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## SHARE Wave 9 - New items on financial decision making, successful ageing, eating habits, sleep, long-term care insurance, and long-term care expectations (English Version): Cognitive Pretest

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## GESIS Project Report

2020|03

### SHARE Wave 9 –

New items on financial decision making, successful ageing, eating habits, sleep, long-term care insurance, and long-term care expectations

Cognitive Pretest

February 2020

*Timo Lenzner, Patricia Hadler, Désirée Nießen, Friederike Quint, Patricia Steins & Cornelia Neuert*



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## **GESIS-Project Report**

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## 1 Aims of the Pretest

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The Survey of Health, Ageing and Retirement in Europe (SHARE) is a multidisciplinary and cross-national panel database of micro data on health, socio-economic status and social and family networks of about 140,000 individuals aged 50 or older (around 380,000 interviews). SHARE covers 27 European countries and Israel. For wave 9 of SHARE, there is interest in including new items on the following topics: financial decision making, successful ageing, eating habits, sleep, long-term care insurance, and long-term care expectations.

The aim of the pretest is to optimize the questions prior to their administration in the actual survey and thereby to improve data quality.

For that purpose, GESIS was assigned the task to conduct a cognitive pretest by Dr. Katrin Schuller.



## 2 Sample

**Number of cognitive interviews:** 10

**Selection of target population:** Quota Sampling

**Quotas:** The selection of the target population was based on sex (m/f) and education (no university-entrance degree/ university entrance degree) = 2 x 2 groups. The minimum age for the test persons was 50 years.

**Table 1.** Quota scheme

Education	Sex		Total
	Female	Male	
No university-entrance degree	3	2	5
University-entrance degree	2	3	5
<b>Total</b>	<b>5</b>	<b>5</b>	<b>10</b>

**Table 2.** Key characteristics of the respondents

Respondent No.	Sex	Age	Education
01	female	55	University-entrance degree
02	female	62	University-entrance degree
03	female	75	No university-entrance degree
04	female	69	No university-entrance degree
05	female	56	No university-entrance degree
06	male	60	University-entrance degree
07	male	54	University-entrance degree
08	male	70	University-entrance degree
09	male	74	No university-entrance degree
10	male	62	No university-entrance degree

### 3 Methods

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<b>Field time:</b>	27 January to 11 February 2020
<b>Number of cognitive interviewers:</b>	3
<b>Pretests conducted in the lab (video-recorded):</b>	10
<b>Interview mode:</b>	CAPI
<b>Procedure:</b>	The interviews were conducted in the GESIS pretest lab. The cognitive questions were asked after each question (concurrent probing).
<b>Cognitive techniques:</b>	Comprehension Probing, General Probing, Specific Probing, Difficulty Probing, Information Retrieval Probing, Confidence Rating, Category Selection Probing, Paraphrasing, Emergent Probing.
<b>Incentive for respondents:</b>	30 Euros
<b>Language of questions and interviews:</b>	German

## 4 Results on the individual questions

### Question 1: Subjective ageing – satisfaction with own ageing

Bitte sehen Sie sich Karte 1 an. Auf einer Skala von 0 bis 10, wobei 0 „überhaupt nicht erfolgreich“ bedeutet und 10 „sehr erfolgreich“: Was würden Sie sagen, wie erfolgreich altern Sie?

[Please look at card 1, on a scale from 0 to 10 where 0 means not successfully at all, and 10 means most successfully, how successfully would you say you are ageing?]

Überhaupt  
nicht  
erfolgreich  
[Not  
successfully  
at all]

Sehr  
Erfolgreich  
[Most  
Successfully]

0     1     2     3     4     5     6     7     8     9     10

(Weiß nicht) [Don't know]

(Verweigerung) [Refusal]

#### Frequency distribution (N = 10)

0 Not successfully at all	-
1	-
2	-
3	-
4	-
5	1
6	2
7	1
8	2
9	1
10 Most successfully	2
(Don't know)	1
(Refusal)	-

## Cognitive techniques:

General Probing, Comprehension Probing, Specific Probing

## Key questions and findings:

### 1. What do respondents understand by „successfully ageing“?

Except for test person 07, all persons could answer the question and stated that they were ageing moderately to very successfully (range of answers: scale points 5 to 10). Test person 07 stated that he could not answer the question because he did not understand what the term "successfully ageing" meant: *"How successfully do I age? Oh dear, what do you mean by this? I have never heard these two words in context before. I do not understand the connection between ageing and success. [...] Well, I don't know what to do with that question."*<sup>1</sup> (TP 07).

