



Participants' expectations and experiences with periodic health examinations in Austria

Report of a qualitative study

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Authors

Name	Email-address	Affiliation
Isolde Sommer	isolde.sommer@donau-uni.ac.at	Department for Evidence-based Medicine and Clinical Epidemiology, Danube University Krems, Austria
Viktoria Titscher	viktoriam.titscher@donau-uni.ac.at	Department for Evidence-based Medicine and Clinical Epidemiology, Danube University Krems, Austria

Contact

Corresponding author

Isolde Sommer

University for continuing education (Danube University Krems)
Department for Evidence-based Medicine and Clinical Epidemiology
Dr.-Karl-Dorrek-Straße 30
3500 Krems

isolde.sommer@donau-uni.ac.at

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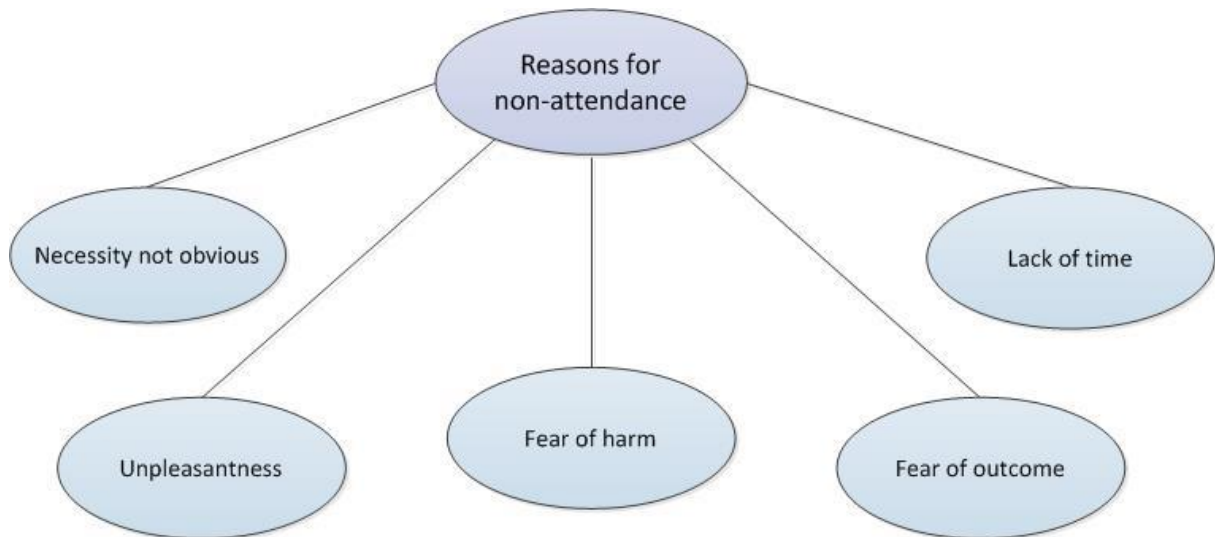


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Executive Summary (German)

Einleitung

Die österreichische Vorsorgeuntersuchung (VU) soll bis zum Jahr 2020 evidenzbasiert überarbeitet werden. Dies beinhaltet neben der Überprüfung der wissenschaftlichen Grundlagen auch erstmals die Berücksichtigung der Werte und Präferenzen der Bürgerinnen und Bürger. Dazu müssen die Erwartungen bezüglich des Nutzens und des Ablaufs der VU erhoben werden.

Ziel der Studie war es, folgende Fragen zu beantworten:

1. Was sind die Gründe und Motivation erwachsener Bürger und Bürgerinnen in Österreich an der Vorsorgeuntersuchung teilzunehmen? Welche Erwartungen und Befürchtungen sind mit der Teilnahme an der VU verbunden?
2. Wie zufrieden sind erwachsene Bürger und Bürgerinnen in Österreich mit der Organisation der VU? Was erachten sie als besonders wichtig?

Methoden

Die Rekrutierung der Teilnehmenden erfolgte über die Gebietskrankenkassen Wien, Steiermark und Tirol. Sie schickten jeweils 1200 Einladungsschreiben an Versicherte, die bereits an der VU teilgenommen hatten. Interessierte Personen konnten einen ausgefüllten Kurzfragebogen über einen frankierten Rückumschlag an die Donau-Universität Krems schicken. Auf Basis der Kurzfragebögen wurden stratifiziert nach Alter, Geschlecht, Bildungsgrad und Migrationshintergrund Teilnehmende ausgewählt und eingeladen. Die Fokusgruppe fand in den Räumlichkeiten der jeweiligen Gebietskrankenkasse in Wien, Graz und Innsbruck statt. Sie wurden mit einem Diktiergerät aufgezeichnet. Vor Beginn unterzeichneten alle Teilnehmenden eine Einverständniserklärung. Die Ethikkommission der Donau-Universität Krems bewilligte das Projekt.

Die Fokusgruppen wurden im Wortlaut transkribiert und nach den Arbeitsschritten der thematischen Analyse [1] induktiv ausgewertet.

Ergebnisse

Von August bis November 2017 führten wir drei Fokusgruppen mit acht bis zwölf Teilnehmenden in Innsbruck, Graz und Wien durch. Die Rücklaufquote der Einladungsschreiben betrug durchschnittlich 9,8%. Das Durchschnittsalter der 30 Teilnehmenden war 49,4 Jahre und circa die Hälfte waren Frauen (46,7%). Es konnte keine

Personen mit Migrationshintergrund eingeschlossen werden. Die meisten Teilnehmenden gingen jährlich zur Vorsorgeuntersuchung (66,7%).

Wir identifizierten sieben Hauptthemen in Bezug auf die VU:

1. Gründe für eine Teilnahme

Viele Teilnehmende hatten **gesundheitliche Erwartungen** an die VU. Sie erwarteten einerseits, dass Krankheiten durch die VU frühzeitig erkannt werden, unnötiges Leiden verhindert und das Wohlbefinden verbessert würde. Andererseits gab die VU ihnen auch Sicherheit, dass sie nicht unbemerkt erkrankt waren. Darüber hinaus dient die VU einigen Personen dazu, ihre Untersuchungsergebnisse und ihren Gesundheitszustand zu dokumentieren.

Einige Personen hielten **Umwelteinflüsse**, wie finanzielle Anreizsysteme durch das Gesundheitssystem, für motivierend. Weitere Gründe waren die Sensibilisierung für die VU durch den Beruf oder sportliche Freizeitaktivitäten.

Soziale Einflüsse spielten eine wichtige Rolle, da Familienmitglieder und Ärzte/Ärztinnen an die VU erinnerten. Auch Krankheitsfälle im Freundeskreis bewegten einige Personen dazu, an der VU teilzunehmen.

Die Teilnehmenden diskutierten auch **individuelle Einflussfaktoren**, wie Alter, Geschlecht und persönliche Krankheitsgeschichte, als potentielle Gründe.

2. Gründe, nicht teilzunehmen

Als Hauptgründe, nicht an der VU teilzunehmen, wurde die **fehlende Wahrnehmung der Notwendigkeit** der Untersuchung aufgeführt oder dass sie **unangenehm** sei. Außerdem vermuteten einige Personen, dass manchen Menschen die **Zeit fehle** oder sie einfach nicht an die VU denken würden. Manche Teilnehmende erwähnten, dass die **Angst** vor Ärzten/Ärztinnen oder schlechte Erfahrungen mit ihnen Personen an der Teilnahme an der VU hindern könnte. Des Weiteren diskutierten die Teilnehmenden auch die Angst vor Schäden durch die Untersuchung, wie Strahlenbelastung oder falschen Diagnosen, als Hinderungsgrund.

3. Vorsorgeuntersuchungen als Anreiz, das Gesundheitsverhalten zu ändern

Die Teilnahme an der VU wurde in der Diskussionsrunde als Anreiz für gesundheitsbezogene Verhaltensänderungen erachtet, da schon die **Untersuchung an sich als gesundheitsfördernd, bewusstseinsbildend** und motivierend empfunden wurde. Die Teilnehmenden versuchten nach der VU ihr **Gesundheitsverhalten zu ändern**.

Empfehlungen von Ärzten/Ärztinnen seien jedoch nur **manchmal hilfreich**. Die Teilnehmendem wünschten sich zusätzlich noch **Empfehlungen für grenzwertige Befunde**.

4. Vorsorgeuntersuchungen sollten umfassender und individueller gestaltet werden

Die Teilnehmenden waren mit einigen Untersuchungen unzufrieden. Sie hatten das Gefühl, dass der Umfang an Untersuchungen in den letzten Jahren abgenommen hatte und wünschten sich **mehr Untersuchungen**. Die Personen äußerten aber auch den Wunsch nach der **Berücksichtigung des persönlichen Erkrankungsrisikos** aufgrund von Alter und Krankheitsfällen in der Familie bei der Auswahl der VU.

5. Vorsorgeuntersuchungen werden bei jedem Arzt/jeder Ärztin anders erlebt

In den Diskussionsrunden fiel den Teilnehmenden immer wieder auf, dass ihre Erfahrungen mit der VU sehr unterschiedlich waren. Negativ merkten sie an, dass einige Ärzte/Ärztinnen zu **wenig Zeit** hätten, um die VU durchzuführen und die Ergebnisse zu besprechen und die VU **nicht standardisiert durchgeführt** wurde. Einige berichteten zudem, dass die VU bei ihnen nur durch eine/n **Assistent/in ausgeführt** wurde. Aufgrund ihrer Unzufriedenheit mit dem Kassensystem gaben einige Teilnehmende an, dass sie einen Wahlarzt/eine Wahlärztin aufsuchten. Die **Organisation**, z.B. die Öffnungszeiten, habe sich aber laut einiger Personen **verbessert**. Manche waren der Meinung, dass die **Vergütung** der VU für Ärzte/Ärztinnen zu **gering** sein. Bezogen auf den Umfang der VU und die Betreuung durch Arzt/Ärztin waren sich die Teilnehmenden nicht einig, ob **Internisten/Internistinnen gegenüber (Kassen-)Hausärzten/-ärztinnen** zu bevorzugen seien.

6. Besprechung der Untersuchungsergebnisse ist nicht zufriedenstellend

Die meisten Teilnehmendem waren mit der Besprechung der Ergebnisse unzufrieden. Die Ärzte/Ärztinnen nahmen sich zu **wenig oder keine Zeit** dafür oder kommunizierten die Ergebnisse missverständlich. Die Besprechung der Ergebnisse erzeugten bei ihnen **unterschiedliche Gefühle**, wie Unsicherheit oder auch Zufriedenheit.

7. Ein Termin für die Vorsorgeuntersuchung reicht nicht aus

Viele Personen waren der Meinung, dass die VU mehrere Termine umfassen sollten. Zum einen wünschten sie sich **Folgetermine**, um Ziele zu vereinbaren. Zum anderen zeigten ihre Erfahrungen, dass es von der Ärztin/vom Arzt abhängt, ob sie im Anschluss an die VU Überweisungen zu Fachärzten/-ärztinnen erhielten. In diesem Zusammenhang beklagten einige Teilnehmende, dass die Krankenkasse die Kosten für **weitere** notwendige oder gewünschte **Untersuchungen**, nicht übernahm.

Schlussfolgerung

In unserer Studie gaben die meisten Personen die Früherkennung von Krankheiten und ein langes Leben in Gesundheit als Motivatoren an, um an der VU teilzunehmen. Sie empfanden die VU außerdem als Anreiz, um ihr Gesundheitsverhalten zu ändern. Unzufriedenheit berichteten die Teilnehmenden damit, dass die Durchführung der VU nicht standardisiert durchgeführt wurde und die VU zu wenige (individualisierte) Untersuchungen beinhaltete. Sie machten außerdem das Gesundheitssystem dafür verantwortlich, dass die Ärzte/Arztinnen zeitlich eingeschränkt waren. Die Motivation und Erwartungen von Migranten und Migrantinnen konnten in unserer Studie nicht untersucht werden.

