Concepts of health in different contexts: a scoping review

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Abstract
The rationale of our study was that the World Health Organization's (WHO) definition of health from 1947 which includes “… complete physical, mental and social wellbeing…” does not fit the current societal viewpoints anymore. The WHO’s definition of health implies that many people with chronic illnesses or disabilities would be considered unhealthy and complete wellbeing would be utopian and unfeasible for them. This is no longer uniformly accepted. Many alternative concepts of health have been discussed in the last decades such as ‘positive health’, which focusses on someone’s capability rather than incapability. However, the question remains whether a general health concept can guide all healthcare practices. More likely, health concepts need to be specified for professions or settings. The objective of our study was to create a structured overview of published concepts of health from different perspectives by conducting a scoping review using the PRISMA-ScR guideline. A literature search was conducted in Pubmed and Cinahl. Articles eligible for inclusion focussed on the discussion or the conceptualisation of health or health-related concepts in different contexts (such as the perspective of care workers’ or patients’) published since 2009 (the Dutch Health Council raised the discussion about moving towards a more dynamic perspective on health in that year). Seventy-five articles could be included for thematic analyses. The results showed that most articles described a concept of health consisting of multiple subthemes; no consensus was found on one overall concept of health. This implies that healthcare consumers act based on different health concepts when seeking care than care workers when providing care. Having different understandings of the concepts of health can lead to misunderstandings in practice. In conclusion, from every perspective, and even for every individual, health may mean something different. This finding stresses the importance that care workers’ and healthcare consumers’ meaning of ‘health’ has to be clear to all actors involved. Our review supports a more uniform tuning of healthcare between healthcare providers (the organisations), care workers (the professionals) and healthcare consumers (the patients), by creating more awareness of the differences among these actors, which can be a guide in their communication.

Keywords: Health, Health concept, Health definition, Positive health, Health-related concepts, Health perception, Perceived health, Scoping review

Introduction
The World Health Organisation’s (WHO) definition of health does not fit the current societal viewpoints anymore [1]. The WHO definition of health is formulated as “Health is a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity” [2]. Due to the word ‘complete’ in this definition, many people would not be considered healthy, because...
of their chronic illnesses or disabilities [1, 3]. For them, complete wellbeing would be utopian and unfeasible [4]. This is no longer uniformly accepted. Perspectives on people with physical disabilities are changing; they are no longer seen as ‘unhealthy’. On the other hand, the focus has shifted to the fact that people, when they get a chronic illness or disability, do need to adapt to their new situation; being able to do this is part of the recently developed paradigm of ‘positive health’ [5].

Many alternative concepts of health have been discussed in the last decades in philosophical and policy-oriented health and medicine debates, changing from health as being free from disease to health as someone’s capabilities. Prominent concepts of health which have been widely discussed and criticized by philosophers were developed by Boorse, Nordenfelt, and Nussbaum, respectively. Boorse’s biostatistical theory of health is a purely descriptive quality of an organism [6], which focusses on the functioning of body parts and on physiological systems being free from disease [7]. Nordenfelt discharged Boorse’s biostatistical theory and focussed on the ‘second-order ability to achieve vital goals’ in which actions are oriented to achieve minimal happiness, being a condition that the person prefers [8]. Like Nordenfelt, also Nussbaum’s capability approach is about achieving a set of capabilities in things that are important in a person’s life [9]. However, Nordenfelt focusses on a person’s health relating to human flourishing and achieving vital goals, while Nussbaum focusses on defining components of a person’s life that equally reflect human dignity as well as being able to be and to do certain things [10]. More recently, the International Classification of Functioning, Disability and Health (ICF) focussed on performance as well as capacities taking a broader set of aspects into account: body functions, activity and participation, environmental and personal factors, and body structures [11, 12].

These broader views on health were further extended since the positive health concept was postulated by Huber et al. in 2011 [5, 12]. Positive health focusses on someone’s capability rather than incapability, which means that people with chronic diseases or disabilities are no longer automatically seen as ‘not healthy’. Besides, there is a clear focus on resilience and self-management in social, physical and emotional challenges [5, 12]. To further operationalise the concept of positive health, Huber et al. conducted survey research among several stakeholders, asking what they considered important aspects of health. This resulted in the identification of 32 aspects categorized into six dimensions: 1) bodily functions, 2) mental functions and perception, 3) spiritual/existential dimension, 4) quality of life, 5) social and societal participation, and 6) daily functioning [12]. This concept has had a strong influence on healthcare policy in the Netherlands. Furthermore, since 2020 the Eastern Institute of Health (HSA) in Iceland has also started the implementation of positive health [13].

Reactions to the concept of positive health in the literature are mixed. The dimensions are seen as meaningful, however, the terms ‘adapt’ and ‘self-manage’ are being questioned. Jambroes et al. [14] discussed that several groups of people like frail elderly or people with mental disorders may not have the capacity to adapt or to manage their own health. Furthermore, giving people the responsibility for their own health management can cause people to feel guilty when health problems occur [14]. Prinsen and Terwee [15] tried to develop an instrument for measuring positive health. The results showed that the aspects of the ‘positive health’ concept had not yet been worked out clearly. The experts involved questioned whether the operationalisation of the conceptual model is a reflection of health or a reflection of aspects of life that influence health (i.e., are determinants of health) [15]. Also, Hafen [16] sees the ‘ability to adapt and self-manage’ as a determinant instead of part of the concept of ‘health’ itself. Motives for including aspects in the six dimensions were unclear, nor was it always clear to which dimension certain aspects belonged. Overlap was seen across aspects within dimensions [16].

It can be concluded that a clear alternative concept of health to replace the WHO definition has not yet been found. To our knowledge, no reviews have been conducted on this topic yet. However, it is important to have a clear and understandable general health concept for management, designing and redesigning policy, research and healthcare practices [5, 17]. It may help policymakers to establish and implement effective health policies to improve health status, quality of life, morbidity and mortality [18]. Clear understanding of the meaning of health by healthcare professionals and patients will foster active participation and will increase patient empowerment [18]. However, it is questionable whether a general health concept can guide all practices. More likely, health concepts need to be specified for specific professions or settings [1]. To answer this question, we conducted a scoping review, to create a structured overview of published concepts of health from different perspectives that can support a more uniform tuning of healthcare between healthcare providers and healthcare consumers. The research question was: How is the concept of health defined in different contexts and from different perspectives? (For example, from the perspective of healthcare providers and healthcare consumers).
Method

Design
This scoping review was conducted using the PRISMA-ScR guideline, which follows a systematic approach to map evidence and identify main concepts and theories on a topic [19]. This design was used because our research question was broad. In line with the design of a scoping review, our review did not have the intention to perform a structured evaluation of the research quality, but focussed on all publications available about our topic.

Eligibility criteria
Articles eligible for inclusion focussed on the discussion or conceptualisation of health or health-related concepts. We included original research articles (interview or focus group discussions in qualitative design studies, surveys and concept mappings, quantitative or mixed methods studies exploring the concept), but also literature reviews, books, and letters to the editor. We excluded intervention studies using health or wellbeing related terms as one of their outcome measures. These studies do not focus primarily on discussing the concept of health. Validation studies of questionnaires or instruments evaluating health or wellbeing related terms not primarily focussing on the concept or definition of health were also excluded. Articles needed to be published in English between 2009 (the Dutch Health Council raised the discussion about moving towards a more dynamic perspective on health [5, 12] in that year) and May 2020.

