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ARTICLE

Assessing the structures and domains of wellness models: A systematic review

Krista Kauppi · Antero Vanhala · Eira Roos · Paulus Torkki

Abstract: *Objective:* This study systematically identifies different wellness domains, explores whether we are reaching any consensus, and presents an archetype of a wellness model.

Methods: Studies were selected for review if they proposed a model for assessing individuals' wellness, the model was generic (i.e., non-context or disease-specific), designed for adults and included at least physical, psychological and social domains. Furthermore, the study needed to be peer-reviewed with a full-text available in English. Based on this, 44 models were identified and their domains were extracted and grouped using thematic analysis, and placed under themes that were created using quantitative methods. Publication year and formed groupings were used to examine the evolution of models. Median, mode, and percentages were used to form the archetype.

Results: The investigated models included 379 unique domains that could be clustered into 70 groups and under 14 themes. While the numbers of published wellness models increased, no consensus on the domains was reached. The majority of the models were presented at one level with five domains.

Conclusions: Incorporating wellness into everyday practice requires comparable measures to evaluate and benchmark outcomes. Hence, we need to reach a mutual understanding on the structure and domains of wellness.

Keywords: wellness; wellbeing; model; domain; systematic review; measurement

1. Introduction

Although wellness benefits are widely recognized, we still use most of our healthcare spending to treat people when symptoms appear. Studies have shown that higher levels of overall wellness increase labor productivity (Isham et al., 2021; Shi et al., 2013), reduce unscheduled absences, presenteeism, and employee turnover (Sears et al., 2013), decrease the risk of mortality (Martín-María et al., 2017), reduce hospital utilization (Harrison et al., 2012), and lead to lower healthcare costs (Harrison et al., 2012; Sears et al., 2013). However, on average, the Organization for Economic Co-operation and Development (OECD) countries spend less than 3% of their overall health expenditure on health promotion and prevention actions (Gmeinder, 2017). Concurrently, the medical research field has been criticized for focusing mainly on diseases instead of health promotion activities and understanding wellness (Naci & Ioannidis, 2015). It is vital that we continue to investigate wellness and how it affects our everyday lives to push society to shift our focus from the absence of disease to the presence of wellness.

Understanding the structure and content of wellness is imperative in designing effective health promotion activities and tracking their success on community and individual levels. However, the term wellness lacks a widely accepted definition. Currently, the most cited

Krista Kauppi
The University of Helsinki
krista.kauppi@helsinki.fi

definition in the literature is that of health, which is defined as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity" (Linton et al., 2016; Roscoe, 2009; WHO, 1948). Since defining the concept has been arduous, many authors have attempted to explain wellness by defining its characteristics. Wellness is considered to be a) something more than solely the absence of illness (Els, 2006; Roscoe, 2009), b) a positive construct with a subjective nature (Bart et al., 2018; Corbin & Pangrazi, 2001; Dunn, 1961), c) a continuum, not an end state (Dunn, 1961; Greenberg, 1985; Kirsten, 2009; Lafferty, 1979; Myers et al., 2000), d) multidimensional and dynamic, where the different factors are interrelated and search for balance (Abbott & Baun, 2015; Corbin & Pangrazi, 2001; Crose, 1992; Dunn, 1961; Lafferty, 1979; Myers et al., 2000; Roscoe, 2009; Seppälä et al., 2012). Likely due to these characteristics, the WHO's definition of health has ended up to be also the definition of wellness. However, the terminology surrounding the concept has been left nebulous. The terms wellness and well-being are often used interchangeably, (Kirsten, 2009; Ryff & Keyes, 1995) and many systematic reviews on wellness instruments have included quality of life, subjective well-being, happiness, and life satisfaction instruments (Charlemagne-Badal et al., 2015; Cooke et al., 2016; Dronavalli & Thompson, 2015). Since all these terms are also separate concepts, it remains unclear how they relate to and overlap one another. However, fundamental to designing and tracking the impact of health promotion interventions is the ability to measure changes, which requires defining the phenomenon's ontology.

A key challenge in defining wellness is the vast number of conceptualizations, which tend to vary from author to author. It is common to describe wellness by enumerating the domains that it includes. While some authors have created conceptualizations that include domains such as physical and social (Adams et al., 1997; Allen et al., 2007; O'Donnell, 2008; Seppälä et al., 2012), others have focused solely on psychological factors (Ryan & Deci, 2001; Ryff & Keyes, 1995). Some previous studies have attempted to visualize the relationships between the domains by describing them using, for example, a picture of yin and yang (Saylor, 2004), a circle (Greenberg, 1985; Roy et al., 2018; Witmer & Sweeney, 1992), or a cone (Adams et al., 1997). Some have turned the concept into a measurement instrument for individual wellness (Adams et al., 1997; Lui & Fernando, 2018; McElligott et al., 2018; Myers et al., 2000; Naidoo, 2019; Prilleltensky et al., 2015; Renger et al., 2000). Unfortunately, this has resulted in extensive lists of different kinds of wellness instruments, which multiple existing systematic reviews attempt to gather and evaluate (Bart et al., 2018; Charlemagne-Badal et al., 2015; Cooke et al., 2016; Dronavalli & Thompson, 2015; Linton et al., 2016). These different conceptualizations and operationalizations make finding a general measure of wellness and incorporating it into our current practices difficult.