Die Analyse zeigte, dass die Teilnehmenden fehlinformiert waren über den Inhalt der VU. Dies weist darauf hin, dass eine umfassende Informationskampagne notwendig wäre. Zudem könnte eine Leitlinie den PraktikerInnen helfen, die VU standardisiert umzusetzen. Zusätzlich ist eine Evaluation der Implementierung empfehlenswert.

Abstract English

Background

The engagement of citizens in the development of evidence-based screening programs is internationally supported. As part of a scientific update of the periodic health examination (PHE) program in Austria, the aim of the research was to explore the motivations and reasons for adult citizens in Austria attending periodic health examinations as well as their satisfaction with the way the periodic health examinations are organized.

Methods

We conducted three focus groups with a random sample of previous PHE attenders. Participants were stratified by age, gender, and education. The discussions were recorded, transcribed, and analyzed using a thematic analysis approach.

Results

Main motivations of attenders (n=30) were to detect diseases earlier, to spare suffering, and to live a long healthy life. They believed that the PHE works as an incentive of health behavior change. As possible reasons not to attend the PHE, participants mentioned no obvious necessity, time constraints, unpleasant experiences, and fear of harm or outcome. They wanted the range of examinations to be selected based on individual risks and be more comprehensive. Some participants expressed frustration with the lack of time doctors dedicated to the examination or the discussion of the results. Throughout the discussion, they realized that the scope and conduction of the PHE depends on the doctor.

Conclusion

The study showed that attenders of the PHE have high expectations concerning the content and quality. They requested a comprehensive and individually-focused program. The misinformation among the participants and inconsistent conduct of the PHE showed the need for an information campaign for patients, as well as guidelines and implementation support for doctors.

1 Introduction

The development of periodic health examinations has a long history. Since their first implementation in various settings, they have been applied as regular medical examinations by physicians to identify and treat diseases, and prevent the spread of diseases [2]. With increasing life expectancy and increasing numbers of people suffering from preventable diseases, prevention programs have become more important. Periodic health examinations or health checks contribute to primary/secondary preventions as part of prevention programs. They aim to evaluate individual risks and initiate health promoting interventions or early treatment of diseases. Depending on the framework of the program, health checks work in various settings, such as general practices or schools. Thus, it is possible to reach many different target groups, like the general public or specific high-risk groups. In Austria, primary health care providers offer periodic health examinations to the general public. All men and women with insurance aged 18 years or older have the possibility to receive health checks for free. The Austrian periodic health examination program includes 18 screening and behaviour counselling interventions in order to evaluate the risk of developing diseases and to prevent or detect diseases. The program targets non-communicable diseases like cardiovascular diseases and cancer. The examinations are mostly offered in general practices. In case of further examinations or to confirm a diagnosis, they might refer the patient to a specialist. Some examinations, like cancer screening, are offered in specialist practices.

The clinical and cost effectiveness of prevention programs depend on their uptake. The participation rate of the periodic health examination in Austria was 13.2% in 2015, which is an unsatisfactory low rate [3]. Furthermore, in other countries, such as the UK, participation rates are lower (45% of invited patients) than projected (75% of invited patients) [4, 5]. Therefore, efforts to increase the uptake of health checks are made [6]. One way to counter this problem is to improve the program evaluating health services and investigating the perception of health examinations. In general, program evaluations are implemented as part of the basic quality assessments of health care to ensure that services are optimally delivered. Previous research has evaluated the different perspective of all stakeholders in the health care sector. Hence, stakeholders other than patients are asked about their perception of health check programs [7, 8]. Results from these studies report positive factors and barriers perceived by nurses and physicians. Such information helps to improve the implementation of prevention programs. Focusing on patients, research on the uptake of health examinations has mainly concentrated on factors influencing participation rates. For example, researchers assessed the socio-demographic characteristics of attenders and non-attenders of health examinations. These studies showed a positive correlation of educational level or marital status with participation rates of individuals [4, 9, 10]. They also identified

individual reasons not to attend the health examinations, like a lack of perceived relevance or dissatisfaction with the primary care provider [11]. Other studies explored the perceptions of patients concerning the framework of health examinations, like their wishes of more individualised health examinations [12, 13]. Nevertheless, the landscape of the multidimensional public's decision process remains incomplete. Only few studies explore the complex network of influencing factors on patients' decision-making process in participating in health checks [13].

Despite the evaluations of participants and their motivation for the quality assessment, active patient involvement in the development of screening programs is limited. As part of an evidence-based approach, scientific evidence, clinical expertise, and patient values should be integrated in the decision making process of recommendations [14]. Involvement of patients aims to identify their expectation, values, and priorities and to take them into consideration. Some international institutes already include patients in their guideline or program development processes like the Guidelines International Network [15], the National Institute for Health and Care Excellence (Great Britain) [16], or the World Health Organization, which uses the Grading of Recommendations Assessment, Development and Evaluation approach. They involve patients, for example, by including them as members in decision-making committees using patients' expertise to develop recommendations. In addition, studies have shown that patients are more satisfied with medical care if it meets their expectations [17]. In the context of health checks, it implies that their expectations regarding health checks, especially the expected outcomes of screening, have to be known to the program developers. Furthermore, the involvement of participants and their values might lead to higher patient satisfaction, which might increase the participation rate in the end. Also, there is evidence that meeting patients' expectations improves their involvement in the treatment and shortens the recovery time [18]. So far, in Austria, patient satisfaction with the program has been evaluated, but their expectations and values were not been taken into consideration to design or revise the Austrian periodic health examination program [10].

In conclusion, it is necessary to explore the public's values and expectations in health checks in more detail to improve the development of prevention programs, leading to more successful prevention programs.

As part of a larger project to conduct a scientific update of the Austrian periodic health examinations, we involved patients in the decision-making process by exploring their expectations and fears, values, wishes, and experiences concerning the Austrian periodic health examinations.

2 Aims of the research and research questions

The aim of the research was to explore the motivations and reasons for adult citizens in Austria attending periodic health examinations as well as the expectations and concerns they have in terms of their health. A further objective was to determine how citizens perceive the organization and process of periodic health examinations. The results are used to formulate health outcomes and provide information on the values and preferences of the population with regards to periodic health examinations that will provide information for the recommendation process.

This qualitative research study addressed the following key questions:

1. What are the reasons and motivations for adult citizens in Austria attending periodic health examinations? Which expectations and concerns do they have when attending periodic health examinations?
2. How satisfied are adult citizens in Austria with the way periodic health examinations are organized and conducted? What do they consider particularly important?

3 Methods

3.1 Sampling

The sampling procedure selected for this study followed the stratified purposeful sampling strategy suggested by Patton [19]. This strategy aims to capture variation of key characteristics while selecting a fairly homogenous sample within each stratum. Stratified purposeful sampling differs from stratified random sampling in that the sample sizes are likely to be too small for generalization.

In consultation with the funder, we purposely sampled adult citizens that have attended periodic health examinations in the past. Adult citizens had to vary in age, gender, place of residence, education, and migration background. We assigned them to strata by constructing a sampling grid that reflected various combinations of these characteristics. Participants were excluded if they were not able to speak German as they were required to be able to express themselves during a discussion held in German.

The sample size of this research project was primarily guided by the heterogeneity of the target group and pragmatic considerations as purpose of the focus groups was to provide information for the development of recommendations rather than being a stand-alone research project.

3.2 Recruitment strategy

The Main Association of the Austrian Social Security Institutions asked the Regional Health Insurance Funds in Vienna, Styria, and Tyrol to send an invitation letter (Appendix 8.1) with a study information sheet (Appendix 8.2) and a short questionnaire to assess personal characteristics (Appendix 8.3) to a random sample of 1200 previous attenders of periodic health examinations per region, stratified by age and gender. Those expressing interest to participate were asked to return the short questionnaire including their contact details in a stamped envelope provided. The research team selected and invited participants to the focus groups based on personal characteristics.

3.3 Settings

The data collection took place in meeting rooms of the Regional Health Insurance Funds in Vienna, Graz, and Innsbruck. Refreshments were provided in order to create a pleasant environment. Travel expenses and a small incentive (e.g. € 20 gift voucher) were offered to all participants.

3.4 Procedure

We prepared a topic guide to elicit discussion of a wide range of motivations, expectations, and concerns for attending periodic health examinations, importance of individual screening tests, consultations, and satisfaction with the organization of periodic health examinations (Appendix 8.5). The discussion guide included an outline of the topics to be covered. It was developed with input from the literature [4, 7, 12, 20]. Topics for the focus groups included 1) reasons for attending periodic health examinations, 2) feelings associated with periodic health examinations, 3) dealing with results of periodic health examinations, 4) actions upon completion of the periodic health examination, and 5) organization of periodic health examinations. The topics were formulated as a series of open-ended questions.

One member of the research team acted as ‘facilitator’ for the focus group discussions and a second member served as an ‘observer’. IS facilitated the first two focus groups and VT facilitated the third one. We audio-recorded the focus group discussions using a digital voice recorder. The observer kept a record of the content of the discussion in case the equipment failed. Each focus group discussion lasted up to two hours. We stopped collecting data after the third focus group as no new information in relation to the research question was forthcoming.

3.5 Data analysis

We applied an inductive framework for the analysis of the data. After each focus group session, IS and VT met to review and complete the notes taken during the meeting. This allowed them to evaluate how the focus groups went. A professional transcribed all focus group discussions verbatim. After the transcript of the discussion was prepared, IS and VT conducted the data analysis. Analysis was facilitated using MaxQDA (VERBI Software.Consult.Sozialforschung GmbH), a program designed to aid qualitative data analysis.

We analyzed the data using a thematic analysis approach [1]. The approach involves six steps to identify, analyze, and report patterns (themes) within data (Figure 1).

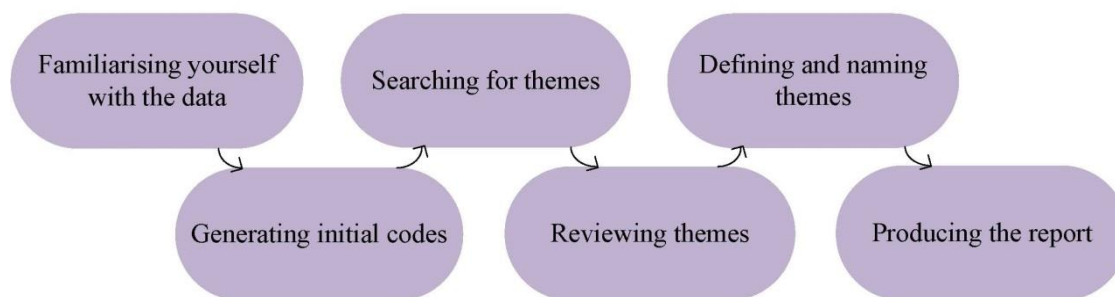


Figure 1: Phases of thematic analysis according to Braun & Clarke (2006)

First, we read the first two transcripts to become familiar with the data. We then independently identified and coded meaningful text segments. We constantly compared codes. The next step involved collating generated codes into potential subthemes. We then met to review the codes and to discuss and define subthemes. The subthemes that we agreed on were grouped into overarching themes. As the third focus group was conducted four months later than the first two groups, VT integrated its codes into the proposed themes and new subthemes as they arose. We created a graphical display that maps out the relationships of the themes. In the final step, IS selected vivid, compelling example extracts to substantiate the created themes. While she wrote the ‘story’ of the data, she made final amendments to the themes.

3.6 Ethical considerations

Data were anonymized and the research adhered to local and national guidelines and legislation and the articles within the Declaration of Helsinki. We gained ethical approval from the Danube University Research Ethics committee on the 21st of July 2018.

All participants in the research project were fully informed about the aims of the research, the procedures involved in the research, and their rights as a participant. We sought informed consent in the form of a signature from the participants before the start of the focus group (Appendix 8.4). Participants had the opportunity to withdraw from the study at any time during the course of the study.