Of the nine test persons who answered the question, one (TP 05) ignored the term "successfully" and answered the question only in terms of whether or how much she was ageing (answer: 6): *"I can also see that a friend of mine is ageing now - the last two years. It's because of the movement, it doesn't work the way it used to."*<sup>2</sup> A person who is not (successfully) ageing described the test person accordingly as someone *"who always stays young or always looks young."*

The remaining eight test persons associated the term "successfully ageing" mainly with being or remaining physically healthy. In addition, some subjects also associated the term with mental health (TP 01, 02, 03, 08), satisfaction with ageing (TP 02, 04, 08) or social participation in old age (TP 01, 02):

- *"[By this I mean] to eat healthy food, sleep well, exercise, social exchange. To belong [to social life]. [...] If one remains efficient in mind for a long time and also in movement. If you simply do something to live a long life."*<sup>3</sup> (TP 01)
- *"I'm 75 years old and I can still do anything. I am still totally fit in my head, I still go to work, do my household, I am healthy and have no troubles. I can't complain."*<sup>4</sup> (TP 03)
- *"[By this I mean] that one is still physically and mentally fit. No longer the fittest, but that one is still fit, still can do something. That one does not just sit behind the corner of the stove and wait until death comes. [...] That you still have fun in life."*<sup>5</sup> (TP 08)

<sup>1</sup> „Wie erfolgreich ich altere? Oh je, was verstehen Sie darunter? Diese beiden Wörter habe ich im Zusammenhang noch nie gehört. Den Zusammenhang zwischen altern und erfolgreich verstehe ich nicht. [...] Also, mit der Frage kann ich überhaupt nichts anfangen.“ (TP 07).

<sup>2</sup> „Bei einer Freundin von mir sehe ich auch, dass sie jetzt – also die letzten zwei Jahre – altert. Es ist aufgrund der Bewegung, es geht nicht mehr so, wie es vorher ging.“ (TP 05)

<sup>3</sup> „[Darunter verstehe ich], mich gesund zu ernähren, ordentlich zu schlafen, Bewegung, sozialer Austausch. Dazugehören [zum sozialen Leben]. [...] Wenn man im Kopf lange leistungsfähig bleibt und auch in der Bewegung. Wenn man auch einfach etwas dafür tut, damit man lange lebt.“ (TP 01)

<sup>4</sup> „Ich bin 75 Jahre alt und kann noch alles machen. Ich bin im Kopf noch total fit, gehe noch arbeiten, mache meinen Haushalt, bin gesund und habe noch gar keine Beschwerden. Ich kann mich nicht beklagen.“ (TP 03)

- *"That you're healthy and you don't need to be in a doctor's office all the time. That's what I would define as successful for me."*<sup>6</sup> (TP 10)

## **2. Do the respondents think about a general ageing process or do they think of old age accompanied by the deterioration of mind and body?**

None of the test persons thought exclusively of old age when answering the question. Instead, they focused mainly on their current (health) condition and age and answered the question for the ageing process in general:

- *"[I have] thought about the ageing process in general. Not about old age, some people get dementia or a stroke or something like that already at 60 or 70 or even earlier."*<sup>7</sup> (TP 03)
- *"Ageing is a process that basically begins at birth."*<sup>8</sup> (TP 06)
- *"The ageing process begins with different people in different age groups. Some people think that ageing begins at 40, others at 50, so at almost 75 I count myself as one of the older or old people. But you can't pin that on a specific age."*<sup>9</sup> (TP 09)

## **3. Is the showcard helpful or not needed?**

Except for two test persons (TP 01, 02), all persons stated that presenting the card made it easier to answer the question:

- *"It just makes it easier to answer when it's in front of you."*<sup>10</sup> (TP 05)
- *"This is more helpful than unnecessary. It's easier when you have it in front of you."*<sup>11</sup> (TP 08)

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<sup>5</sup> „[Darunter verstehe ich], dass man körperlich und geistig noch fit ist. Zwar nicht mehr der Fitteste, aber dass man doch noch fit ist, noch etwas unternehmen kann. Dass man nicht nur hinter der Ofenecke sitzt und wartet, bis der Tod kommt. [...] Dass man noch Spaß am Leben hat.“ (TP 08)

<sup>6</sup> „Dass man gesund ist und nicht ständig beim Arzt sitzt und irgendwelche Zipperlein hat. Das würde ich für mich als erfolgreich definieren.“ (TP 10)

<sup>7</sup> „[Ich habe] an den Alterungsprozess [allgemein gedacht]. Ans hohe Alter nicht, manche bekommen ja schon mit 60 oder 70 oder noch früher Demenz oder einen Schlaganfall oder so etwas.“ (TP 03)

<sup>8</sup> „Altern ist ja ein Prozess, der im Grunde mit der Geburt beginnt.“ (TP 06)

<sup>9</sup> „Der Alterungsprozess fängt bei verschiedenen Menschen in unterschiedlichen Altersgruppen an. Manche meinen, das Altern beginnt schon mit 40, andere mit 50. Also ich zähle mich mit fast 75 Jahren schon zu den älteren oder alten Menschen. Man kann das aber nicht an einem bestimmten Alter festmachen.“ (TP 09)

<sup>10</sup> „Da kann man es einfach nochmal besser abschätzen, wenn man es vor sich hat.“ (TP 05)

<sup>11</sup> „Das ist eher hilfreich als unnötig. Wenn man das vor sich hat, ist es einfacher.“ (TP 08)

**Recommendations:**

Question: We recommend rephrasing the question to avoid the term "ageing successfully". Possible formulations would be, for example:

a. "How satisfied are you with how your ageing process is progressing?"

[„Wie zufrieden sind Sie damit, wie Ihr Alterungsprozess verläuft?“]

b. "How satisfied are you with the way you age?"

[„Wie zufrieden sind Sie damit, wie Sie altern?“]

Alternatively, a definition of "successfully ageing" could be added to the question, such as:

"Successfully ageing is the ability to age actively and happily in spite of changing conditions and not being restricted by infirmity or disease."  
[„Unter erfolgreich altern verstehen wir, dass man trotz sich verändernder Bedingungen aktiv und zufrieden altern und nicht durch Gebrechen oder Krankheiten dabei eingeschränkt wird.“]

Response options: If the question text is modified as suggested above, the endpoints of the scale would have to be changed to "Not satisfied at all" [„Überhaupt nicht zufrieden“] and "Very satisfied" [„Sehr zufrieden“].

## Question 2: Regularity of vegetables/fruits intake

**Bitte sehen Sie sich Liste 2 an. In einer normalen Woche – wie oft nehmen Sie eine Portion Obst oder Gemüse zu sich?**

**[Please look at card 2. In a regular week, how often do you consume a serving of fruits or vegetables?]**

- Täglich [Every day]
- 3-6 mal pro Woche [3-6 times a week]
- Zweimal pro Woche [Twice a week]
- Einmal pro Woche [Once a week]
- Weniger als einmal pro Woche [Less than once a week]
  
- (Weiß nicht) [Don't know]
- (Verweigerung) [Refusal]

### Frequency distribution (N = 10)

Every day	5
3-6 times a week	3
Twice a week	2
Once a week	-
Less than once a week	-
(Don't know)	-
(Refusal)	-

### Cognitive techniques:

Emergent Probing

### Key questions and findings:

**Since the explanation is only given in question 3, do the respondents have difficulties in defining a “serving” in question 2?**

None of the respondents asked what was meant by "a serving of fruit or vegetables" in this question or commented otherwise on the lack of a definition of a serving. However, to ensure that respondents in the main survey are thinking of comparable servings, we recommend adding an explicit definition to the question.