Information sources
The search was conducted in two databases: Pubmed and Cinahl, on May 25, 2020. The search was conducted by the first author (VvD) and was peer reviewed within the research team. These databases were chosen because of their focus on social behaviour and medical sciences. A snowball method was conducted on the references of the collected articles. Finally, four experts in the field were asked for additional papers that might have been missed.

Search
The exact search string for PubMed is shown in Table 1 and for Cinahl in Table 2.

Selection of sources of evidence
Results of the search were uploaded in Rayyan, a free web application for independent selection of articles by multiple researchers. Two researchers (VvD and EB)

Table 1 The search string as conducted in PubMed

| Search term                        | Variations of the search terms entered in pubmed                                                                 | Field            |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------|------------------|
| OR                                | Health-related wellbeing OR health-related wellbeing OR health-related well-being                               | [Title/abstract] |
| Health perception                 | OR health perception OR health perceptions                                                                    | [Title/abstract] |
| Attitude to health                | OR attitude to health OR attitude health                                                                        | [Title/abstract] |
| Health concepts                   | OR health concepts OR health concept                                                                           | [Title/abstract] |
| Conceptualisation of health       | OR conceptualisation of health OR conceptualisation health OR conceptualisation of health OR conceptualisations  | [Title/abstract] |
| Positive health                   | OR positive health                                                                                             | [Title/abstract] |
| Dimensions of wellbeing           | OR dimensions of well-being OR dimensions of wellbeing OR dimensions well-being OR dimension of wellbeing OR    | [Title/abstract] |
| Perceived health                  | OR perceived health                                                                                           | [Title/abstract] |
| Concept                            | concept*                                                                                                       | [Title/abstract] |
| Definition                         | OR defin*                                                                                                       | [Title/abstract] |
| NOT                               | Child                                                                                                           | [Title/abstract] |
| Kid                                | OR kid*                                                                                                         | [Title/abstract] |
| Adolescent                        | OR adolescent*                                                                                                  | [Title/abstract] |
| Newborn                           | OR newborn*                                                                                                      | [Title/abstract] |
| Infant                             | OR infant*                                                                                                       | [Title/abstract] |
| Baby                               | OR baby OR babies                                                                                               | [Title/abstract] |
| Animals                            | OR animals                                                                                                      | [Title/abstract] |
| Filter                             | English                                                                                                         | [Title/abstract] |
|                                   | 11 years                                                                                                        | [Title/abstract] |
independently screened all titles, abstracts and full-text articles for in- or exclusion. In addition, they discussed the articles on which there was disagreement. If no agreement was reached after discussion, a third researcher (LN-vV) was asked. Simultaneously, three senior researchers (LN-vV, EdV, DvdM) independently screened 10% of the articles for in- or exclusion in the first two phases, the title and abstract selection, in order to validate the process.

**Data items**

Preceding the coding process, a list of themes of interest was developed in consensus by the research team based on the aim of the scoping review and research question consisting of: 1) concept of health (a description of a health (—related) concept or definition, or what a health (—related) concept or definition should contain); 2) dimensions of health (category of health indicators for operationalisation in healthcare); 3) perspective (the perspective from which the concept of health was explored or the article written).

**Data charting process**

For data extraction and synthesis, a thematic analysis was conducted to identify patterns within the data. First, a form including characteristics of the article and the list of themes was developed. The characteristics consisted of: country, article type/study design and perspective population/theoretical approach. The list of themes of interest was pilot tested on three articles by the first (VvD) and the last author (LN-vV). Second, the first author (VvD) started data extraction. Third, within the themes of interest, an open coding process was started using a bottom-up approach by the first author (VvD). The program ATLAS.ti (version 8) was used when coding the data. Codes were extracted from the data using the exact words from the original article. After coding all articles, the codes were categorised into potential subthemes, which fit into the overarching themes (i.e. concept of health, dimensions of health, perspective). We introduced a minimum level of appearance for subthemes in at least three articles as threshold for relevance. In case a subtheme was represented in at least 3 articles a description in detail of the subtheme was given. This threshold was based on consensus within the research team with the aim to keep our focus on the most relevant results. During the entire process, four researchers (EB, LN-vV, EdV, DvdM) were repeatedly consulted to discuss the analytic process and the development of the results.

**Synthesis of results**

The articles were first divided into the retrieved subthemes for theme 3 (perspective), resulting in an overview of the results of theme 1 (concept of health) and theme 2 (dimensions of health) per subtheme of perspective (theme 3). In Fig. 1, the process for synthesis of results is shown.

**Results**

**Selection of sources of evidence**

In Fig. 2, the flowchart with the number of retrieved articles in Pubmed and Cinahl and in-/exclusion per

### Table 2 The search string as conducted in Cinahl

| Search term          | Variations of the search terms entered in pubmed                                      | Field                        |
|----------------------|---------------------------------------------------------------------------------------|------------------------------|
| OR                   | health-related wellbeing OR-related well-being                                       | [Title/abstract]             |
| Health perception    | OR health perception OR health perceptions                                           | [Title/abstract]             |
| Attitude to health   | OR attitude to health OR attitude health                                              | [Title/abstract]             |
| Health concepts      | OR health concepts OR health concept                                                  | [Title/abstract]             |
| Conceptualisation of health | OR conceptualisation of health OR conceptualisation health OR conceptualisations of health OR conceptualisations health | [Title/abstract] |
| Positive health      | OR positive health                                                                     | [Title/abstract]             |
| Dimensions of wellbeing | OR dimensions of well-being OR dimensions wellbeing OR dimension of wellbeing OR dimension wellbeing | [Title/abstract] |
| Perceived health     | OR perceived health                                                                    | [Title/abstract]             |
| AND                  | concept*                                                                               | [Title/abstract]             |
| Definition           | OR defn*                                                                              | [Title/abstract]             |

Filter

English

11 years
selection step is shown. Articles that did not fulfil the inclusion criteria after screening title, abstract or full text, respectively were not included for the next step. In the first step (title screening), there was an initial agreement of 94% between the authors VvD and EB. Simultaneously, the initial agreement with the senior researchers (LN-vV, EdV, DvdM) was 94%. In the second step (abstract screening), the initial agreement was 77% between the authors VvD and EB. In addition, the initial agreement with the senior researchers (LN-vV, EdV, DvdM) was 82%. In the third step (full-text screening), the initial agreement was 87% between the authors VvD and EB. In total, 75 articles were included for thematic analysis. Fifty-six articles were excluded in full-text screening, because they did not meet the inclusion criteria: 29 articles were not focusing on the concept or definition of
health, 12 articles were intervention studies using health or wellbeing related terms as one of their outcome measures, 4 articles focussed on validation studies of questionnaires or instruments evaluating health or wellbeing related terms, for 8 articles no full texts were available, 2 articles were excluded because they were duplicates and 1 article was in Spanish.