Electronic data collected are kept in password-protected files. We gave each participant a pseudonym for the purpose of analysis and dissemination. We deleted audio files once the transcription process had been completed.

4 Results

From August to November 2017, we conducted three focus groups with 8-12 participants each in Innsbruck, Graz, and Vienna. The response rate for invitation letters sent through the regional health insurance funds was 11.4% in Innsbruck, 8.4% in Graz, and 9.7% in Vienna. The mean age of participants was 49.4 years and around half of them were women (46.7%). None of them had a migration background (defined in our study as born abroad or of other than Austrian nationality). Around one third had school education without leaving certificate, one third with leaving certificate (12-13 school years), and another third held a degree from a University/Polytechnic. Two thirds were attending periodic health examinations annually (Table 1).

Table 1: Sample characteristics

	Total (n=30)
Age (̄, years)	49.4
Gender (%)	
Women	46.7
Men	53.3
Place of residence (%)	
City/town	70.0
Countryside	30.0
Country of birth (%)	
Austria	100
Others	0
Nationality (%)	
Austrian	100
Others	0
Education (%)	

Compulsory school	6.7
Apprenticeship	23.3
Vocational secondary school without school leaving certificate (“Matura“)	3.3
School leaving certificate (“Matura“)	33.3
University/Polytechnic	33.3
Average frequency of periodic health examinations (%)	
Annually	66.7
Every 2 years	20.0
Every 3 to 5 years	10.0
Less than every 5 years	3.3

We identified a number of themes that were grouped into seven main themes. The first three themes were 1) reasons for attendance, 2) reasons for non-attendance, and 3) periodic health examinations as incentive for health behavior change relate to research question 1 addressing reasons, motivations, expectations, and concerns adult citizens associate with periodic health examinations. Themes 4) periodic health examinations should be more comprehensive and individualized, 5) periodic health examinations a different experience with every doctor, 6) discussion of results often dissatisfying, and 7) one appointment is not enough deal with issues of satisfaction and dissatisfaction with the current periodic health examination and relate to research question 2. Each theme is discussed below in more detail.

4.1 Reasons for attendance

Participants gave several reasons for attending periodic health examinations, most of them relating to health expectations. Others referred to environmental, social, and individual influences (Figure 2).

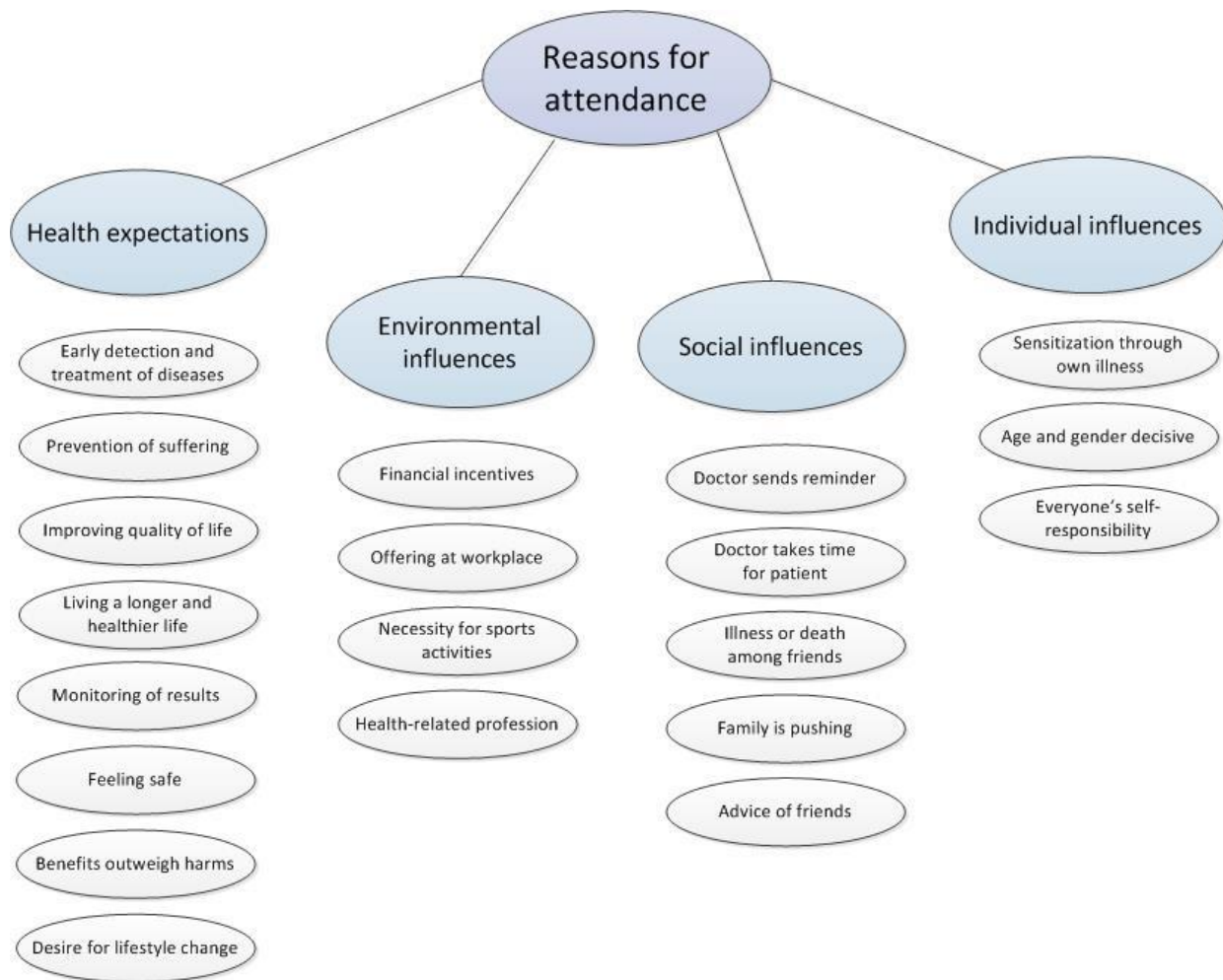


Figure 2: Reasons for attendance

Health expectations

Many participants shared the expectation that periodic health examinations were all about recognizing diseases that do not cause any health concerns if they get detected and treated early:

*“I think there are some diseases that are no problem at all if you recognize them in time and I think that is the task of the health examination.”
(Informant 9, FG Innsbruck)*

In some cases, participants had experienced a diagnosis of severe illness as a result of a periodic health examination which confirmed their opinion that periodic health examinations fulfilled their purpose.

Participants felt that the early detection of diseases would prevent them from a lot of unnecessary suffering and would thereby make their life more livable and improve their

well-being. Additionally, some women mentioned that being a mother was a further motivation and obligation to attend periodic health examinations. They said that they wanted to look after their children for as long as possible and live a long and healthy life.

Another reason that spurred some participants to regularly attend period health examinations was the documentation of examination results. They felt that a regular documentation of results would be an advantage for diagnosing a disease or condition or simply wanted to get feedback on their health status:

*“For me the motivation has changed twice, I have been going to periodic health examinations for a long time, basically because I was always interested in a status, it was simply good to know where I stand in terms of health, where I stand physically, what can I improve in my lifestyle in order to stay healthy?
(Informant 2, FG Vienna)*

Attending periodic health examinations also gave several participants a feeling of safety. They wanted to be sure that they do not suffer from a disease that does not show symptoms yet. Such diseases would be detected by examinations such as blood tests, as explained by one participant:

“I don't think that it (attending periodic health examinations) depends so much on age, I was, when something pinches or where something hurts, you can feel it, but above all, the blood values and so on, that you can only really find out with one, such an examination, just can't do it otherwise, and therefore, just out of safety I now go for example again and that already for over ten years.” (Informant 4, FG Graz)

Environmental influences

Almost all the participants were convinced of the usefulness and benefit of periodic health examinations, so they thought of ways how others could be motivated to attend. Several participants believed that periodic examinations should be connected to incentives which could include financial incentives like a bonus system or non-financial incentives like a working day off for attending the examination. Few proposed a system that would include cuts in social welfare benefits if people failed to attend.

Other reasons for attending health examinations that participants mentioned were sports activities requiring a medical certificate, awareness through their profession in the health sector, and the convenience of having periodic health examinations offered at work:

“I've been going regularly for many years, thank God I'm healthy, the big advantage is what you said, it's under one roof, it's quick, a few minutes to take blood, a few minutes and then you have the result, so the rough overview.” (Informant 4, FG Vienna)

Social influences

Family and friends, but also doctors had a substantial influence on whether participants were attending periodic health examinations or not. Many participants mentioned that they are being sent reminders for periodic health examinations by their doctors. Few said that periodic health examinations provided a rare occasion where doctors dedicated sufficient time to their patients which they wanted to use.

In many cases, family and friends were the reason for attending periodic health examinations. Sometimes they influenced participants indirectly when a close friend or family was diagnosed with a severe disease or suddenly died. With other participants, family members or friends advised or in some circumstances even pushed them to attend periodic health examinations, as expressed by one participant:

“Yes, that's the way it is for me, I'm forced to attend the periodic health examinations. My wife thinks this is important. (Note: laughs briefly) Well, my wife thinks it is important and she is absolutely right, there are certain diseases and the earlier they recognize them, it is about the early detection, afterwards I have a chance...” (Informant 1, FG Innsbruck)

Individual influences

Among the participants were some that were or had been suffering from a severe disease. Although they would get regularly checked for disease progression or remission as part of follow-up examinations, their health state made them worry about other potential diseases and motivated them to attend period health examinations.

Biologic factors such as age and gender were discussed as potential drivers for attending periodic health examinations. While opinions in terms of gender diverged, almost all participants thought that awareness for periodic health examinations would, with exceptions, increase with age:

“Yes, I think there is certainly a difference in age and gender, whether male or female, but you probably think differently at 25, 35 than if you are in the age group between 60 and 70, I assume that this is more likely at the age between 60 and 70 or 50 to 60, than when you say as a 30-year-old or as someone else said, something tweaks, ah, you play it over, but when you get older, you

might think about it more seriously and that way you are more willing to accept it.” (Informant 3, FG Graz)

In contrast to the financial and non-financial incentives which many participants believed the health system should provide, many other emphasized that attending health examinations is an individual responsibility.

4.2 Reason for non- attendance

The predominant reasons why participants did not attend periodic health examinations in the past or thought other people would not attend were that they did not see any need or considered the examination as unpleasant. Other reasons referred to lack of time, fear of outcome or harm caused by the examination (

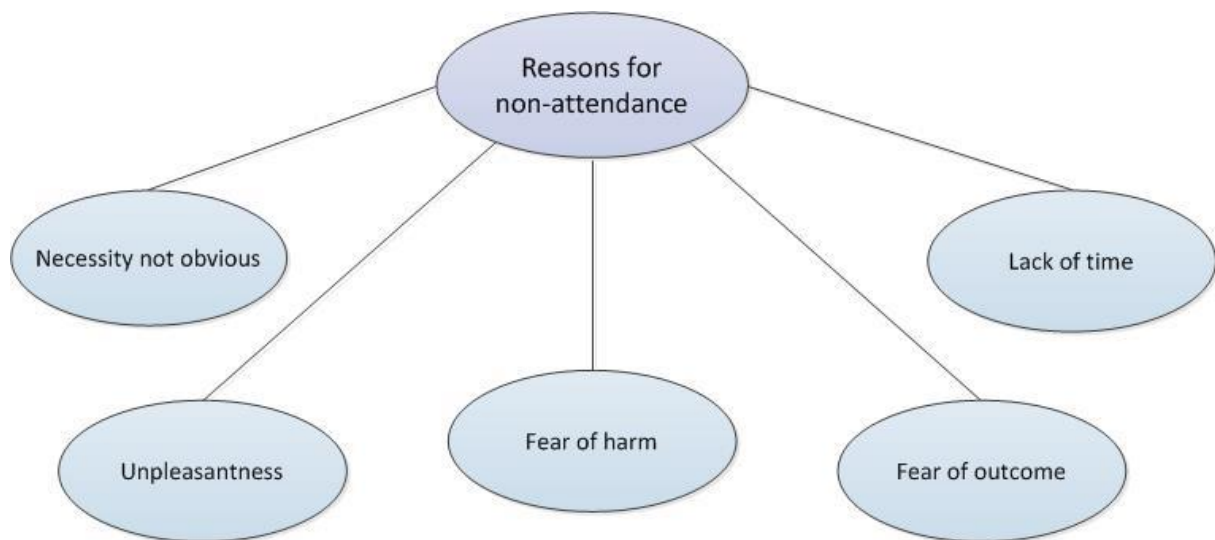


Figure 3).

