced by the other." (CC_AG_P09)*

D) The accompaniment of certain people with mental health problems to prevention services will be necessary at times.

> *"I also believe that there will need to be someone who will pick up a person and accompany them to an appointment, let's say to a smoking cessation clinic, or to a nutritionist." (CC_AG_P01)*

E) Assistance, comfort, and encouragement provided by social networks, such as friends, family members, or communities, to help them cope with challenges, stress, or difficult situations. Therefore, there is a need to address the caregivers/support system of mentally ill individuals and suggest solutions regarding the management of certain matters related to cancer, such as obesity.

> *"If the [patient] isn't convinced, you could approach a family member or someone from their environment, carefully always" (CC_AG_P14)*

> *"Certainly, the existence of a supportive framework will be a positive factor for the effectiveness of the action." (CC_AG_P09)*
>
> *"It would be beneficial for the action to also address the support system of mentally ill individuals, meaning their family or caregivers in general." (CC_AG_P05)*
>
> *"I would focus more on the daily challenges that caregivers face in managing certain aspects related to cancer. For example, issues like obesity or the difficulty they encounter in persuading patients to undergo preventive screenings. I would try to suggest solutions or management methods for these issues, both with the patients they care for and for their own well-being." (CC_AG_P05)*

F) Enhance stakeholder active participation and collaboration through the organisation and implementation of focus group discussion with healthcare professionals working in the participating organisations, beneficiaries - service users and carers and implementing organisation on the development of the PNM. By doing so there would be: (a) enhancement of motivation and active participation of all (b) effective design and implementation of the intervention.

> *"It would be extremely useful to do something like this. It's a very good idea to listen to the opinions of the people who will participate in this action, whether as patients or professionals. It's beneficial to hear all the voices that the action concerns simultaneously." (CC_AG_P01)*
>
> *"Only through this discussion, you can tap into a wealth of knowledge and prevent things that might not fit. And the participants in this discussion will tell you exactly that." (CC_AG_P02)*
>
> *"It would be nice for the patients to see themselves at the same discussion table with their therapists." (CC_AG_P07)*
>
> *"It's a great idea for everyone involved to have their say." (CC_AG_P09)*
>
> *"We are talking about a situation where participation in such a discussion would be an active socialization for her." (CC_AG_P11)*

Some other suggestions were the following:

Carers stressed the fact that the proposed action will be effective if they are in close collaboration with the patient navigator and the doctor.

> *"It would be beneficial for these individuals to collaborate with both the family network and the doctor. Yes, rather than functioning independently, the individual should participate in the sessions alongside the doctor. They should also communicate with the family, informing them about what was discussed, as they can provide further assistance, and so on." (CC_AG_P11)*

The effectiveness of the action should be evaluated over an extended period of time as, according to healthcare professionals' opinion it will take time to become ingrained in individuals with mental ill-health.

> *"Because in mental illness, things work more slowly, you may not see an immediate response as expected. However, if you apply it more consistently, you may see results. In the beginning, there might not be enthusiasm from the beneficiaries, but over time, you can see outcomes. It takes time for them to get involved." (CC_AG_P04)*

A healthcare professional discussed that a possible way to make the action effective for some people is to avoid associating it with cancer, as cancer can be linked with negative feelings. Instead, the action should be associated with positive aspects, encouraging individuals to take care of their health.

> *"You know what? I think the action would be effective if it engaged some patients in things unrelated to cancer. That is, if it met them through the concept of sports, healthy eating. Health should be the path to get there, not cancer. Because cancer is fear... and this way, you might lose some patients. You'll inform them, but then they might not take any action..." (CC_AG_P03)*

Some healthcare professionals mentioned that the type of mental health problems, such as obsessive-compulsive disorder, can be an enabler for the effectiveness of the action.

> *"On the other hand, mental illness can be of such a nature as to facilitate cancer prevention. For example, obsessive-compulsive patients who listen to their doctor and follow their instructions to the letter. For instance, they keep a record of their examinations, etc." (CC_AG_P02)*

Finally, participants with mental health problems mentioned the importance of developing awareness raising actions in order to disseminate the intervention to the beneficiaries.

> *"I think more awareness and informational material, there could be more workshops for those with mental illness to attend and learn… maybe even a campaign, like a government campaign to raise awareness. I think awareness is important in prevention in general." (CC_AG_17)*

> *"There needs to be awareness, maybe an info session or a conference or provide a leaflet for them to read on the program." (CC_AG_14)*

App

Approximately half of the healthcare professionals who were interviewed noted that **mobile phones and application**s have become an integral part of their service users' daily routines. Nonetheless, they emphasized that the effectiveness of healthcare apps can vary among them, as not all are equally comfortable with technology or proficient in using mobile devices.

> *"Mobile phones and apps are a part of many of our patients' lives. I don't think they would have a problem using something like that. However, some others are entirely unable to do so. So, it can be applied on a case-by-case basis." (CC_AG_P01)*

It's worth noting that a significant portion of the healthcare professionals expressed **reservations** about the concept of introducing healthcare apps. For some, there was a notable discomfort in advocating for the implementation of such applications, primarily driven by apprehensions surrounding the security and protection of sensitive personal data. Furthermore, there were healthcare professionals who voiced concerns about potential adverse psychological effects stemming from the use of these apps. They raised alarm about the potential for heightened levels of health-related anxiety and obsession among certain service users, as these apps could provide real-time health information and monitoring, which might lead to excessive focus on their health concerns and exacerbate anxiety issues.

> *“I would have a security concern with personal data in such an application” (CC_AG_P04)*

> *“Once again, it would increase the anxiety and obsession of some patients about their health. And these patients would be the ones using it." (CC_AG_P03)*

A select group of healthcare professionals raised the idea of employing the healthcare app as a **therapeutic tool**, suggesting that it could play a pivotal role in aiding people to effectively manage and structure their thoughts, in conjunction with their understanding of the concepts of time and space. Additionally, they posited that the app could be especially beneficial for patients who have progressed to an advanced stage of action. In other words, for individuals who have moved beyond mere information acquisition to actively implementing their health-related actions and have subsequently entered the phase of systematizing these actions.

> *“The use of this application would help some patients organize their thoughts, their relationship with space, and time. In this sense, it could also be seen as a therapeutic tool." (CC_AG_P07)*

Conversely, the majority of the interviewed participants with mental health problems **voiced opposition** to the adoption of such a healthcare app, primarily rooted in their limited familiarity with technology or their absence of internet and mobile phone usage. Furthermore, a subset of these participants articulated their reservations about data privacy and security, citing apprehensions about sharing sensitive personal information through the app. It is noteworthy that only a small fraction of them demonstrated a favourable stance towards the app. Their reasons for this favourable disposition varied, encompassing an expressed interest in exploring and trying the app or noting that they already utilize a similar application for their healthcare needs.

> *“I don’t have the internet; I don’t know about such things.” (CC_AG_P15)*

> *“Aah, yes yes, I already have something similar. I would like it.” (CC_AG_P12)*

FINDINGS - POLAND

Sociodemographic data and health

The sample consisted of 20 participants (9 men and 11 women, aged between 22 and 76 years), including eight people with mental health problems, three caregivers, three care team members, three representatives of mental health organisations, and three representatives of service managers. The characteristics of the sample are summarised in Table 3.

Table 3

Participant information

ID	Age	Gender Identity	Further information
CC_PL_P01	46	Male	Diagnosis of paranoid schizophrenia, personality disorders, obsessive-compulsive disorder
CC_PL_P02	36	Male	Diagnosis of schizophrenia, recognized moderate degree of disability
CC_PL_P03	37	Female	Diagnosis of depression, has been taking antidepressants for several years
CC_PL_P04	39	Male	Member of the social care team, working with people in crisis of homelessness as a street worker; addictions therapist
CC_PL_P05	41	Male	Head of the volunteer centre operating at the association for people with mental disorders and their families
CC_PL_P06	46	Male	Head of the Mental Health Unit at the University Hospital Clinic
CC_PL_P07	67	Male	His son is diagnosed with schizophrenia
CC_PL_P08	76	Female	Her daughter is diagnosed with OCD
CC_PL_P09	28	Female	Several years in contact with psychotherapist and psychiatrist; diagnosed with adjustment disorder, currently with moderate depressive episode
CC_PL_P10	37	Male	Diagnosis of schizophrenia
CC_PL_P11	58	Female	Nurse with practice in the government institutions
CC_PL_P12	47	Male	Diagnosis of a depressive episode

CC_PL_P13	22	Female	Bipolar Disorder Diagnosis. Enrolled in the project supporting employment of people with intellectual disability
CC_PL_P14	48	Female	Vice-president of the Association for child and youth development, director of the development and mental health support centre
CC_PL_P15	28	Female	Physiotherapist working in a private sector
CC_PL_P16	39	Male	Diagnosis of paranoid schizophrenia
CC_PL_P17	45	Female	Her son is diagnosed with ADHD, her father suffering from Alzheimer's disease
CC_PL_P18	44	Female	President of an association supporting young people and people with mental health problems, their families and friends
CC_PL_P19	49	Female	Manager of Mental Health Day Centre focusing on rehabilitation
CC_PL_P20	46	Female	Works for a mental health NGO; has personal experience with mental health issues; her father was diagnosed with bipolar affective disorder and died of cancer.

Note. ID: CC = CO-CAPTAIN, PL = Poland, Lodz, P01 = Participant number 1.