Despite much research, there is a gap in knowledge regarding the basic structure of wellness conceptualizations, including the social, psychological, and physical aspects described in the WHO's definition. Previous systematic reviews have often described models by exploring operationalization (Bart et al., 2018; Charlemagne-Badal et al., 2015) and included models that might only focus on, for example, psychological factors. However, they did not investigate the general structure of wellness or whether there was any mutual understanding on the structure and domains of wellness. Reaching even some degree of mutual understanding is vital as it enables a starting point to investigate how wellness perceptions vary between different countries, cultures, age groups and genders, and allows examining the validity of a more generalized wellness instrument. These issues justify this review's aim of informing researchers on the basic structure of wellness conceptualizations that consider at least the physical, social, and psychological domains.

In this review, we aim to 1) offer a structured list of the domains of wellness models that

conform to the WHO tripartite definition; 2) review whether we are approaching any degree of mutual understanding about the domains of wellness, and 3) present the archetype of a wellness model, focusing mainly on the basic structure. Currently, the terminology around wellness is elusive and no agreement seems to exist on the use of the different terms. As in this study we wanted to focus on models that examine individuals from a broader perspective and consider social, psychological and physical aspects, we decided to use "wellness" instead of "wellbeing" as a main term of the paper, as wellness is more often seen to encompass more factors. Hence, to maintain clarity and to limit the scope of the study, this review focuses strictly on wellness conceptualizations that include at least physical, social, and psychological aspects, excluding quality of life and subjective well-being (SWB) models, latter usually referring to Diener's literature (Diener, 1984). This review will aid health promotion researchers in getting closer to a mutual understanding on what wellness is and how to structure it to take steps towards a more generalized measure of wellness.

2. Methods

2.1 Search strategy

The search started with an exploratory literature review to identify relevant articles and key terms used in the field, and to set appropriate inclusion and exclusion criteria. Based on this keywords were formed (supplement 1) and a systematic literature review was performed using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) (Page et al., 2021). Databases used for the search were Web of Science, Scopus, Applied Social Sciences Index and Abstracts, and Sociological Abstracts, and the time range was from 1945 to 1st of September 2020. The databases were chosen with a help of a University Library search professional. The review was complemented with a manual search of wellness conceptualization from the articles identified in the exploratory literature search and systematic review.

2.2 Inclusion and exclusion criteria

Our aim was to find models that were suitable for most of the population and to get a wide view on models that include wellness domains. Hence, studies were included when they 1) presented domains of either a wellness or well-being model for assessing an individual's wellness, 2) had a model with domains that included at least social, physical, and psychological aspects as presented in WHO's definition, 3) were the first peer-reviewed publication of the model domains, 4) were developed for the adult population, and 5) were written in English with the availability of a full text article. Studies were excluded when they 1) focused on a specific purpose (e.g., disease, symptom, treatment, intervention) or setting (e.g., urban development), 2) assessed wellness or well-being focusing only on a specific population (e.g., ethnic group, occupation, or nationality), 3) could not be evaluated due to a missing abstract and full text, and 4) assessed a model that was clearly stated to be a quality of life or subjective well-being model.

2.3 Screening of studies and data extraction

The studies were screened by two authors who independently reviewed the studies using the PRISMA guidelines and study selection criteria. The authors first made a separate preliminary decision about inclusion or exclusion and then met to discuss the studies and to agree on which models should be included in the review. If no agreement was reached, a third author acted as an arbiter. The same two authors first extracted data independently to a spreadsheet, and then reviewed the data together. The data included the author's name, year of publication, name of

the model, if available, target group, methodology of creation, number of taxonomic levels, number of domains, and eventually domains divided to taxonomic levels using the tree structure model. For data analysis purposes, the definitions of domains were also collected if they were available.

2.4 Data analysis and synthesis

First, the authors decided on the taxonomic level to be used for the analysis. Approximately, one third of the models (n = 15) had domains placed to two taxonomic levels, where the first level (root node) was usually a grouping of second-level domains (leaf nodes). Hence, the authors decided to primarily use the second-level domains (leaf nodes of the tree hierarchy) and moved the first-level domains or domain groupings (root nodes) to the second level if a domain or level was missing. Second, the obtained domains were collected to a visual board (Miro, Realtimeboard Inc.), where similar domains were grouped using thematic analysis (Nowell et al., 2017) aided by domains' definitions when available. The two authors coded each group based on the content with a code, such as "sense of coherence." Third, higher-level themes were created by analyzing the first-level domains or domain groupings (root nodes) of the previously mentioned two-level models (n = 15). This was done by coding each domain, for example, with the code "environmental," calculating the frequency and considering all repeated themes. The groups formed in step two of the analysis process were placed under the most appropriate theme. Figure 1 clarifies the meaning of the terms first-and second-level domains, theme, grouping, and domain.