Characteristics of sources of evidence
For theme 1 (concept of health) 159 codes (210 quotes) were created during the analysis process. For theme 2 (dimensions of health) 72 codes (148 quotes) were created. For theme 3 (perspective) 68 codes (92 quotes) were created. Table 3 shows the coding scheme with the identified subthemes and codes of theme 1 concept of health. Table 4 shows the coding scheme with the identified subthemes and codes of theme 2 dimensions of health. To see details of Table 3 the supplementary Table 1 shows the same coding scheme, but includes also all related quotations from the 75 articles.

Themes 1 and 2: concepts of health and dimensions of health
From the data for theme 1 (concepts of health) 159 codes were extracted and categorised. Nine subthemes arose by categorising the codes: multi-sided, adapting to change, complete wellbeing or functioning, participation, daily functioning, wellbeing, satisfying life, self-management, and subjective (see Table 3). Most articles (58/75) described a concept of health consisting of multiple subthemes. From the data for theme 2 (dimensions of health) 72 codes were extracted and categorised. Eight subthemes arose by categorising the codes for this theme: physical, mental, social, spiritual, individual, environmental, functional, and other dimensions (see Table 4). Almost half of the articles (36/75) described multiple dimensions of health. Similarities and differences in subthemes between theme 1 (concepts of health) and theme 2 (dimensions of health) were seen, represented by the related subthemes (see Tables 5, 6, 7, 8, 9, 10 and 11). An overview of the presented concepts and dimensions of health in more detail can be found in Supplementary Tables 2A to 2G (S2A-S2G). An overview table of the numbers of articles representing subthemes identified in the articles for theme 1 and theme 2, respectively, grouped per subtheme of perspective (theme 3), can be found in Supplementary Tables S3A and S3B.

Theme 3: concept of health from different perspectives
From the data for theme 3 (perspective) 68 codes were extracted and categorised. Seven subthemes arose by categorising the codes: general population (articles which do not specify a specific perspective in their study), care workers, patients, older people, philosophical, theological, and context specific (articles which define a specific context or viewpoint such as ‘Māori spiritual healers’). In the next paragraphs the similarities and differences between theme 1 (concepts of health) and theme 2 (dimensions of health) are outlined per perspective, in line with Tables 5, 6, 7, 8, 9, 10 and 11. We reviewed every subtheme mentioned in the included articles. We did not take into account the importance or weighting of a certain subtheme in our analyses although it was considered of higher importance in that specific article.

Health from a general population perspective
Thirteen articles were written from a general population perspective [20–32]. These articles were mostly literature studies, discussion articles or commentaries in which health concepts were discussed. Detailed characteristics of the included articles are shown in Table 5.

In the next paragraph, illustrative quotes are given for the subthemes of theme 1 (concept of health) which were identified in at least three different articles. Examples of quotes are also given of associations seen between the results of theme 2 (dimensions of health) and theme 1 (concept of health). For more detailed information and all quotes see supplementary Table S2A.

Content belonging to four subthemes were identified in at least three articles written from the general population perspective: multi-sided, self-management, participation, and subjective. The subtheme multi-sided view on health, i.e., health not only related to the physical dimension, was identified in five articles (5/13) written from a general population perspective. For example, Amzat and Razum [21] wrote: “the concept of health presents a form of ambiguity because it is multidimensional, complex, and sometimes elusive”. The multi-sided view on health from this perspective was also identified by the multiple dimensions of health (theme 2) being reported in six articles (6/13). For example, Lipworth et al. [27] wrote: “… balance among the physical, spiritual, cognitive, emotional, and/or social domains of life”. The subtheme self-management as part of a health concept was identified in three articles (3/13) written from a general population perspective. For example, Makoul et al. [28] wrote about the concept of health: “Health is the result of an individual’s behaviors, and is embodied in the self-control it takes to enact the behaviors”. The subtheme participation, i.e., being active and participating in life, as part of a health concept was identified in three articles (3/13) written from a general population perspective. For example, Makoul et al. [28] wrote: “Health is the means to living an active life”. Participation as part of a health concept was also identified in the dimension social (theme 2). For example, Makoul et al. [28] wrote: “... the biopsychosocial
Table 3  The coding scheme; identified subthemes and codes for theme 1, the concept of health

| Subtheme (explanation) | Codes |
|------------------------|-------|
| Complete wellbeing or functioning (Functioning without any disturbance of diseases or infirmities) | Absence of disease and functioning | Absence of disease or illness | Absence of health problems | Adopting the biomedical view |
| Biomedical interpretation of health | Complete physical | Getting off or maintaining desistance from harmful substance | Health as a condition to be fixed |
| Health merely as absence of disease or infirmity | No tension | Normal functional ability | Normal physiological functional ability |
| Not getting sick | Theoretical health is value free | | |
| Liberating and expansive way of being | Overall wellbeing | Physical-psychological wellbeing | Positive concept of wellbeing |
| Sense of wellbeing | Spiritual and emotional wellbeing | State of wellbeing | Subjective wellbeing |
| Wellbeing | | | |
| Liberating and expansive way of being | Overall wellbeing | Physical-psychological wellbeing | Positive concept of wellbeing |
| Sense of wellbeing | Spiritual and emotional wellbeing | State of wellbeing | Subjective wellbeing |
| Wellbeing | | | |
| Adapting to change (Being able to adapt to personal or environmental health-related changes and circumstances) | Ability to adapt | Acceptance and adjustment with optimism | Adapt and accept limitations as part of ageing | Adaptation to worsening life conditions |
| Adaptive system | Balance among dimensions | Dynamic nonlinear interaction | Dynamic over time |
| Emotional balance | Flow of energy, listening to and respecting its rhythms | Functional adaptation | Health and peace are dynamic |
| Health as a process | Health as a state of balance | Health can be fleeting both lost and regained | Health is a dynamic state |
| Interactions | Maximal functional adaptation to illness or disability | Never-ending system of events | Overcoming health problems |
| Process individuals go through during illness and health | Rhythmic pattern of living | | Subject to change |
| Multi-sided (Health is not related only to the physical dimension, but involves several dimensions) | Extends beyond the physical | Health as complex system | Health as holistic | More than physical |
| Health is not merely the absence of disease or infirmity | Health is not only normal physical function | Mind, body, soul or spirit concept | |
| More than the absence of disease or illness | Multi-facetted concept | Multidimensional | Multidimensional, complex, elusive |
| Not just focus on illness/disease elimination | Not merely the absence of problems | Person is more than his illness | Salutogenic health concept |
| Tried to quality of life concept | Ability to do something independently | Ability to handle daily life activities | Ability to make health-related decisions | Ability to self-manage |
| Self-management (Having self-control in life and in the health process) | Ability to handle daily life activities | | | |
| Absence or management of symptoms | Action and repetition of action in the health process | Autonomy | Autonomy and independency |
| Being able to trust one's ability | Capability to cope and manage malaise and wellbeing conditions | Control their lives | Experiencing enough energy in their own world |
| Focus on a person's strength | Independence | Manage daily activities | Manage one's daily tasks |
| Positive thinking and resourcefulness | Responsibility for yourself and others | Self-acceptance | Self-control |
| Self-esteem | Self-esteem, self-concept | To be aware of one's worth | To feel secure in oneself |
Table 3 (continued)

