Supported by:

Federal Ministry of Health

on the basis of a decision by the German Bundestag

ELNET

GIHF AI

German Israeli Health Forum for Artificial Intelligence

GIHF-AI Study 2023

Trust in the use of health data – a comparison between Germany and Israel

Authors:

Dr. Yiska Weisband, Dr. Alexander Schachinger, Prof. Dr. Sylvia Thun, Prof. Dr. Ran Balicer

1. Background and method approach

The digitalization of medicine is currently one of the most relevant topics globally. In order to measure **the willingness to provide digital health data for research and care management**, **2,052 citizens in Germany and Israel were surveyed** in mid 2023 for a first direct comparison **in the context of GIHF-AI** (German Israeli Health Forum for Artificial Intelligence). **Prof. Dr. Sylvia Thun**, Director Core Unit eHealth and Interoperability at **Berlin Institute of Health at Charité** (BIH), and **Prof. Dr. Ran Balicer**, CIO & Deputy-DG at **Clalit Health Services** and Founding Director at **Clalit Research Institute**, served as **primary investigators to the study**. Additional authors were **Dr. Yiska Weisband**, Director of Data Research Centers at Clalit Innovation, and **Dr. Alexander Schachinger**, CEO of EPatient Analytics.

Clalit Research Institute and EPatient Analytics, the digital health market research agency, **designed a health data survey** and used the panel approach from **Kantar Global**, an international leading consumer panel provider, to survey a **controlled sample of 1,219 German and 833 Israeli citizens**. The project time of the panel survey was **May to July 2023**.

In addition to the current state of health, the main contents of the questionnaire included **socio-demographic information** of the participants, the **use of digital health applications, wearables or trackers, medical devices,** and the **willingness of the digital data donation** of one's own vital data for a wide variety of application scenarios with different actors, such as doctors, clinics, authorities, industry, and others.

2. Key findings

The sociodemographic participants structure is in its majority aligned to the social structure of the respective countries. In a first comparison visualized in the graphs below, the **age difference between Germany and Israel is quite apparent. The average age in Germany in 2020 was 44.7 years, in Israel 29.1 years (2022).**

2.1 Age of population

The different age structure is also reflected in the proportion of participants with chronic diseases: **41% of German participants have a chronic disease. In Israel, the figure is only 26%**.

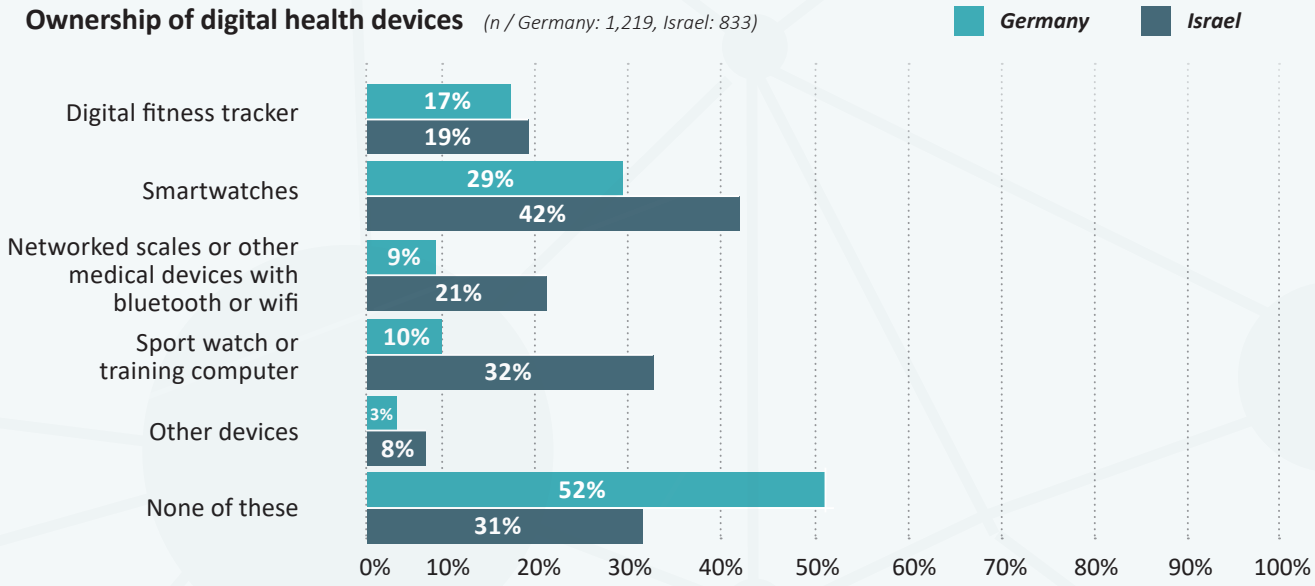
2.2 Ownership of digital health devices

As shown in table 1, **Israeli citizens own all digital health devices surveyed more frequently than Germans**. These differences are quite significant from a digital technology diffusion perspective. After adjusting for age and gender, use of some digital device is more common in Israel than Germany, IRR 1.28, 95% CI (1.14, 1.44), P<0.001.