Knowledge on and utilization of health/well-being promotion and cancer prevention

Participants mentioned the Internet, TV, radio, newspapers and printed outlets (usually in the context of social campaigns exploiting these **media platforms**) as a source of general knowledge about cancer prevention health/wellbeing promotion. Different channels were seen as potentially effective with different audience populations:

> *“So, I don't know, older people are convinced by newspapers, paper, leaflets, whatever, younger people at school are convinced by visual and audio messages, preferably in a form that will be most accessible to them, i.e. a way that is tailored to the recipient.” (CC_PL_P09)*

While there is no shortage of information, especially on the Internet, the challenge seems to lie in sorting through it to find reliable, applicable advice. And then bridging the gap between knowledge and action:

> *"I have this feeling that it's kind of about more than just the delivery of knowledge. Because I feel that it itself is already at a pretty good level. Patients know a lot of things. Whereas the gap is between the fact that I know and what I can do to act. That I know that you must eat well, that you must move. That one should not smoke, that one should not abuse alcohol or drink alcohol at all. That this lifestyle is important, but that there's a big gap between that and the concrete and the possibilities. And that when it comes to patients in this group, I think the lack of activity is certainly greater than in the group of so-called healthy people." (CC_PL_P02)*

Some participants have seen physical and mental health as strongly interconnected, inseparable even:

> *"Mhm, I believe that there is no separation between mental and physical health, and it seems to me that every piece of literature, whether it's psychology, sociology, pedagogy, or other social sciences, in my opinion... I believe that it's an integral whole. We cannot treat mental health separately from physical health." (CC_PL_P02)*

> *"It's difficult to separate (physical health from mental health). I think that boundary doesn't exist for me. I wouldn't know how to draw it. Everything intertwines... because where would we separate certain chemical processes that pertain only to the somatic state or only the mental state, because I can't do that..." (CC_PL_P14)*

The scope and level of knowledge on and utilization of health/wellbeing promotion and cancer prevention varies greatly among participants. Those participants who work in the broader health field also note this discrepancy. Some participants emphasized the lack of information and support directly from specialists working in the public health care system. They have seen their own (or recipients of their services) active search for information as a necessary condition for utilizing important services of crucial specialists (e.g., dietitian):

> *"And prevention? Well, it's also I think at such a basic level. It's also not like I regularly check where the programs are and what can be done. No. And what's worse, well I'm a psychiatrist, but what's worse I think is that patients rarely get this information from other doctors either." (CC_PL_P19)*

Genetics and health history of close family, smoking cigarettes, alcohol abuse, diet containing excessive sugar, fat and meat (especially fried meat, processed food), and sedentary lifestyle (lack of physical activity) were mentioned frequently as **risk factors**. Also, deficit of sleep and low quality of sleep were noticed. Some mentioned also excessive exposure to the sun, chemicals and radiation, especially in the context of occupation (e.g., construction workers). **Awareness of personal risk factors** seems to be increasing the use of medical tests and preventive measures:

> *"I am simply in favour of having myself examined. Like a regular blood count or an ultrasound. When it comes to my abdomen, for example, it's quite important to me, because I also know that, for example, on both sides of my parents I'm burdened with different susceptibilities to illnesses."* (CC_PL_P09)

And successful treatment of relatives is seen as an encouraging and as a source of positive expectations towards medical tests and treatment:

> *"My aunt has been battling cancer for 5 years and my mum had surgery 5 years ago and is so far ok. This shows that cancer is not immediately a sentence but can be treated, life prolonged and cured."* (CC_PL_P20)

The most frequently mentioned **cancer prevention measures** were healthy eating, adequate sleep and rest, hydration and the avoidance of smoking and healthy weight. Control of dermatological lesions was also emphasized. Female participants mentioned cervical cytology and clinical breast examination. Physical activity was seen as especially potent:

> *"Well, certainly this kind of exercise and physical activity is, in my opinion, such a great preventive measure for almost everything."* (CC_PL_P03)

Participants mentioned various forms of physical activity (e.g., walking), exercise (e.g., yoga) and sports as **means to maintain good health**. The pleasurable, at least to some extent, physical activities are seen by some as the best option. Some participants also mentioned the quality of resting, relaxing, enjoying entertainment and cultural activities (e.g., theatre or cinema). Awareness of one's own wellbeing and needs was mentioned as the most rudimentary level of health promotion and prevention. Additionally, participants recognized taking medications as a vital aspect of maintaining health and well-being. They also emphasized the significance of social engagement, such as through voluntary work, and highlighted the importance of the quality of relationships in contributing to overall well-being:

> *"What do I do? Well, I certainly try to, as I said, as much as possible eat well, as much as possible, take care of physical activity, as much as possible take care of some outings after outside the house, that is, as much as possible be active here at classes. Be active to just, as if to say, have the opportunity, so to speak, to be active in life, outside of work and home." (CC_PL_P16)*

> *"I go here for activities. I take medication. Er, I volunteer. At Caritas and at KOTYlion. At the cats. (CC_PL_P13)*

> *"Well, according to me, in my opinion, my relationships with people have improved. My relations with people. I realized, I realized that I don't have to, mm, I don't have to demand. (CC_PL_P12)*

The absence of a targeted oncological prevention model for individuals with mental health problems in Poland over the past five years is evident:

> *"I have been evaluating health policy programs for 5 years, there has never been any health policy program that was targeted at this group of patients." (CC_PL_P11)*

> *"I mean, I only associate the ones that are publicly available, I am not aware of prevention programmes aimed specifically at the mentally ill group, although maybe there are, I don't know." (CC_PL_P18)*

In the group of people with more severe mental health problems they struggled to recall specifics of experiences regarding utilization of preventive measures (even when they remembered having such). Others recall, e.g., physicians offering preventive health examinations associated with monitoring blood pressure, and not pursuing them.

Despite widespread knowledge regarding smoking, overweight, unhealthy diet and the lack of physical activity as health risk factors, participants mainly mentioned actual use of dietitians' services. To some extent, physical activity was supported in the context of mental health organisations. It seems puzzling that the actual use of specialized help for smoking cessation or reduction did not appear in the content of the interviews.

Barriers to healthcare access and utilization

Poor communication skills in healthcare are seen as barrier what is also related to **stigmatization**. Participants feel that some professionals do not adequately explain the diagnoses and leave them confused and isolated with their concerns. This lack of communication and empathy can exacerbate anxiety among this group.

In general, people with mental health problems are ashamed of their condition. They have a sense of being treated differently once someone (including health professionals) finds out about their ill-health. One participant noted that if doctors ask about mental health diagnosis and medication, their answer is specific:

> *"When I get that magic question from the doctor, are you being treated for something? What medication are you taking? and sometimes when I say that I have a moderate depressive episode, people look at me so strangely...doctors usually..."* (CC_PL_P09)

Participants expressed dissatisfaction related to the functioning of public health care. **The prolonged waiting time** for appointments can be considered an obstacle to timely access to oncology care, which can affect overall poor prognosis and reduced quality of life. The participants emphasized also poor accessibility to mental health services, especially psychotherapy. In turn, the **unsatisfactory financial situation** makes it difficult for people with mental health problems to use the private healthcare sector, where access to specialists is much faster. According to some patient:

> *"For me to wait a year for an appointment, or as I used to wait two years, well, that's not normal, and I think... maybe I'll put it very simply... but if my salary wasn't deducted for health insurance and so on, I would gladly spend it on appointments or a medical package at a private facility, where, for example, when I went there privately, I had appointments in three days, and I believe that this dysfunctional system should be changed."* (CC_PL_P09)

Co-morbidity of mental health issues with somatic symptoms makes diagnosis difficult. According to experts, characteristic symptoms may reflect physical problems which are typical for psychosomatic functioning. There is a risk of somatic symptoms being underestimated by medical staff when they are automatically interpreted as side effects of pharmacotherapy. For this reason, individuals with mental health problems struggle with various health issues and go to different specialists to obtain a correct diagnosis. This is also caused by **the lack of holistic approach in therapy**. It has been argued that medical staff have a poor ability to help people with a variety of health symptoms and focus mainly on health problems within the scope of specialized competence.

Health professionals indicate that people with mental health problems suffer from somatic complaints much more often than people without. A health system manager suggested that fear of diagnosis can often be a barrier for this group of people, causing them to delay seeking help or starting treatment. The respondent noted that **increased anxiety** can discourage people with mental ill-health from seeking specialist medical care, such as oncology services, in a timely manner. Instead, they seek support from mental health professionals such as psychiatrists or psychotherapists. Many individuals avoid medical diagnosis or screening due to the fear of discovering a possible cancerous condition as they assume that it is better not to know because they will have to worry about their ability to cope if a serious illness is detected.

Participants with mental health problems have found generic advice unhelpful and have expressed **a lack of personalized and understanding healthcare**. They emphasized that all people are different, the medical staff should approach each person individually, rather than following a pattern. The participant’s statement was as follows:

> *“I always tell people, we are different. Because, I think, the basic mistake of the doctor, if a doctor generalizes. We are born as we are individuals; we are individual.” (CC_PL_P12)*

Limitations in the acquisition of knowledge by people with mental health problems are the main reason for **the exclusion of this group of people from health education.** It has been suggested that people with mental health issues are not educated in healthcare because they could have difficulties in understanding and guiding themselves in education.

> *“There are many elements related to health education that exclude the possibility of conducting a health prevention program for patients with mental disorders. First, this patient may not absorb knowledge properly and may not remember it.” (CC_PL_P11)*

It should be also noted that health education of service users even with DiLO card (The *Oncology Diagnostics* and *Treatment Card*) is not sufficient because it is not a standard in the oncology pathway for every service user in Poland.