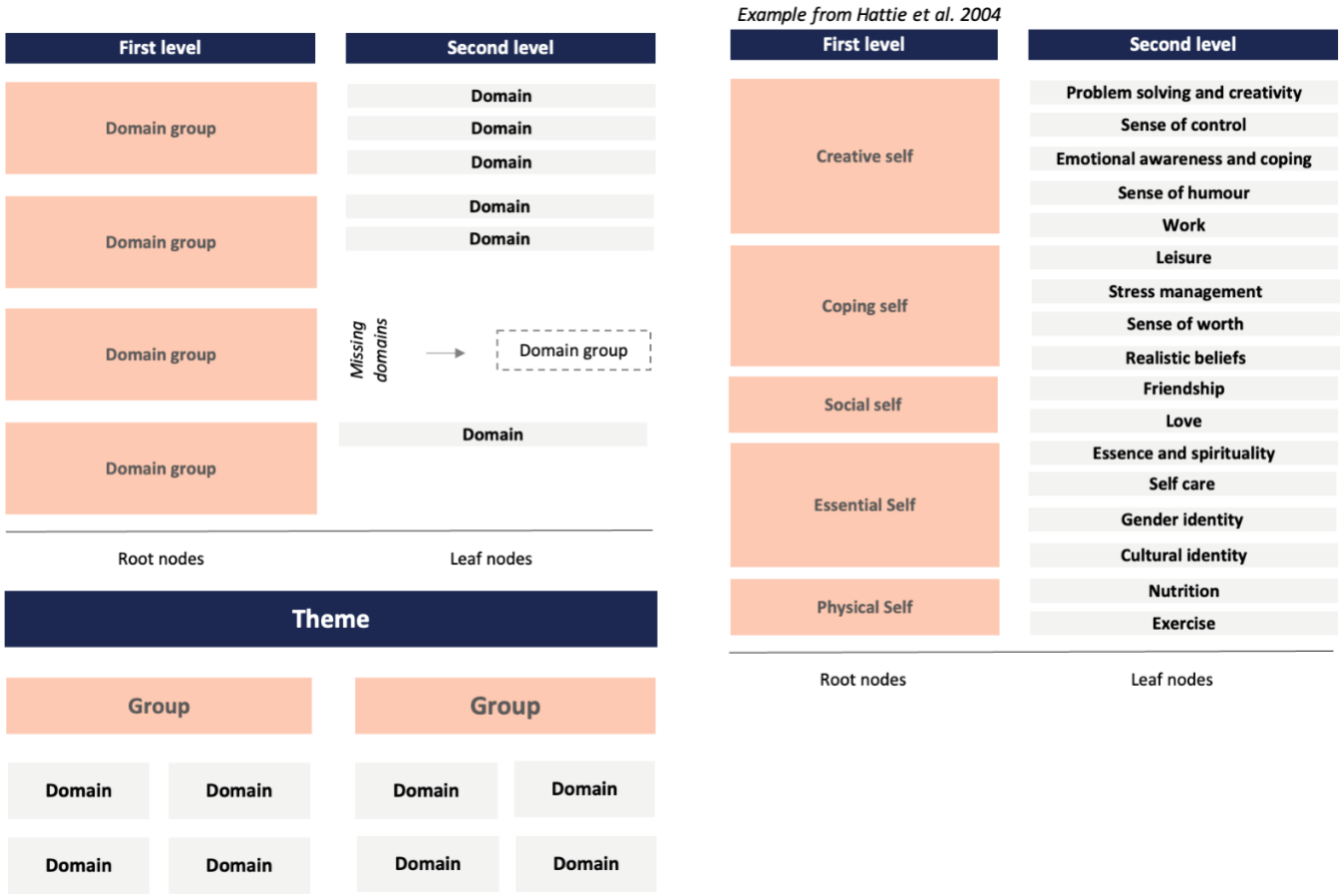

Figure 1. Clarification of the terms first-and second-level, theme, group, and domains. Left hand side describes the data extraction process and the analysis structure, while right hand side shows

an example of data extraction.

Fourth, to examine the evolution of models and to estimate whether the research community had moved closer to a mutual understanding, the two authors listed the identified articles based on the publication year and examined whether the formed groupings would start to occur more frequently. Furthermore, the frequency of published models per decade was calculated. Finally, to explore the archetype of a wellness model, the median and mode were calculated for the number of domains and the percentages for the number of taxonomic levels. To calculate the number of domains, the authors again primarily used the second-level domains (leaf nodes), and moved the first-level domains or domain groupings (root nodes) to the second level if a domain or level was missing.

3. Results

3.1 Description of the search results

We identified 5805 articles in the databases and 49 in other sources. After removing duplicates, 3925 articles remained for the title and abstract screening. We reviewed 104 full-text articles using the study selection criteria, of which 44 were included in the review (Table 1). The table presents for each model its reference, year of publication, what method was used to create the model, how many levels the model has and how many domains the model includes. The detailed screening and exclusion process is summarized in the PRISMA diagram (Figure 2). Main risk of bias is related to the screening and selection of the results. The quality of abstracts was occasionally poor but due to snowballing we consider the risk of missing important studies to be low. As we had a clear predefined criteria for study selection and two independent authors evaluated each study and a third author acted as an arbiter to reach consensus, we consider the risk of leaving out important studies to be low.