**Recommendations:**

Question: The question should be supplemented by a definition of what is meant by “a serving of fruits or vegetables.” A possible formulation can be found in the recommendation on question 3.

Furthermore, the question could be simplified grammatically:

"How often do you consume a serving of fruits or vegetables in a regular week?"

[„Wie oft nehmen Sie in einer normalen Woche eine Portion Obst oder Gemüse zu sich?“]

Response options: We recommend making the answer options uniform and either write out "three to six times" [„Drei- bis sechsmal“ ] or write all response options as numbers.



### Question 3: Amount of vegetables/fruits intake

Wie viele Portionen Obst oder Gemüse essen Sie an einem typischen Tag? Eine Portion könnte etwa ein mittelgroßer Apfel, eine mittelgroße Banane oder Tomate oder eine Handvoll Obst oder Gemüse sein. Bitte zählen Sie Kartoffeln und andere stärkehaltige Wurzeln wie Süßkartoffeln und Maniok nicht mit.

[How many servings of fruits or vegetables do you eat during a typical day? One serving could be a medium-sized apple, banana, tomato or one handful of fruits or vegetables. Please exclude potatoes and other starchy roots such as sweet potato or cassava.]

\_\_\_\_\_Portionen [servings]

(Weiß nicht) [Don't know]

(Verweigerung) [Refusal]

#### Answers (N = 10)

TP 01	2
TP 02	4
TP 03	1
TP 04	1
TP 05	7
TP 06	1
TP 07	0,5
TP 08	4
TP 09	1
TP 10	2-3

#### Cognitive techniques:

General Probing, Difficulty Probing, Specific Probing, Comprehension Probing

## Key questions and findings:

### 1. How do the respondents arrive at their answers? Do they compute/count/estimate the number of servings?

When answering the question, all test persons proceeded in such a way that they retrospectively remembered their eating behaviour and counted or roughly estimated the amount of fruit or vegetables they consumed on a typical day:

- *"I eat fruit throughout the day. Every now and then, sometimes a banana, sometimes an apple, sometimes a tangerine. So several times a day. That should be about four servings. Vegetables with the main meal and in the evening I also have vegetables in the form of peppers and tomatoes. If you add it all up, it's 7 servings altogether. Servings for me are an apple, a tangerine. That's what I've added up."*<sup>12</sup> (TP 05)
- *"I definitely eat fruit once a day. It's just my dietary plan. It stands and it is followed through. I usually mix it with yoghurt and some oatmeal and maybe some coconut flakes. So once a day fruit, that's a must for me."*<sup>13</sup> (TP 06)

But the cognitive interviews also brought to light problems with the question. Several test persons reported exclusively on their fruit consumption and either left out their vegetable consumption or only included it in their answers when asked by the interviewer. This could be due to the wording "fruits or vegetables" in the question, which could be interpreted as meaning that respondents should report either their fruit or vegetable consumption, depending on what they consume more frequently:

- *"I could eat fruit all day. Three times a day on average. [...] I simply counted, in terms of fruit, what I eat. [...] But if I add vegetables, I have not taken that into account: I eat vegetables once a day."*<sup>14</sup>(TP 02; changes her answer from 3 to 4 servings)
- *"I eat vegetables like this once a day. And like I said, twice a week I eat fruit."*<sup>15</sup> (TP 04; in question 2, indicates to eat fruit twice a week, in question 3, indicates to eat a serving of vegetables on a typical day. Consequently, in question 2 she should have indicated "daily")

Furthermore, the definition of a serving of fruits or vegetables led to misunderstandings among two test persons (TP 06, 08). They interpreted the definition to mean that a serving refers to "half" an apple or "half" a banana instead of a medium-sized:

<sup>12</sup> „Obst esse ich über den ganzen Tag verteilt. Immer mal wieder, mal eine Banane, mal einen Apfel, mal eine Mandarine. Also mehrmals täglich. Das dürften so vier Portionen sein. Gemüse bei der Hauptmahlzeit und abends gibt es auch Gemüse, in Form von Paprika, Tomate. Also, wenn man alles zusammenzählt, dann komme ich insgesamt auf 7 Portionen. [...] Portionen sind für mich ein Apfel, eine Mandarine. Das habe ich zusammengerechnet.“ (TP 05)

<sup>13</sup> „Ich esse definitiv jeden Tag einmal Obst. Das ist einfach mein Ernährungsplan. Der steht und wird auch durchgezogen. Ich mische das meistens mit Joghurt und ein paar Haferflocken und vielleicht auch noch Kokosflocken. Also einmal am Tag Obst, das ist für mich Pflicht.“ (TP 06)

<sup>14</sup> „Ich könnte den ganzen Tag Obst essen. Dreimal täglich im Schnitt. [...] Ich habe einfach gezählt, an Obst, was ich zu mir nehme. [...] Aber wenn ich Gemüse noch dazuzähle, das habe ich nicht berücksichtigt: Gemüse esse ich einmal am Tag.“ (TP 02)

<sup>15</sup> „Gemüse esse ich so einmal am Tag. Und wie schon gesagt, so zweimal pro Woche esse ich Obst.“ (TP 04)

- *"So, in terms of size [the definition in the question], two. I eat either a banana or an apple every day. But if you relate it to only half a banana and half an apple, then double it."*<sup>16</sup> (TP 06)
- *"That would be four servings by your definition. So two apples a day or one apple and a banana. [...] The question was based on half a banana and half an apple. [...] Oh, then I misunderstood. Then let's stick with 1."*<sup>17</sup> (TP 08)

Finally, test person 07 pointed out that question 3 could not be answered for persons who had not answered "daily" in question 2, as there was no "typical day" for them in relation to their fruit and vegetable consumption: *"Well, I don't eat this every day. As I said, three or four times a week. This is in contradiction to the previous question. [...] [If I break it down to one day], then I would say: half an apple a day. But as I said, the two questions are a bit contradictory."*<sup>18</sup>

## 2. What kind of fruits and vegetables were the respondents thinking about?

As already described in the previous section, several test persons thought exclusively about their fruit consumption and left their vegetable consumption out of the equation when answering the question.

When asked, all respondents stated that they had thought about fresh fruit or vegetables when answering the question. Occasionally, frozen fruit or vegetables (TP 01, 03), dried fruit or vegetables (TP 03, 08) and juices or smoothies (TP 02) were also included in the answer.

## 3. How do respondents interpret the terms "starchy roots" and "cassava"?

The test persons associated the term "starchy roots" primarily with potatoes and occasionally also with the two other vegetables mentioned in the question (sweet potatoes, cassava):

- *"You also gave the example. But I know that too: potatoes have starch, sweet potatoes less, but I believe they do too. That's all I can think of at the moment."*<sup>19</sup> (TP 01)
- *"Basically the potato."*<sup>20</sup> (TP 05)
- *"The most famous is certainly the potato. Then there's the cassava and the sweet potatoes. I can't think of anything else."*<sup>21</sup> (TP 08)

<sup>16</sup> *„Also, auf die Größe [die Definition in der Frage] bezogen zwei. Ich esse jeden Tag entweder eine Banane oder einen Apfel. Aber wenn Sie es nur auf eine halbe Banane und einen halben Apfel beziehen, dann das Doppelte davon.“* (TP 06)

<sup>17</sup> *„Dann wären das vier Portionen nach Ihrer Definition. Also zwei Äpfel am Tag oder einen Apfel und eine Banane. [...] Die Frage ging ja von einer halben Banane und einem halben Apfel aus. [...] Ach so, dann habe ich es falsch verstanden. Dann bleiben wir bei 1.“* (TP 08)

<sup>18</sup> *Also, ich esse das nicht täglich. Wie gesagt, 3- bis 4-mal pro Woche schon. Das steht ja im Widerspruch zu der vorherigen Frage. [...] [Wenn ich es auf einen Tag herunterbreche], dann würde ich sagen: einen halben Apfel pro Tag. Aber wie gesagt, die beiden Fragen sind ein bisschen gegenläufig.“* (TP 07)