Facilitators to healthcare access and utilization

Including special needs of people with mental health problems is a key facilitator in healthcare. These people highly value medical staff who dedicate time to thoroughly examine and understand their unique needs. Often, physicians extend consultation durations to ensure comprehensive care and achieve this goal. According to participants with mental ill-health, being listened to, understood, and having their voices considered is crucial to their care experience.

Effective **communication with medical staff** is very important for people with mental health problems. They emphasized the importance of being able to ask questions and receive clear explanations, especially regarding test results. They prefer being treated with respect, consideration, and attention, highlighting the need for their opinions, concerns, and needs to be taken seriously. This preference underscores the need for others to acknowledge the significance and validity of their words and experiences, treating them with genuine respect and earnestness.

The role of social support in enhancing people motivation for treatment was emphasized. Managers highlighted the value of exchanging experiences and observations between families and caregivers. Moreover, they suggested that families and caregivers should be more involved and educated than service users themselves, particularly in being informed about disease symptoms to help recognize cancer in a loved one. The importance of family involvement in assisting and guiding individuals through the healthcare system was underscored by participants. One manager noted that a person's closest relationship can significantly influence their decision to register for preventative examinations. With proactive effort from family members, navigating the healthcare system and expediting appointments can be more effective. Additionally, the manager of mental health clinics pointed out that individuals with concurrent mental and physical health issues could lead by sharing their experiences with their peers and healthcare personnel, thus recommending effective ways to manage healthcare needs.

Supporting service users in **health education and changing health behaviours** is essential. Managers in the health care sector assert that educating the general population about oncological symptoms can increase the likelihood of early symptom recognition in family members. Health education activities are also gold standards in nursing care. After performing the depression scale assessments for people at risk of mental health, they determine whether the person should be educated, or whether the education should be transferred to the caregiver.

Psychiatrists also support therapy by providing health education on a healthy lifestyle. They discuss the use of psychoactive substances, such as alcohol and cigarettes, during both outpatient and inpatient visits. It was mentioned that psychiatrists encourage service users to reduce cigarette consumption, and a hospital stay in an inpatient division is often seen as an opportune moment to initiate smoking cessation. It was recommended that using tools supporting smoking cessation (e.g., Nicorette) by patients with mental health problems should be reimbursed by the National Health Service.

Various forms of involvement in health education were discussed. Participants with mental health problems recommended workshops as their preferred educational method and claimed that they are more effective than reading materials. Some managers highlighted the importance of enabling service users to verbalize their thoughts and feelings as the most effective way to influence their health behaviours.

Some managers suggested that the waiting period for a doctor's appointment presents an ideal opportunity for people to watch educational videos about cancer diagnosis. They emphasized that these videos should be straightforward and tailored to specific groups, such as children or the elderly. Conversely, caregivers noted that professionally active individuals often lack the time to read extensive materials. Therefore, they proposed that health education for this group should be integrated into workplace environments.

The access to health care facilitates its utilization. Service users indicated that improved access to doctors and information about preventive measures would increase the quality of medical services. Several among them emphasized the need for equal healthcare accessibility for both individuals with and without mental health issues. Additionally, one participant highlighted a practical and effective strategy employed by some healthcare facilities to prevent the issue of people missing their scheduled appointments and thus blocking appointment slots:

> *"Exactly, and it's also good practice in some places to call the day before and ask if you can confirm your appointment. I, for example, am very happy when they call me because it reminds me, for example, that I have an appointment tomorrow, oh! I didn't put it in my calendar." (CC_PL_P09)*

The manager of the mental health division in a hospital stressed the need to support a person with mental health problems in making the appointments and reaching the doctor. Another manager highlighted the beneficial impact of the DiLO CARD (colloquially: DiLO green card), which was introduced on January 1, 2015, to improve cancer diagnosis and treatment in Poland. By using this card all services for whom doctors suspect some cancer symptoms have a rapid oncology track. In this process, the supervisor has contact with the person, schedules appointments, arranges all tests. Some nurses also mentioned DILO CARD as a good practice because it enables recording procedure in the oncology treatment and coordination of this process.

An active professional attitude toward service users was also recommended. It was noted that the involvement of a therapeutic team member intensifies when people report mental health problems. Additionally, creating a friendly and safe environment in outpatient clinics is crucial. Such an atmosphere not only facilitates engagement between service users and medical staff in the therapeutic process but also instils a sense of security:

> *"When it comes to my involvement, if a person says in an interview that he/she has some anxiety or depressive disorders, my involvement immediately increases because I know that this person will need a little more encouragement to exercise. Moreover, it is necessary to create a friendly condition to visit us, to feel safe and be involved in this therapeutic process. So, my involvement increases immediately when a patient says that he has a poor mental health condition". (CC_PL_P15)*

Participants with mental health problems had reflections on using psychological care. According to them, the psychologists had the skills and aptitude to motivate individuals to change behaviours. It was found the care in which the psychologist was involved to be complete and satisfying due to clear messages from the specialist.

On the other hand, the participant saw the role of psychiatrists in capturing a broader perspective of the person's health, encompassing both somatic and psychological factors, skilfully combining their mutual influence. Psychiatrists weigh the risk of side effects against the potential benefits of pharmacotherapy. The goal is to ensure that the advantages of pharmacotherapy outweigh any adverse effects.

Furthermore, the family doctor is perceived as a pivotal figure in maintaining good health. Service users highlighted that primary care physicians are their main point of contact for somatic illnesses. A notable aspect of their care is the doctors' commitment to identifying the root causes of health issues, rather than merely providing temporary symptom relief through medication. This thorough and considerate approach positions general practitioners as exemplary in the medical field.

Implementation of the pre-screening model in primary health care is also recommended. Physical examination at the beginning of contact with people could speed up the process of oncology pathway. The manager of nurses suggests that while anyone with a medical background could conduct a physical examination, they must be authorized to refer people to a short oncology pathway. Observation methods and physical examinations, particularly by nurses and midwives, could facilitate early cancer symptom detection. However, this requires specific training and accreditation. Psychiatrists also emphasize the need for standardized cancer prevention training for medical staff to improve prevention practices. Additionally, implementing a pre-screening module at the undergraduate level is recommended by practitioners.

Mental health organisations are seen as pivotal in offering support at various stages of cancer prevention, especially when immediate environmental support is lacking. NGOs can assist people with mental health issues in managing complex treatments. Psychoeducation workshops conducted by external organisations could enhance therapeutic outcomes during hospital treatment. One hospital division manager outlined the role of these organisations:

> *“Organisations should have such a specialist who will be somewhere on duty, such a space to provide adequate support, that is, also to calm various fears in the beginning and help such a person, I don’t know, develop, for example, a plan of such an action, so that he knows from a to exactly what it involves, what it is, where to go now, who to contact, what specialists to visit.” (CC_PL_P05)*

Finally, the importance of cost-effectiveness in implementing new solutions should be emphasized. The expert on innovation in health care claimed that the implementation of new solutions among people with mental health issues requires evaluation in terms of the costs incurred and the effects achieved for the patient.

> *“Cost-effectiveness is very important because we should implement technologies that are effective for the patient, but at the same time we must remember that we have specific budgets to carry out such a task.” (CC_PL_P11)*

Hindering factors and behavior with potential negative (health) consequences

Participants with mental ill-health mentioned several behaviours that have a negative impact on health (**behavioural risk factors**): i.e., smoking, alcohol consumption, lack of physical activity, unhealthy diet, and neglect of preventive activities. They indicated a problem with long-term, increased tobacco use, exacerbated especially in stressful situations (e.g., during periods of psychiatric hospitalisation).

> *"Patients with mental disorders smoke more often (...) due to the stress they experience." (CC_PL_P06); "But back when I was in psychiatric hospitals, and my condition was worse, I used to smoke there". (CC_PL_P10).*

For the most part, individuals with mental health issues have been sensitized by psychiatrists to the harmfulness of combining psychotropic drugs with alcohol. Most people follow this recommendation or, as a result of the very serious consequences of not following this recommendation, currently abstain from alcohol:

> *“Once, I'll be open about it, when I had a psychological crisis due to poorly prescribed medications, I had hallucinations and delusions. At that time, I simply mixed the medications with alcohol, and it was a deadly combination. As you can imagine, I ended up in the hospital.” (CC_PL_P02)*

However, it has been pointed out that while people are given guidance on the harmful effects of alcohol, similar information is lacking when it comes to smoking:

> *"I think it's [alcohol abuse] less prevalent, though, that it's sort of in such a package, that when psychiatric drugs are prescribed, there's also automatically a message that you should limit alcohol. I don't think everyone does, but I think some people take this into account. But smoking cigarettes, I don't think anyone pays much attention to that in psychiatric care." (CC_PL_18)*

As another hindering factor (indicated by both service users and their caregivers or care team members) is the aspect of **reduced physical activity** (engaging in sports, physical movement). Individuals with mental health issues confirm significant limitations resulting from a lack of motivation to act and impaired cognitive functions necessary for planning activities.

