Fachhochschule Dortmund
University of Applied Sciences and Arts

WisPerMed
Wissens- und datenbasierte Personalisierung von Medizin am Point of Care

UNIVERSITÄT DUISBURG ESSEN
Offen im Denken

RP11 - Giving information to counteract wrong conclusions - Empirical study on acceptance

Research question

- How can an information system counteract the tendency to human error (confirmation bias and availability heuristics)?
- Under what circumstances is such a system accepted?

State of the art

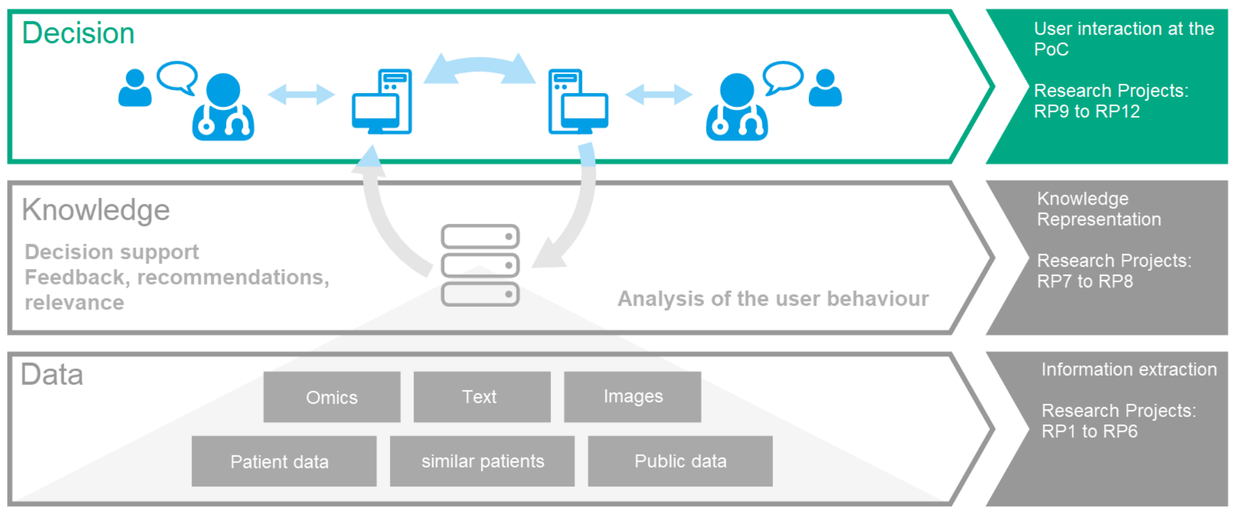
- Human decisions are subject to errors like confirmation bias and availability heuristics [1, 2, 3]
- Counteracting through technical systems: Pointing out relevant information; beyond the first own impression
- Avoidance of reactance necessary [4]
- Is possibly in any contradiction with *perceived usefulness* des *technology acceptance models* [5]

Solution approach

- four experimental-psychological studies with about 100 participants each, one field-related long-term study with N = 30 participants
- Analysis of how much the given information can and must deviate from the own default settings and availability in order to support good decisions
  - two experimental-psychological studies with variation of the proximity to the presetting
- Testing how this information can be presented without leading to defensive reactions
  - two experimental psychological studies with variation of the presentation form
  - Long-term study to test acceptance in the field
- Contribute to explainable AI research by working out how much information needs to be given to make users trust algorithmic decision systems

Integration

- Close exchange with the doctors to better understand decision-making processes
- Joint development of relevant decision scenarios as a basis for experimental studies
- Exchange with computer scientists to ensure that the results are taken into account



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Literatur

1. Knobloch-Westerwick S. Choice and preference in media use: Advances in selective exposure theory and research. New York: Routledge Taylor & Francis Group; 2015.
2. Festinger L. A theory of cognitive dissonance. Evanston Ill. u.a.: Row Peterson; 1957.
3. Lazarsfeld PF, Berelson B, Gaudet H. The people's choice: How the voter makes up his mind in a presidential campaign. New York: Duell, Sloan and Pearce; 1944.
4. Brehm JW. A theory of psychological reactance. New York, NY: Academic Press; 1966.
5. Venkatesh, Morris, Davis. User Acceptance of Information Technology: Toward a Unified View. MIS Quarterly. 2003;27:425–78. doi:10.2307/30036540.