<sup>19</sup> *„Sie haben ja auch das Beispiel gegeben. Aber das weiß ich auch: Kartoffeln haben Stärke, Süßkartoffeln weniger, aber ich glaube die auch. Mehr fällt mir im Moment nicht ein.“* (TP 01)

<sup>20</sup> *„Prinzipiell die Kartoffel.“* (TP 05)

Six test persons claimed having already heard the term cassava, five of whom were able to explain the term in more detail:

- *"I heard it once. I think it is a kind of sweet potato, but I am not sure. I'd have to google it."*<sup>22</sup> (TP 06)
- *"I have read this before, but I cannot explain exactly. Comes from South America, I think. I've never eaten this before."*<sup>23</sup> (TP 09)
- *"Cassava is a kind of potato, something like sweet potato."*<sup>24</sup> (TP 10)

### Recommendations:

Question: In order to avoid respondents reporting either exclusively on their fruit or exclusively on their vegetable consumption, it is recommended that both foods be queried separately.

In order to avoid respondents naming "half" instead of "medium-sized" servings, we recommend not stating a size and to modify the definition(s) of a serving of fruits or vegetables as follows:

"One serving of fruit could be an apple, a banana or a handful of berries."

[„Eine Portion Obst könnte etwa ein Apfel, eine Banane oder eine Handvoll Beeren sein.“]

"One serving of vegetables could be a tomato, a carrot or a handful of lettuce. Please exclude..."

[„Eine Portion Gemüse könnte etwa eine Tomate, eine Karotte oder eine Handvoll Salat sein. Bitte zählen Sie ...“]

In addition, the question should only be asked to those respondents who indicated in question 2 that they eat fruit or vegetables daily, as there can (logically) be no "typical day" for all other respondents.

Alternatively, the wording of the question should make it clear that respondents should think of a day when they eat fruit and/or vegetables:

"If you think of a day when you eat fruit or vegetables: how many servings of fruit or vegetables do you normally eat?"

<sup>21</sup> „Das bekannteste ist sicher die Kartoffel. Dann wird ganz sicher noch dieser Maniok dazugehören und die Süßkartoffeln. Ansonsten fällt mir da nichts mehr ein.“ (TP 08)

<sup>22</sup> „Gehört habe ich den mal. Ich glaube, das ist eine Art Süßkartoffel, bin ich mir aber nicht sicher. Müsste ich googeln.“ (TP 06)

<sup>23</sup> „Ich habe das schon einmal gelesen, kann ich aber nicht genau erklären. Stammt aus Südamerika, glaube ich. Ich habe das noch nie gegessen.“ (TP 09)

<sup>24</sup> „Maniok ist doch eine Kartoffelart, so etwas wie Süßkartoffeln.“ (TP 10)

[„Wenn Sie an einen Tag denken, an dem Sie Obst oder Gemüse essen:  
Wie viele Portionen Obst oder Gemüse essen Sie dann normalerweise?“]

Response Options: No changes recommended.

## Question 4: Long-term private care insurance

### Haben Sie eine private Pflegeversicherung?

#### [Do you have a private long-term care insurance?]

*Interviewer: Antwortoptionen vorlesen!*

*[Interviewer: Read out answer options!]*

*Interviewer: Gegebenenfalls erklären: Unter "privat" verstehen wir eine Versicherung, die bei einer privaten Gesellschaft abgeschlossen wird, entweder auf rein freiwilliger individueller Basis oder im Rahmen eines Pflichtsystems. Eine Pflegeversicherung hilft, die Kosten für Langzeitpflege zu decken. Sie deckt normalerweise häusliche Pflege, Pflegeunterstützung, ambulant betreutes Wohnen, Tagespflegeeinrichtungen, Aufenthalte in Alten- oder Pflegeheimen oder in einem Hospiz ab. Einige dieser Leistungen könnten auch durch Ihre Krankenversicherung übernommen werden.*

