

Subjective expectations on having implanted medical devices at older ages: results of a cross-sectional population survey

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BACKGROUND AND OBJECTIVES

With the ageing of society and advances in medical technologies, implantable medical devices (IMDs) are becoming more common. Subjective expectations on being treated with innovative IMDs in the future may have significant impact on current lifestyle decisions and participation in healthcare. We aimed to explore the population's subjective expectations on having IMDs at older ages.

METHODS

- Design: cross-sectional study, online survey in Hungary
- Participants: age 40 and over (N=1400), representative for the general Hungarian population by main sociodemographic characteristics

IMD related questions:

- Current IMDs
- IMDs participants subjectively expect to have in the future at ages 50, 60, 70, 80 and 90
- Subjective life expectancy

RESULTS

- The mean age of the sample was 57.8 (SD=10.6) years, the youngest respondent was 40, the oldest was 79 years old. There were 753 (53.5%) females and 648 (46.3%) males in the sample.
- There were 378 (27.0%), 739 (52.8%), 1148 (82.0%), 1369 (97.8%) and 1400 (100%) participants aged <50, <60, <70, <80 and <90 years, respectively. (Table 1)

CONCLUSIONS

Individuals expect an increase in having IMD with the increase of age which is in line with actual data. However, a tendency to overestimate the prevalence of IMDs at ages 50, 60, 70 and 80 can be observed. Our results help design health programs that put patients’ subjective expectations on a realistic basis.

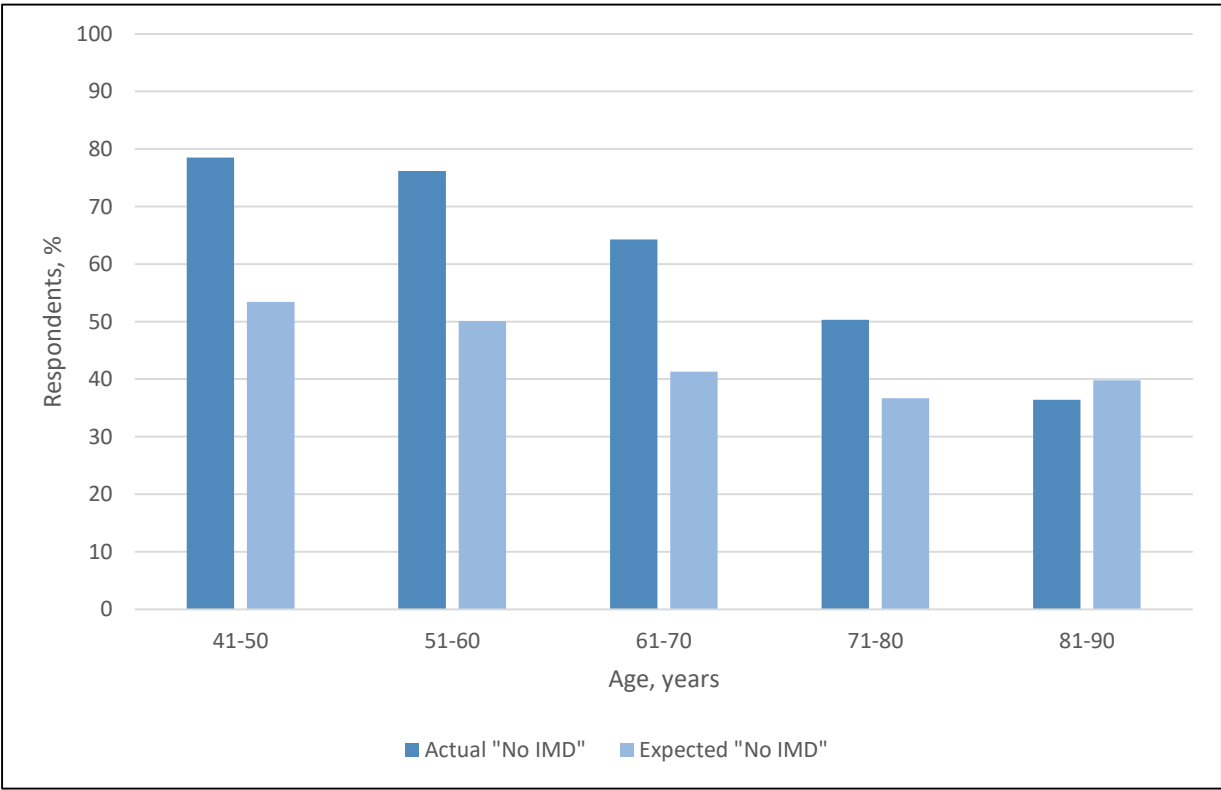
RESULTS (CONT.)