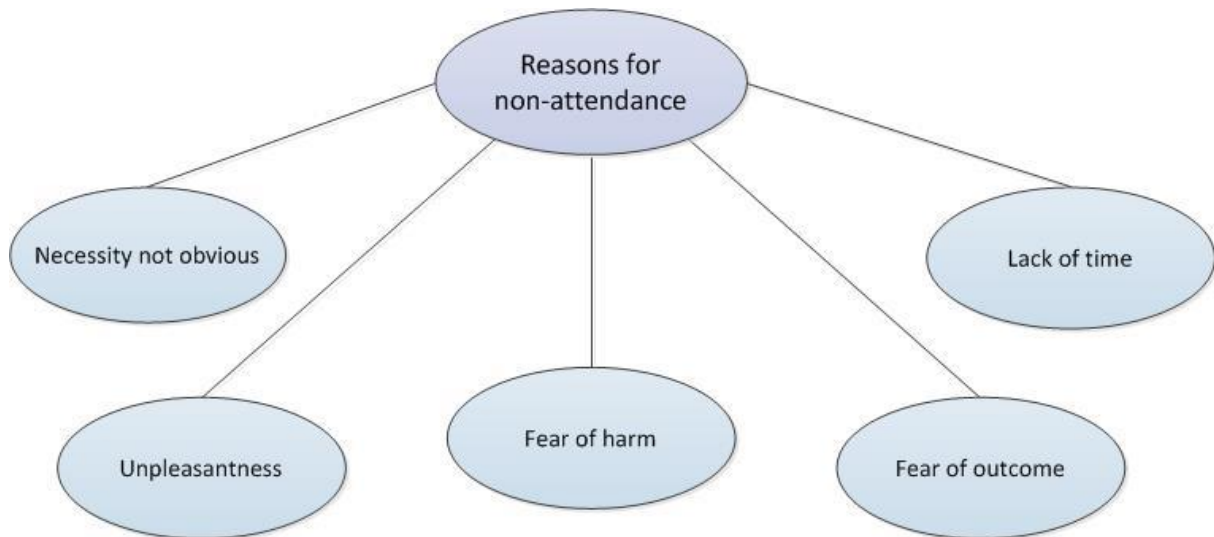


Figure 3: Reasons for non-attendance

Many participants believed that people often do not go to periodic health examinations for the simple reasons that they just would not have it on their mind, or they would have other problems in life that take over. Some questioned the concept of having an extra annual appointment for health prevention since doctors could include preventative examinations such as measuring blood pressure as part of other appointments. Others again have always felt healthy and strong and had never experienced any symptoms in the past:

“Yes, I am actually also, I am a butcher, I have worked 45 years in my profession, I have actually rarely gone, [...] actually I was quite healthy, I have never been operated on and I have actually gone a few times to examinations, yes, nothing more and I have always lived to the fullest, yes, I have always worked, everyone should do as he believes. Now I am actually enjoying the retirement, yes, and but it's just, the stress is gone, you gain a few kilos (note: laughs briefly), that's also fast, right, but meanwhile I'm still fine.” (Informant 6, FG Graz)

A few participants talked about people who would be afraid of doctors and would avoid them as much as possible. One participant told about an unpleasant experience he had in the past where he felt bullied around with numerous examinations after revealing his smoking habits:

[...] I once, but that was almost 20 years ago, made a health check-up and that along with the other apprentices and then one comes out and says, do not say that you smoke. I went in, yes I am about to quit smoking or something, but that was enough for the doctor, I was chased through the whole health care center, from the chest X-ray to what I know and back and

forth, although I was actually in a treatment at a lung doctor, but I also told her that it didn't help anything, that was worth nothing, well then she wanted me to do another allergy test, although my current one was only half a year old, that was really an harassment, the dry skin comes from smoking and that comes from smoking, what do I know, and then I stopped the examination [...]
(Informant 5, FG Graz)

Participants discussed fear not only in relation to fear of doctors but also in terms of examinations and outcome. Some women would be worried about being exposed to X-rays during mammography screening. Individual participants with background knowledge in medicine or health sciences generally questioned the scientific basis of some examinations and whether they would cause more harm than good. The fear, however, that participants believed was most decisive in attending periodic health examinations, was the fear of the possible outcome and its consequences:

[...] if I then go a little deeper with some people, it turns out that people are afraid that something will be discovered, that's a bit like the dentist syndrome, yes, I don't go to the dentist because he could find a hole (some agree) and there I have to deal with something unpleasant. (Informant ?, FG Vienna).

Another reason that many participants thought was hindering regular attendance of periodic health examinations was lack of time. Periodic health examinations were generally considered as time consuming and many employers would not appreciate long absence periods. Few participants said that they even would take annual leave in order to be able to go to periodic health examinations.

4.3 Periodic health examinations as incentive for health behaviour change

The attendance of periodic health examinations was considered as an incentive for a health behaviour change because examinations are health promoting on their own, as they create awareness for oneself, and they motivate a change in health behaviour. Recommendations received from doctors were sometimes perceived as helpful but sometimes not, and recommendations for borderline findings were seen as desirable (Figure 1).

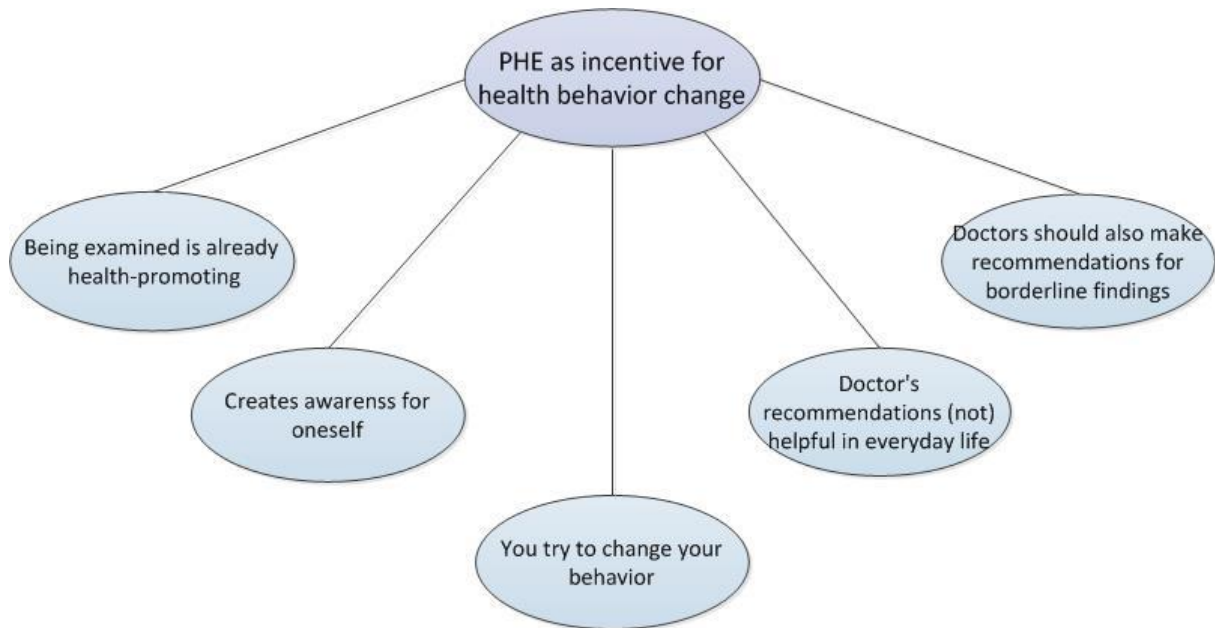


Figure 4: PHE (Periodic health examinations) as incentive for health behavior change

Some participants deemed the fact that your health status is being checked during periodic health examinations a health promoting activity. If a disease gets detected and treated, their health would be improved and promoted. Others found themselves being more aware of health issues after attending periodic health examinations:

4: *"Yes, I think it's enough just to fill out the form every year."*

3: *"That's true."*

4: *"And you have to fill in the alcohol, how much you drink a week, which still makes many people think about it, no matter, that doesn't have any influence on anything, but it's just itself."*

3: *"That's true, at some point it gets stuck that you should stop."
(Informant 3 and 4, FG Graz)*

Some participants mentioned that they would actively try to change their behavior after periodic health examinations, at least if that change was easily done and not a major one:

"Certain things that you should never eat, for example, yes (i.e. I would change), just now, so what I know now, uric acid would be such a typical value, right, when it is relatively on the limit, then you have to live without it (i.e. food high in uric acid), and, yes, I would change my diet, but rather no major change, I would say, which you would after the examination, but with

the goal to prevent something worse now, right, yes, so that's what's behind it, right, because it just gets worse.” (Informant 2, FG Innsbruck)

In terms of usefulness of recommendations concerning health promoting activities which doctors would give, participants differed in their opinion. While some talked about lists of exercises including detailed explanations in plain language they had received, others were not pleased with the recommendation they had been given:

“I have gone to a periodic health examination because I was gently forced by doctors and family members, although I donate blood monthly, and the doctor recommended Nordic Walking to me, that is something that I do not like at all.” (Informant ?, FG Vienna)

In addition, participants often felt left alone with borderline findings. They had the feeling that it was totally dependent on the doctors whether they would be given advice or not.

4.4 Periodic health examinations should be more comprehensive and individualized

Participants were dissatisfied with the number of examinations the current periodic health examination contains. They expected a range of examinations that doctors and patients can choose from based on individual risk (Figure 5).