*[Interviewer: If unclear, explain: By "private" we mean an insurance subscribed with a private company, either on a pure voluntary individual basis or through a mandatory scheme. Long-term care insurance helps cover the cost of long-term care. It generally covers home care, assisted living, adult day-care, respite care, hospice care, and stays in nursing homes or residential care facilities. Some of the long-term care services might be covered by your health insurance.]*

- Ja, private Pflicht-Pflegeversicherung [Yes, private mandatory]
- Ja, private freiwillige Pflegeversicherung [Yes, private voluntary]
- Nein [No]
  
- (Weiß nicht) [Don't know]
- (Verweigerung) [Refusal]

### Frequency distribution (N = 10<sup>25</sup>)

Yes, private mandatory	3
Yes, private voluntary	3
No	6
(Don't know)	-
(Refusal)	-

<sup>25</sup> Since question 4 allowed multiple answers, the absolute N does not correspond to the number of test persons, but is larger. The test persons 07 and 09 each (correctly) selected two possible answers ("Yes, private compulsory nursing care insurance", "Yes, private voluntary nursing care insurance").

**Cognitive techniques:**

General Probing, Comprehension Probing, Specific Probing, Difficulty Probing

**Key question and findings:****Do the respondents have difficulties to understand the question and/or to answer it?**

Nine of the ten respondents answered the question correctly, i.e. they correctly stated that they had or did not have private long-term care insurance. However, the process of answer generation (in the interaction with the interviewer) was in some cases laborious. This will be illustrated below using the example of the interaction between test person 02 and the interviewer:

TP 02: *I have private long-term care insurance, yes. Now I should hear the three [answer options] again. I have compulsory insurance ...*

INT: *So the private [compulsory insurance]?*

TP 02: *And the private one. There are two. I mean, the compulsory insurance you have to have anyway, but I have another private one. I think so, but I'm not sure. The private compulsory insurance, I know that one hundred percent.*

INT: *Here, a distinction is made between private mandatory long-term care insurance and private voluntary long-term care insurance, but you're not sure?*

TP 02: *I have a private long-term care insurance, I know that, but a private compulsory insurance ... that is a state insurance, isn't it?*

[INT reads additional explanation]

TP 02: *Well, I finished something, it was a voluntary one. I am confused about the compulsory insurance. I know that I took out a private long-term care insurance, but I thought that was over the rate that the health insurance company ... Now I'm out of my depth. I thought I had both. Because the mandatory one is compulsory.*

INT: *Do you also mean compulsory long-term care insurance?*

TP 02: *Yes.*

INT: *And that the private long-term care insurance is a kind of ...*

TP 02: *Additional insurance, yes. Supplemented. I mean, what the compulsory private insurance does not pay, what is above that is covered by my current private insurance, which I have taken out. Therefore, I have both.*

INT: *So one mandatory and one private?*

TP 02: *Yes, how much I don't have in my head now, but private in any case. So in the contract ... the compulsory [insurance] goes up to a certain amount and we thought that the rest would be covered. So not to have a deductible, which is too high. That's why we have concluded this [private one].*

[INT notes down voluntary long-term care insurance]

TP 02: *Private in any case. I know that, we have one. But the mandatory insurance thing. I thought we all had to.*

As the example above illustrates, problems in answering the question arose mainly from the interviewers reading out the answer categories. The distinction between private compulsory long-term care insurance and private voluntary long-term care insurance was unclear for four test persons (TP 02, 03, 08, 10) or they interpreted compulsory nursing insurance as statutory insurance:

- Test person 03 responded to the question of what she considers to be the difference between a private compulsory long-term care insurance and a private voluntary insurance: *"I think that you get more benefits in a private long-term care insurance than in a compulsory nursing insurance."*<sup>26</sup> (TP 03, answer: "No")
- *"I know I didn't take out long-term care insurance. This is a voluntary thing. And we're all in the statutory nursing insurance somehow."*<sup>27</sup> (TP 08, Answer: "Yes, private mandatory")
- *"I don't really see the difference. Both are private. One is a mandatory insurance policy that the state could possibly impose on me. And the other is really completely voluntary, so it's a supplemental insurance."*<sup>28</sup> (TP 10)

In the case of test person 08, this misinterpretation led to him falsely stating that he had taken out private compulsory long-term care insurance.

