

# Introducing hope in design for health and well-being

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Health and well-being are fundamental aspects of life, directly impacting the quality of life. Hope is a phenomenon that significantly relates to the quality of life. The purpose of this paper is to introduce hope in the context of design for health and well-being. By exploring the intersection of design, health, and hope, we can create outcomes that are not only functional and address immediate needs but also increase resilience and foster a sense of optimism and empowerment for users and communities. We provide reflections on how this elevation in design can cultivate strengthened communities through improved health care interventions.

**Keywords:** *hope; health; well-being; design*

## 1 Introduction

As reflected in the shift from “design for” to “design with” (Mattelmäki, 2005), today’s design field generally seeks to be open and inviting. Current design practitioners largely view design as a kind of collaboration and typically use participatory approaches and tools to achieve a genuine understanding of people’s needs, expectations, perspectives, and contexts. The design encompasses the process and the outcome. Ultimately, the design process and the outcome are interconnected. Empathy has become a key concept in the design process. Through a conscious empathic approach, design teams may be able to come up with solutions that are more in tune with real-life needs and contexts. Along similar lines, aiming to contribute with the promotion of empowerment and agency in communities of collaborative practices, we suggest that the phenomenon of hope can be of significant value in design.

Hope is a complex phenomenon referring to a combination of positive expectations, goals, and thoughts about the future. In the context of health and well-being, hope and hopefulness can be seen as essential states in human life. The purpose of this paper is to introduce hope as a new perspective in design, with specific attention to design contexts related to health and well-being. First, we seek to unpack the phenomenon of hope by presenting some main features and theoretical underpinnings.



Next, we elaborate on health and design. Finally, we present reflections on how we can understand/position hope and hopefulness in design contexts about health and well-being.

## **2 Method**

This paper, a work in progress, is built upon an explorative and unstructured review of peer-reviewed literature and academic books on the topics of hope, health, and design. The literature sources were identified through various search engines, namely Google Scholar, ACM, PubMed, Scopus, and the Oria service provided by the Norwegian University of Science and Technology. The search was limited to articles available in full text and written in English. The main search themes included design, health, well-being, and hope. Following the application of these search themes and corresponding terms, the research materials were sorted based on their relevance, determined by assessing the abstract and conclusion sections. Subsequently, articles specifically addressing the subjects of hope in health and/or design for health were thoroughly reviewed in their entirety. The purpose was to identify core components and seek corresponding theoretical perspectives for positioning hope in health-related design.

## **3 Hope and hopefulness**

The significance of experiencing hope in human life is perhaps best illustrated by looking at the opposite, namely experiencing hopelessness. We instantly recognise that without hope, most things would seem heavy and devoid of meaning. Experiencing hope and hopefulness provides a positive perspective and sense of agency, particularly in discouraging circumstances.

Starting in the mid-1970s, there was a surge in psychological research and literature focused on the topics of stress, coping, and illness. Studies at the time began to suggest a link between negative thoughts and emotions and poor health outcomes, coping ability, and recovery from medical issues (Cohen, 1979; Cohen & Lazarus, 1979). In response, some authors (e.g., Cousins (1977); Frank (1975); Simonton et al. (1978)) have argued that given the negative impact of negative thoughts and emotions regarding health, it was important to investigate the potential positive effects of processes such as hope (Snyder, 2000). During the 1970s and 1980s, there was a notable period in which numerous researchers from diverse fields, ranging from nursing to psychology, formulated various theories on the phenomenon of hope (Farran et al., 1995).

Hope is a complex and multidimensional phenomenon that entails positive anticipations, objectives, and beliefs concerning future events. Irrespective of age, gender, culture, ethnicity, and place of origin, individuals experience hope (Baczewska et al., 2019) although its meaning is elusive (Cutcliffe, 2004). According to Erikson's (1993) seminal work on the epigenetic stages of human development, hope is a fundamental aspect of this process. Dufault and Martocchio (1985, p. 380) expanded on this notion, stating, "Hope is not a single act, but a complex of many thoughts, feelings, and actions that change with time" (p. 380).

Defining emotions, including hope, can be challenging due to their multidimensional nature. However, psychologists have attempted to facilitate a better understanding of these phenomena by unpacking and categorizing them. Snyder (2000) defined hope as the sum of perceived abilities to identify pathways to desired goals and the perceived motivation to utilize those pathways. Snyder's theory of

hope (Snyder, 2000, p. 8; Snyder et al., 1991, p. 571) is based on the idea that hope is not just an emotion or feeling but a cognitive process that involves setting goals, identifying pathways to achieve those goals, and having the motivation and agency to pursue them. Following is a breakdown of each element.