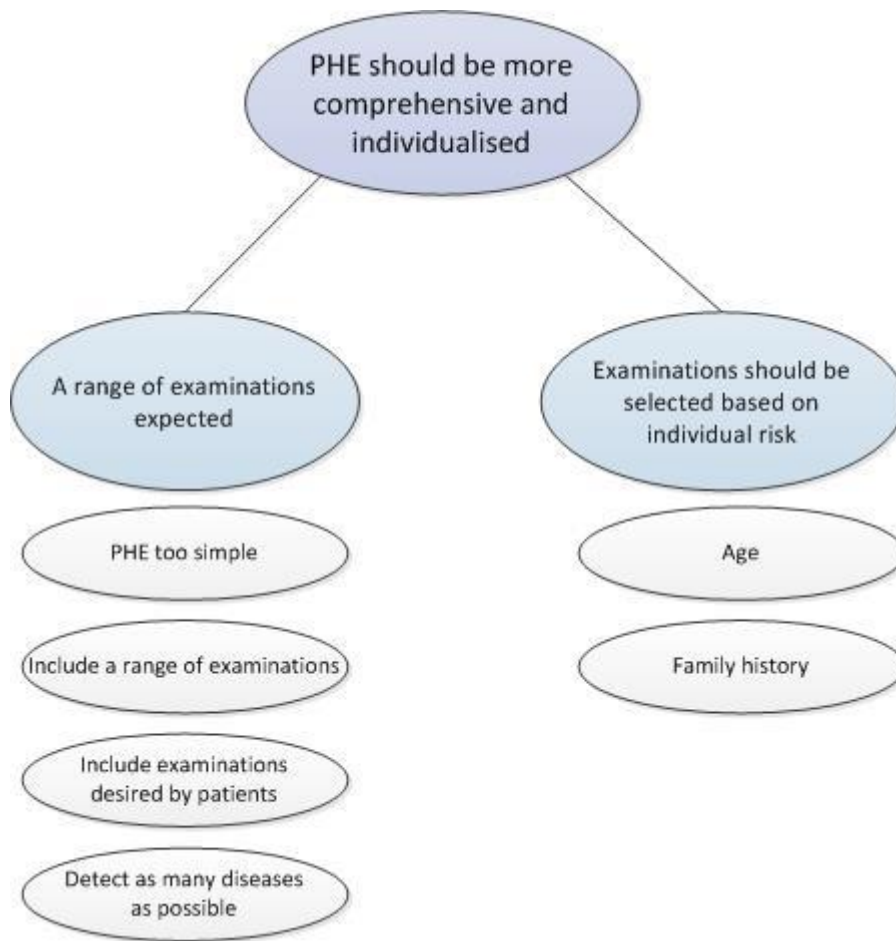


Figure 5: PHE (Periodic health examinations) should be more comprehensive and individualized

A range of examinations expected

The majority of participants considered the current periodic health examination as being too simple in that it would only contain few individual examinations that are being paid for. Many had been going to periodic health examinations over many years and observed that fewer and fewer examinations were included over time. They feared that the re-evaluation of the programme would result in another cut down of included examinations. Some believed that periodic health examinations were easily earned money for doctors because they were so simple:

“[...] on the other hand, I find it is a cheaply earned money for the doctor, I must say quite honestly, there is simply too little in the whole package, it just should be fundamentally, the package should be extended.” (Informant 5, FG Innsbruck)

When asked which examinations should be included in the periodic health examination, participants listed a number of examinations including a detailed medical history,

orthopaedic examinations, assessment of respiratory diseases, chest X-ray, bone density measurements and assessment of hormone status in women, comprehensive blood test, psychosomatic examinations, immunisation advice, stress electrocardiogram, ophthalmological examination, thyroid test, examination for vascular diseases, and lifestyle assessment and consultation. Some thought that the periodic health examination would no longer be up to date to meet present health problems. Others took the view that patients should have a say in which examinations the doctor should conduct or arrange.

“I ask because everyone who takes self-responsibility for his body and says, I want more, yes, then I say, well send me, now I do this and that, I have heard from my friend, carotis, they also check it, yes, we can send you there. A dermatologist, yes, we can send you there. (Informant ?, FG Vienna)

The majority of participants expected the periodic health examination to be a complete check of their state of health so that as many diseases as possible would get detected. This is in contrast to the opinion of individual participants who felt it was impudent to be asked about their alcohol consumption.

Examinations should be selected based on individual risk

Although many participants wanted the periodic health examination to include a full spectrum of individual examinations, they considered differentiation according to age and family history as important. They believed that young, sporty, and apparently healthy individuals would only need a superficial examination such as a blood test, whereas older people required a much more in-depth investigation. Younger people with family history in certain diseases should receive the examinations they need, as expressed by one participant:

But just because I was so persistent and I found that so cheeky, because my mother is very ill with cancer and, I have to swallow hormones and because of that something with the breast was wrong, and I was told that I am not 50 yet to get mammography screening paid that it would be ridiculous and then I really insisted on it for so long and I sent them a letter and everything and I said I wasn't paying for it myself, that's ridiculous, yes, that's ridiculous if you have a family history and I find that something that absolutely should be included in the periodic health examination is the family history of the disease.(Informant ?, FG Vienna)

4.5 Periodic health examinations a different experience with every doctor

Throughout the course of the focus group discussions, participants noticed that their experiences of periodic health examinations were often very different. These experiences referred to the time doctors dedicated to them, reimbursement of costs for each examination, the organisation of the examination, the number and detail of examinations, the role of assistants, and the type of physician involved (Figure 6).

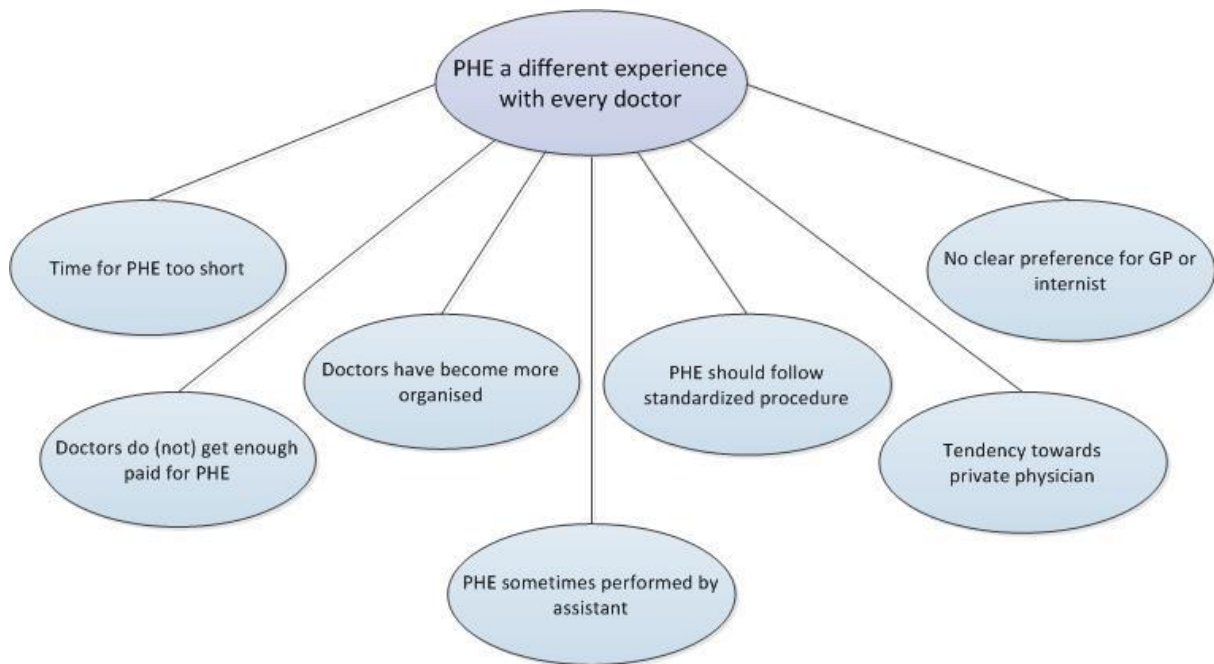


Figure 6: PHE (Periodic health examinations a different experience with every doctor)

Many participants had the general feeling that doctors would have to deal with an increasing number of patients and a growing bureaucracy these days, giving them less and less time to spend with the individual patient. As a consequence, periodic health examinations would often last a very short time. Most participants blamed the health system for it. However, there were also few participants who highlighted that their doctors would take sufficient time despite packed waiting rooms.

Related to this issue, participants also discussed the costs doctors would get reimbursed for each periodic health examination. Here the opinions diverged. While some participants were convinced that periodic health examinations are easy money for the doctors, others thought that doctors could not offer more than a quick check because of the little money they would get:

"[...] the doctor can actually only ever do what will be charged, what is paid for, and that is a catalogue, without having a flexible hand there, he only has, no matter, a certain time frame so to speak, because he gets nothing paid for consultation and otherwise something else." (Informant 1, FG Graz)

In terms of organisation, one participant felt that doctors have become more organised than they used to be. Opening hours and numbers of days that doctors would offer periodic health examinations as well as time until the results are received had improved. In some cases, assistants would mostly be involved in the periodic health examinations, with patients only seeing the doctor for the discussion of the results.

The discussion among participants became more intensive and emotional when they realized that the periodic health examinations are conducted differently by every doctor:

"?: It seems to me now that there may be different catalogues."

"?: Reference values, right?"

?: No, not only different reference values, different catalogues for the health examination, which blood values are examined, because I have no special complaints, desires, payments made, or anything else and for example I get different cholesterol values examined, long-term sugar anyway, thyroid hormone is on it."

"?: May I tell you something, I think every doctor is really different and some doctors can, can just put that in and some can't. The form, which they send to the laboratory is not predefined, the doctor can still add whatever he likes."

"?: What he likes, what he thinks makes sense." (Informants ?, FG Vienna)

Another topic that came up during the discussion was the type of physician participants would prefer for their periodic health examination. A number of participants expressed their frustration with the statutory health insurance physicians because of the little time they would dedicate to their patients. These participants were particularly those who had moved from other parts of Austria to Vienna, thinking that there is a big difference between urban and rural doctors. On the contrary, there were also some participants who were very pleased with their statutory health insurance physician.

Participants were also divided as to whether the general practitioner or the internist would be better suited to conduct the periodic health examination, although the majority tended to prefer the specialist. Internists would have better equipment and could therefore fit in more

examinations. This would save time and extra ways as general practitioner would need to refer patients to the internist for all examinations they could not conduct.

“7: So I am satisfied that I go to the internist and not to the family doctor, because the family doctor gets the results from the internist anyway and I then just pay the extended blood count, I simply have more than I get, as from the family doctor.”

“4: Yes, he can do more, yes.”

“7: Like all the sonographies and so on.”

“4: ECG.”

“7: Everything, ultrasound.” (Informant 7, FG Graz)

4.6 Discussion of results often dissatisfying and an emotional affair

Participants generally considered the discussion of the results as dissatisfying as doctors would often neglect it, either by communicating the results unclearly or by taking too little time for it. The discussion would be an emotional affair, evoking a series of feelings (Figure 7).

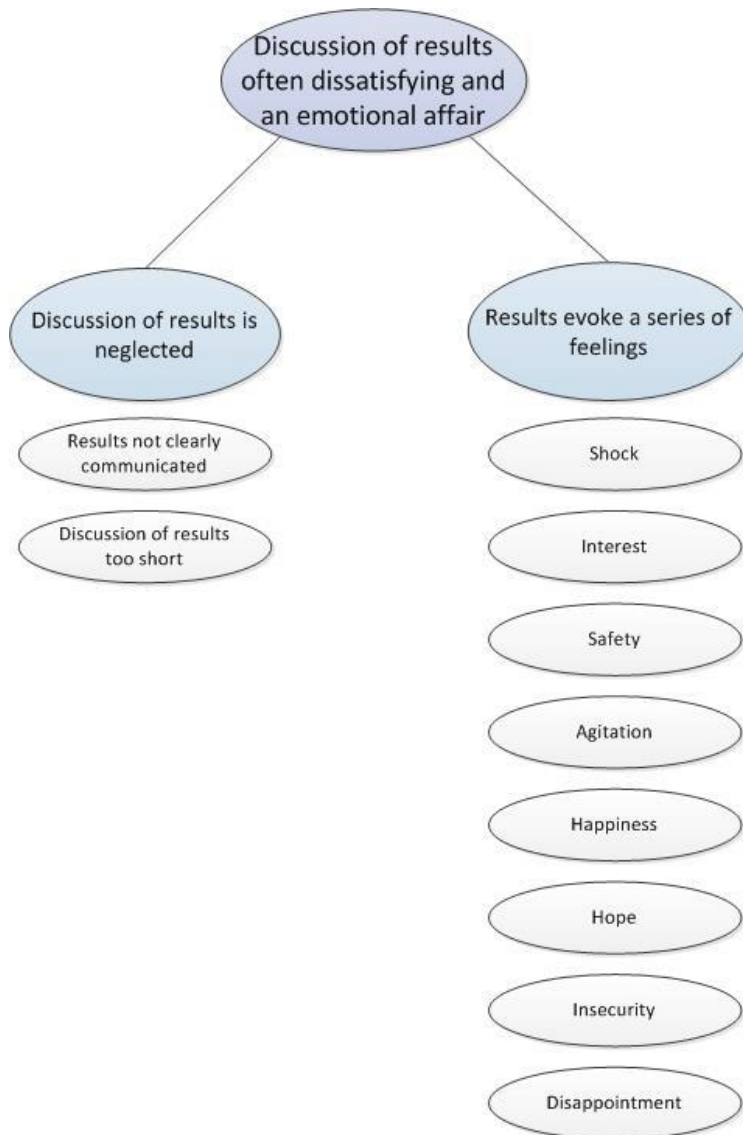


Figure 7: Discussion of results dissatisfying and an emotional affair

Discussion of results is neglected

Many participants were unhappy with the way doctors discussed the results of the periodic health examination. In their view, doctors would not realize or care if patients had understood what the results mean and which consequences they bring with. Some participants did not feel confident enough to ask the doctor for clarification. Others would go back home and try to find explanations on the internet. The most important problem is the use of medical terms, as expressed by one participant:

“He can't bring it across so that us, I just say it using quotation marks, ordinary citizen could understand it, because he comes with his technical jargon, I say it provocatively now, because I cannot make use of all those words, we can't do

anything with them or at least I can't and it's not only me, I work in a disabled association, even there people often don't know what the doctor meant, the doctors can bring it across with their expressions, but not with expressions understandable to us, that is a fact.” (Informant 6, FG Vienna)

In addition to communication problems, most participants wished the doctors would spend more time discussing the results. Although some were very pleased with the way their doctors discussed the results, the majority told that doctors would often either do a very short discussion, discuss only some results, leave it out completely, ask the assistant to pass on the information, or do the discussion over the phone:

6: I also have a telephone call to discuss my results. I call, but then I am already connected to the doctor, who then looks at them and says, yes, they are ok, then comes the story with the good and the bad cholesterol (note: laughs briefly), that is also an issue for me, and, then no, we don't need anything, that's fine.(Informant 6, FG Innsbruck)

Results evoke a series of feelings

Participants described a series of feelings they had in anticipations, during, or after the discussion of results of periodic health examinations. These feelings range from shock having received a positive test result, over interest if values have changed, safety knowing that you are healthy, to agitation that there could be something wrong with the results. Participants felt happy if they have unconsciously improved their lifestyle and their results have improved, hopeful, that results would remain the same, and insecure or suspicious but not certain yet. Or they felt disappointed because their efforts to change their lifestyle was unsuccessful:

“And the disappointment is when, if you think you've changed your lifestyle and so the results have to be completely different now, and they did not change (note: laughs briefly), you just hope they would” (Informant 2, FG Graz)

4.7 One appointment is not enough

Many participants believed that the periodic health examination should go further than the final discussion of results. They expected the doctors to arrange follow-up appointments to track changes and further examinations with specialists, although they were often expensive and cumbersome (Figure 8)



Figure 8: One appointment is not enough

Some participants, particularly those who had received results outside reference values in the past, suggested developing goals for change with their doctors which suit them. These goals should be evaluated in follow-up appointments or in the next periodic health examination by latest.

“Yes, I also think that somehow the patients' personal responsibility should somehow be focused in this way, that one really should agree on concrete goals, and then come back again and have another conversation and perhaps also work with some incentive systems, but if there really is a need for change now, that one really also tries to set concrete goals, because then you can agree on a time and then do a short check.” (Informant 7, FG Graz)

Participants also mentioned that they would appreciate if doctors reminded them of follow-up examinations or further examinations with specialists that were due.

In terms of further examinations with specialists, the majority of participants expected the periodic health examination with the general practitioner to only be the starting point of further examinations. Participants had, however, different experiences in how doctors would react. While some doctors would hardly ever prescribe any further examinations with specialists, and if, only for major issues, others would not let their patients leave without a pack of referrals. In many cases, participants said that they had to push doctors to refer them to further examinations.

Although participants asked for these examinations, they experienced them as cumbersome because of the extra effort and long waiting lists they would involve. They would find it helpful if doctors collaborated with specialists they could recommend. Also group practices were considered as being convenient for further examinations.

Additionally, further examinations would sometimes not be covered by the health insurance:

“But it can happen that you have to pay for something yourself if you receive a positive result from the periodic health examination. If they have detected something now, for example, then I have to pay for it. But these are services that the doctor simply does not get reimbursed from the insurance company.”
(Informant 5, FG Innsbruck)

Many participants blamed the health system for not covering examinations they considered as important for their health and felt that they were treated unfairly. Although others were also not happy for paying further examinations, they viewed them as extra service doctors were offering.

5 Discussion

Summary of main findings

Our study found that the main motivation for people attending periodic health examinations was to detect and treat diseases early and to live a long and healthy life. Alongside health expectations, other individual, social, or environmental factors were decisive for attendance. When asked about possible reasons for non-attendance, participants cited necessity not obvious, time constraints, unpleasant experience, and fear of harm or outcome.

Participants had high expectations of periodic health examinations. They considered them as an incentive for health behavior change; although they were not always pleased with the recommendations that doctors gave. In the view of most, the periodic health examination in its current form was too simple and should include a range of examinations tailored to the individual risks and needs. Throughout the discussion, participants realized that their experiences were often very different depending on the doctor they would see. Some called for standardization and blamed the health system for time and financial constraints doctors would face. Participants also expressed frustration with the lack of time doctors dedicated to the discussion of the results. Some struggled with the medical terms they used to communicate the results and wished they would use a language lay people understood. After the final discussion of results, many participants expected the doctors to arrange follow-up appointments and further examinations with specialists.

Comparison with existing literature

Several studies report similar reasons for attending and not attending periodic health examinations, thereby confirming our findings. The desire to prevent and detect diseases early motivated patients to attend an NHS (National Health Services) Health Check, a program with the aim of reducing cardiovascular disease mortality and morbidity in England [4, 21]. Reasons for attendance also included reassurance about the health [4, 22] and reinforcement of healthy lifestyles [22]. Likewise, social factors influencing uptake of screening programs, such as the obligation towards family and friends, or ill health of those, was described not only by patients [4, 13, 20, 22] but also by general practitioners offering health examinations [7]. These doctors believed that younger people would not attend because of their lack of concern for their health, a finding which was also, along with gender, discussed in our study.

However, there are also reasons participants of our study cited which have not been reported before. For example, the view that regular attendance of health checks helps monitoring your values or environmental factors such as work, sport activities, or the potential of financial incentives. Although the study by Burgess et al. 2014 found civic responsibility as a motivation for attendance, this responsibility referred to the social environment and health system whereas the finding in our study was focused towards one's own health [4].

Reasons for non-attendance found in our study have all been reported previously. A qualitative review on reasons for non-attendance of the NHS Health Check identified lack of awareness or knowledge, aversion to preventive medicine, time constraints, or competing priorities as barriers [23]. Aversion to preventive medicine related to previous experience of primary care and the avoidance of practices when feeling well [4, 11, 21, 23]. Burgess et al. 2014 further cited concerns about negative consequences of having a health examination, which our participants discussed as a fear of outcome [4].

Participants also expressed fear in relation to harms of screening tests but not harms following testing and treatment. This is in line with a study conducted in the United States, where patients could easily identify benefits of screening while struggling to identify harms other than those of screening tests [24]. In contrast, general practitioners were worried about inducing negative psychological reactions and false security by performing health examinations in the study by Sondergaard 2012 [7].

The finding that periodic health examinations have, in the view of participants, a potentially health promoting effect by creating awareness and acting as a stimulus for behaviour change, has also been reported in two studies evaluating the NHS Health Check [20, 25].

While participants of the study by Perry et al. 2014 were pleased with the advice and support given to make the recommended lifestyle changes [25], participants of our study and those of Riley et al. 2015 and 2016 did not always find the doctor's recommendations helpful [20, 22]. Additionally, participants of our study preferred to be given advice as early as possible when results were still within the reference range but borderline values. These differences might be explained by regional variations or variations in staff delivering the care.

Expectations of the periodic health examination in terms of comprehensiveness and individualization by the participants in our study were high. In their view, the current periodic health examination was far too simple and should include a range of examinations based on an individual's risk. This finding corroborates the perception of general practitioners in the study by Sondergaard 2012, who reported that patients would see themselves as consumers, regarding it as their right to have health examinations done and viewing it as a service [7]. General practitioners expressed concerns about the organization of health examinations in practice if they became too comprehensive. Despite participants asking for more examinations, there were some who were upset about the questionnaire assessing alcohol consumption. Indeed, general practitioners from Sweden have shown to be hesitant to engage in screening for high alcohol consumption [26].

Differences in experiences of periodic health examinations depending on the doctor that participants noticed during the course of this study supports findings of previous research conducted with general practitioners. The impression that doctors are overwhelmed with full waiting rooms, giving them too little time for the periodic health examination corresponds with the findings of the qualitative review done by Rubio-Valera et al. 2014 which identified workload and lack of time as barriers to the implementation of primary prevention or health promotion programs in primary care [8]. Likewise, general practitioners in the study by Shaw et al. discussed the importance of financial context in delivering health examination programs, which was also discussed in this study [27].

The request of participants to standardize the content of the periodic health examination after realizing that each periodic health examination was conducted differently is confirmed by the study of Sondergaard et al. 2014, which revealed a great diversity in content and quality of health examinations [7]. Although participants in this study associated the diversity to some extent with the type of doctor (private vs. statutory and general practitioners vs. internist) involved, this might be a context-specific issue. The tendency to prefer private physicians corresponds with increasing numbers of private physician (26% general practitioners and 52% specialists from 2005 to 2015) [28] in Austria, while numbers for statutory physicians remained largely similar during the same period [29].

Participants were not only dissatisfied with the recommendations they were given in relation to lifestyle changes, they considered the time and effort doctors would take to discuss the results as too short. As a consequence, participants often did not understand the implications of the results. Frustration and confusion with the communication of test results, risk, and advice was also reported by Riley et al. 2015 and 2016 [20, 22].

Interestingly, many participants anticipated that the periodic health examination would continue with follow-up appointments or referrals. The need to set and follow-up goals for long-term diet and lifestyle change was also reported by patients in one of the studies evaluating the NHS Health Check program [30]. In line with this, staff involved in the delivery of this program highlighted a lack of resources to support patients to adopt long-term changes [12]. The expectation to be referred to further examinations, which, at the same time, participants saw as cumbersome and often expensive, has not been reported before and might also be specific to the Austrian context.

Strengths and limitations of the study

The strengths of this study include the acquisition of participants through the databases of the regional health insurance funds. We could thereby reach a high number of participants willing to participate in the focus group discussions, of whom we were able to sample a variation of adult citizens based on age, gender, place of residence, and education. Nevertheless, our participants constituted a self-selected group of participants, so their motivation to participate could be different to non-participants. This might have having implications for the generalizability of the findings.

Another strength is the dual involvement of IS and VT in the data collection and analysis process. This approach enabled us to reflect and discuss the focus group immediately after they had taken place. We also coded the first two transcripts independently and created themes and subthemes together. IS and VT have both a non-medical background with little insight into the practice of periodic health examinations. Although we did our best to create themes that were fully emerging from the data, we are individuals with our own ideas and belief system, which have naturally had an influence on the way we collected the data and analyzed the results.

Limitations of this study are also recognized. For convenience and financial reasons, we held the focus groups in meeting rooms of the head office of the regional health insurance funds. Together with the fact that the invitation to attend the focus groups was sent by the health insurance funds on our behalf, participants could have been intimidated by the setting. However, we were not under the impression that participants had issues speaking freely about periodic health examination or wanted to please us.

Another limitation refers to the failure to acquire participants with a migration background. In 2016, the proportion of Austrian citizens who were born abroad was 22% [31]. Despite the large number of insured adults we contacted and efforts of the Viennese health insurance fund to acquire participants through local health centers, we had a very low response from people with migration background. Therefore, we were unable to include a single participant with migration background. We do not know whether their perceptions of the periodic health examination are similar to our participants or not. A review by Dryden et al. 2012 found gender, age, socio-demographic status, and ethnicity had an influence on the uptake of routine health examinations [32]. General practitioners in the study by Ismail et al. 2015 felt that language and cultural factors were major barriers to attend health examinations [12]. Likewise, language issues could have prevented citizens with migration background from attending the focus groups.