| Subtheme (explanation) | Codes |
|------------------------|-------|
| Participation (Being active and participating in life) | Ability to be active and participating Ability to live an active life Being able to work Being able to perform activities of daily living |
| Capacity to perform tasks and full societal roles | Participation | Ability to live a life that makes sense Capacity to fulfill societal roles |
| Dynamic participation in the world | Ability to participate in daily life Ability to take care of children Caring for others |
| Ability to satisfy by themselves the needs of daily life | Dynamic participation in the world Health as basic necessity or requirements to engage in activities |
| Capacity to realize creatively flourishing | Ability to take care of children Caring for others |
| Adjusting the world | Health as a commodity Experience meaningfulness in life Experience worth of equal human dignity Purpose in life To live the good life |
| Partaking in daily life | Health as a commodity Experience meaningfulness in life Experience worth of equal human dignity Purpose in life To live the good life |
| Satisfying life (Values that contribute satisfaction in life) | Satisfying life (Values that contribute satisfaction in life) |
| Ability to flourish | Satisfying life (Values that contribute satisfaction in life) |
| Feelings for the future | Satisfying life (Values that contribute satisfaction in life) |
| Health as a value | Satisfying life (Values that contribute satisfaction in life) |
| Health is about the whole life | Satisfying life (Values that contribute satisfaction in life) |
| Life satisfaction | Satisfying life (Values that contribute satisfaction in life) |
| Life worth of equal human dignity | Satisfying life (Values that contribute satisfaction in life) |
| Purpose in life | Satisfying life (Values that contribute satisfaction in life) |
| To live the good life | Satisfying life (Values that contribute satisfaction in life) |
| Connectedness with others | Connectedness with others Contextual features of human society Experience harmony in life |
| Relationships with family | Connectedness with others Contextual features of human society Experience harmony in life |
| Experience of the being | Connectedness with others Contextual features of human society Experience harmony in life |
| Health is subjective | Connectedness with others Contextual features of human society Experience harmony in life |
| Health beliefs | Connectedness with others Contextual features of human society Experience harmony in life |
| Personal and social resources | Connectedness with others Contextual features of human society Experience harmony in life |
| Health as a commodity Experience meaningfulness in life Experience worth of equal human dignity Purpose in life To live the good life |
| Health as a commodity Experience meaningfulness in life Experience worth of equal human dignity Purpose in life To live the good life |
| Subjective (Personal perceptions and experiences about health) | Subjective (Personal perceptions and experiences about health) |
| Bodily phenomena | Subjective (Personal perceptions and experiences about health) |
| Experience of the being | Subjective (Personal perceptions and experiences about health) |
| Health is subjective | Subjective (Personal perceptions and experiences about health) |
| Health beliefs | Subjective (Personal perceptions and experiences about health) |
| Personal and social resources | Subjective (Personal perceptions and experiences about health) |
| Subjective wellbeing | Subjective (Personal perceptions and experiences about health) |
| Personal experience | Subjective (Personal perceptions and experiences about health) |
| Subjective experience | Subjective (Personal perceptions and experiences about health) |
| Subjective wellbeing | Subjective (Personal perceptions and experiences about health) |
| Subjective experience | Subjective (Personal perceptions and experiences about health) |
| Subjective wellbeing | Subjective (Personal perceptions and experiences about health) |
| Personal evaluation of wellbeing | Personal evaluation of wellbeing |
| Personal and social resources | Personal evaluation of wellbeing |
| Objective features of human biology | Objective features of human biology |
model encompasses mental, emotional, social, and spiritual elements as well". The subtheme subjective view on health as part of a health concept was identified in three articles (3/13) written from a general population perspective. For example, Kaldjian [25] wrote: “... we can endorse a concept of health that incorporates ... subjective features of human valuing”. The other subthemes for the concepts of health were not identified in three articles or more and thus not further described here (see S2A).

**Health from a care worker’s perspective**

Ten articles were written from a care workers perspective [12, 33–41]. The care workers in these articles were for example general practitioners, social workers, and staff in mental health. Characteristics of the included articles are shown in Table 6.

Content belonging to six subthemes were identified in at least three articles written from a care worker’s perspective: multi-sided, subjective, adapting to change, satisfying life, wellbeing and complete wellbeing and functioning. The subtheme multi-sided view on health was identified in six articles (6/10) written from a care worker’s perspective. For example, Hunter et al. [36] wrote; “health is more multidimensional” and Merry [40] wrote; “health is viewed from a holistic perspective”. The multi-sided view on health from this perspective was also identified by multiple dimensions of health (theme 2) being reported in six articles (6/10). For example, Ashcroft and Van Katwijk [34] wrote; “… health is physical, mental and emotional well-being—as determined by relationships with others and with the constructed and natural environments ...”. The second subtheme, health is subjective, i.e., the concept of health depends on personal perceptions and experiences, was identified in four articles (4/10) written from a care worker’s perspective. For example, Merry [40] wrote; “… each person is unique and that how health is defined by a person, group, or community is subjective”. The subtheme adapting to change, i.e., being able to adapt to personal or environmental health-related changes and circumstances, as part of a health concept was identified in three articles (3/10) written from a care worker’s perspective. For example, Huber et al. [5] wrote; “… health as ‘the ability to adapt and to self-manage ...’”. The subtheme satisfying life, i.e., values that contribute satisfaction in life, as part of a health concept was both identified in three articles (3/10) written from the perspective of care workers. For example, Hunter et al. [36] wrote; “… the most advanced conception of ‘health that is more than the absence of disease’ was a liberating and
expansive way of being...". However, they also referred to health as "... health being understood only as the absence of disease", which relates to complete wellbeing. Notably, the subtheme complete wellbeing or functioning was never used as a concept of health on its own by care workers but always in combination with other subthemes for the concept of health. The other subthemes for the concepts of health were not identified in at least three articles and are not further described here (see S2B).

### Health from a patient's perspective

Eleven articles were written from a patient's perspective [12, 36, 38, 42–49]. The patients in these articles were for example patients with chronic illnesses, patients in mental health services, patients with psychosis, and patients with pressure ulcers. Characteristics of the included articles are shown in Table 7.