Table 1. Characteristics of the studies included in the review

References	Year of model	Name of the model	Methodology of creation	Taxo-nomic levels	Number of domains
(Adams et al., 1997)	1997	Perceived Wellness Survey (PWS)	Combination: Literature review and population survey data (quantitative)	1	6
(Agarwal et al., 2016) (a)	2006	NA	Not specified	1	7
(Ali et al., 2018)	2018	Wellness Concepts Model (WCM)	Combination: Literature review and expert group	2	29
(Ardell, 2011) (b)	1986	High-level wellness	Not specified	1	5
(Ardell, 2011)	NA	High-level wellness	Not specified	1	14
(Arora et al., 2016) (c)	2009	Gallup-Healthways Well-Being Index	Population survey data (quantitative)	1	6
(Bell et al., 2004)	2004	Arizona Integrative Outcomes Scale (AIOS)	Not specified	1	5
(Brown & Applegate, 2012) (d)	1981	Wellness Inventory	Not specified	1	12
(Brown & Applegate, 2012) (e)	1983	Lifestyle Assessment Questionnaire (LAQ)	Not specified	1	11
(Brown et al., 2015) (f)	1992	Testwell	Not specified	1	10

References	Year of model	Name of the model	Methodology of creation	Taxo-nomic levels	Number of domains
(Charlemagne-Badal et al., 2015)	2015	NA	Combination: Literature review and expert group	1	15
(Crose, 1992)	1992	NA	Not specified	2	25
(Depken, 1994)	1994	Wellness Model	Not specified	1	6
(de Vries et al., 2016)	2016	Health-related subjective wellbeing (HR-SWB)	Population survey data (quantitative)	1	5
(Greenberg, 1985)	1985	NA	Not specified	1	5
(Hadley, 1974)	1974	NA	Literature review	2	22
(Hattie et al., 2004)	2004	Indivisible self-wellness model	Population survey data (quantitative)	2	17
(Henriques et al., 2014)	2014	Nested Model (NM) of Well-being	Literature review	2	6
(Jovanović et al., 2019) (g)	2013	Personal Well-being Index (PWI)	Not specified	1	8
(Kirsten, 2009)	2009	NA	Not specified	2	23
(Lafferty, 1979)	1979	NA	Not specified	1	5
(Linton et al., 2016)	2016	NA	Literature review	1	6
(Lui & Fernando, 2018)	2018	The Wellbeing Scale (WBS)	Combination: Literature review and population survey data (quantitative)	1	5
(McElligott et al., 2018) (h)	2015	Integrative Health and Wellness Assessment (IHWA)	Combination: Expert group and population survey data (quantitative)	2	10
(Myers et al., 2004)	2004	4F-WEL	Population survey data (quantitative)	1	4
(Myers et al., 2000)	2000	Wheel of Wellness	Population survey data (quantitative)	2	18
(Naidoo, 2019)	2019	Multidimensional individual well-being (MIW)	Combination: Literature review and population survey data (quantitative)	1	6
(Prilleltensky et al., 2015)	2015	Interpersonal, Community, Occupational, Physical, Psychological, and Economic well-being (I COPPE)	Combination: Literature review and population survey data (quantitative)	1	7
(Renger et al., 2000)	2000	Optimal Living Profile (OLP)	Combination: Expert group and population survey data (quantitative)	2	24
(Roscoe, 2009)	2009	NA	Literature review	1	7
(Saylor, 2004)	2004	The circle of health	Not specified	2	9
(Seppälä et al., 2012)	2012	Personal Wellness Information Model	Combination: Literature review and expert group	1	7
(Sinclair et al., 2005)	2005	General Population Clinical Outcomes in Routine Evaluation-Outcome Measure (GP-CORE)	Combination: Expert group and population survey data (quantitative)	1	4
(Skevington & Böhnke, 2018)	2018	Life Quality and Well-being" (LQW) model	Population survey data (quantitative)	2	14

References	Year of model	Name of the model	Methodology of creation	Taxo-nomic levels	Number of domains
(Supranowicz & Paź, 2014)	2014	Physical, Mental and Social Well-being scale (PMSW-21)	Combination: Expert group and population survey data (quantitative)	2	21
(Tulloch & Healy, 1982)	1982	NA	Not specified	1	6
(Voukelatou et al., 2020)	2020	NA	Literature review	1	11
(Wheeler, 1991)	1991	The General Well-Being Questionnaire (GWBQ)	Combination: Literature review and population survey data (quantitative)	2	30
(White, 2010)	2010	NA	Not specified	2	25
(Wilcock, 1998) (i)	1990	NA	Population survey data (qualitative analysis)	1	8
(Wilcock, 1998)	1998	NA	Population survey data (qualitative analysis)	1	9
(Witmer & Sweeney, 1992)	1992	Wheel of wholeness	Not specified	2	11
(Zhou et al., 2017)	2017	NA	Combination: Literature review and expert group	1	5
(Žižek et al., 2015)	2015	Requisite Personal Holism (RPH) dimensions	Not specified	1	5