Finally, we did not return transcripts to participants or sought their feedback on themes derived in this study (member checking). Although this is often assumed to improve the credibility of qualitative research, it would have been difficult for individual participants to identify their statements in the transcript. In addition, a recent study on the impact of member checking found little evidence that member checking improved research findings [33].

6 Conclusion

Our study has identified a number of reasons why adult citizens attend or do not attend periodic health examinations. Expectations for the content and quality of periodic health examinations were high, with a request for a more comprehensive and individualized program that is standardized in its procedure. A best-practice guideline for periodic health examinations would therefore help physicians follow a standardized procedure. Such a guideline would have to be accompanied with an implementation process including assessment and evaluation. Our analysis further revealed that there is a lot of confusion and misinformation concerning the content of periodic health examinations among the public. This highlights the need for an extensive information campaign using several communication channels. Further studies are needed to explore motivations and expectations for periodic health examinations among migrant groups.

7 References

1. Braun, V. and V. Clarke, *Using thematic analysis in psychology*. Qual Res Psychol, 2006. **3**(2): p. 77-101.
2. Holland, W., *Periodic Health Examination – A brief history and critical assessment*. Eurohealth, 2009. **15**(4): p. 16-20.
3. Friedrich, K., *Bericht des Hauptverbandes der österreichischen Sozialversicherungsträger an das Bundesministerium für Gesundheit und Frauen sowie an das Bundesministerium für Arbeit, Soziales und Konsumentenschutz*. 2016.
4. Burgess, C., et al., *Influences on individuals' decisions to take up the offer of a health check: a qualitative study*. Health Expect, 2014. **18**(6): p. 2437-48.
5. Dalton, A.R., et al., *Uptake of the NHS Health Checks programme in a deprived, culturally diverse setting: cross-sectional study*. J Public Health (Oxf), 2011. **33**(3): p. 422-9.
6. Jepson, R., et al., *The determinants of screening uptake and interventions for increasing uptake: a systematic review*. Health Technology Assessment, 2000. **4**(14).
7. Sondergaard, A., B. Christensen, and H.T. Maindal, *Diversity and ambivalence in general practitioners' attitudes towards preventive health checks - a qualitative study*. BMC Fam Pract, 2012. **13**: p. 53.
8. Rubio-Valera, M., et al., *Barriers and facilitators for the implementation of primary prevention and health promotion activities in primary care: a synthesis through meta-ethnography*. PLoS One, 2014. **9**(2): p. e89554.
9. Pill, R., et al., *Invitation to attend a health check in a general practice setting: comparison of attenders and non-attenders*. Journal of the Royal College of general Practitioners 1988.
10. Brunner-Ziegler, S., et al., *Predictors of participation in preventive health examinations in Austria*. BMC Public Health, 2013. **13**: p. 1138.
11. Ellis, N., et al., *A qualitative investigation of non-response in NHS health checks*. Arch Public Health, 2015. **73**(1): p. 14.
12. Ismail, H. and S. Kelly, *Lessons learned from England's Health Checks Programme: using qualitative research to identify and share best practice*. BMC Fam Pract, 2015. **16**: p. 144.
13. Cheong, A.T., et al., *To Check or Not to Check? A Qualitative Study on How the Public Decides on Health Checks for Cardiovascular Disease Prevention*. PLoS One, 2016. **11**(7): p. e0159438.

14. Sackett, D.L., et al., *Evidence based medicine: what it is and what it isn't*. British Medical Journal, 1996.
15. Qaseem, A., et al., *Guidelines International Network: toward international standards for clinical practice guidelines*, in *Ann Intern Med*. 2012. p. 525-31.
16. National Institute for Health and Care Excellence, *Developing NICE guidelines: the manual*. 2014.
17. Berhane, A. and F. Enquselassie, *Patient expectations and their satisfaction in the context of public hospitals*. Patient Prefer Adherence, 2016. **10**: p. 1919-1928.
18. Jaworski, M., et al., *Primary care patients' expectations regarding medical appointments and their experiences during a visit: does age matter?* Patient Prefer Adherence, 2017. **11**: p. 1221-1233.
19. Patton, M.Q., *Qualitative Research and Evaluation Methods*. 4th ed. 2015, Thousand Oaks, California: Sage Publications Inc. 832.
20. Riley, R., et al., *The provision of NHS health checks in a community setting: an ethnographic account*. BMC Health Serv Res, 2015. **15**: p. 546.
21. Jenkinson, C.E., et al., *Patients' willingness to attend the NHS cardiovascular health checks in primary care: a qualitative interview study*. BMC Fam Pract, 2015. **16**: p. 33.
22. Riley, R., et al., *Experiences of patients and healthcare professionals of NHS cardiovascular health checks: a qualitative study*. J Public Health (Oxf), 2016. **38**(3): p. 543-551.
23. Harte, E., et al., *Reasons why people do not attend NHS Health Checks: a systematic review and qualitative synthesis*. Br J Gen Pract, 2018. **68**(666): p. e28-e35.
24. Sutkowi-Hemstreet, A., et al., *Adult Patients' Perspectives on the Benefits and Harms of Overused Screening Tests: a Qualitative Study*. J Gen Intern Med, 2015. **30**(11): p. 1618-26.
25. Perry, C., et al., *The NHS health check programme in England: a qualitative study*. Health Promot Int, 2014. **31**(1): p. 106-15.
26. Johansson, K., P. Bendtsen, and I. Akerlind, *Factors influencing GPs' decisions regarding screening for high alcohol consumption: a focus group study in Swedish primary care*. Public Health, 2005. **119**(9): p. 781-8.
27. Shaw, R.L., et al., *GPs' perspectives on managing the NHS Health Check in primary care: a qualitative evaluation of implementation in one area of England*. BMJ Open, 2016. **6**(7): p. e010951.
28. Österreichische Ärztekammer and Österreichische Zahnärztekammer. *Anzahl der Wahlärztinnen/-ärzte je Erstfach*. 2016 [cited 2018 06-14]; Available from: https://www.parlament.gv.at/PAKT/VHG/XXV/AB/AB_09691/imfname_568755.pdf.

29. Bundesministerium für Gesundheit und Frauen. *Entwicklung der Anzahl der niedergelassenen Ärztinnen mit und ohne Kassenvertrag* 2016 [cited 2018 06-14]; Available from: https://www.parlament.gv.at/PAKT/VHG/XXV/AB/AB_09691/imfname_568754.pdf.
30. Ismail, H. and K. Atkin, *The NHS Health Check programme: insights from a qualitative study of patients*. *Health Expect*, 2016. **19**(2): p. 345-55.
31. Statistik Austria. *Bevölkerung mit Migrationshintergrund seit 2008*. 2017 [cited 2018 06-14]; Available from: http://www.statistik.at/web_de/statistiken/menschen_und_gesellschaft/bevoelkerung/bevoelkerungsstruktur/bevoelkerung_nach_migrationshintergrund/index.html.
32. Dryden, R., et al., *What do we know about who does and does not attend general health checks? Findings from a narrative scoping review*. *BMC Public Health*, 2012. **12**: p. 723.
33. Thomas, D.R., *Feedback from research participants: are member checks useful in qualitative research?* *Qualitative Research in Psychology*, 2016. **14**(1): p. 23-41.

8 Appendix

8.1 Invitation letter

Sehr geehrte Damen und Herrn,

die **Vorsorgeuntersuchung** wurde zum letzten Mal im Jahr 2005 grundlegend aktualisiert und seither im Wesentlichen nicht verändert. Da in der Medizin jedoch große Fortschritte erzielt und viele neue Erkenntnisse gewonnen wurden, ist es an der Zeit, die in der bisherigen Vorsorgeuntersuchung vorgesehenen Inhalte an aktuelle wissenschaftliche Erkenntnisse unter Berücksichtigung der PatientInneninteressen anzupassen.

Wir haben daher gemeinsam mit dem **Department für Evidenzbasierte Medizin an der Donau-Universität Krems** ein Projekt gestartet, das zum Ziel hat, das Programm, das im Rahmen der Vorsorgeuntersuchung angeboten wird, auf Grundlage der neuesten wissenschaftlichen Erkenntnisse neu zu gestalten. Das Department für Evidenzbasierte Medizin und Klinische Epidemiologie an der Donau-Universität Krems prüft dafür die wissenschaftliche Datenlage bestehender Inhalte und begleitet den Prozess zur Erarbeitung der Empfehlungen.

In diesen Prozess möchten wir auch Bürgerinnen und Bürger wie Sie, die die Vorsorgeuntersuchung in Anspruch nehmen, einbinden. Wir möchten von Ihnen wissen, warum Sie zur Vorsorgeuntersuchung gehen und was Sie sich hinsichtlich Ihrer Gesundheit von ihr erwarten. Auch interessiert uns, wie Sie mit dem Angebot und der Art wie die Vorsorgeuntersuchung derzeit durchgeführt wird, zufrieden sind. Deshalb möchten wir Sie gerne zu einer **Gruppendiskussion** einladen, die vom Department für Evidenzbasierte Medizin und Klinische Epidemiologie an der Donau-Universität Krems organisiert wird.

Bitte lesen Sie sich dazu die beiliegende Information durch. Ihre Meinung ist uns sehr wichtig und wir hoffen auf Ihre Unterstützung zählen zu können.

Mit freundlichen Grüßen,

Jeweiliger SV-Träger

8.2 Information sheet

Information zur Teilnahme an der Gruppendiskussion im Rahmen des Projekts „Vorsorgeuntersuchung NEU“

Bei der Gruppendiskussion diskutieren Sie in entspannter Atmosphäre mit 7-9 anderen Personen über Ihre Erwartungen und Ansprüche an die Vorsorgeuntersuchung sowie Ihre Motivation und Gründe sich untersuchen zu lassen. Wir haben diesbezüglich keine vorgefasste Meinung, wir sind einfach daran interessiert, was Sie uns dazu mitteilen können. Es gibt keine falschen oder richtigen Aussagen.

Die Gruppendiskussion wird abends an einem Wochentag in Wien/Graz/Innsbruck stattfinden und etwa 1 – 1,5 Stunden dauern. Details zum genauen Ort und Zeitpunkt werden noch bekannt gegeben. Es wird Getränke und leichte Snacks geben und Sie werden für Ihren Aufwand mit €20 Sodexo-Gutscheinen entschädigt. Wir werden Ihnen auch die Fahrtkosten erstatten.

Um gewährleisten zu können, dass wir in dieser Gruppendiskussion auch jene BürgerInnen vertreten haben, die die Vielfalt der österreichischen Bevölkerung abbilden, würden wir Sie bitten den beigefügten **Kurzfragebogen** auszufüllen und diesen kostenlos mit dem beiliegenden frankierten Rückumschlag an uns zu retournieren. Wir können dann gezielter BürgerInnen auswählen. Betrachten Sie dieses Schreiben daher bitte vorerst als Einladung zur Gruppendiskussion. Ob sie letztendlich teilnehmen werden, werden Sie erst nach Erhalt aller Kurzfragebögen von uns erfahren. Die Daten des Fragebogens werden ausschließlich für die Gruppendiskussion verwendet und nicht an Dritte weiter gegeben.

Mit dem Einverständnis aller TeilnehmerInnen möchten wir das Gespräch auf Tonband aufnehmen. Dies erleichtert uns die Auswertung. Die Ergebnisse werden anonymisiert präsentiert. Auch sollten Sie wissen, dass Ihre Teilnahme an der Gruppendiskussion freiwillig ist und Sie diese jederzeit zurückziehen können. Bei Fragen oder Anregungen zu dieser Gruppendiskussion bzw. zum Projekt können Sie mich gerne telefonisch oder per-Email kontaktieren.