- The actual prevalence of IMDs in the sample by age group was lower than the subjectively expected prevalence of IMDs for respective ages, except in the highest age group (Figure 1)
- The most frequently expected IMD was tooth implant for all the five ages. For ages 50 and 60, the second most frequently expected IMD was knee implant, but for ages 70, 80 and 90 it was the intraocular lens.
- The average sLE was 83.0 (SD=12.7) years. Comparison of subgroups by sLE (i.e., those who expect or not to live to the age in question) showed no significant difference in subjective expectations on IMDs

Table 1. Age of the sample at the time of the survey

Current age, years	N	%
<50	378	27.0
<60	739	52.8
<70	1148	82.0
<80	1369	97.8
<90	1400	100.0

Figure 1. Share of participants having no IMD at the time of the survey and participants expecting not to have IMD at respective future ages



Note: expected ages refer to ages 50, 60, 70, 80 and 90

Figure 2. Share of participants expecting to have hip implant, knee implant, intraocular lens, tooth implant or pacemaker at future ages

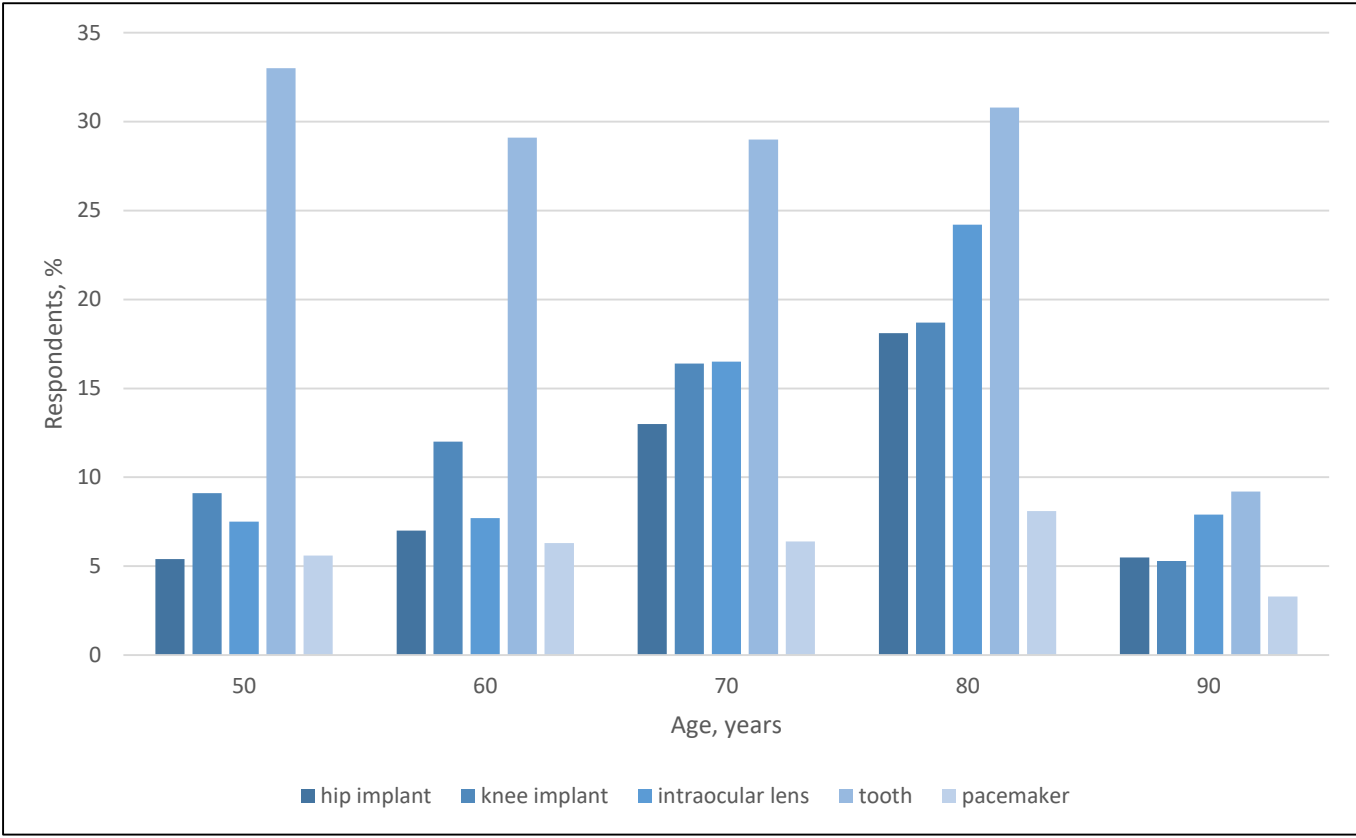
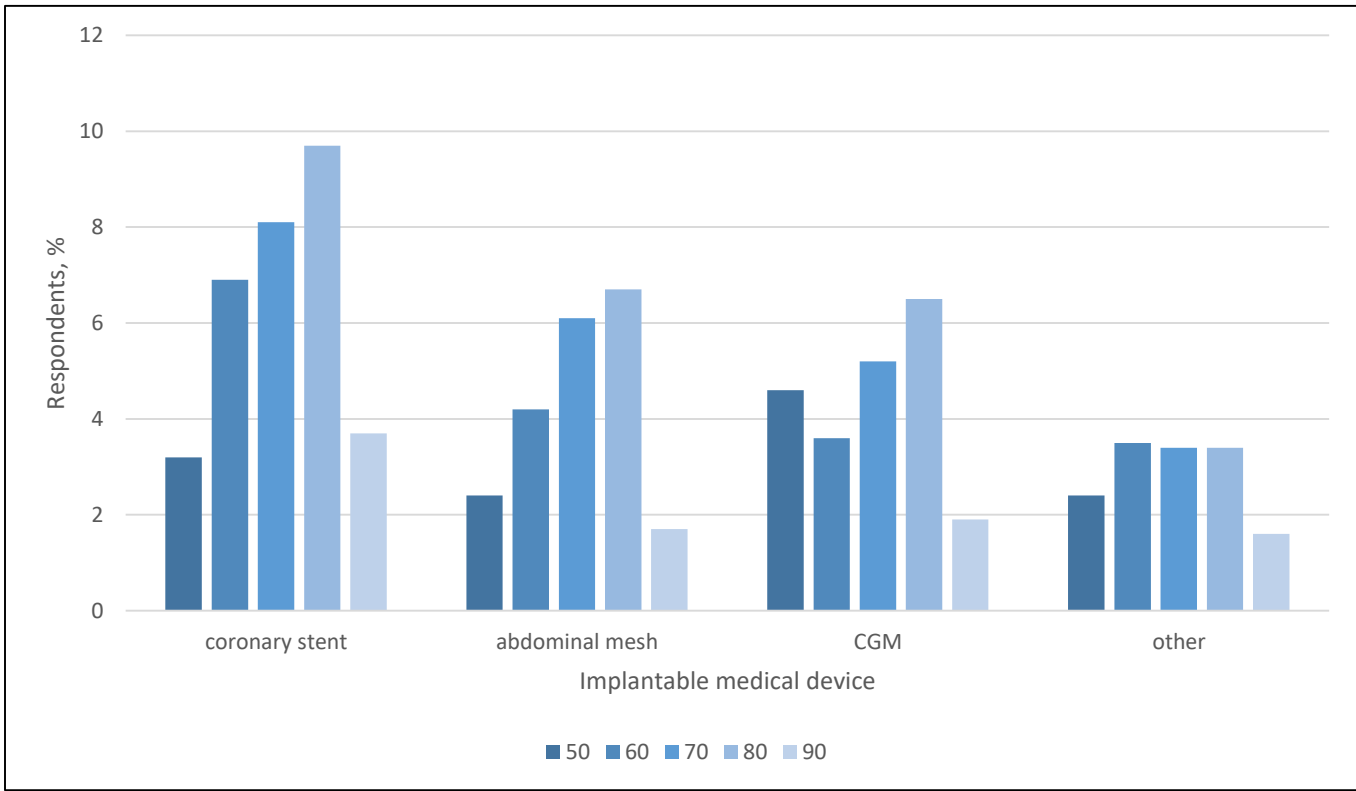