> *"I don't have the motivation, I've always dreamt of trying to go to some gym, because somehow, I lost weight, I wanted to gain some muscle, but I gave up on that idea. I also had an idea with yoga, I mean I feel like I have ideas all the time, but it's hard when it comes to concretising those ideas to make them happen." (CC_PL_P02)*

The issue of preparing healthy and nutritionally rich meals looks similar. Participants indicated that they neither have sufficient skills to prepare a varied dish, nor are they motivated to devote a particularly large amount of time and effort to preparing a meal for themselves (most often, these are individuals living alone). There were statements that there are days when they don't have a warm meal, and food serves only to satisfy hunger. One participant reported that due to **financial reasons** he does not always eat full meals. There are also situations in which the opposite occurs - a loss of control over the amount of food consumed, compulsive eating, and so-called "stress eating".

Lack of regular physical activity, combined with poor eating habits and side effects of psychopharmacotherapy contribute to significant, often rapid weight gain. In turn, this can significantly influence susceptibility to **somatic ailments**.

Most of the behaviours described above can be related to the specifics of the mental health problems experienced by the participants. **Symptoms of mental health problems,** e.g., mood and drive changes, anxiety, cognitive impairment, social withdrawal, increased levels of tension and distress, sleep disturbances, may all be reflected in lifestyle and undertaking negative health behaviours. Moreover, it has been reported that experiencing mental illness is already so burdensome and attention-consuming that focusing on other aspects (physical health, somatic symptoms, prevention measures) is sometimes beyond the capacity of the participants to accommodate.

> *“Long-term depressive episodes or psychotic disorders significantly disorganise daily life or lead to cognitive impairment. This means that the patient often has problems with daily functioning, i.e., making breakfast, drinking enough fluids, getting dressed, shopping. (...) not to mention a healthy lifestyle, going for walks, being physically active, taking medication regularly, doing preventive examinations, going to the doctor. These difficulties are often neglected due to poor mental state, poor organisation of daily life, psychiatric symptoms (...).” (CC_PL_P06)*

It has been highlighted that overwhelming state of anxiety and worry (frequently experienced by people with mental distress) causes them to focus more on negative outcomes, such as potential mortality, rather than on proactive steps they could take towards their diagnosis and subsequent treatment. Such intense anxiety can be counterproductive, especially for those already undergoing medical treatment, as it prevents clear and rational thinking, which is essential for making informed health decisions.

Resources and behavior potentially beneficial for health

Based on the participants' statements, several groups of resources and behaviours potentially beneficial to health were identified including various forms of support, engaging in health-promoting behaviours, self-determination, and taking responsibility for one's actions, as well as activating internal motivation. Considering **different types of support**, participants most often mentioned that they received the most support from their closest family members (usually mother or father), friends and representatives of therapeutic teams. Family members often coordinate the psychiatric treatment process, assist in scheduling appointments, and encourage compliance with medical recommendations. They also encourage healthy behaviours, such as a healthy diet, physical activity, social engagement, and cultural activities (e.g., going for a walk with friends, going to the movies, or reading books). They often provide financial support.

> *"I have a situation where my mother earns fairly well, and if needed, she lends me money for a private doctor." (CC_PL_01)*

Having a social support network in itself has healing properties, it gives meaning to life and the willingness to act.

> *"If I tell her (a friend): You know what...I don't want to go to the gym today...I'm tired, I'm falling flat on my face, she'll say to me then, for example...I know she'll say: Don't bullshit me. You get up, take a shower, you pack your bag, and see you at the gym." (CC_PL_09)*

On the other hand, individuals with mental health issues often take actions to benefit their health on their own (engaging in **health-promoting behaviours**). Some of them mentioned successfully quitting smoking, limiting alcohol knowing that it interacts unfavourably with their medications, improving sleep patterns and hygiene practices and maintaining a healthy diet while also remembering to stay adequately hydrated. In a way, a sign of our times is the use of modern technologies for these purposes, such as smartphone relaxation apps and apps that aid in falling asleep. One of the individuals (a dance teacher) pointed out psychological methods for emotional tension reduction:

> *"I practice mindfulness in observing my moods, and when something physically bothers me, I try to work with it using my various somatic methods. Particularly with my stress-related excessive tension, which I think causes the headaches that bother me the most." (CC_PL_P03)*

While another emphasized the role of physical activity in mood regulation:

> *"But I want to sign up for karate, I would like my nerves and mood to improve in general. It's not about fighting, no, because I'm not that kind of person, just for myself. The mood, the satisfaction and the nerves calming down too. Just for fitness. Yes." (CC_PL_01)*

Another important factor that emerges in interviews is **self-determination** and **taking responsibility** for one's actions. Individuals experiencing mental health issues emphasized the role of taking proactive steps to improve their wellbeing such as resolving unfinished tasks and setting new goals, actively participating in treatment-related decisions, engaging in voluntary or charitable activities, and managing their finances wisely.

All these above-mentioned actions or any other behaviour potentially beneficial for health would not be possible without **intrinsic motivation**. Many participants' comments clearly emphasized this aspect in the context of lifestyle changes. The presence of supportive people, the availability of preventive programs, or well-being-related projects will not yield the expected results without internal conviction and readiness for engagement.

> “*When our 'Together we can do it' project ended, we found that you can't help someone who doesn't want help. We wanted to help more than the people who came for this help, signed up to the project.” (CC_PL_20)*

Considerations for the Patient Navigation Mode

Most participants found the idea of the Patient Navigation Model (PNM) **valuable and potentially useful**. It was emphasized that trust and a sense of safety are crucial, starting from the very first interaction, such as the information provided on the webpage. This trust needs to be nurtured by utilizing a variety of communication channels for clear and non-intrusive advertising, ensuring that the message reaches prospective recipients without feeling forceful or overwhelming. The gradual building of trust-based relationships is essential:

> *“(...) when they get to know and trust each other, well then there is a chance that actually this patient will feel convinced and that this is not something that is just imposed by some stranger (...) if there's already some kind of relationship, there's some kind of trust, well there's already some kind of I don't know, maybe a little bit of authority of that person, if you see actually, well, that others are also cooperating and it somehow works out well, well I think that, well, that's certainly a factor that would increase the effectiveness of such a navigator.” (CC_PL_P18)*

Regarding the **competencies** essential for specialists delivering services in the PNM, they should:

- be able to recognize the recipient's needs, especially psychological and mental health related,
- understand general health condition of the recipient,
- be able to personalise their interventions,
- be able to refer to a specific doctor or suggest specific examination (this is an expectation that participants mentioned that they considered desirable, but probably unrealistic to meet),
- monitor the course of the process, such as diagnostics, to intervene if any difficulties arise,
- be able to practically support recipients in dealing with addictions, such as smoking
- be able to understand the situation and the perspective of the family or caregivers, sometimes very different from that of the primary recipient,
- be supportive but not overly so (should assist but not replace) and support caregivers in finding a balance on this difficult issue (or at least understand how difficult it can be),
- be able to provide assistance in a straightforward, necessary manner, but not excessively (e.g., taking on additional, unnecessary tasks or responsibilities),
- be able to motivate (with tact and respect for the right to self-determination),
- be persuasive (both to the recipient and to the professionals involved in his diagnosis or treatment),
- be able to support recipient in case of fear-inducing information or behaviour by doctors or other specialists,
- exhibit a high degree of flexibility in terms of time to be able to reasonably accommodate the capabilities of the recipient.

Some participants expressed the belief that the competencies and qualities of those involved in implementing the PNM are difficult to define, but surely demanding. One stressed that PNM providers should be well versed in the knowledge and explaining the patient rights:

> *"(…) it would be important for the patient to also, for example, know that they have someone who will explain their rights to them in an understandable way, (…). For instance, someone could explain that once a year, you have the right to receive a photocopy of your medical history if needed, and it's free. Also, to pay attention to this, for example, if you felt mistreated, the doctor didn't respect you, then we give... I don't know… the phone number for the Patient's Rights Ombudsman…". (CC_PL_09)*

They should also be careful not to exceed certain boundaries to avoid professional burnout:

> *"Going above and beyond is not a good solution, so it's important for navigators to have boundaries." (CC_PL_02)*

There were also voices emphasizing the simplicity and human dimension that are the essence of support:

> *"The physical presence of another person can alleviate anxiety. For example, helping someone sign up for tests and being with them at the tests." (CC_PL_P20)*

According to the participants, meetings with the Navigator should take place regularly, but their preferences for frequency of meetings varied widely, ranging from one meeting a month to two a week. Some preferred meetings in a group, some individually. Participants also generally stressed the need for flexibility regarding the meeting place (institution or recipient's home) and respecting individual preferences and practical needs in that matter.