Note. *Original authors (a) (Anspaugh et al., 2006), (b) (Ardell, 1986), (c) (Gallup-Healthways, 2009), (d) (Travis, 1981), (e) (National Wellness Institute, 1983), (f) (National Wellness Institute, 1992), (g) (International Wellbeing Group, 2013), (h) (Dossey, 2015), (i) (Blaxter, 1990)

3.2 What domains are found from wellness models that conform to the WHO tripartite definition?

The investigated wellness models included 494 domains, of which 379 were unique. Due to the significant variation in the naming of domains, 322/379 (85%) of them were unique in their exact written format. However, the domains were clustered based on similarities to 70 groups. These groups were further grouped under 13 main themes, namely "Economical," "Emotional," "Environmental," "Health behavior," "Healthcare," "Intellectual," "Life satisfaction," "Occupational," "Physical," "Psychological," "Social," "Spiritual," and "Values and ideology". An additional theme named "Miscellaneous" was used for domains described as "overall well-being," that did not clearly belong to any other grouping, or for which the authors could not reliably determine the domain's meaning based on its name.

Table 2 presents each theme's description and Figure 3 presents each theme, the domain groups it includes and how many separate domains each group includes. For instance, group "coping" includes four separate domains from different models, namely "coping style/patterns", "coping patterns", "Having reserve to combat problems", and "balance, adaptation, resiliency". Based on the analysis, the highest number of domains was related to the "Physical" theme, with 83/494 (17%) of domains. Other themes with a high number of domains were "Psychological" (67/494, 14%), "Social" (63/494, 13%), "Emotional" (57/494, 12%), "Spiritual" (43/494, 9%), and "Environmental" (40/494, 8%). Notably, studies must include physical, social, and psychological components to be considered for this review.