Content belonging to six subthemes were identified in three articles or more from a patient's perspective: subjective, daily functioning, self-management, satisfying life, adapting to change, and multi-sided. The first subtheme health as subjective as part of the health concept was identified in five articles (5/11) written from a patient's perspective. For example, Post [45] wrote: "... conceptualization of health encompassed ... personal evaluations of well-being" and Ebrahimi et al. [43] wrote: "... health is a subjective and dynamic phenomenon". The subjective view on health from this perspective was also seen by the dimension individual (theme 2). For example, Schrank et al. [46] wrote: "... the domain of individual well-being represents the subjective part of the concept". The second subtheme daily functioning, i.e., daily functioning in life, as part of the health concept was identified in four articles (4/11) written from a patient's perspective. For example, Warsop [48] wrote: "Health is always in the background, letting us do what we always do" and

### Table 5 Included articles discussing health from a general population perspective

| Authors, year       | Country | Article type/ study design | Perspective (population) | Subthemes of Concept of health                        | Subthemes of Dimensions of health |
|---------------------|---------|----------------------------|--------------------------|-------------------------------------------------------|-----------------------------------|
| Abuelaish et al., 2020 [20] | Canada | Literature debate          | NA                       | Multi-sided, adapting to change                       | Social, environmental             |
| Amzat & Razum, 2014 [21] | Nigeria | Book chapter               | NA                       | Multi-sided                                           |                                   |
| Conner et al., 2019 [22] | USA     | Survey research            | African American, Asian American, European American, and Latin American men and women of lower and higher socioeconomic status (SES) | Complete wellbeing or functioning | Functional, physical, mental, social, spiritual, others |
| Downey & Chang 2013 [23] | USA     | Empirical mixed-method study | American adults           | Multi-sided                                           |                                   |
| Frenk & Gómez-Dantés, 2014 [24] | USA, Mexico | Commentary                | NA                       | Multi-sided                                           |                                   |
| Kaldjian, 2017 [25] | USA     | Forum discussion           | NA                       | Daily functioning, subjective, satisfying life         |                                   |
| Karimi & Brazier, 2016 [26] | Switzerland | Current opinion             | NA                       | Daily functioning, wellbeing                          |                                   |
| Lipworth et al., 2011 [27] | Australia | Qualitative literature review | NA                       | Adapting to change                                   | Physical, spiritual, mental, social |
| Makoul et al., 2009 [28] | USA     | Survey research            | American adults           | Participation, self-management, complete wellbeing or functioning | Physical, mental, social, spiritual, functional, others |
| Pietersma et al., 2014 [29] | The Netherlands | Three-stage Delphi-procedure | Patients, family members of patients, clinicians, scientific experts, and general population | Self-management, satisfying life, participation | Mental, social, physical |
| Shilton et al., 2011 [30] | Australia, France | Letter to the editor | NA                       | Self-management                                       | Physical, mental, social, spiritual, environmental |
| Thumboo et al., 2018 [31] | Singapore, Finland | Qualitative research design | General public in Singapore | Subjective, participation, multi-sided                |                                   |
| Williamson et al., 2009 [32] | Canada | Literature study           | NA                       | Subjective                                            |                                   |
Post [45] wrote: “... health encompassed how well people function in everyday life ...”. Daily functioning as part of a health concept was also identified in the dimension functional (theme 2) by Post [45]: “Functional health, including both physical functioning in terms of self-care, mobility, and physical activity level and social role functioning in relation to family and work”. The subtheme self-management as part of a health concept was identified in four articles (4/11) written from a patient’s perspective. For example, Jormfeldt [38] wrote: “… to be able to manage ones daily tasks”. The subtheme satisfying life as part of a health concept was identified in three articles (3/11) written from a patient’s perspective. For example, Jormfeldt [38] wrote about the attitudes towards health: “... to experience meaningfulness in life...” and “… to have a peaceful and positive feeling inside...”. The subtheme adapting to change as part of a health concept was identified in three articles (3/11) written from a patient’s perspective. For example, Shearer et al. [47] wrote: “Health was characterized by a rhythmic pattern of living with the paradox of chronic illness; that is, constructing meanings about one’s health that enhance personal strengths while acknowledging the losses and changes brought on by their illness”. The subtheme multi-sided view on health was identified in three articles (3/11) written from a patient’s perspective. For example, Hunter et al. [36] wrote: “... health that is more than the absence of disease ...”. The multi-sided view on health from this perspective was also identified by multiple dimensions of health (theme 2) being reported in four articles (4/11). For example, Gorecki et al. [44] wrote: “We developed a conceptual framework of HRQL [Health-Related Quality of Life] in PUs that includes four domains: PU-specific symptoms, physical functioning, psychological well-being and social functioning”. The other subthemes for the concepts of health were not identified in at least three articles and are not further described here (see S2C).

**Health from the perspective of elderly people**

Nine articles were written from the perspective of elderly people [18, 43, 47, 49–54]. The elderly people in these articles were for example elderly people with chronic illnesses. Characteristics of the included articles are shown in Table 8.

Content belonging to five subthemes were identified in at least three articles written from the perspective of elderly people: adapting to change, self-management, subjective, satisfying life, and participation. The subtheme adapting to change as part of a health concept was identified in six articles (6/9) written from...
| Authors, year          | Country                                  | Article type/ study design                      | Perspective (population)                                                                 | Subthemes of Concept of health                     | Subthemes of Dimensions of health                  |
|------------------------|------------------------------------------|------------------------------------------------|------------------------------------------------------------------------------------------|--------------------------------------------------|--------------------------------------------------|
| Bickenbach, 2013 [42] | Switzerland                              | Literature study                                | Persons with disabilities                                                                | Subjective, daily functioning                     |                                                   |
| Ebrahimi et al., 2012 [43] | Sweden, USA                             | Phenomenological approach                      | Elders in emergency treatment, 80 years and older, or 65 years and older with chronic diseases | Subjective, adapting to change                    | Individual, environmental                          |
| Gorecki et al., 2010 [44] | United Kingdom                         | Review of the literature and qualitative approaches | Patients with pressure ulcers                                                           | Adapting to change, self-management, multi-sided  | Physical, mental, functional, social, others      |
| Huber et al., 2016 [12] | The Netherlands                         | Mixed method study, qualitative approach       | Physicians, physiotherapists, policymakers, insurers, public health professionals, researchers, nurses, patients | Functional, physical, mental, social, spiritual, others |                                                   |
| Hunter et al., 2013 [36] | Australia                               | Phenomenography method                          | Patients and practitioners in integrative medicine clinic                               | Complete wellbeing or functioning, wellbeing, multi-sided |                                                   |
| Jormfeldt, 2009 [38]   | Sweden                                  | Cross-sectional study                           | Patients and staff in mental health services                                              | Satisfying life, self-management                  |                                                   |
| Post, 2014 [45]        | The Netherlands                         | Narrative review                                | NA                                                                                      | Functioning, subjective                           | Physical, mental, social, functional              |
| Schrank et al., 2013 [46] | United Kingdom, Austria, Canada        | Systematic review and narrative synthesis       | People with psychosis                                                                    | Daily functioning, participation, self-management, subjective | Individual                                      |
| Shearer et al., 2009 [47] | USA                                    | Qualitative descriptive design                  | Older women with chronic illness                                                          | Participation, satisfying life, adapting to change, self-management, subjective |                                                   |
| Warsop, 2009 [48]      | United Kingdom                          | Phenomenological approach                      | NA                                                                                      | Satisfying life, daily functioning                | Multi-sided, self-management                     |
| Zhang et al., 2014 [49] | China                                   | Qualitative descriptive design                  | Chinese elderly with chronic illness, aged over 60                                      |                                                  |                                                   |
| Authors, year | Country | Article type/ study design | Perspective (population) | Subthemes of Concept of health | Subthemes of Dimensions of health |
|--------------|---------|-----------------------------|--------------------------|-------------------------------|----------------------------------|
| Boggatz, 2016 [50] | Austria | Concept analysis | Older adults | Subjective, adapting to change, satisfying life | |
| Cresswell-Smith et al., 2018 [51] | Finland/Italy/Norway/ Spain | Rapid review | Older adults, 80 years and older | Adapting to change, self-management, daily functioning | |
| Ebrahimi et al., 2012 [43] | Sweden, USA | Phenomenological approach | Elders in emergency treatment, 80 years and older, or 65 years and older with chronic diseases | Subjective, adapting to change | Functional, social, individual, environmental |
| Fange & Ivanoff, 2009 [52] | Sweden | Grounded theory method | Old age, between 80 and 89 years old | Participation, self-management | |
| Goins et al., 2011 [53] | USA | Qualitative approach | Community dwelling persons aged 60 years or older in west Virginia | Participation, subjective, adapting to change, satisfying life, multi-sided | Physical, functional, mental, spiritual |
| Noghabi et al., 2013 [54] | Iran | Theoretical analysis of literature and empirical observation. Hybrid concept analysis. | Old people, 65 years and older | Self-management | Physical, mental, social, spiritual, environmental |
| Shearer et al., 2009 [47] | USA | Qualitative descriptive design | Older women with chronic illness | Participation, satisfying life, adapting to change, self-management, subjective | |
| Song & Kong, 2015 [18] | Republic of Korea | Systematic review | Older adults | Self-management, adapting to change, satisfying life | Physical, mental, social, spiritual |
| Zhang et al., 2014 [49] | China | Qualitative descriptive design | Chinese elderly with chronic illness | Multi-sided, self-management | |
Table 9  Included articles discussing health from a philosophical perspective