However, **no difference was found in use of some digital health devices between chronic disease and not**, after adjusting for age and gender.

TABLE 1

Ownership of digital health devices *(n / Germany: 1,219, Israel: 833)*



2.3 Knowledge and readiness on using personal digital health data for research and care

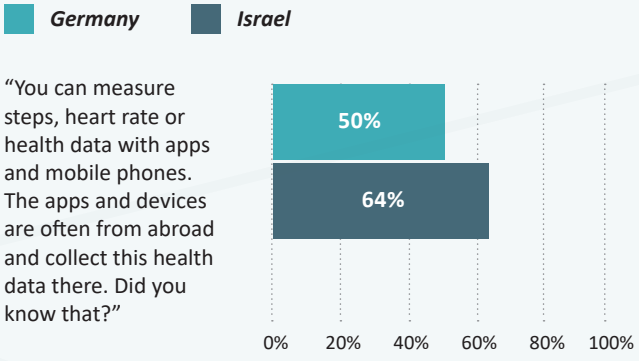
Participants from Israel have a higher knowledge of the digital ecosystem behind personal digital health data and its potential. This remained even after adjusting for age and gender, IRR 1.17, 95% CI (1.04, 1.32), P=0.01. Table 2 shows the results for two exemplary items.

Also, **Israeli citizens are more open to research and care scenarios** that are **based upon or using their personal digital health data**. This remained even after adjusting for age and gender, IRR 1.24, 95% CI (1.09, 1.41), P<0.001.

TABLE 2

Knowledge on the topic of digital health data (percentage of respondents who answered positively)

(n / Germany: 1,219, Israel: 833)



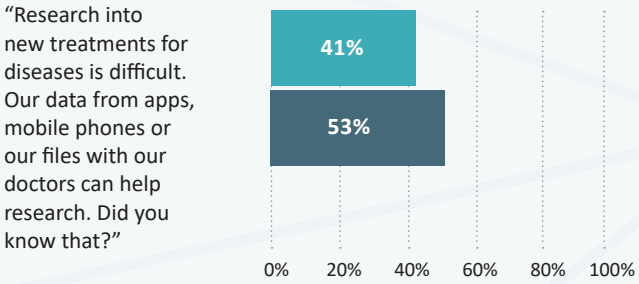


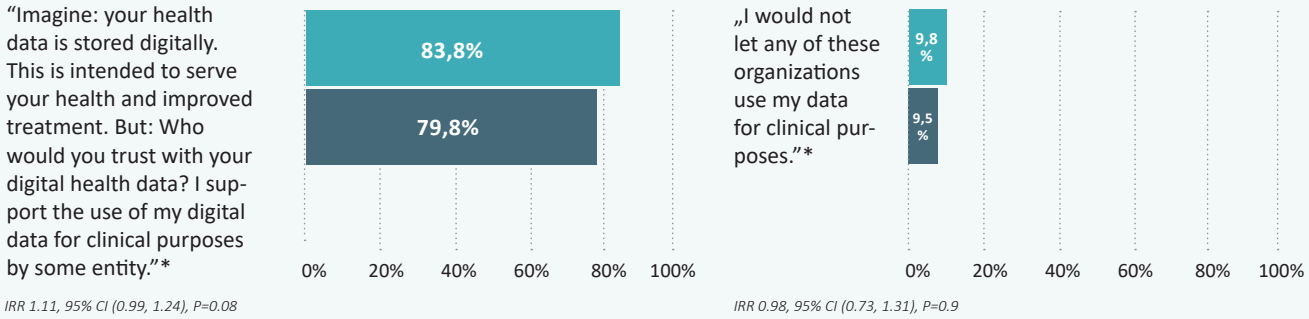
TABLE 3

Support data use for clinical purposes by clinical public entities (doctor, HMO, or clinic)

(n / Germany: 1,219, Israel: 833)

*Surveyed organization proposals (pro) were:

- industry
- health fund/insurance
- government
- non-profit-organization
- university
- hospital



