

Health-related consumer wearable use for elderly people

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Purpose Wearables – intelligent end devices worn on the body – can be used to record vital signs (DeClercq et al., 2017). The forecasts clearly show that wearables are going to increase in the future (Fotteler & Denking, 2021). Seifert et al. (2020) writes of a potential for older people. It was found that it is possible to monitor health remotely with the wearable (Olmedo-Aguirre et al., 2022). Furthermore, wearables are also described as creating a greater awareness of physical activity among older people (Gu et al., 2024). In addition, wearables can be used by older people to lead a self-determined life for longer period of time (Chung et al., 2023; Garcia Reyes et al., 2023). Especially, the acceptance of the health-related use of consumer wearables in everyday life and the associated health empowerment for healthier aging was not analyzed in the previous studies yet. This led to the following research question: What experiences do people have aged 60 and older with the usefulness of health functions of wrist-worn consumer wearables in everyday life? **Method** Eleven qualitative semi-structured interviews were conducted with people aged 60 and older in Germany between January and May 2024. Six men and five women were included in the interviews. The age range of the interviewed people were between 60 - 74 years. The research participants were selected by using the snowball system (Kruse, 2015). The researchers apply the principle of theoretical saturation. These interviews were transcribed and analyzed using Mayring's method of qualitative content analysis (Mayring, 2023). Furthermore, the results were interpreted by using the Technology Acceptance Model 2 (TAM2) to draw conclusions about perceived usefulness via intention to use. (Venkatesh & Davis, 2000). **Results and Discussion** The results of the eleven interviews indicated that measuring vital signs and making them visible is important to older people. The interviewees felt safe by using the wearable and were better able to assess their subjective perceived health. The wearables were used to check heart rate, ECG and blood pressure. The devices were deliberately selected by older people according to the desired characteristics. For example, an Apple Watch was purchased to monitor atrial fibrillation or a smartwatch from Kardena to measure blood pressure. Older people have a positive attitude towards wearables and sometimes recognize a motivating factor. In addition, a wearable could have a health-promoting and preventive effect and lead to a longer independent life. Data protection was not considered particularly important in the research group. In the context of the TAM2 model, Job Relevance and Result Demonstrability were found to be the most significant factors for Perceived Usefulness for older people. Furthermore, wearables assume to be a possibility for older people to be aware of illnesses much earlier and to enable faster health interventions and promote their health literacy. Further scientific research is needed in that field.

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