Figure 3. Share of participants expecting to have coronary stent, abdominal mesh, continuous glucose monitor (CGM) or other IMD at future ages



REFERENCES:
1. Hölgyesi Á, Tóth B, Kozlovsky M, Kuti J, Weszl M, Balázs Gy, Baji P, Kovács L, Gulácsi L, Zrubka Zs, Péntek M. Epidemiology and patients' self-reported knowledge of implantable medical devices: Results of a cross-sectional survey in Hungary. PLoS One. 2023 Apr 18;18(4):e0284577. doi: 10.1371/journal.pone.0284577. eCollection 2023.
2. Péntek M, Hajdu O, Rencz F, Beretzky Z, Brodsky V, Baji P, Zrubka Z, Major K, Gulácsi L. Subjective expectations regarding ageing: a cross-sectional online population survey in Hungary. Eur J Health Econ. 2019 Jun;20(Suppl 1):17-30. doi: 10.1007/s10198-019-01059-w
3. Zrubka Z, Kincses Á, Ferenci T, Kovács L, Gulácsi L, Péntek M. Comparing actuarial and subjective healthy life expectancy estimates: A cross-sectional survey among the general population in Hungary. PLoS One. 2022 Mar 10;17(3):e0264708. doi: 10.1371/journal.pone.0264708. eCollection 2022.
4. Péntek M, Brodsky V, Gulácsi ÁL, Hajdú O, van Exel J, Brouwer W, Gulácsi L. Health Expect. 2014 Oct;17(5):696-709. doi: 10.1111/j.1369-7625.2012.00797.x. Subjective expectations regarding length and health-related quality of life in Hungary: results from an empirical investigation.

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