IRR 1.11, 95% CI (0.99, 1.24), P=0.08

IRR 0.98, 95% CI (0.73, 1.31), P=0.9

2.4 Evaluation of digital health data scenarios

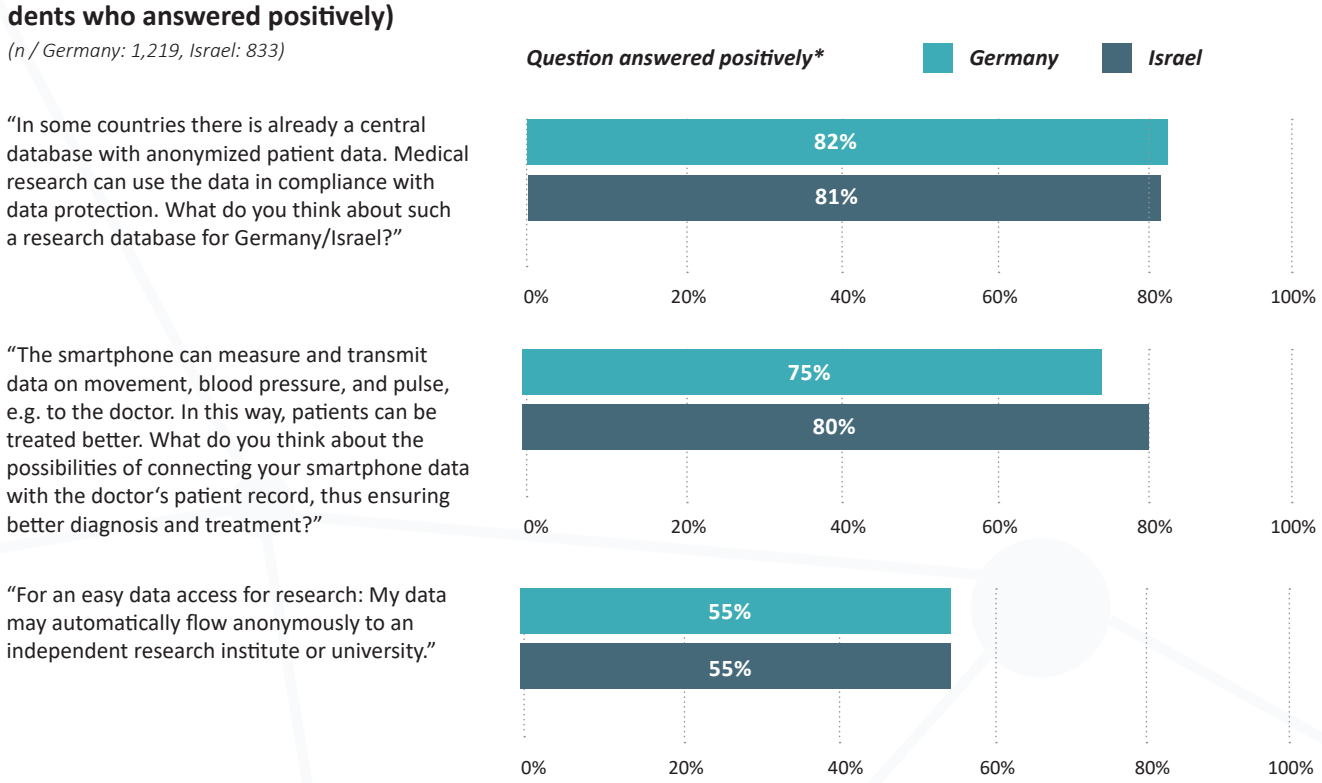
The **assessment of application scenarios in which personal digital health data is used, did not differ as clearly for the two countries as in the other questions raised**. This is noteworthy because the implementation of digital health data infrastructure in the care of citizens is quite advanced in Israel compared to Germany – whose health care system is practically still paper-based. Vice versa these results can be interpreted as a **digital health readiness of Germans** which **is more advanced than state-of-the-art political regulators think or act upon**.

TABLE 4

Evaluation of selected digital health data scenarios (percentage of respondents who answered positively)

(n / Germany: 1,219, Israel: 833)

*Scenario evaluations in the survey were operationalized via 3 items: 1. pro, 2. con, 3. don´t know.



3. Conclusion

Common wisdom suggests that the wide differences that exist between **Germany and Israel** in the legal framework and the **extent of health data usage** for clinical and research purposes are **driven by differences in public willingness to share such data**. The survey **results tell a very different story. In fact, support of such use is almost identical in both countries; and is moderately high when public-service clinical entities are involved**, while a small consistent minority of about 10% of those surveyed are categorically opposed to any such use in both countries.