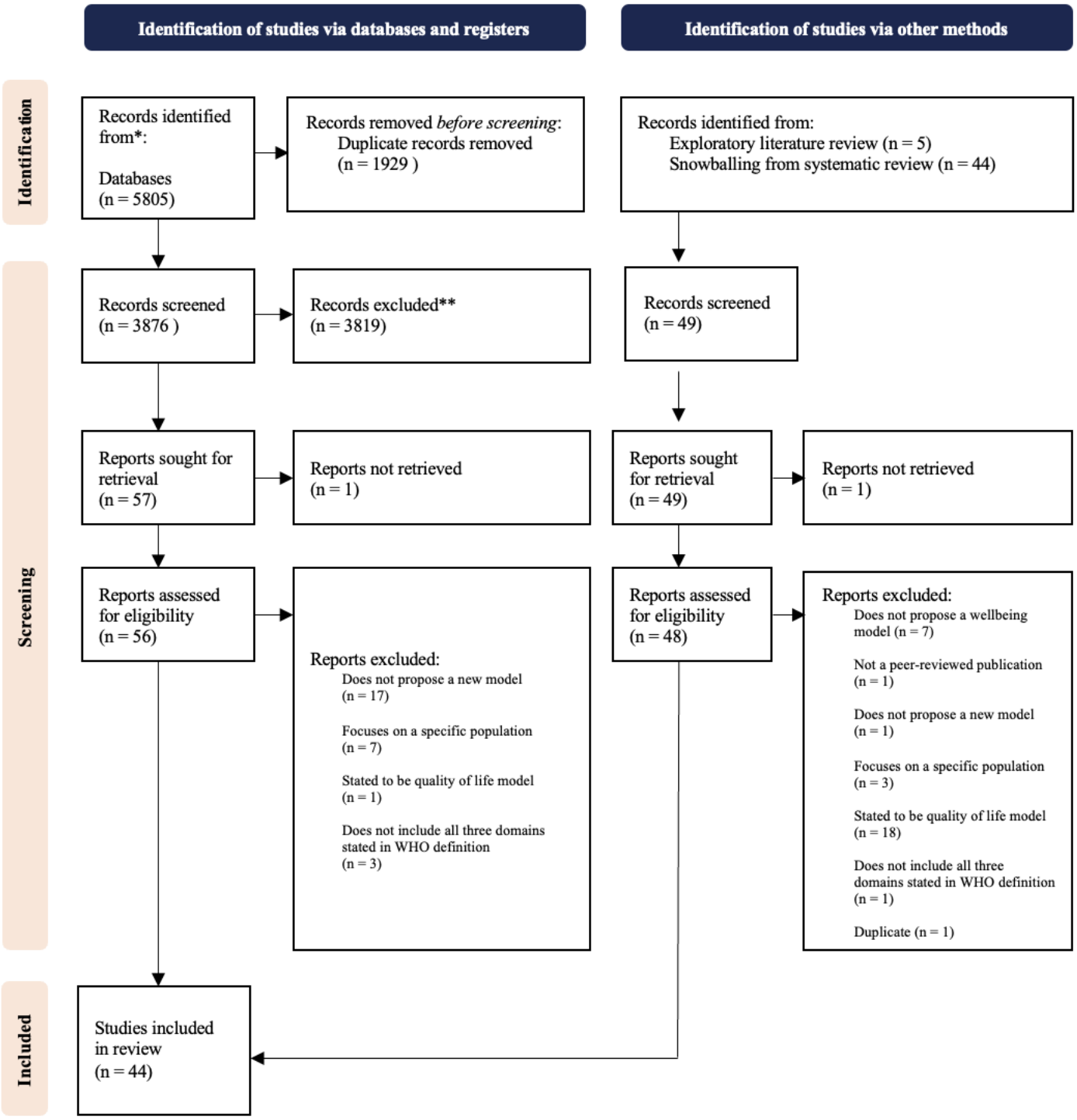

Figure 2. PRISMA flow chart

Table 2. Emergent themes and their brief descriptions

Emergent theme	Brief description
Economical	The economical theme includes domains linked to economic and material aspects of wellness, such as economic stability, the standard of living, income, and socioeconomic development.
Emotional	The emotional theme includes various aspects of emotional health, such as positive and negative emotions, coping, emotional awareness and intelligence, and emotional management.
Environmental	The environmental theme includes domains related to both general environmental health and ecological context. For example, community, political environment, safety, and natural environment.
Health behavior	The health behavior theme includes domains linked to behavior, health responsibility, preventative actions, and self-care. Other examples include health attitudes and lifestyle habits.
Healthcare	The healthcare domain includes aspects such as dependence on medication and availability of healthcare services.
Intellectual	The intellectual domain includes intellectual health and wellness, such as education and learning, creativity, cognitive wellness, and problem solving.
Life satisfaction	The life satisfaction domain focuses on life satisfaction and life balance
Miscellaneous	The miscellaneous theme includes domains that could not be categorized under any other theme. This might be because they simply did not fit there, or the authors could not reliably determine what was meant with the domain.
Occupational	The occupational theme includes domains linked to work, occupation, leisure, and work-life balance. It is noteworthy that work does not only mean a job. It also considers the students, retired, and unemployed people.
Physical	The physical theme includes biological context and physical or physiological aspects of health. For example, functioning, energy, exercise, nutrition, recovery, and body image.
Psychological	The psychological theme includes different mental aspects and psychological contexts. For example, self-worth, sense and temperaments, identity, autonomy, optimism, and sense of competence.
Social	The social theme includes friendships, love, relationships and other aspects of social health such as social capabilities and support.
Spiritual	The spiritual theme includes spiritual context and different aspects of spirituality. For example, meaningfulness and inner peace.
Values and ideology	Values and ideology themes include values, beliefs and ideology alongside metaphysical context.

Figure 3. Emergent themes, their groups and the number of domains in each group

3.3 Are we getting closer to any degree of mutual understanding on the domains of wellness?

Although a steep increase in the number of published wellness models in recent decades exists (Figure 4), having examined models from the 1970s to the present, we did not see any evidence that the occurrence of any specific theme has been increasing or establishing its status (supplement 2). Instead, many of the different themes kept occurring inconsistently. As can be seen, some new domains have appeared over the years. The "Economic" theme was rare and occurred in only two publications out of 26 before 2010 after being mentioned in 11 out of 18 publications. A similar effect can be seen with the theme "Environmental," which appeared in seven publications before 2010 and, after that, appeared in 13 publications. The somewhat opposite effect can be observed with the theme "Intellectual," which appeared 15 times before 2010, and after that, appeared only three times. Figure 4 shows the historical development of models showcasing the number of domains each model includes and how many of the emergent 13 themes of this study could be found from each model. When examining the number of different themes and domains, we could not see any clear trend over time.