### **3.1 Goal**

According to Snyder (2002), a goal is something one wants to achieve in the future. Goals can be short-term or long-term and can relate to any aspect of life, such as relationships, career, health, and personal growth. Setting clear and realistic goals is an important part of the hope process because it provides direction and purpose.

### **3.2 Pathway**

A pathway refers to the various routes or strategies that you can take to achieve your goals. Snyder (2002) emphasized the importance of identifying multiple pathways because this increases the likelihood of success and can help one stay motivated when facing obstacles. Pathways can include seeking advice or support from others, learning new skills, and trying different approaches.

### **3.3 Agency**

Agency is the belief that one has the ability to act and make things happen in their life. Snyder (2002) argued that having a sense of agency is crucial for maintaining hope because it allows people to see themselves as active participants in life rather than passive observers. Cultivating agency can involve building self-confidence, setting boundaries, and taking responsibility for one's choices and actions.

Hope can be defined as emotion, too. In Plutchik's emotion dyad, hope is defined as a combination of anticipation and trust (Plutchik, 1962; Plutchik & Kellerman, 2013).

Hope has emerged as a crucial phenomenon of nursing care for populations with chronic or complex diseases, as (Paramos et al., 2023) found. Hope is associated with resilience and well-being and supported by nursing interventions that have yielded positive outcomes in healthy and affected populations. Even individuals with severe illnesses maintain hope (Benzein, 1999) and show hope in their drawings, as evidenced by advanced cancer patients (Hammer et al., 2022).

## **4 Health**

According to Krahn (2021, p. 3), the definition of health has undergone several iterations. As defined by the WHO in 1948, health is "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." The Lancet (2009) described health as "a dynamic adaptation to stressors akin to resilience" (Schulkin, 2004) and "a sense of coherence". Huber et al. (2011; 2016) proposed that "health is dynamic based on one's "ability to adapt and to self-manage" to maintain and restore one's sense of integrity and equilibrium and sense of well-being. Six proposed dimensions of positive health are bodily functions, mental functions and perception, existential, quality of life, social and societal participation, and daily functioning". Finally, Halfon et al. (2014) defined health as "creating capacities to achieve goals, satisfy needs, fortify reserves" (p. 3).

Many studies note that poor health can lead to absence, reduced academic achievement, and limited opportunities for social engagement and positive psychosocial development (Gonzalez et al., 2016; Viner et al., 2012). These consequences can impact an individual's long-term outcomes, such as their

educational attainment, economic opportunities, and overall well-being. For example, absenteeism and reduced academic achievement can limit an adolescent's ability to pursue higher education and achieve economic stability, and limited opportunities for social engagement can impact their social and emotional development, potentially leading to increased risk for mental health issues and social isolation. Additionally, health is a complex phenomenon that encompasses multiple factors and extends beyond human well-being to impact the entire ecosystem, which is the fundamental concept underlying the One Health approach (Mackenzie & Jeggo, 2019).

Salutogenesis is a framework Aaron Antonovsky (1979) developed that shifts the focus from disease to health. It proposes that an individual's life experiences shape their sense of coherence, a global orientation that enables them to mobilize their resources to cope with stressors effectively. A strong sense of coherence is essential for managing tension successfully and determines one's position on the health ease/dis-ease continuum. In essence, salutogenesis represents a scholarly approach emphasizing the study of positive aspects of human experience, seeking to understand better how people maintain their health and well-being. He asked what factors could make people maintain and develop their health, even under difficult external circumstances. In his study, the use of the river as a metaphor for health development has been common, but Antonovsky argued that simply preventing stress or constructing barriers to keep people from falling into the river is not sufficient for promoting health. Rather, individuals must also learn to swim.