Some participants stressed the role of adequate funding as essential for effective implementation of the model and continuation of the project. One of the suggestions was to involve the decision-makers from the very beginning of the project, so that they have the feeling of co-creation and responsibility for implementing the developed solutions. The roles of political support and financial support are seen as intertwined:

> *"Even good projects fail at the concept stage because they do not receive political and/or financial support."* (CC_PL_14)

> *"Well, and the other thing is that this navigator will have the possibilities offered by the system, in the sense of what services are available, so if services are available, such as advice from a nutritionist or an addiction specialist, who will help with nicotine addiction or some other substances. Or if he doesn't have just some physical activity or sports classes, well he won't have anything to offer either (…)."* (CC_PL_18)

Several participants voiced doubts and concerns about the PNM, particularly questioning whether the mental state of recipients might hinder the effectiveness of the program's activities. They suggested a greater emphasis on educating caregivers of individuals with mental health issues:

> *"The idea is very good, but here I will emphasize again that working with such a patient will be difficult. (…) Results may be impossible to achieve. Due to mental disorders. (…) Therefore, I would definitely focus again on the education of caregivers."* (CC_PL_11)

One of the concerns was the risk of excessive time commitment or disrespectfully wasting participants' time, coupled with scepticism about the program's ability to provide personalized care and address individual needs:

> *"It's kind of like with looking after a healthy lifestyle and all that, that sounds great, but in practice, how much, the first thing I thought, how much time would it take and is someone going to flood me with prevention in only one direction? Is someone going to want to find out what do I need, or is it going to be like, okay, well now we're looking for people with mental illness and cancer, and they're going to focus just on that."* (CC_PL_03)

Some participants suggested **ways to increase involvement of recipients:**

- the messaging could highlight how applying preventive measures promotes overall well-being:

> *"(…) showing that this cancer prevention actually makes you do so many good things, actually for yourself, not just to not be sick with cancer. This can contribute to some kind of outreach effectiveness".* (CC_PL_P03)

- involving recipients in **the co-creation** of prevention increases their motivation and the effectiveness of the actions taken:

  "Simply involve them in the creation of such programs. Then, well, they also feel that it's as if it's not someone out there imposing or explaining something to them, if they're also the creators of certain solutions or we're basing it on their experience, well, it's easier to encourage them to just use it skilfully." (CC_PL_P05)

- **PNM providers should be people who approach mental health issues without fear**, such as those who have experienced such problems themselves:

  "I think, everyone is crazy. (…) I have no problem in dealing with a schizophrenic person, with a person with depression. Most people have a problem because they are afraid." (CC_PL_P05)

Providers should be able to build long-term relationships in a non-intrusive manner, be tactful and empathetic, and have up-to-date knowledge of available health promotion services and programs. Additionally, PNM services should offer assistance in securing adequate financial support from various sources.

App

Most participants commented favourably on the application which can potentially be a part of the implementation phase of the CO-CAPTAIN project, a few of them declared their initial consent to use an application.

The following comments were made regarding the use of the application (they can be divided into three categories indicated below):

Barriers

1. No need/no finance/resistance to devices that support new technologies.
2. Service users may be reluctant to use the app because they may be concerned about collecting additional data, other than health behaviours.

3. Service users may be hesitant to use the app because their health condition does not allow it.
4. Limited time and motivation of medical personnel may cause difficulties in implementing the application.
5. Reluctance to apps tracking the location.
6. When asked about the possibility of installing the application developed as part of the project, the participant's first association was “general surveillance”. Expressed concern about privacy and surveillance, particularly in the context of monitoring or control by unknown individuals.

Facilitators

1. Using an electronic database may facilitate monitoring the therapeutic process and provide more reliable information than completing surveys or asking questions.
2. An easy and intuitive application can increase its implementation possibilities.
3. Electronic documentation reduces the time needed to complete medical information.
4. If service users could receive and respond to feedback via an app, it would reduce the effort and energy they would have to put into self-managing their healthcare.

Recommendations

1. The application is more beneficial if professional support is available.
2. When designing and implementing solutions using new technologies, the fear of providing personal data should be taken into account. The security of the collected data must be ensured. The need to carefully consider the advantages and disadvantages of using such an application, especially in terms of who has access to the collected personal data.

3. User testing of the application interface is of great importance during application development.
4. The application must be accompanied by an educational guide for service users that will help them expand their knowledge in an appropriate way.

FINDINGS - SPAIN

Sociodemographic data and health

The data contained in this document are obtained from interviews and the subsequent discourse analysis, which were carried out by 20 people (3 care professionals, 3 members of professional associations, 3 carers/family members, 3 service managers and 8 users of the mental health systems in Spain). Sociodemographic description of the study group is described in Table 4.

Table 4

Participant information

ID	Age	Gender Identity	Further information
CC_MS_P01	39	Male	Professional: Nursing
CC_MS_P02	37	Female	Professional: Doctor with Master degree
CC_MS_P03	36	Male	Professional: Oncologist-Master
CC_MS_P04	56	Female	Representative of professional organisations
CC_MS_P05	49	Female	Representative of professional organisations
CC_MS_P06	66	Male	Representative of professional organisations
CC_MS_P07	43	Female	Health Service manager
CC_MS_P08	65	Female	Health Service manager
CC_MS_P09	61	Female	Health Service manager
CC_MS_P10	35	Female	Patient: Phobia
CC_MS_P11	43	Female	Patient: Schizoaffective Disorder Bipolar
CC_MS_P12	41	Female	Patient: Schizophrenia
CC_MS_P13	43	Female	Patient: Dual pathology
CC_MS_P14	39	Female	Patient: Bipolar disorder
CC_MS_P15	55	Female	Patient: Schizophrenia
CC_MS_P16	34	Female	Patient: Disruptive disorder
CC_MS_P17	54	Female	Patient: Paranoid Schizophrenia
CC_MS_P18	66	Female	Family/caregiver
CC_MS_P19	70	Female	Family/caregiver
CC_MS_P20	57	Female	Family/caregiver

Note. ID: CC = CO-CAPTAIN, MS= Madrid, SPAIN P01 = Participant number 1.

Knowledge on and utilization of health/well-being promotion and cancer prevention

In terms of levels of health in general, the population with mental health problems has a low level of awareness of self-care and of preventive measures for cancer in particular and other illnesses as well.

The cause expressed in most of the statements of all participants, is that it is a population with a low demand for care from the systems, with a greater endurance of chronic pain as the main cause of the low demand. Healthcare professional mentioned that people with mental ill-health with a high level of health problems and a low life expectancy, due to the lack of preventive actions, despite the high level of deterioration.

> *"I think the demand is the same, I would even say that they are under-demanding."* (CC_MS_P01)

> *"There are more prevalent problems of these people; there are no specific care programmes according to the higher prevalence of cancer. When people present to health services with ordinary physical problems, they tend to receive a lower level of care, less health care than they need. They tend to receive a lower level of care, less health care than any other person would need and more so in their case because they tend to have more problems. I know of cases, very many cases, even with almost lethal consequences."* (CC_MS_P01)

Under the demand for coverage of physical health needs, most of the statements indicate that, in health services, when there is the need to address the presence of both physical and mental health issues, the latter cancel out the former. Moreover, there is an evident lack of training of professionals to interact with service users with physical problems and also mental-ill health. In some cases, it has been stated that some systems, including primary and hospital care, referred people with mental health problems, to mental health services in spite of the demand for a physical health problem solving.

> *"And if a patient has a psychiatric disorder, it sometimes makes early diagnosis of physical illnesses difficult. It is difficult, to separate the psychiatric sphere from*

> *physical symptoms. If the patient has uncontrolled psychiatric symptoms, it also makes a physical assessment very difficult or the physical assessment cannot be done in a correct way. It is important to have the patient well controlled psychologically and psychiatrically in order to be able to assess him/her physically." (CC_MS_P03)*

As for the oncological system, the detection of oncological illnesses generates mental health issues and, vice versa, the lack of attention to people facing difficulties in getting a diagnosis due to their health mental problem generates oncological problems.

In terms of lifestyle prevention, there is no vision of the patient from a holistic perspective. Biopsychosocial factors are not addressed to generate a response to the prevention of obesity, diabetes, cognitive impairment, sedentary lifestyle, low level of self-care, medical treatment.

> *"Their physical health needs are the same as those of people who do not have mental illness or mental health problems. They are patients who usually have other diseases associated with them, for example, COPD is very common. They are usually heavy smokers. And other chronic diseases such as hypertension or diabetes are frequent, with the same prevalence as in the general population." (CC_MS_P05)*

Another important point is, that neither the impact of medication is highlighted, nor the prevention and participation measures at community level. The side effects caused by taking medication, are affecting what is understood as a healthy and socially active lifestyle.

With regard to prevention and promotion in particular, the people interviewed stated that there is no prevention model adapted to the people included in this population group (group in vulnerable situation). Moreover, there is a lack of reflection in the systems, a lack of adaptation of the systems to people experiencing mental ill-health who are prone to a vital risk due to the lack of effective care. These people in particular should be the recipients of effective medical attention.

There is a lack of a population-based approach to mental health that would allow early recognition of mental health problems or other possible situations susceptible to diagnosis and prompt interventions The primary health care system is leaving a large number of the population out of prevention.

> *“The physical needs are the same as in the general population, but multiplied, because their cardiovascular risk is actually much higher. Their risk of infectious disease pathologies is much higher, their risk of cancer is much higher. Preventive and health promotion activities should be higher than in the general population, but not only are they not higher, they are much lower. It would be good if this could be done from primary care because it is not covered by mental health, but it is not covered here either.”* (CC_MS_P05)

With regard to cancer, information does not reach people with mental ill-health, and professionals do not report having specific knowledge or methods to reach the population other than all the information that is generated for general population screening.

> *“There is a lack of methodological annexes for this population on what we do in primary health care. At the management level, cancer and cancer symptom prevention measures are included in programmes and strategies. I think that they remain more on a theoretical level and do not end up being applied in routine clinical practice. The knowledge of these measures exists in the structure and in the plans that are made for people with mental illness, but they are not applied, that is my opinion.”* (CC_MS_P04)

Barriers to healthcare access and utilization

The people interviewed, including people with mental health problems and carers, mentioned stigma both from the healthcare systems and from the general population. Mental health issues generate prejudices among health professionals and, as a consequence they undervalue the physical issues of these people. They assume that “insane” people invent the symptoms. Some professionals refer to diagnostic difficulties if physical symptoms are not separated from psychiatric symptoms and vice versa.

