## **Attachment 1: Questionnaire**

# 1 Sociodemographic data

```
Gender [1]
female
male
other

Age (please click to select) [1]
17 – 45
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I have already completed training in the medical and/ or scientific field (with/ without working in the profession and total duration > 1 year). [1]

yes no

Prior to this study, I have attended other university studies in the medical and/ or scientific field (at least one year). [1]

yes no

I am regularly committed (voluntarily) in the field of environmental issues (BUND, university group for sustainability of the University of Ulm, etc.). [1]

yes no

#### 2 Environmental affect

Please rate the following statements (agreement on Likert-type scale from 1-6 = strongly disagree - strongly agree)

- 1. I am worried about the environmental conditions in which future generations will probably have to live. [2]
- 2. It angers me when I see that Germany is failing to meet its climate protection targets. [2]
- 3. I get annoyed when others try to tell me that I should live in an environmentally conscious manner. [2]
- 4. Climate change threatens our quality of life here in Germany as well. [2]
- 5. Many environmental protection associations greatly exaggerate environmental problems. [2]
- 6. I feel powerless, because I think that average consumers can hardly contribute as much to energy conservation compared to industries. [1]
- 7. I am glad when sustainable initiatives (e.g. Fridays for Future, Greenpeace, etc.) receive a lot of public attention. [1]
- 8. I am afraid that mankind will be increasingly confronted with environmental and climate catastrophes in the future. [1]

## 3 Environmental cognition

Please rate the following statements (agreement on Likert-type scale from 1-6 = strongly disagree - strongly agree)

- 1. Regular people can make a significant contribution to environmental protection with our consumption and mobility behavior. [4]
- 2. Things other than the environment or nature are more important for leading a good life. [2]
- 3. We should all be willing to lower our current standard of living for the sake of the environment. [2]
- 4. Our way of life makes us responsible for many environmental problems in other countries as well (e.g. through the exploitation of raw materials or waste export). [3]
- 5. Science and technology will solve many environmental problems without requiring us having to change our way of life. [3]
- 6. We need more economic growth in the future, even if it burdens the environment. [2]
- 7. We should not consume more raw materials than can be regrown. [2]
- 8. Each and every individual bears responsibility for leaving a livable environment for future generations. [2]

#### 4 Environmental behavior

Please rate the following statements (agreement on Likert-type scale from 1-6 = strongly disagree - strongly agree)

- 1. When buying food, I pay attention to the sustainability of the products (environmental compatibility, fair working conditions) and prefer to choose those with environmental and organic labels. [3]
- 2. At main meals, I almost always eat meat or sausage. [2]
- 3. I mainly buy second-hand products (online, flea markets, etc.). [1]
- 4. For my everyday errands I ride a bicycle, use public transportation or walk. [2]
- 5. I can imagine myself getting involved in environmental protection and nature conservation. [3]
- 6. I turn off electronic devices completely when not in use (not in stand-by mode). [4]
- 7. I often fly for private travel. [1]
- 8. When it comes to vacation, a destination far from home (long-distance travel) is important to me. [1]

### 5 Seminar- and student-specific questions

I have already participated in an event on "Climate, Environment, Plastics, etc." by Kühl/Kühl. [1]

yes

no

Please rate the following statements (agreement on Likert-type scale from 1-6 = strongly disagree - strongly agree)

- 1. Relatives and friends would describe me as very environmentally conscious. [3]
- 2. I am more motivated to get involved in environmental protection if my lecturers are active in this respect themselves. [1]
- 3. Stays abroad (combined with air travel) during my studies are important for me to optimize my resume. [1]
- 4. I know how I can personally contribute as much as possible to environmental and climate protection in my everyday life. [1]

Attachment 1 to Straßer P, Kühl M, Kühl SJ. *A hidden curriculum for environmental topics in medical education: Impact on environmental knowledge and awareness oft he students*. GMS J Med Educ. 2023;40(3):Doc27. DOI: 10.3205/zma001609

- 5. I feel sufficiently informed about current facts on climate change (e.g. through the media, the university, etc.). [1]
- 6. If someone in my group of friends were to deny the existence of climate change, I would try to convince him/ her otherwise. [1]
- 7. It is important to me that my future employer pays attention to the environmental footprint of the company/ institution. [1]
- 8. When choosing my future job, it is important to me that I can travel to work in a climate-friendly way (public transport, bicycle). [1]

**6 Additional seminar- and student-specific questions only on the posttest** (°variant for the comparison group, \*variant for the intervention group).