In another study, based on this metaphor, Eriksson and Lindström (2008) developed the "Health in the River of Life" concept, which illustrates the phases of public health development towards health promotion

- Curative: "Upstream thinking would offer people support and interventions at an earlier stage" and contrasts with the curative perspective on health, which involves using expensive technology and well-educated professionals to "save people from drowning" (Eriksson & Lindström, 2008, p. 194).
- Protective and preventive: The protective perspective focuses on limiting the risks of disease through population-based and passive interventions whereas the preventive perspective is intended to involve people in preventing diseases through population-directed and individualbased interventions.
- Health education and promotion: This stage encompasses health education and health promotion. The former has evolved from simply informing people about health risks to involving them in making decisions with support from professionals, and the latter emphasizes social and personal resources as well as physical capacities, taking a humanistic approach to health and well-being. In health education and health promotion, people are more actively involved. The interventions are directed towards individuals and groups to improve health literacy and enable people to make sound choices.
- Improving health perception/well-being/quality of life: The final stage of the public health approach is focused on health perception and quality of life, aiming to create the necessary conditions for a good life by reflecting on what generates health, improves the quality of life, and develops a sense of coherence, with the salutogenic framework providing a fusion of these concepts and emphasizing the importance of identifying and utilizing resources to improve health and life options.

## 5 Design and design in health contexts

Design involves the process of creation and the resulting outcome. The design process comprises a series of steps or stages a designer goes through to develop a product or solution. The design process is iterative, meaning designers often cycle through these steps multiple times. This continuous refinement of ideas and solutions often leads to superior outcomes. Design in health care, traditionally limited to the development of medical devices, is now embracing a broader role in shaping the future of health care practice. The aim of this expanded approach to design is to meet the needs and goals of its intended users or stakeholders. This approach not only ensures aesthetic appeal and practical functionality but also encourages a healthy lifestyle (Partridge, 2017; Patrício et al., 2020). As designers take on this responsibility, they are required to contemplate their work's moral and ethical implications, ensuring they "do no harm" (Shafafi & Bazoli, 2023) Moreover, designers may deliberately choose to promote healthy lifestyles, thereby preventing ill health (Tseklevs & Cooper, 2017).

Ultimately, design principles can ensure the quality of the design process and outcome. Services are expected outcomes of these days' designs because they are more holistic and not isolated. Especially in the health domain, it is hard not to think of services. Following are five essential service design principles (Stickdorn & Schneider, 2012):

- Human-centeredness: This principle focuses on understanding and meeting users' needs by involving them in the design process.
- Cocreative: Involving all stakeholders in the service design process is essential for generating ideas and improving existing services.
- Sequencing: This principle focuses on designing a service experience that is easy to use and navigate.
- Evidencing: Using visual aids, such as pictures, graphs, and images, can simplify a complex project and make it easier to remember important points, bring ideas to life, and ultimately improve design and customer satisfaction.
- Holistic: This principle considers the service experience, including all touchpoints, channels, and stakeholders involved.
- Cocreative and participatory design is an approach that involves end users in the design process. This approach aims to create an outcome that meets its users' needs and expectations. By involving end users, the design process becomes more collaborative, inclusive, and effective. It also leads to greater user engagement and ownership of the service.

Today, codesign and participatory design has shown a great influence in many sections. Participatory design originated in the 80s in Scandinavia, where the workers were included in the decision making regarding their work environment (Johansson, 2005). Later, this approach was applied to the health care contexts as well, in which it has been used to design services that are more patient-centered and responsive to patients' needs.

Participatory design in health care has several benefits (Akoglu & Dankl, 2021). It enables health care providers to understand patients' and their own needs and preferences, possibly leading to better health outcomes. A paradigm shift in health design is the shift from an end-user focus to a

human-centered focus. One reason service design can be interesting in health care is that it involves another approach to understanding the ecosystem around this. We can broaden our focus beyond our end users to include the larger ecosystem, as well as the participation of other professionals and nonprofessionals.

Another benefit of participatory design in health is that it fosters a sense of ownership and empowerment among patients, who become active participants in their care. In a long-term perspective, participatory design can also lead to more efficient and cost-effective health care services by reducing waste and duplication of effort.

## **6 Reflections**

The health care landscape has experienced a notable transformation, departing from conventional practices and embracing novel approaches to support patients. Moving away from disease-centered models, these developments redirect the focus of health care towards patients' experiences, values, and quality of life. Active patient participation in care and treatment is now a paramount consideration, reflecting a shift towards more patient-centered care approaches (Dullabh et al., 2022; Ekman et al., 2011). Also, the design field in health care has undergone a significant transformation. It has evolved from its traditional focus on aesthetics and functionality to a more holistic, human-centered approach. This new perspective emphasizes empathy, shaping the future of health care practices with greater sensitivity to patient needs. As part of this transformation, designers aim to create solutions that are not only visually appealing and practical but also culturally sensitive, ethically responsible, and in harmony with societal values. This holistic approach helps ensure that their designs enhance individuals' health and well-being while respecting the diverse contexts in which they will be implemented.