> *“They read you the story and say: "this is a (.) a mental health patient. Nothing, this is a (.) thing". By this, what I mean is that everything, everything is, "as he is a mental health patient", as soon as they see that he has a mental health problem, they think it's all the same.”* (CC_MS_P19)

> *“If a patient has a psychiatric disorder as well, that sometimes makes early diagnosis of physical illness difficult.”* (CC_MS_P07)

> *“It is the psychiatric illness in conjunction with the physical illness they may have.”* (CC_MS_P03)

Prejudices and moral judgements have an impact on the people experiencing mental health issues which result into a decrease in demand for healthcare services in the form of self-exclusion. It is the stigma which labels them as a population with a behavioural disorder, so they manifest rejection, feel fear of professionals.

> *“The stigma that exists is from primary health care and from health services in general, everything that is not mental health, they don't know how to treat people with serious mental disorders or in very few cases. And I think that primary health care is the one that knows a bit more, but it doesn't know either. There is a double barrier, their own barrier due to the limitations they have about the illness, and it depends on the moment they are in, and then the barrier of professional stigma, which is very high.”* (CC_MS_P05)

The health professionals who do not specialise in mental health, do not take the health demand seriously.

> *“Let's see, especially more oriented to the cancer issue, sometimes it is difficult, like making a distinction between physical symptoms and mental symptoms, because they are often confused with each other and if they are not well controlled in the psychiatric sphere or the psychological sphere, or they do not have the right psychiatric medication, sometimes they can also have symptoms that are physical symptoms that, for example, if it is a patient with metastasis, if you have symptoms derived from the metastasis, it can confuse you or can make it difficult for you to assess the patient correctly, that is, it is very important to integrate everything and see it all together.”* (CC_MS_P03)

In the case of women, in addition to stigma linked to mental health, discrimination related to gender also appears. According to participants, a gender perspective is required towards mental health in order to raise awareness.

> *"If, in addition to having a mental health problem, you are a woman, the rejection is doubled. Double discrimination."* (CC_MS_P09)

On the other hand, it should be noted that throughout the interviews, some of the participants with mental health problems stated that they go to a mental health clinic but they deny the having mental ill-health. Therefore, they refuse the treatment and don't adhere to the health systems. In the result, there is no consistency and permanence of the medical care.

> *"We don't realise that we are a trajectory, a life story, with the way we are, or the difficulties we have."* (CC_MS_P20)

The interviewees state that the population with mental health issues does not adapt to the normal routine of self-care and other areas of life. All this leads to rejection; self-exclusion.

> *"Obesity, due to medication, they have medication that makes them slower, then we have to think about the physical part, because otherwise it's (.) it's awful. She hears comments such as "Mother, if I have to be with a sick person or a crazy person, who has schizophrenia, well, well, I have to run, I don't stop." (CC_MS_P19)*

Facilitators to healthcare access and utilization

The health professionals and managers revealed the need to generate actions focused on the person, where all the health systems work in connection with the community, which is a guiding principle of public health.

> *"The whole patient is like a whole, there is not just one thing to look at. Because during the cancer diagnosis process and during the treatment process there is also a very, very high risk of decompensation, also of psychiatric illnesses." (CC_MS_P03)*

They consider that in order to facilitate access, professional teams must act as multidisciplinary teams, generating a fabric/system of care, where service users, carers and all systems (social and health) work in a coordinated manner. Besides, it should be adapted to the service users and families.

> *“They are people who perhaps go less to doctors, to health professionals, and that often the solution is in primary care and in carrying out an adequate follow-up of these people from primary care or making them aware of the importance of going to the psychiatrist's visits so that the psychiatrist. The psychiatrist has them under good control and they can go to their appointments and make all the other appointments as planned for the general population, not because they have a mental health diagnosis.” (CC_MS_P03)*

> *“In reality, many, many times the problem is more the treatment between the different specialists, the lack of coordination between health systems. The different volume of appointments or the different waiting list times, because, for example, if you want to have a very close coordination with a psychiatrist, it can also cause the psychiatric disease to be more out of control, because it has a waiting list and this worsens the treatment of cancer, which influences the results of the treatment of cancer or other diseases, so it is very important to have a proper coordination and to be able to use it whenever we need it.” (CC_MS_P03)*

In order to ensure the work of these services, the interviewees mention the need for sensitivity when working with people experiencing mental health problems. It can be achieved by greater scientific evidence. It is recognised that there is little preparation in general, few definitions of what mental health is and how to approach it.

Services, in the care of this group, must be trained to know how to establish dialogue and detect needs, work with a focus on respect, establish trust. It is about services adapting to people and not the other way round.

> *“We live quite normally despite the fact that people may think that this is not the case. The family member is out of place, doesn't know what to do and so they come, "what am I doing here? So there is always someone here who... who takes them in and says: "well, to the psychologist, to the social worker", because all this ends up in, in social affairs, yeah, in social affairs. Accepting their situation, that is, accepting that they are ill, which is very complicated, is the first step, the*

> *collateral talks about the (..) of (.) of the depression of (.) sometimes you talk about how they are special, because they are special, eh? Because they are sick, but they are still normal people and some of them are super intelligent, First, it is difficult for professionals to realise who they are dealing with. Once they get down to that level, that's the end of the problems. Because they are so anti-medication, so anti-doctor's visit, the rest of the pathologists are so.... of doctor, the rest of pathologies in (..) with mental illness they have a tremendous handicap." (CC_MS_P06)*

Families are seen as facilitators between society and people with mental health problems, but they do not receive training. There is a lack of what they call "family schools".

> *"I find family schools very interesting in this sense... hhhh where (.) Where - families, carers, have a way of expressing what we feel, what we fight for, what we want for our (.) our, uh, relatives or (.) or our care (.) eh, and where we are also instructed a little bit on how to manage certain situations. They do not integrate well". (CC_MS_P20)*

Hindering factors and behavior with potential negative (health) consequences

The **consumption of addictive substances to feel better**, as well as the consumption of tobacco or alcohol being considered normal. Ingrained consumption and/or dual pathology in people make mental health systems refer them to addiction treatment systems, but not to mental health services. This results into people not receiving the comprehensive and coordinated care they need.

Paternalistic actions do not motivate the person, standard itineraries are not adapted to people with mental health problems. There are no proactive actions, or active recruitment of service users to health system

Lack of adapted support. Families are abandoned after receiving the mental diagnosis without knowing what to do to help their loved ones. This results from the lack of coordinated resources.

The prescribed treatments sometimes give people side effects which are incompatible with regular participation (they cause sleepy, sedentary effects, etc.)

Health education. There is no attractive model of health education for the people with mental ill-health and the family, which will consider all the health issues and care plans.

Inadequate emotional management of people from the side of services other than those specialised in mental healthcare. There is a negative attitude and a lack of knowledge about mental health.

People with mental issues don’t get effective care for physical problems because they are taken for the typical patterns of mental health symptoms. As a result, the physical symptoms are not dealt with properly, as they are associated with general deterioration.

Resources and behavior potentially beneficial for health

The people interviewed consider that it is necessary to pay more attention to mental health for the following benefits:

1. Improvements in health care, including cancer prevention.
2. Support the social inclusion of people with mental health problems, not focusing just on health prevention.
3. A clear social definition of what mental health is.
4. Creation of learning spaces for families, mutual support groups.

> *"Workshops to keep them active, so that their minds (.) let's see, let's not (.) let's say, vulgarly, so that they don't get stuck, they don't settle down, they don't stay there on a sofa." (CC_MS_P19)*

5. Committed participation of professionals: commitment to a complete accompaniment of needs
6. Strategies through training for adherence

> *"Mental health problems, I think it would be important to define it, I could not give a definition of typical needs in these patients. It is precisely the neglect of other problems that generates needs. Sometimes the attention is more focused on other common physical problems, sometimes the problem is more focused on the professional's own relationship with the other person because of their specific problem or because of our inability to address it, sometimes non-specific symptoms are catalogued and attributed to them, and sometimes the relationship of trust with a health professional. What we mean by health promotion." (CC_MS_P02)*

Considerations for the Patient Navigation Mode

The people interviewed consider that the patient navigation model would improve accessibility, because it would allow a professional figure to mediate between all the agents and be a facilitator for service users' linkage in the systems.

> *"The figure of the health navigator seems very interesting to me; I think they could do it together with the other measures that I have been talking about throughout the interview. It would be a way of promoting care for this group of patients who really need prevention and health promotion measures, in other words, to bring these measures closer to them so that they are aware of them and can implement them." (CC_MS_P04)*

It would mean an improvement in terms of information, which is mediated and adapted, to service users and/or professionals. Thus, it guarantees rights, allows greater possibilities in terms of information, participation and coordination.

The Patient navigator appears as a figure that connects systems and helps to generate proactive approaches. It can also be a figure that adapts the prevention activities to patients and families by using an individual approach.

> *"Any way to provide both people with mental health problems and the public with more information and offer them the possibility to get tested for better health monitoring is a good thing."* (CC_MS_P15)

The conclusion is that the patient navigator should focus on the following aspects and has to do the following:

- To motivate a positive action towards patients and their families in their interaction with the health system, which complies with the Madrid Community Strategy.
- To define care processes in the mental health system and in primary health care generate processes of socio-health integration.
- To re-design a coordinated system of actions between the different levels of the healthcare system.
- To develop integrated processes between the systems and the community that will promote good life in community, a friendly environment, and participation
- To co-adapt population-based screening to groups in vulnerable situations.
- To raise general awareness and the awareness of the stakeholders.
- To inform about diagnostics, services and resources.
- To establish the responsibilities of the health care with a supportive approach adapted to the person and families.
- To be trained and provide training on patient-centred care.
- To unify addiction care as an integrated process into the systems.
- To work on proactive actions using a community prevention methodology.
- To detect barriers in order to generate actions to reduce them.
- To generate integrated processes between horizontal and vertical systems.