Ich freue mich über Ihre Teilnahme!

Mit besten Grüßen,

Isolde Sommer

*Departments für Evidenzbasierte Medizin und Klinische Epidemiologie
Donau Universität Krems
Dr.-Karl-Dorrek-Straße 30, 3500 Krems
Telefon: +43/2732/8932927, Email: isolde.sommer@donau-uni.ac.at*

8.3 Screening questionnaire

Kurzfragebogen

Bitte füllen diesen Kurzfragebogen mit Ihren Kontaktdaten und Angaben zur Ihrer Person vollständig aus und retournieren ihn mittels beigelegtem Umschlag bis 30.09.2017

Name, Vorname	
Adresse	
E-Mail	
Telefon	
Alter	
Geschlecht	<input type="checkbox"/> männlich <input type="checkbox"/> weiblich
Geburtsland	
Staatsbürgerschaft	
Höchste abgeschlossene Ausbildung	<input type="checkbox"/> Kein Schulabschluss <input type="checkbox"/> Berufsbildende höhere Schule ohne Matura <input type="checkbox"/> Pflichtschule <input type="checkbox"/> Matura <input type="checkbox"/> Lehre <input type="checkbox"/> Universität oder Fachhochschule
Wie regelmäßig nehmen Sie an der Vorsorgeuntersuchung teil?	<input type="checkbox"/> Jährlich <input type="checkbox"/> Alle 3 bis 5 Jahre <input type="checkbox"/> Alle 2 Jahre <input type="checkbox"/> Weniger als alle 5 Jahre

8.4 Consent form

Zustimmungserklärung zur Teilnahme an der Gruppendiskussion zu „Vorsorgeuntersuchung NEU“

Die Analyse und Auswertung der Gruppendiskussion erfolgt ausschließlich für Forschungs-zwecke durch das Department für Evidenzbasierte Medizin und Klinische Epidemiologie an der Donau-Universität Krems. Der Hauptverband für Sozialversicherungsträger erhält über Einzelergebnisse der TeilnehmerInnen keine Information.

Vor- und Nachname: _____

Zustimmungserklärung

Ich nehme an der Gruppendiskussion teil und bin mit den
Teilnahmebedingungen einverstanden.

ja nein

Datum, Unterschrift

8.5 Focus group topic guide

Themenleitfaden

Fokusgruppen Vorsorgeuntersuchung 2020

Vorbereitungen:

- Getränke und kleine Snacks
- Einverständniserklärungen: Ausdrücke mitbringen
- Vorbereitete Liste für Unterschriften für Aufwandsentschädigung (20 Euro/Person in Kuvert)
- Fahrtkostenrückerstattung. Ausdrücke mitbringen
- 10 dicke Stifte (Moderationsstifte), Moderationskärtchen, Tixo, Schere,
- Aufnahmegerät (Ersatzaufnahmegerät)
- Vorbereitung von Namenskärtchen

Begrüßung und Überblick

Schön, dass Sie heute hier sind und sich bereit erklärt haben, an der Fokusgruppe teilzunehmen.

Ich darf mich kurz vorstellen. Mein Name ist Isolde Sommer und ich bin wissenschaftliche Mitarbeiterin am Department für Evidenzbasierte Medizin der Donau-Universität Krems. Gerne möchte ich Ihnen auch meine Kollegin Viktoria Titscher vorstellen, die unsere Diskussion mitprotokollieren wird. Wir haben zu Beginn dieses Jahres einen Prozess zur Aktualisierung der Vorsorgeuntersuchung gestartet. Die letzte Aktualisierung liegt bereits 12 Jahre zurück, und da seither viele neue wissenschaftliche Erkenntnisse gewonnen wurden, ist es wieder an der Zeit diese einfließen zu lassen. Neu ist diesmal, dass auch Personen wie Sie, die die Vorsorgeuntersuchung schon einmal in Anspruch genommen haben, zu dieser befragt werden. Konkret geht es darum, welche Erwartungen Sie an die Vorsorgeuntersuchung haben, welche Ängste und Befürchtungen Sie damit verbinden, und was Sie motiviert, diese in Anspruch zu nehmen. Auch interessiert uns, wie sie mit der bisherigen Durchführung der Untersuchung zufrieden sind. Ich möchte aber auch hervorheben, dass es heute nicht um die Leistungen bzw. ihre Erfahrungen mit der Krankenkasse oder dem österreichischen Gesundheitssystem geht. Wir konzentrieren uns rein auf die Vorsorgeuntersuchung.

Bevor wir beginnen möchte ich aber noch kurz erklären, was eine Fokusgruppe ist und wie diese ablaufen wird. Bei einer Fokusgruppe geht es darum, dass die Gruppe miteinander diskutiert und kein Frage-und-Antwort-Spiel mit dem Moderator stattfindet. Ich gebe Ihnen die Themen vor und -achte sonst nur darauf, dass die Diskussion ordnungsgemäß abläuft, alle Personen zu Wort kommen und niemand übereinander spricht. Natürlich werde ich auch eingreifen, wenn die Diskussion in eine Richtung abdriftet, die nicht mehr dem Ziel des heutigen Abends/Nachmittags entspricht. Am besten wäre es, wenn Sie in die Runde blicken, wenn sie etwas sagen und mich gar nicht direkt ansehen. Außerdem möchte ich betonen, dass Ihre Meinung für uns sehr wichtig ist und es in dem Sinne keine richtigen oder falschen Antworten gibt. Steigen Sie bitte jederzeit in die Diskussion ein und warten Sie nicht bis Sie von mir aufgerufen werden. Wichtig ist nur, dass Sie sich gegenseitig ausreden lassen und die Meinung der anderen respektieren. Wenn Sie zu einem bestimmten Thema nicht

mitdiskutieren möchten, steht Ihnen das selbstverständlich frei. Ich habe einen Themenkatalog vorbereitet und voraussichtlich wird die Diskussion 1-1,5 h dauern.

Sie haben alle ihr Einverständnis gegeben, dass wir die Fokusgruppe auf Tonband aufnehmen. Damit gehen keine Gesprächsinhalte verloren und wir können die Daten leichter auswerten. Die Ergebnisse werden natürlich streng anonymisiert ausgewertet und die einzelnen Aussagen werden nicht bestimmten Personen zugeordnet. Auch bleibt alles, was in diesem Rahmen gesagt wird, unter uns.

Im Anschluss an die Diskussionsrunde möchten wir Sie gerne einladen, sich zu überlegen, ob Sie auch noch an einer weiteren schriftlichen Online-Befragung im Rahmen dieser Studie teilnehmen möchten. Am besten wäre es, wir besprechen das nach der heutigen Diskussion.

Haben Sie noch Fragen?

Vorstellung

Dann können wir beginnen. Ich werde jetzt das Tonband einschalten. Wir haben hier mehrere Bilder aufgelegt. Suchen Sie sich bitte ein Bild aus, das Ihnen besonders gut gefällt. Und zum Kennenlernen untereinander bitte ich Sie, sich kurz vorzustellen (Name, Wohnort, warum dieses Bild gewählt?) *Bilder in der Mitte auflegen*,

Themen

1. Gründe für die Teilnahme an einer Vorsorgeuntersuchung

Erklären Sie uns einmal warum Sie zur Vorsorgeuntersuchung gehen oder gegangen sind ...

Was hat Sie motiviert zur letzten Vorsorgeuntersuchung zu gehen?

Wer oder was hat Sie dazu gebracht zur Vorsorgeuntersuchung zu gehen?

Fördern Vorsorgeuntersuchungen die Gesundheit?

Was sind die Vorteile einer Vorsorgeuntersuchung?

Was sind die Nachteile einer Vorsorgeuntersuchung?

Warum glauben Sie, dass andere Personen nicht an Vorsorgeuntersuchungen teilnehmen?

Welche Untersuchungen finden Sie am wichtigsten?

2. Gefühle verbunden mit Vorsorgeuntersuchungen

Erzählen Sie uns bitte ein bisschen davon wie Sie sich fühlen, wenn Sie zur Vorsorgeuntersuchung gehen...

Wie zuversichtlich gehen Sie zur Vorsorgeuntersuchung?

Was erwarten oder erhoffen Sie sich von der Vorsorgeuntersuchung in Bezug auf Ihre Gesundheit?

Welche Ängste und Befürchtungen verbinden Sie mit der Vorsorgeuntersuchung?

3. Umgang mit den Ergebnissen der Vorsorgeuntersuchung

Beschreiben Sie bitte wie sie die Ergebnisse der letzten Vorsorgeuntersuchung erhalten haben und was Sie dabei empfunden haben ...

Wie haben Sie auf unerwartete, negative Ergebnisse reagiert?

Wie haben Sie auf unerwartete, positive Ergebnisse reagiert?

Haben Sie schon einmal ein Ergebnis erhalten, dass später nicht bestätigt wurde?

Zum Beispiel wird beim Stuhltest im Rahmen der Darmkrebs-Früherkennung nach versteckten Blutspuren im Stuhl gesucht, die auf einen Darmkrebs hinweisen könnten. Bei einem auffälligen Befund wird anschließend eine Darmspiegelung gemacht.

Wie haben Sie die gemeinsame Besprechung der Ergebnisse mit der Ärztin/mit dem Arzt erlebt?

Was hat sich für Sie durch die Vorsorgeuntersuchung/en verändert?

4. Weitere Schritte nach der Vorsorgeuntersuchung

Erzählen Sie bitte wie es nach der letzten Vorsorgeuntersuchung weitergegangen ist...

Haben Sie danach noch weitere Untersuchungen durchführen lassen?

Hat Sie Ihre Ärztin/ihr Arzt an eine/n weitere/n Kollegin/Kollegen überwiesen?

Hat Ihre Ärztin/ihr Arzt Untersuchungen angeboten oder durchgeführt, die Sie selbst bezahlen mussten?

Haben Sie Änderungen in Ihrem Lebensstil vorgenommen?

Haben Sie die Empfehlungen der Ärztin/des Arztes umgesetzt?

5. Organisation der Vorsorgeuntersuchung

Die Vorsorgeuntersuchung wird neu überarbeitet. Was meinen Sie, gibt es etwas, was an der aktuellen Vorsorgeuntersuchung geändert werden sollte? Was sollte gleich bleiben?

Welche Untersuchungen sind für Sie besonders relevant? Auf welche Krankheiten, Risiken sollte genauer geachtet werden? (medizinischen Untersuchung vs. Beratungen)

Was haben Sie sich bei der Vorsorgeuntersuchung erwartet?

Was finden Sie an Vorsorgeuntersuchungen besonders gut?

Was gefällt Ihnen nicht?

Was könnte verbessert werden?

Wie sollten Vorsorgeuntersuchungen organisiert werden?

Glauben Sie, dass Allgemeinmediziner/innen ihre Patienten/Patientinnen daran erinnern sollten, an einer Vorsorgeuntersuchung teilzunehmen?

Was denken Sie, wie könnte man generell mehr Menschen dazu bewegen, an einer Vorsorgeuntersuchung teilzunehmen?

Abschluss

- Gibt es aus Ihrer Sicht noch etwas, das für Sie wichtig ist, jetzt aber noch nicht besprochen wurde?

Auswahl Vertreter/in

Wir haben jetzt eine Stunde lang intensiv über die Vorsorgeuntersuchung diskutiert. Bei der Online-Befragung wird es darum gehen, die Erwartungen in Bezug auf die Vorsorgeuntersuchung nach deren Wichtigkeit zu reihen. Kann sich jemand von Ihnen vorstellen bei dieser Online-Befragung mitzumachen? Wir würden eine Person benötigen.

Bei mehreren Interessenten und keiner Lösung: Ziehen einer Person

Verabschiedung

Vielen Dank dafür, dass Sie sich heute Zeit genommen haben und mitdiskutiert haben. Falls Sie noch Fragen haben, können Sie sich gerne bei uns melden.