In light of these shifts, design can adopt new perspectives, such as the inclusion of hope and hopeful thinking, which can add value to the health care design approach. Hope is viewed as a fundamental human response to the health and sickness journey within the population (Hendricks-Ferguson, 1997), and it is crucial to cultivate a sense of hope in one's future (de Andrade Alvarenga et al., 2021). Although the phenomenon of hope has been studied extensively in nursing and psychology, it has yet to be well-established from a design perspective. As a multidimensional phenomenon, hope has been approached from multiple disciplines in the context of health interventions. By incorporating hope into the design process, designers can create outcomes such as products, services, and systems that are not only functional and address immediate needs but also increase resilience and foster a sense of optimism and empowerment in users and communities.

In investigating the impact of hope and hopefulness on design, design principles can help generate ideas and facilitate the work. The idea of implementing hope in health promotion, prevention, protection, and curing through design and design principles is a potentially valuable approach. Hope is a powerful phenomenon that can help individuals continue through difficult circumstances and improve their overall well-being. Figure 1 is an initial attempt to position hope in design and health.

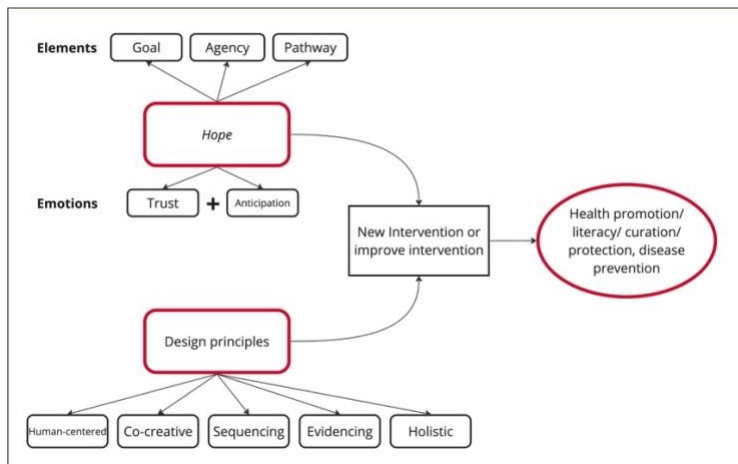


Figure 1. Intersection of design, health care, and hope.

Moreover, the hope phenomenon can be considered a component of the broader concept of salutogenesis, which contains various factors that contribute to health and well-being. The salutogenesis theory is relevant to all phases of health in the river of life (Eriksson & Lindström, 2008), and research indicates that growing hope is vital for individuals, regardless of their health status (Lohne, 2022). Therefore, facilitating hope can be beneficial in promoting positive outcomes at every stage of health in life (Snyder, 2002). Various strategies can be employed to promote health and wellbeing, such as behavior change interventions, addressing health inequalities, and improving access to health care and health interventions. By implementing these approaches, individuals, communities, and societies can be empowered to take control of their health and improve their overall well-being.

Designers can use design principles to bring hope and hope phenomena into the design field for health care. By doing so, they can gain a new perspective that provides additional evaluation criteria for their concepts. However, moving towards this new perspective of health care requires a transformation in health care systems. One way can be to make tools to set goals, show pathways, and/or reload agency. For example, we can consider the user's journey (Følstad & Kvale, 2018) and create touchpoints that build momentum and a sense of progress towards their goals. To foster health care transformation effectively, it is essential to develop specialized service design methods and tools that cater to the unique challenges of the health care section. This entails creating approaches that seamlessly integrate data-driven service innovation opportunities with the human-centered principles of the service design (Patrício et al., 2020).

Hope-facilitating interventions found in nursing perspective studies can be beneficial for the health and design sector. Those interventions can be starting points to implement or evaluate concepts for health care and well-being in the design field. Ultimately, design can be more holistic and human-centered, and health can be more meaningful to, efficient for, and effective for users and communities.

By exploring the intersection of design, health, and hope, we aim to identify service components and interventions that can contribute to the improvement of health through participatory design. This initial work hopefully has the potential to pave the way for more human-centered, holistic approaches to health care design that promote positive outcomes at every stage of health in life.

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