| Authors, year | Country | Article type/ study design | Perspective (theoretical approach) | Subthemes of Concept of health | Subthemes of Dimensions of health |
|---------------|---------|----------------------------|------------------------------------|--------------------------------|----------------------------------|
| Bauer et al., 2020 [55] | Switzerland, Canada, Kenya, Italy, United Kingdom, Sweden, Norway, Denmark, Spain, Israel, Austria, Singapore, Netherlands, | Literature study | Salutogenic | Wellbeing, adapting to change, multi-sided | Environmental, individual, social |
| Bircher & Kuruvilla, 2014 [3] | Switzerland | Multi-grounded theory method | Multi-grounded theory | Wellbeing, adapting to change, multi-sided | Environmental, individual, social |
| Cloninger et al., 2012 [56] | USA | Literature study | Holistic | Multi-sided, adapting to change | Physical, mental |
| de Araújo et al. 2012 [57] | Brazil | Theoretical study | Hermeneutics | Subjective, adapting to change | Physical, mental |
| Elliot, 2016 [58] | United Kingdom | Literature study | Eudaimonistic | Multi-sided | Physical, mental, social |
| Ereshefsky, 2009 [59] | Canada | Paper | Naturalist/ normativist | Physical, mental, social, others | |
| Haverkamp et al., 2018 [7] | The Netherlands | Practice-oriented review | Philosophical | Adapting to change, self-management | Physical, mental, social |
| Huber et al. 2011 [5] | The Netherlands | Analysis | Positive health | Satisfying life, adapting to change | Physical, mental, social, spiritual, others |
| Leonardi, 2018 [1] | Italy | Literature study | Epistemological | Self-management, adapting to change, daily functioning | Physical, mental, social, functional |
| Misselbrook, 2014 [60] | Bahrain | Note | Human flourishing | Satisfying life, adapting to change | Physical, mental, social, spiritual, others |
| Misselbrook, 2016 [61] | Bahrain | Literature study | Human flourishing | Satisfying life, multi-sided, adapting to change | Physical, mental, social, spiritual, others |
| Prinsen & Terwee, 2019 [15] | The Netherlands | Mixed-method study including a literature search, a qualitative and quantitative ranking study, followed by a content validity study | Positive health | Satisfying life, adapting to change | Physical, social |
| Reed, 2019 [62] | USA | Review | Philosophical | Subjective, satisfying life | Physical, social |
| Van Spijk, 2015 [63] | Switzerland | Scientific contribution | Philosophical anthropology | Satisfying life | Physical, mental, social, functional |
| Sturmberg et al., 2010 [17] | Australia/USA | Literature study | Philosophical | Adapting to change, multi-sided | Environmental |
| Sturmberg, 2014 [64] | Australia | Commentary | Philosophical | Subjective, wellbeing, multi-sided | |
| Tengland, 2016 [65] | Sweden | Critical discussion | Holistic/ capability approach | Multi-sided, subjective, adapting to change, participation | |
| Tyerman, 2011 [66] | United Kingdom | Literature study | Phenomenological/ hermeneutics | Multi-sided, subjective, adapting to change, participation | |
| Venkatapuram, 2013 [4] | United Kingdom | Debate | Capability approach | Daily functioning, subjective, satisfying life | |
### Table 9 (continued)