Please rate the following statements (agreement on Likert-type scale from 1-6 = strongly disagree - strongly agree)

- 1. I think it is good when environmentally relevant topics are integrated into courses. [1]
- 2. I think it is good when *general medical topics* are integrated into courses. [1]
- 3. I find the integration of *environmental topics* in a course motivating to interact with them in more depth. [1]
- 4. I find the integration of *general medical topics* in a course motivating to interact with them in more depth. [1]
- 5. I thought that the selected *general medically relevant presentation topics*°/ environmentally relevant presentation topics\* were interesting. [1]
- 6. Completing the *questionnaires*°/ the *integration of the environmentally relevant topics in the course*\* increased my awareness of environmental and climate problems. [1]
- 7. I know how to reduce plastic consumption in my daily laboratory routine. [1]
- 8. I know why plastic is a problem for health and environment. [1]
- 9. I feel well informed about the negative health effects caused by climate change. [1]
- 10. I feel well informed on the topic of organ donation. [1]
- 11. I feel sufficiently informed to actively participate in a discussion about Coronavirus vaccines. [1]
- 12. I will advocate for vaccination education in the future. [1]

**7 Environmental knowledge** (multiple-choice format according to type A<sub>pos</sub>, one correct answer out of five possible answers)

- 1. How many liters of water were used on average per day and bed in germany's hospitals in 2015? [1]
  - a) 300-600
  - b) 600-900
  - c) > 1000
  - d) 100-300
  - e) < 100
- 2. For which component of the coronavirus does Biontech's mRNA vaccine encode? [1]
  - a) Viral envelope
  - b) Viral capsid
  - c) Attenuated virus
  - d) Entire viral genome
  - e) Spike protein

- 3. Which of the sources indicated causes the most primary microplastics to enter the environment? [1]
  - a) Waste and industrial companies
  - b) Fiber wear from textiles
  - c) Motor vehicle traffic
  - d) Cosmetics and personal care products
  - e) Plastic packaging
- 4. What are the current regulations for organ donation in Germany? [1]
  - a) Dissent solution
  - b) Extended consent solution
  - c) There is no regulation on organ donation
  - d) Decision solution
  - e) Extended dissent solution
- 5. For which infectious disease is vaccination compulsory for children and staff in community and health care facilities throughout Germany? [1]
  - a) Tetanus
  - b) Hepatitis B
  - c) Diphtheria
  - d) Measles
  - e) TBE
- 6. What percentage of emerging infectious diseases have an animal origin? [1]
  - a) 20 %
  - b) 5%
  - c) 75 %
  - d) 50 %
  - e) 97 %
- 7. How many projects for the development of a vaccine against COVID-19 are there worldwide, according to the World Health Organization (WHO)? [1]
  - a) 200
  - b) ca. 75
  - c) ca. 120
  - d) ca. 40
  - e) < 20
- 8. What was the estimated annual global plastic consumption in medical, biological and agricultural research laboratories in 2014? (in tons per year) [1]
  - a) 5,5 M
  - b) 12 M
  - c) 3 M
  - d) 0,2 M
  - e) 20 M
- 9. What percentage of Germany's total CO2 emissions were caused by the healthcare sector in 2019? [1]
  - a) <2%
  - b) 9,2 %
  - c) 5,2 %
  - d) 18 %
  - e) 12,7 %

10	<ul> <li>In which of the following products are most plasticizers used? [1]</li> <li>a) PET bottle</li> <li>b) Yogurt pot</li> <li>c) Sticking bricks</li> <li>d) PVC flooring</li> <li>e) T-Shirts</li> </ul>
11.	. How much plastic waste was generated per person in germany in 2019? (private, commercial and industrial plastic waste combined) [1] a) 20 kg b) 76 kg c) 470 kg d) 205 kg e) 8 kg
12.	How many of the 10 hottest summers since temperature records began (in 1881) have been recorded in the last 20 years? [1] a) 3 b) 1 c) 6 d) 9 e) 4
13	. What is the share of patients who have already communicated with a doctor or therapist via video consultation (as of July 2020)? [1] a) 27 % b) 13 % c) 2 % d) 41 % e) 0,2 %
14.	. What amount of money did the German pharmaceutical industry spend on advertising in 2019? [1] a) 5 M € b) 7,8 B € c) 650 M € d) 1,5 B € e) 20 B €
15	Out of all the medical specialists, which ones use video consultations the most? [1]  a) Surgical physicians b) Non-surgical physicians c) General practitioners d) Psychological-psychotherapeutic-psychiatric physicians e) Dentists
16	. How many heart attack events could be prevented annually across Germany by curbing global warming from 3 degrees to 1.5 degrees? [1] a) 1000 b) ca. 15000 c) ca. 200 d) 200000 e) < 50

- 17. According to the German Foundation for Organ Transplantation, which organ was most common to be donated after death in 2018? [1]
  - a) Lung
  - b) Kidney
  - c) Liver
  - d) Pancreas
  - e) Heart
- 18. How much did pharmaceutical companies spend on medical facilities and institutions in Germany in 2019 (e.g. for supporting events and donations)? [1]
  - a) ca. 118 M €
  - b) ca. 20 M €
  - c) ca. 3 M €
  - d) ca. 900 M €
  - e) ca. 50 M €
- 19. How many EU countries (currently 27 member states) have mandatory vaccination for at least one disease? [1]
  - a) 1
  - b) 8
  - c) 19
  - d) 12
  - e) 26
- 20. Which region of the world is most affected by declining populations of mammals, birds, amphibians, reptiles, and fish? [1]
  - a) South and Central America
  - b) Asia
  - c) Europe
  - d) North Amerika
  - e) Africa

#### References

- [1] Question designed by the authors.
- [2] Rubik F, Müller R, Harnisch R, Holzhauer B, Schipperges M, Geiger S. Umweltbewusstsein in Deutschland 2018. Ergebnisse einer repräsentativen Bevölkerungsumfrage. Dessau-Roßlau (DEU): Umweltbundesamt, Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit; 2019.
- [3] Scholl G, Gossen M, Holzhauer B, Schipperges M. Mit welchen Kenngrößen kann Umweltbewusstsein heute erfasst werden? Eine Machbarkeitsstudie. Dessau-Roßlau (DEU): Umweltbundesamt, Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit: 2016.
- [4] Bundeszentrale für politische Bildung (Bpb). M 04.04 Musterfragebogen "Umweltbewusstsein und Klimaschutz in ...". Berlin: Bpb; 2007. Zugänglich unter/available from: https://www.bpb.de/lernen/grafstat/134897/m-03-04-musterfragebogen-umweltbewusstsein-und-klimaschutz-in-