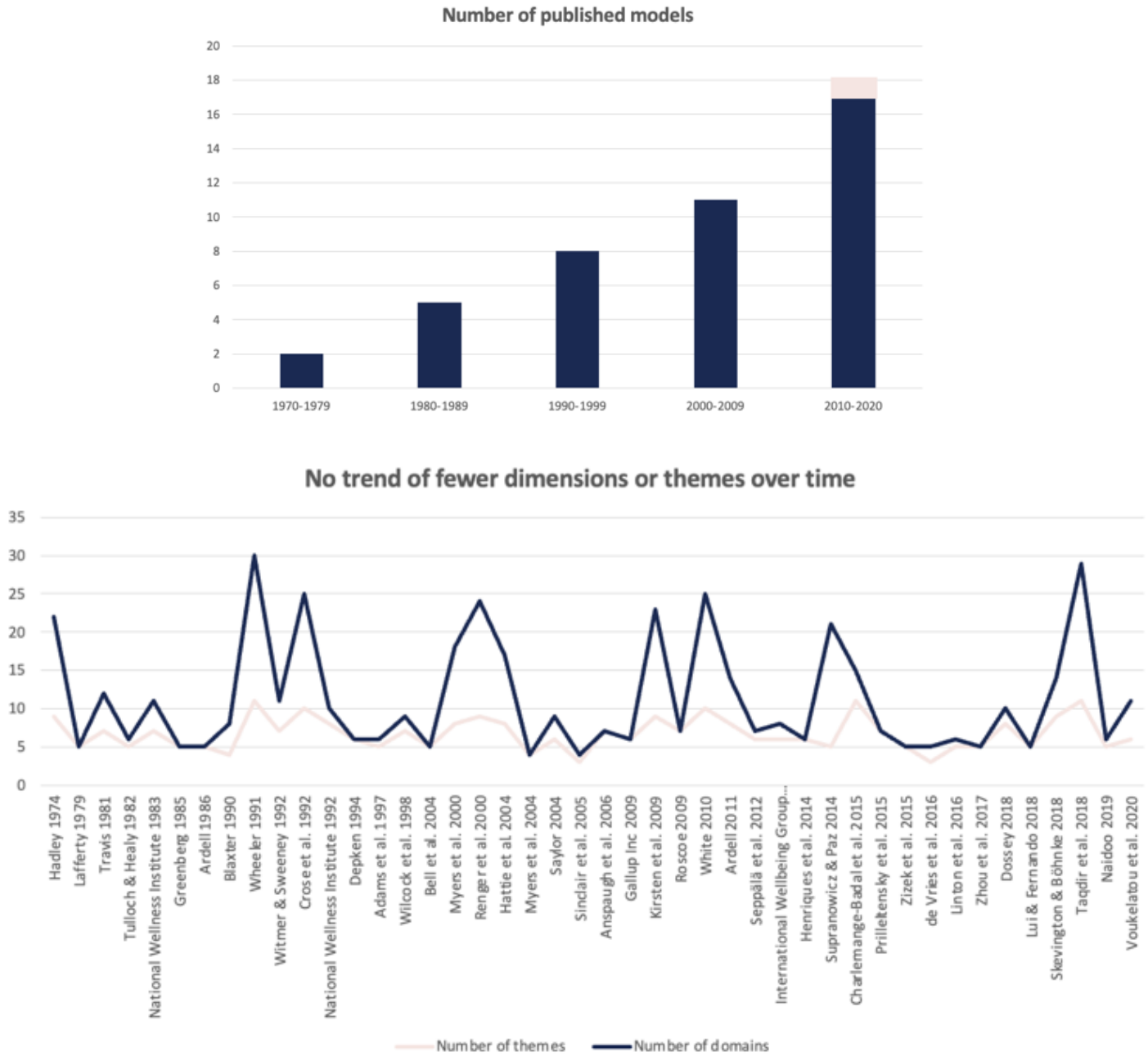

Figure 4. Number of published models per decade and examination of the number of themes and dimensions over time

* *The last column includes one model from 2020, which has been marked with a different color.*

3.4 What would be the archetype of a wellness model based on previous studies?

Among the 44 models identified, the number of domains varied between four and 30, resulting in a median of eight domains. However, the majority of the models (n = 8) had five domains. Based on Figure 3 the five most common domains were "Social relationships", "Positive and negative feelings", "Functioning", "Generic spiritual health and wellness", and "Environment". The taxonomy level analysis revealed that 29 (66%) of the models were presented at one level, while the others (n = 15, 34%) were divided into two taxonomic levels.

4. Discussion

We aimed to review the different wellness domains extensively, examine whether we had come closer to a mutual understanding on the different domains, and investigate the structure of current wellness models. We identified almost 400 different wellness domains and clustered them into 70 different groups. This indicates that many of the previously published wellness domains did not differ. However, while the interest in wellness model development has clearly increased, the views on the wellness domains and how many there are still vary. Based on our findings, wellness models are generally presented at one level, and they comprise five domains but there is still little agreement on the structure and domains of wellness.

Many of the identified wellness domains of this systematic review have also been described in previous literature. These include, for example, cognitive, physical (Charlemagne-Badal et al., 2015; Linton et al., 2016), economic, intellectual, social, and emotional wellness (Charlemagne-Badal et al., 2015; Cooke et al., 2016; Linton et al., 2016). Other previously identified domains were environmental and occupational aspects, spirituality, energy (Charlemagne-Badal et al., 2015; Cooke et al., 2016; Linton et al., 2016), health behavior, leisure, life satisfaction, sleep (Charlemagne-Badal et al., 2015; Linton et al., 2016), healthcare (Charlemagne-Badal et al., 2015), nutrition, functioning, achievement, autonomy, self-esteem, meaningfulness (Cooke et al., 2016; Linton et al., 2016), coping, sense of humor (Cooke et al., 2016), and creativity (Linton et al., 2016). Interesting finding was that economic and environmental domains have appeared more often in the recent years. This might be due to the shift from models emphasizing psychological domains to more multidisciplinary approach of wellness as well as the vast technological, economic, social, cultural, and political changes in our society and rising environmental awareness (Hadley, 1974; OECD, 2013; Reese & Myers, 2012; Voukelatou et al., 2020).

We found number of domains ranging from four to 30, which differs from previous research, where the number of domains ranged from one to 15 (Charlemagne-Badal et al., 2015; Linton et al., 2016). The lower limit difference is naturally due to our requirement that wellness domains include at least the physical, mental, and social domains to be considered for this review. The upper limit difference might be because we aimed for the most comprehensive picture, and thus, the extraction of domains was done primarily using the leaf nodes and secondarily using the root nodes. However, most of the models had five domains and a median of eight domains, both of which fit the range identified in previous literature but signifies that on average models investigate individual's wellness from a rather narrow perspective.