| Authors, year | Country    | Article type/study design | Perspective (theoretical approach) | Subthemes of Concept of health | Subthemes of Dimensions of health |
|---------------|------------|---------------------------|-----------------------------------|-------------------------------|-----------------------------------|
| Included articles discussing health from a biomedical science perspective |
| Boorse, 2011 [67] | USA        | Conceptual analysis       | Naturalist                        | Complete wellbeing or functioning |
| Boorse, 2014 [68] | USA        | Reactions to critics      | Naturalist                        | Complete wellbeing or functioning |
| Hafen, 2016 [16] | Switzerland | Sociological systems theory | Health/health impairment-continuum | Complete wellbeing or functioning |
| Schroede, 2013 [89] | United Kingdom | Literature study          | Comparative                       | Daily functioning               |
the perspective of elderly people. For example, Goins et al. [53] wrote: “... defining health as a value indicates it can be fleeting, both lost and regained” and Cresswell-Smith et al. [51] wrote about the concept of health: “... older adults have been seen to adapt and accept limitations as part of the ageing process”. The second sub-theme self-management as part of a health concept was identified in six articles (6/9) written from the perspective of elderly people. For example, Ebrahimi et al. [43] wrote: “... older adults experience health when they have the ability to do something independently...”. That health is subjective was identified in four articles (4/9) written from the perspective of elderly people. For example, Goins et al. [53] wrote: “... defining health as a value indicates it can be fleeting, both lost and regained” and Cresswell-Smith et al. [51] wrote about the concept of health: “... older adults have been seen to adapt and accept limitations as part of the ageing process”. The second sub-theme self-management as part of a health concept was identified in six articles (6/9) written from the perspective of elderly people. For example, Ebrahimi et al. [43] wrote: “... older adults experience health when they have the ability to do something independently...”. That health is subjective was identified in four articles (4/9) written from the perspective of elderly people. For example, Goins et al. [53] wrote: “... defining health as a value indicates it can be fleeting, both lost and regained” and Cresswell-Smith et al. [51] wrote about the concept of health: “... older adults have been seen to adapt and accept limitations as part of the ageing process”. The second sub-theme self-management as part of a health concept was identified in six articles (6/9) written from the perspective of elderly people. For example, Ebrahimi et al. [43] wrote: “... older adults experience health when they have the ability to do something independently...”. That health is subjective was identified in four articles (4/9) written from the perspective of elderly people. For example, Goins et al. [53] wrote: “... defining health as a value indicates it can be fleeting, both lost and regained” and Cresswell-Smith et al. [51] wrote about the concept of health: “... older adults have been seen to adapt and accept limitations as part of the ageing process”. The second sub-theme self-management as part of a health concept was identified in six articles (6/9) written from the perspective of elderly people. For example, Ebrahimi et al. [43] wrote: “... older adults experience health when they have the ability to do something independently...”. That health is subjective was identified in four articles (4/9) written from the perspective of elderly people. For example, Goins et al. [53] wrote: “... defining health as a value indicates it can be fleeting, both lost and regained” and Cresswell-Smith et al. [51] wrote about the concept of health: “... older adults have been seen to adapt and accept limitations as part of the ageing process”. The second sub-theme self-management as part of a health concept was identified in six articles (6/9) written from the perspective of elderly people. For example, Ebrahimi et al. [43] wrote: “... older adults experience health when they have the ability to do something independently...”. That health is subjective was identified in four articles (4/9) written from the perspective of elderly people. For example, Goins et al. [53] wrote: “... defining health as a value indicates it can be fleeting, both lost and regained” and Cresswell-Smith et al. [51] wrote about the concept of health: “... older adults have been seen to adapt and accept limitations as part of the ageing process”. The second sub-theme self-management as part of a health concept was identified in six articles (6/9) written from the perspective of elderly people. For example, Ebrahimi et al. [43] wrote: “... older adults experience health when they have the ability to do something independently...”. That health is subjective was identified in four articles (4/9) written from the perspective of elderly people. For example, Goins et al. [53] wrote: “... defining health as a value indicates it can be fleeting, both lost and regained” and Cresswell-Smith et al. [51] wrote about the concept of health: “... older adults have been seen to adapt and accept limitations as part of the ageing process”.
| Authors, year | Country | Article type/ study design | Perspective (population) | Subthemes of Concept of health | Subthemes of Dimensions of health |
|--------------|---------|---------------------------|--------------------------|------------------------------|----------------------------------|
| **Included articles discussing health from a cultural specific perspective** | | | | | |
| Kendall et al., 2019 [75] | Australia | Community collaborative participatory action research | Aboriginal mothers in metropolitan regional, and remote prisons | Complete wellbeing or functioning, adapting to change, self-management, multi-sided | |
| Mark & Lyons, 2010 [76] | New Zealand | Phenomenological approach | Māori spiritual healers | Multi-sided, satisfying life | Spiritual, environmental, others |
| Seyyedfatemi et al., 2014 [77] | Iran | Systematic review | Iranian women’s health concepts | Multi-sided, adapting to change | Environmental, social, individual, physical, spiritual |
| Yang et al., 2016 [78] | Republic of Korea/USA | Qualitative method | Nepalese women, had lived in the Dadeldhura district for more than 5 years | Complete wellbeing or functioning, satisfying life, participation | |
| **Included articles discussing health from an immigrant’s perspective** | | | | | |
| Cha, 2013 [79] | South-Korea | Grounded theory method | Korean migrant women who migrated to North-America or Canada for their children’s education while their husbands remained in Korea | Satisfying life, daily functioning, complete wellbeing or functioning | |
| Martin, 2009 [80] | USA | Phenomenology | Older Iranian immigrants | Adapting to change, multi-sided | Mental, physical, spiritual, social, others |
| Tirodkar et al., 2011 [73] | USA | Qualitative research design | South Asian immigrants in Chicago / religion | Multi-sided | Functional, social, physical, spiritual |
| **Included articles discussing health from an educational perspective** | | | | | |
| Jensen, 2013 [81] | Denmark | Qualitative approach | Women with low levels of education | Wellbeing, complete wellbeing or functioning, multi-sided, satisfying life | |
| Stronks et al., 2018 [82] | The Netherlands | Concept mapping | Lay persons with a lower educational level | Complete wellbeing or functioning, daily functioning, multi-sided, satisfying life | |
| | | | Lay persons with an intermediate educational level | Complete wellbeing or functioning, daily functioning, multi-sided, satisfying life, self-management, | |
| | | | Lay persons with a higher educational level | Complete wellbeing or functioning, daily functioning, multi-sided, satisfying life, subjective, self-management | |
| **Included articles discussing health from other context specific perspectives** | | | | | |
| Mayer & Bones, 2011 [83] | Germany, South-Africa | Multi-method research | South-African managers and expatriates | Wellbeing, multi-sided, subjective | Mental, physical, spiritual |
| Rawolle et al., 2016 [84] | Australia | Descriptive qualitative study | South-Australian farmers | Daily functioning, participation, complete wellbeing or functioning | Individual, social, environmental |
identified by multiple dimensions of health (theme 2) being reported in six articles (6/19) with a social science perspective. For example, Misselbrook [61] wrote: “But if we truly believe in a multi-sided model of health, which includes the biomedical, social, psychological, anthropological and spiritual dimensions, then we are swimming against the stream”. That health is subjective was identified in five articles (5/19) written from a social science perspective. For example, Sturmberg et al. [17] wrote: “The perception of being healthy is an emergent phenomenon based on individual and collective understandings of everyday realities”. The subtheme satisfying life as part of a health concept was identified in five articles (5/19) with a social science perspective. For example, Misselbrook [60, 61] wrote: “… health can be seen as the ability to flourish …”. In the articles from a biomedical science perspective content belonging to only one subtheme was identified in at least three articles: complete wellbeing or functioning. For example, Boorse [67] wrote about the concept of health as: “… each internal part to perform all its normal functions …”. The other subthemes for the concepts of health were not identified at least three times in the articles with a biomedical science perspective and are not further described here (see S2E).

Health from a theological perspective

Five articles were written with a theological perspective [70–74]. The perspectives in these articles were for example United Methodist church clergy and Islamic philosophy. Characteristics of the included articles are shown in Table 10.

Content belonging to onesubtheme was identified in at least three articles: multi-sided. The subtheme multi-sided view on health was identified in four articles (4/5) written from a theological perspective. For example, Proeschold-Bell et al. [71] wrote: “... we define our final health outcome holistically to indicate that health is not merely the absence of problems but is, rather, the presence of multiple life satisfactions”. The multi-sided view on health from this perspective was also identified by multiple dimensions of health (theme 2) being reported in four articles (4/5). For example, Proeschold-Bell et al. [71] wrote: “... spiritual, emotional, physical, mental well-being”. The spiritual dimension was identified in a theological perspective in four articles (4/5). For example, Proeschold-Bell et al. [71] wrote: “Although spiritual well-being may not have the rigorous definition and tradition of physical and mental health, participants considered it essential ...”. The other subthemes for the concepts of health were not identified at least three times and are not further described here (see S2F).

