Health literacy plus media literacy equals digital health literacy? A concept and its interdisciplinary roots

The digitization of numerous areas of life also affects the healthcare sector and provides new opportunities for a healthy life, but also challenges for individuals to participate in their healthcare. Patients have the option to purposefully acquire online information anywhere and anytime, have access to online services, or digitally interact with others. However, these opportunities depend on skills on how to adequately find, select, classify, and critically evaluate health-related online information and services. In other words, individuals need digital health literacy or eHealth literacy, which is often used synonymously (Bittlingmayer et al., 2020; Griebel et al., 2018). Both are understood as a set of channel-specific skills relevant in performing health literacy related to digital media (Internet, social media, and mobile tools) and refer to the searching, acquiring, comprehending, appraising, communicating, applying, and creating health information in all contexts of healthcare (Griebel et al., 2018). Recently a growing body of research specially addresses digital health literacy (Bittlingsmayer et al., 2020; Griebel et al., 2018; van der Vaart & Drossaert, 2017), but a common definition and comprehensive theoretical conceptualization are still missing (Griebel et al., 2018; Norman & Skinner, 2006).

As digital health literacy is understood, but not conceptualized as a synthesis of health and media literacy yet (Bittlingsmayer et al., 2020; Griebel et al., 2018; Levin-Zamir & Bertschi, 2018), we aim to contribute to the theory development of digital health literacy by elaborating and integrating the roots of health literacy and media literacy from an interdisciplinary perspective. Based on a literature review of peer-reviewed publications dealing with health literacy, media literacy, and digital health literacy since 2000, we aim to systematically analyze interfaces and differences between the different literacies and thereby clarify the disciplinary roots as well as the theoretical backgrounds of digital health literacy.

Health literacy, the first root of digital health literacy, has been defined in multiple ways and is mainly addressed within public health research. Sørensen et al. (2012) define health literacy as a combination of individuals' knowledge, motivation, and competence to access, understand, appraise, and apply health information to make decisions to maintain or improve quality of life for healthcare, disease prevention, and health promotion. Health literacy can be divided into functional, interactive, and critical literacy (Nutbeam, 2000). Recent definitions emphasize the responsibility of health systems and politics to support health literacy in the population especially for vulnerable groups (Okan et al., 2019).

Media literacy, the second root of digital health literacy, bases on different theoretical backgrounds and is discussed in various interdisciplinary contexts. Communication studies, cognitive psychology, and effect studies, educational science, advertising research, health communication, cultural studies as well as critical theory deal with media literacy (Erstad & Amdam, 2013; Potter, 2016). Depending on the theoretical perspective, each approach defines media literacy a little differently and includes a bundle of skills on different levels (such as personal skills, social interactions, participation; Erstad & Amdam, 2013). All definitions aim normatively at critical thinking and the ability to reflect on perceived media content based on (background) knowledge, whereby a distinction is made between a protectionist and an empowerment approach. Further differences exist concerning the concept of media, the basic definition of literacy, and the purpose of media literacy (Potter, 2010).

Even if both health and media literacy root in different traditions and differ in their theoretical background, there are similarities regarding a normative orientation that focuses on individuals' skills and an empowerment approach which considers a social-interactive dimension of actions. These roots and intersections will be considered concerning the conceptualization of digital health literacy.

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