KEY OUTCOMES

**The two sampled groups in both countries have major age differences – result comparisons are therefore age-adjusted.*

1 **High levels** (71.8% Germany / 72.8% Israel) **of reported awareness that data from apps, cell phones, and electronic medical records can be used to support research,** are reported in both Germany and Israel, with no significant difference between countries.

2 General **high level of willingness** (82.4% Germany / 81.4% Israel) to **establish anonymized datasets** of patient information to be used for research in both Germany and Israel, with no significant difference between countries.

2.1 *The age group with the lowest level of trust was 50-59 years old in Germany and 18-29 years old in Israel.*

2.2 *A small group exists that categorically refuse any and all data sharing and use, by any entity, even for clinical purpose. This subgroup is of identical size (~10%) in both countries.*

2.3 *Those with chronic disease were more willing to share their data for clinical use, in both countries (Israel 83.5% / Germany 88.7%).*

3 **The majority of respondents** in both Germany and Israel (53.5% Germany, 58.5% Israel), are **willing to actively donate one's data for research** (IRR 0.97, 95% CI (0.87, 1.07), P =0.5).

4 **Support of some clinical public entities** (at least on one of the following - doctors, clinics, or HMO) **using health data to improve clinical care is high** (79.8% Israel, 83.8% Germany), with no significant difference between countries.

5 **Agreement to share one's health data with one's Krankenkasse/HMO differs between the countries.** Nearly two thirds in Israel and slightly less than half in Germany (49.1% Germany 65,3% Israel). Differences are significant in age-adjusted analysis (IRR 1.27, 95% CI 1.12, 1.43, p<0.001).

6 **There is a low support for other (especially private) institutions in applying the data**. Here are **no relevant differences between the two countries** given. Pharmaceutical companies receive a relatively lower level of support for the use of personal health data for research purposes (30.7% Germany / 28.3% Israel). Big tech companies are evaluated even lower (4.4% Germany / 18.1% Israel).

RECOMMENDATIONS FOR ACTION

- **Support an unbiased use of patient data for research and medical care while safeguarding data privacy.**
- **Anonymized datasets of patient information should be used for valuable research in the public and private sectors.**
- **Engage in trust-building campaigns for the use of data by informing data holders about data usage, data protection, and data security.**
- **Communicate and inform transparently about data usage and its benefits for research and application.**

4. Summary and conclusion

A key finding is the relatively **advanced willingness of citizens in Germany to accept digital health scenarios based on their own health data**. This willingness is only **slightly less pronounced than in Israel**. Mind you: **In Israel, digital supply solutions based on individual vital signs, have been a reality for over 15 years**.

Against the background of a previously non-existent digital care structure in Germany, it can be deduced that the German population is more advanced in its acceptance of digital health than politicians and legislators or the regulators of the health system in Germany. This finding also **coincides with a comparable preliminary study from 2022**, in which 6,000 Germans were interviewed on this topic (see Self Tracking Report, EPatient Analytics GmbH, 2022).

Furthermore, it is easy to understand that **ownership and usage of digital health devices and applications in Israel are further developed by many years compared to Germany**. As indicated above, the **Health Maintenance Organizations in Israel have been offering these applications** to their policyholders and patients with a consistently digitally integrated database **for many years**. Germany should follow suit.

Primary Investigators:

Prof. Dr. Sylvia Thun, Director Core Unit eHealth and Interoperability, Berlin Institute of Health at Charité (BIH)

Prof. Dr. Ran Balicer, CIO & Deputy-DG, Clalit Health Services; Founding Director, Clalit Research Institute

Additional Authors:

Dr. Yiska Weisband, Director of Data Research Centers, Clalit Innovation

Dr. Alexander Schachinger, CEO, EPatient Analytics GmbH

About

GIHF-AI, a multi-year program funded by the German Federal Ministry of Health, aims to advance the digitalization of the German healthcare system, with a special focus on the application of Artificial Intelligence (AI) and Machine Learning (ML). Networks are established, and policy recommendations are developed for this purpose.

The European Leadership Network (ELNET) serves as a think tank and network organization in the context of European-Israeli relations. ELNET was founded in 2007, operates independently and across party lines, and has offices in Berlin, Brussels, London, Paris, Tel Aviv, and Warsaw. Its focus areas include foreign and security policy, antisemitism, and innovation.

ELNET
Deutschland e.V.

Albrechtstraße 22
10117 Berlin
deutschland@elnetwork.eu

GIHF-AI
German Israeli
Health Forum for
Artificial Intelligence

Date: 15.01.2024

elnet-deutschland.de

@ElnetD

@ELNETDeutschland

gihf-ai.eu

@GIHFAI

CONTACT

Carsten Ovens
CEO (DACH)

Lea Ledwon
Program Manager GIHF-AI