Health from a context specific perspective

Eleven articles were written from a context specific perspective. We divided these articles with a context specific perspective in four groups: cultural perspectives (4 articles) [75–78], immigrant perspectives (3 articles) [73, 79, 80], educational level perspectives (2 articles) [81, 82], and other perspectives (2 articles) [83, 84] (see Table 11). These contexts are diverse and cannot be seen as one similar group. Because of heterogeneity, this subtheme was not included in supplementary Tables 3A and 3B. For characteristics of the included articles and more detailed information about these concepts of health related to their specific contexts see supplementary Table 2G.

Discussion

We posited the research question whether a general health concept can guide all healthcare practices. It seems more likely that specific health concepts are needed for different professions or settings instead. In this scoping review, we provide an overview of articles discussing various concepts and dimensions of health, which were either general or specified to a particular context. We observed relevant differences but also similarities in the concepts and dimensions of health per context.

The variety of concepts of health already suggests that no consensus can be made on one overall concept to replace the WHO definition of health. First of all, our analysis shows that the best fitting health concept depends on the context. Besides, healthcare consumers act based on different health concepts when seeking care than care workers when providing it. This could mean that there is a misfit in the aims of healthcare consumers, compared to care workers. It is remarkable that complete wellbeing or functioning is mentioned by care workers, while healthcare consumers barely mentioned this biomedical viewpoint. Healthcare consumers value self-management, while care workers do not focus on self-management in their health concepts. Furthermore, individual health experiences can change over the course of life, due to diverse life circumstances and events [55]. It was seen that patients in general tend to focus on daily functioning while elderly people specifically focus on participation. This shows that one health concept does not automatically fit all age groups. On the other hand, there were interesting similarities regarding the concepts of health. In the majority of the articles, health was conceptualised as multi-sided and subjective, and not merely as complete wellbeing or functioning as suggested in the biomedical model. Furthermore, in the majority of the contexts other prerequisites for health were adapting to change and satisfying life. Indeed, no consensus can be...
made on one general health concept; all health concepts capture aspects that seem relevant [7].

Nevertheless, it is important to be clear about which health concept is used as a basis for development and implementations in health management, for (re)designing health policy and for research. Health concepts developed in one context do not hold automatically in other contexts. As a result, the expectations of healthcare consumers and care workers might not align in care provision. Having different understandings of the concepts of health can lead to misunderstandings in practice. Our overview of health concepts gives insight in the variety of experiences with health concepts of people with diverse health, life, community and other environmental circumstances. Policy officers or healthcare providers can check the similarities and differences of their health concept with health concepts in other contexts included in this overview. Even better, the overview we provide can be used by care workers preparing their conversation about what health means for the healthcare consumer. However, it should be emphasized that health could mean something different for each individual; no concepts are intrinsically incorrect. As Haverkamp et al. [7] described, health concepts share different features or assumptions and should be understood as a member of a family of concepts. By exploring the health concept in dialogue, important purposes of health provision can be defined by the care worker and the healthcare consumer together. Through such conversation between actors, health provision can be customised for each individual. Tools such as the positive health dialogue tool [12] might be of use in these conversations. This dialogue tool consists of six dimensions of health which correspond to the dimensions found in our study. However, the environmental dimension was not included in the positive health dialogue tool and might be of additional value to the conversation about what health means to an individual.

Many perspectives shared a similar multi-sided approach as Huber’s positive health [12]. Taking a closer look, we noticed that ‘the ability to adapt and to self-manage,’ the main issues of the concept of positive health, were also recognised in other health concepts, independently of perspective. The concepts of health described the ‘ability to adapt’ for example as adapting to changing physical conditions, such as ageing, illness or disability, and also as emotional balance and as health being a dynamic state in which adaptation to circumstances is necessary. ‘The ability to self-manage’ was described for example as autonomy or independence. However, care workers had barely focussed on this. This indicates that for care workers, patient self-management has less priority. Furthermore, we noticed that subjectivity was not explicitly mentioned in Huber’s concept, while this was frequently mentioned in the articles included in our review. However, Huber et al. did explain that positive health focuses on people’s strengths rather than weaknesses. As Huber argues, people’s strengths are based on their perception of and experiences with health [12], which is subjective. Notably, as mentioned by Prinsen and Terwee [15], it is not entirely clear whether the positive health concept refers to patients’ experiences or to their satisfaction with their health, and overlap between dimensions and aspects of Positive Health exist; this was also seen in our results.

Methodological considerations
A few methodological considerations are worth mentioning. A limitation of the search strategy was that the keyword ‘health’ by itself led to too many results. To solve this, we used the keyword ‘health’ in combination with ‘concept’ and ‘definition’ and used more specific keywords such as ‘health perception’ and ‘perceived health’ to broaden the search strategy and capture all relevant articles for our research. Most research we found was conducted in Europe and North America. Fewer research articles from Central/South America, Australia, Africa and Asia were found. Their views on health may be underrepresented. To decrease the chance that articles were missed in the search, a snowball method was conducted on the results of the primary search. Four experts from the field were asked to check whether they missed any articles in the selection. Moreover, we did not include the weighting (importance) of a specific subtheme as was described in some articles. To compensate, we only incorporated a subtheme in our analyses by introducing a minimum level of appearance in multiple articles (> 3) as threshold. Strengths of the research were the thoroughly structured process of article selection, the inductive method of analysis, and the repeated consultation of four researchers (EB, LN-vV, EdV, DvdM) to discuss the process and the results by the first author (VvD).

Conclusion
We performed a scoping review to explore if one general health concept can guide all different care practice situations. Based on the variety of health concepts from different perspectives, we conclude that for every perspective, and even for every individual, health can mean something different. Thus, it seems impossible to choose or define one health concept appropriate for all contexts. However, in the interaction between care workers and healthcare consumers (and also in health policy) it is important that the meaning of ‘health’ is clear to all actors involved to avoid misunderstandings.
Our overview supports a more uniform tuning of healthcare between healthcare providers (the organisations), care workers (the professionals) and healthcare consumers (the patients), by creating more awareness of the differences among these actors, which can be a guide in their communication.

Supplementary Information
The online version contains supplementary material available at https://doi.org/10.1186/s12913-022-07702-2.

Additional file 1: Supplementary Table 1. The coding scheme; identified subthemes and codes for theme 1, the concept of health.

Additional file 2: Supplementary Table 2A. Included articles discussing health from a general population perspective.

Additional file 3: Supplementary Table 3A. Overview of number of articles per subtheme for theme 1 (concept of health) for different perspectives.

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Authors’ contributions
VvD conducted the research and wrote the main manuscript. EB assisted with the screening of all titles, abstracts and full-text articles for inclusion. DJ, EdV, DvdM and LN-vV were repeatedly consulted to discuss the analytic process and the development of the results. EF, EdV, DvdM, AK and LN-vV reviewed the manuscript. All authors read and approved the final manuscript.

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The dataset (list of included articles) supporting the conclusions of this article is included within the tables in this article and in the supplementary files.

Declarations
Ethics approval and consent to participate
Since no humans participated nor any human data has been used in this research, ethics approval and consent to participate are not applicable.

Consent for publication
The manuscript does not include details of individual persons, thus written informed consent for the publication of these details is not applicable.

Competing interests
The authors declare that they have no competing interests.

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