- To provide specific training for specialists according to the categories of the Madrid matrix.
- To work on ethical aspects and patient autonomy laws.

App

There is no difficulty in participating in this type of programme. However, people with mental health problems may feel the over control and persecution and, therefore, be reluctant to use the application.

> *“If it is a secure system that does not leak information and complies with the Data Protection law and that does not leak information, vulnerable patient information and does not generate problems with Data Protection, I believe there would be no problem at all.” (CC_MS_P03)*

SUMMARY OF KEY FINDINGS

This report has synthesised the findings of a qualitative study conducted across four partner countries (Austria, Greece, Poland and Spain) to explore barriers and facilitators that people with mental health problems face in accessing primary and secondary cancer prevention services. Particular attention was also placed on gathering participants' input with regards to various factors to be considered in the design and implementation of the CO-CAPTAIN Patient Navigation Model.

The overarching findings of this report and a series of recommendations are provided below, followed by a brief evaluation of the strengths and limitations of this study.

Knowledge on and utilization of health/wellbeing promotion and cancer prevention

Most participants rated the relevance and importance of somatic disease prevention as high. Several risk factors were named by participants, with genetics and lifestyle (mainly smoking, overweight, substance abuse) being those mostly indicated. In particular: eating, adequate sleep, avoidance of smoking, healthy diet and physical activity. According to some participants awareness of personal risk factors and health needs seems to be increasing the use of medical tests and preventive measures.

The scope and level of knowledge on and utilization of health/wellbeing promotion and cancer prevention varies greatly. Interestingly, it seems that most participants access information on their own initiative and proactive search rather than receiving it through public health services or campaigns and, in the case of professionals from medical programmes and protocols/guidelines.

There are clearly variances in participants' willingness, capacity and possibilities to translate their awareness and knowledge of risks and prevention means into action. Mental health problems are without doubt a hindering factor as they were frequently described as taking priority over preventive measures for physical health. When people with mental health problems go to health services for physical problems, they tend to receive a lower level of care than they need. It also appears strongly that, to reach and be beneficial for this specific group population cancer prevention and promotion measures should be designed/adapted taking into account their specific needs and challenges. An example of this is being aware that the thought of cancer in people with mental health problems may worsen their status by e.g., increasing anxiety, as cancer is associated with death. This could lead to over or under use of prevention services. The absence of a targeted cancer prevention model for individuals with mental health problems is evident.

Finally, many participants emphasised the strong interconnection and interdependence between physical and mental health and the need for an individualised and holistic approach to health that takes into account both physical and psychological aspects. Training professionals on “seeing” individuals in their entirety is considered to be very important.

Barriers to healthcare access and utilization

A key barrier highlighted across the four countries was stigma and discrimination in their multiple forms. In general, people with mental health problems reported being ashamed of their condition and experiencing self-stigma. In addition to that, the real and/or perceived stigma from health professionals further influences their access to services and experience in using them. Mental health issues often bias professionals as they underestimate the physical issues and label them as psychosomatic or attribute them to mental health problems. Hence, diagnostic overshadowing occurs. In case of women, the double stigma of gender and value judgement appears.

Of particular notice is also the dissatisfaction expressed in relation to the dysfunctions of the public healthcare systems, including regarding systematic cancer prevention actions**.** More specifically, they mentioned long wait times for appointments; short time of consultations; shortage of personnel/resources; bad attitudes and poor knowledge/experience of health professionals; lack of an interdisciplinary approach and poor referrals/cooperation between different professionals; uncertainty about healthcare processes or contact points, and language barriers. Participants also described a lack of flexibility and adaptation to the needs of people with mental health problems. Some wished for the possibility to have a consultation via phone or online as they experienced physical visits as a burden.

Financial issues were also raised like difficulty to find services paid for by the health insurance and/ or lack of knowledge regarding which costs are covered; fees for missed appointments and personal financial situation not enabling the use of private services where access to specialists is much faster.

On the side of service users, aversion for hospitals; fear of diagnosis; high levels of anxiety; medication side effects; co-morbidity; lack of/poor autonomy; challenges in doing physical activity were consistently reported. Moreover, individuals with mental health problems are very likely to prioritize the monitoring of their mental health over physical health.

Facilitators to healthcare access and utilization

The **necessity to adapt healthcare to the individual** and a **positive professional-service user relationship** come up as key facilitators in healthcare. These are described by participants in several ways. Staff dedicating time to thoroughly examine and **understand the unique needs of service users**, including those specific to mental health problems is considered a crucial facilitator in healthcare.

Empowering communication from healthcare workers is another crucial factor. Service users emphasize the importance of being able to ask questions and receive clear explanations, especially regarding test results. They want to be treated with respect and attention, stressing the need for their opinions, concerns, and needs to be taken seriously. This preference underscores the need for others to acknowledge the significance and validity of their views and experiences, treating them with genuine respect and earnestness. Going even further, the **healthcare system should be structured and built participatively** so that service users also have a say.

The role of social support in enhancing patient motivation for treatment was emphasized. Participants highlighted the value of exchanging experiences and observations between families and caregivers and of the involvement of families, caregivers, peer supporters and social workers in assisting and guiding individuals through the healthcare system; motivating them to use services and adopt healthy behaviours as well as detecting potential symptoms of cancer. Health education is therefore considered essential also for these actors in addition to educating service users.

Different aspects related to **access to healthcare** were described. Service options should have a low threshold. This could comprise telephone/online consultations, home visits, short-term appointments or visits without an appointment, anonymity, little bureaucracy, or combining several appointments in one place and time. The importance of **sustainable and effective programs** and of **implementation of the pre-screening model in primary health care** were also among recommendations. Furthermore, the financial burden should be kept as low as possible and psychotherapy should be enabled quickly and paid for by insurance.

Finally, addressing mental health issues involves a dual focus on sensibilization and **combating stigma**, as highlighted by people with mental health problems. They emphasized the importance of raising awareness through public information and education. Creating an environment where individuals feel encouraged to approach the healthcare system without fear is deemed crucial.

Hindering factors and behaviour with potential negative (health) consequences

Participants mentioned several behaviours that have a negative impact on health – **behavioural risk factors** – i.e., smoking, alcohol consumption, lack of physical activity, unhealthy diet. In the case of people with the mental health problems these behaviours can be at once the result and contributing factors of mental ill health whereas additional factors come into play: e.g., mood and drive changes, anxiety, cognitive impairment, social withdrawal, increased levels of tension and distress, sleep disturbances, medication side-effects.

Moreover, it has been reported that experiencing mental illness is already so burdensome and attention-consuming that focusing on other aspects (physical health, somatic symptoms, prevention measures) is sometimes beyond the capacity of the participants to accommodate. All these factors can lead to poor self-care, self-neglect, refusing or delaying medical examinations, poor adherence to appointments, treatment and therapy. The absence of a supportive social network and social isolation were found to be further hindering factors.

Resources and behaviour potentially beneficial for health

When looking at beneficial behaviours, quitting smoking, limiting alcohol, improving sleep patterns and hygiene practices and maintaining a healthy diet while also remembering to stay adequately hydrated were consistently mentioned by participants. In a way, a sign of our times is the use of modern technologies for these purposes, such as smartphone relaxation apps.

Resources named comprised social support, financial resources, intrinsic motivation, perseverance in spite of tiredness and exhaustion, self-determination and experiencing self-efficacy. Developing coping strategies was also reported as a resource (e.g., skills training) as well as paying attention to one’s own health and taking self-initiative.

Furthermore, positive experiences were seen as a resource, including physical activity, reading, meditation, various types of hobbies and creative activities, entertainment and cultural activities, social engagement, quality of relationships, nurturing self-awareness and self-esteem and medication.

Other resources indicated were empowerment, combating social stigma, and promoting active living, as well as fostering trust through a supportive network consisting of family members, friends and representatives of therapeutic teams. Positive and supportive communication and interaction between the service user and healthcare provider, underscored by attention to the person's overall health, is considered to be conducive to a favourable view of the healthcare received and the significance of heeding professional guidance.

Considerations for the Patient Navigation Model

Participants were in agreement that the idea of a patient navigation model tailored to people with mental health problems could be beneficial. They had several suggestions regarding the **role and tasks of the patient navigator** who should/could:

- take on a coordinating role and work together with other professionals promoting interdisciplinary cooperation. Coordination efforts could also involve peer workers and other parties (e.g., NGOs)
- proactively involve people with mental health problems in their care as well as their caregivers and trusted persons
- provide information on already existing programs,
- offer health counselling
- promote prevention, while not only focusing on cancer prevention but health promotion in general
- help to prepare and evaluate medical appointments, send appointment reminders and accompany people with mental health problems to appointments
- monitor the course of the process, such as diagnostics, to intervene if any difficulties arise
- provide tailored information to all those involved and mediate communication/interaction
- stay in contact, offer regular meetings, and communicate openly.

There were numerous competencies and qualities that participants esteemed important for the patient navigator, who should:

- be able to establish a trust-based relationship, particularly with people with mental health problems
- have adequate training and professional experience in the psychosocial field and with mental health
- be sensible, respectful, motivating, and flexible and strengthen self-esteem and self-care
- be aware of the individual problem history and family history as well as individual needs
- use simple, comprehensible language

- be aware and have an understanding that people in the acute phase of a mental illness do not focus on prevention
- be able to provide sufficient and diverse resources and options.