Despite almost 50 years of research, a mutual understanding of the different wellness domains is absent. Considering the complex issue and the fact that wellness research brings together multiple branches of science, ranging from philosophy to medicine, it is not surprising that this has not been met. However, the need for harmonizing the concept of wellness increases, as policy-makers and nations attempt to find comparable ways to measure social progress and see how policies and global changes affect wellness of individuals (European Union, 2017; OECD, 2022; Randall et al., 2019). One possible issue in harmonization based on our analysis is that approximately one-third of the studies (14/44) based their models on some degree of a literature review. Hence, it seems that most of the studies did not start forming their models using existing results. This might be one of the reasons we found significant variations in the naming, defining, and grouping of domains. Combining this with the lack of agreement on the different terms of wellness and cultural, age, and gender variation, which have been identified in other studies (Bart et al., 2018; Charlemagne-Badal et al., 2015; Cooke et al., 2016; Crose, 1992; Linton et al., 2016; Myers et al., 2000), wellness researchers face significant challenges in conducting comparable systematic reviews and reaching a consensus on different wellness domains.

We suggest benchmarking, for example, effectiveness research and attempting to form together some guidelines for research, such as in COMET initiative (COMET Initiative). Furthermore, the first step toward reaching some degree of consensus on the domains could be using the findings of systematic reviews, such as this one, and applying, for instance, the Delphi method involving a multidisciplinary expert panel. This could be followed by performing larger scale studies to observe if there are differences between, for instance, age groups or genders on how they value the different domains of wellness. Our study highlights the need for a more unifying discussion and argues that wellness research could benefit from the development of agreed-upon standardized sets of terms.

4.1 Strengths and limitations of the review

We identified some limitations that might have affected the results of this review. As this study was limited to wellness models meant for the general adult population, account for WHO's tripartite definition of health and has been strictly limited to certain terms on the titles, it is possible that not all relevant models were identified. However, this has most likely been mitigated considerably using several different databases and an initial exploratory search that aims to comprehensively identify the key terms of the field. We also acknowledge that there can be a significant amount of subjectivity involved in deciding, in some instances, whether a study proposed a model, how the model was structured into a hierarchical form for analysis purposes, and how different domains were grouped together. For future purposes, it would be worthwhile to have data analysts from a wider set of backgrounds as it is likely to influence how different models are interpreted, domains are grouped, and themes are named. However, we consider that we have offered an analytical data-based approach into thematic grouping and clustering of wellness domains that can give actionable insights to other researchers. Notably, this review did not choose models based on their validity, sensitivity, or reliability measures. However, this can be justified for the purposes of this review, which is to offer an extensive picture of wellness domains and not to focus on the operationalization of models. We do not see that any of the identified limitations would drastically jeopardize the results of this review.

4.2 Implications for health promotion practice and research

We have presented an extensive review of the literature to offer other health promotion researchers a solid ground from which to continue the development of wellness models, hoping to someday approach some degree of consensus. However, we do see that further studies on wellness are still needed. Specifically, to investigate the differences between countries, cultures, age groups and genders, and to develop and validate comparable measures of wellness that could be implemented into practice, it is vital that we get closer to the agreement on even some key domains of wellness. Considering the positive impact of higher level of wellness on labor productivity, unscheduled absences, presenteeism, employee turnover, risk of mortality, hospital utilization, and healthcare costs, it is important to design effective wellness promotion interventions and to comparably track their actual impact. Furthermore, a better understanding of what is meant by different terms in the field and how they are interrelated would help other researchers in future inquiries. Currently, there is no clear consensus on how quality of life, subjective well-being, health, wellness, and well-being are positioned in the field. We hope that this review encourages other health promotion researchers to continue examining the complex nature of wellness in theory and practice to take steps closer to bringing wellness measurement to our everyday lives.

5. Conclusion

This systematic review offered a detailed overview of the different domains of wellness, their evolution, and model structure, with an attempt to aid in developing a more generalized measure of wellness and this way enabling comparing and validating the perceptions of wellness across different countries, cultures, age groups and genders. Based on this review most commonly occuring domains of wellness are related to "Physical", "Psychological", "Social", "Emotional", "Spiritual", and "Environmental" themes. However, it is important to note that this review does not suggest any new model but instead offers a basis for model development. The number of wellness domains is currently remarkably high, and no mutual understanding has been reached on the structure of wellness. Hence, we stress the importance of continuing research and encourage unifying discussion to form agreed standardized sets of terms and domains for the wellness field. It is clear that we still have much to do to harness the benefits of enhanced wellness and to bring comparable wellness measurements to our everyday lives.

Conflict of interest statement

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Data availability statement

Data can be accessed by contacting the corresponding author by email.

Authors

Krista Kauppi
The University of Helsinki
krista.kauppi@helsinki.fi

Antero Vanhala
The University of Helsinki

Eira Roos
The University of Helsinki

Paulus Torkki
The University of Helsinki

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