Participants mentioned several elements that could be either barriers or facilitators for the implementation of the PNM. The role of adequate resources and funding were stressed; one suggestion was to involve the decision-makers from the very beginning so that they have the feeling of co-creation and responsibility for implementing the developed solutions. The roles of political support and financial support are seen as intertwined.

The patient navigation should be low threshold, without costs for the people with mental health problems or with the option for financial support, characterized by little commitment (i.e., being able to join or stay absent), and high flexibility (e.g., establish contact via phone or email).

For the successful implementation of the PNM healthcare professionals stressed the fact that there is a need for it to become part of the therapeutic plan for people experiencing mental health problems since the therapeutic plan takes place in a neutral setting, there is a relationship of trust between the therapeutic team and the patients, and concurrently, it favours an opening for human connection.

Participants saw advertising and high visibility of the PNM as essential to its success. They proposed trendy campaigns, target group-oriented advertisement, communication of the relevance of prevention to society via the media, and work with existing organizations who could refer clients.

The effectiveness of the action should be evaluated over an extended period of time as it will take time to put in place all that is needed for implementing the model: procedures, recruitment and training of patient navigators, engagement of people with mental health problems and their support network and gathering sufficient data to make conclusions.

App

There are mixed opinions about the use of an app as part of the CO-CAPTAIN project though applications have become an integral part of our lives the effectiveness of healthcare apps can vary among people with mental health problems.

Participants saw **potential advantages/facilitators** in the app as tool that would be easily integrable into daily life and could facilitate monitoring the therapeutic process and provide more reliable information than completing surveys or asking questions and function as an orientation aid (e.g., as a pedometer) with the potential of enabling a feeling of being seen and raising motivation (e.g., for physical activity). Furthermore, the app has a large data pool potential that could aid in motivating health policy actions.

Participants also saw **potential disadvantages/barriers** including long phone-use durations, questionable adequate access for all groups, limited familiarity with technology, questionable reliability, and potential problems due to mental health problems (e.g., paranoid feelings of being controlled or pursued or potential for heightened levels of health-related anxiety and obsession among certain patients). Data protection issues were very prominent among participants; hence data collection should be treated as an 'add on' instead of being mandatory.

Furthermore, it was seen as unhelpful to derive political guidelines from the app; instead, individual care issues should be improved upon with the app.

Participants also stated specific conditions/recommendations that would be of importance to them for implementation. The structure should be simple and attractive and the app utilization should take little effort. Furthermore, it would be advantageous to enable customization of the app and to combine several features into a single app. Support and help with using the app could be provided by healthcare workers although they could see this as an additional burden. Additionally, it would be important for the app to be financially affordable. Acceptance could further be raised by creating a user manual.

Participants had several ideas for **app features**, such as receiving information (e.g., cancer prevention), offers for physical activities and social interactions, instructions for meditation or implementing changes in daily life, a (mood-)diary, gratefulness exercises, an option to track one’s own progress, a chat function coordinated by a patient navigator, self-help groups, a discussion forum, and a feature to quickly ask for medical help. For the app contents, a holistic approach to prevention should be aimed at.

Recommendations for the Patient Navigation Model

The key recommendations drawn from the study to be considered in the design and implementation of the PNM are as follows:

- To reach and be beneficial for people with mental health problems, cancer prevention and promotion measures should be designed/adapted taking into account their specific needs and challenges.
- The programme should adopt a person-centred and holistic approach that takes into account both physical and psychosocial aspects.
- There is a clear need for campaigns and education programmes targeting people with mental health problems, members of their support network on cancer prevention and healthcare workers. The latter should also be trained on understanding mental health problems and their connection with physical ones.
- The programme should promote interdisciplinary cooperation of professionals as well as establishing a trustworthy relation between them, people with mental health problems and members of their support network, thus “building” a care team where the patient navigator will be pivotal.
- Cancer prevention programmes for people with mental health problems need to address the issue of stigma and discrimination.
- Medical, psychological and social services should have a low threshold, be flexible and accessible by including and responding to needs of people with mental health problems and their caregivers.

Strength and limitations

The use of an exploratory qualitative design is a notable strength of this study. It enabled a comprehensive exploration of the participants' perceptions, experiences, and priorities. Furthermore, the inductive approach allowed for openness to unexpected lines of inquiry, a fitting choice considering the current under-researched nature of the topic. The systematic analysis, coupled with the engagement of multiple researchers, enhances the confirmability and credibility of the presented findings (Korstjens & Moser, 2018).

The sample recruited for this study comprises several groups confronted with or involved in mental healthcare due to mental health problems including people with mental health problems, caregivers, care team members, representatives of mental health organisations, and representatives of service managers. This involvement of participants with different perspectives constitutes another strength of this study as it allows a comprehensive exploration into the topic. However, recruitment of participants depended on reachability as well as current mental health status. Especially people with e.g., acute mental health problems or social withdrawal may not fully be represented in the recruited sample, which should be considered a limitation. Additionally, sampling was focused mostly on urban areas where mental health services and other offers seem more frequently available compared to rural areas, the latter of which are likely underrepresented in this study.

It should further be noted that quality and availability of healthcare services may vary greatly depending on e.g., the provider, the setting, and the healthcare worker, as indicated by participants. The overall themes detected in the analysis of the data, however, show commonality and consistency across participating countries, suggesting a high degree of transferability of results.

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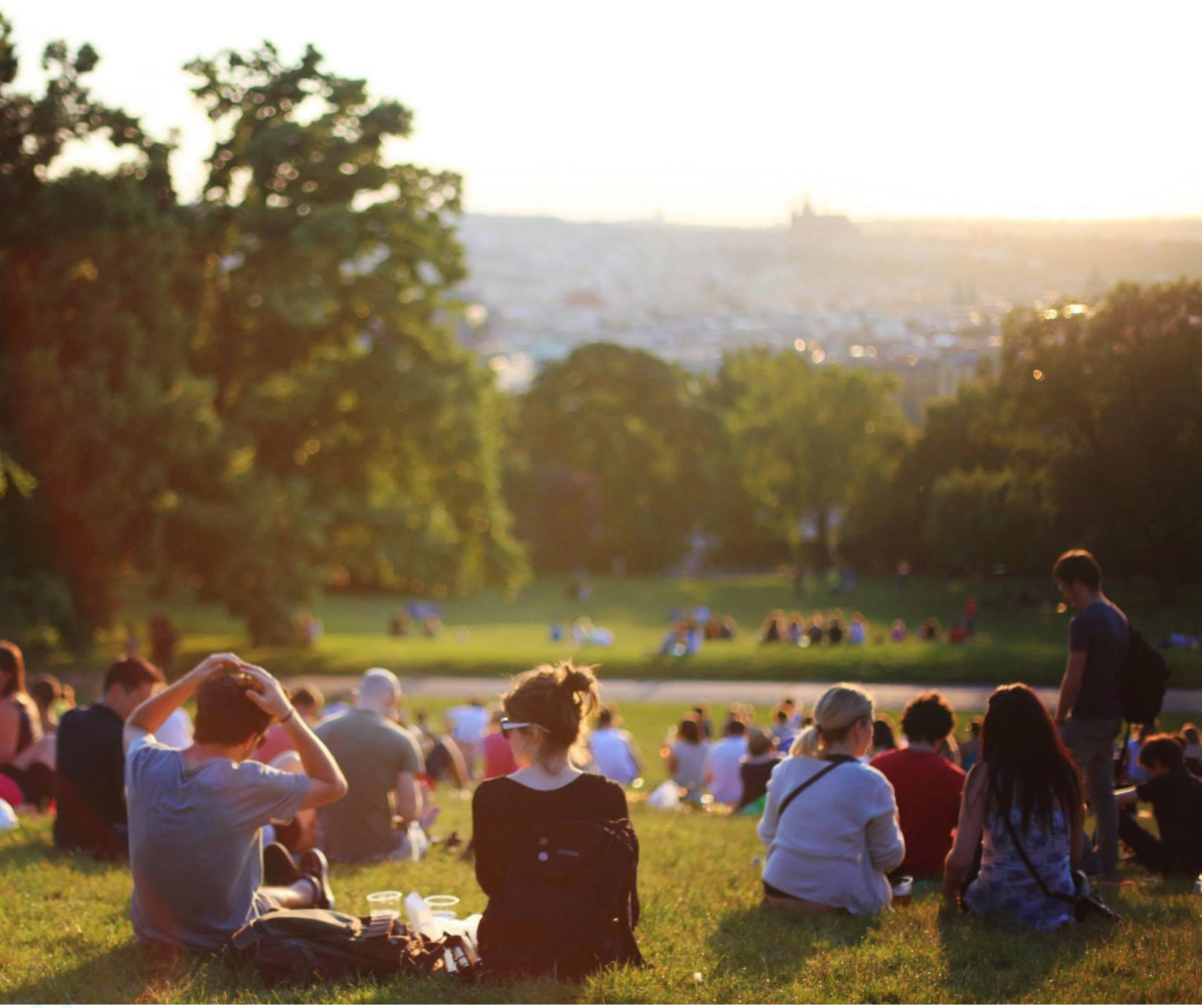
CO-CAPTAIN

Cancer prevention among individuals with mental ill-health: CO-adapting and implementing patient navigation for primary cancer prevention



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