### Recommendations:

We recommend leaving the question wording as it is. However, the answer options should not be read out by the interviewers in order to avoid misunderstandings in the interpretation of a private compulsory long-term care insurance (e.g. as a statutory long-term care insurance). Only "Yes" and "No" (as well as "Don't know" and "Refusal") should be offered as answer options.

Respondents who answer "yes" to this question should then be asked whether they have private compulsory long-term care insurance, private voluntary long-term care insurance or both.

Alternatively, the question could be reworded to ask about the respondents' insurance status and explicitly mention compulsory statutory insurance as an answer option:

"How are you insured for long-term care? (multiple answers are possible)

- Statutory long-term care insurance (via a statutory health insurance company)
- Private compulsory long-term care insurance (via a private health insurance company)
- I have a voluntary private supplementary long-term care insurance
- I don't have any long-term care insurance"

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<sup>26</sup> „Ich denke, dass man in einer privaten Pflegeversicherung mehr Leistungen erhält als in einer Pflicht-Pflegeversicherung.“ (TP 03)

<sup>27</sup> „Ich weiß, dass ich keine Pflegeversicherung abgeschlossen habe. Das ist ja eine freiwillige Sache. Und in der gesetzlichen Pflegeversicherung sind wir ja alle irgendwie drin.“ (TP 08)

<sup>28</sup> „Ich sehe da eigentlich keinen Unterschied. Beide sind privat. Das eine ist eine Pflichtversicherung, die mir der Staat eventuell auferlegen könnte. Und das andere ist wirklich komplett freiwillig, also eine Zusatzversicherung.“ (TP 10)



[„Wie sind Sie pflegeversichert?“ (Mehrfachantworten sind möglich)

- Gesetzlich pflegeversichert (über eine gesetzliche Krankenkasse)
- Privat pflegepflichtversichert (über eine private Krankenkasse)
- Ich habe eine freiwillige private Pflegezusatzversicherung
- Ich habe keinerlei Pflegeversicherung“]

## Question 5: Subjective estimation of probability developing ADL (activities of daily living) limitation in the future

**Bitte sehen Sie sich Liste 3 an. Manche Menschen haben Schwierigkeiten bei einigen dieser Tätigkeiten aufgrund eines körperlichen, geistigen oder emotionalen Problems oder wegen eines Gedächtnisproblems.**

**[Please look at card 3. People can have difficulties with some of these activities because of a physical, mental, emotional or memory problem. ]**

*Interviewer: Pausieren bis Befragte/r Liste gelesen hat.*

*[Interviewer: Wait until the respondent has read the card.]*

**Nun sehen Sie sich diese Schaubilder an. In Deutschland haben 30 von 100 Frauen über 65 Jahren und 41 von 100 Frauen über 75 Jahren Schwierigkeiten mit mindestens einer dieser Tätigkeiten aufgrund eines körperlichen, geistigen, emotionalen oder Gedächtnisproblems. 23 von 100 Männern über 65 Jahren und 30 von 100 Männern über 75 Jahren haben Schwierigkeiten mit mindestens einer dieser Tätigkeiten, wegen eines körperlichen, geistigen, emotionalen oder Gedächtnisproblems.**

**[Now look at these graphs. In Germany, 30 women out of 100 above the age of 65 and 41 women out of 100 above the age of 75 have difficulties with at least one of these activities, because of a physical, mental, emotional or memory problem. 23 men out of 100 above the age of 65 and 30 men out of 100 above the age of 75 have difficulties with at least one of these activities, because of a physical, mental, emotional or memory problem.]**

**Wenn Sie an sich selbst denken, wie hoch ist die Wahrscheinlichkeit, dass Sie eines Tages Einschränkungen bei einer oder mehreren dieser Tätigkeiten entwickeln?**

**[Thinking about yourself, what are the chances that you will develop sometime in the future one or more of these activity limitations?]**

**Wenn Sie sich über die Wahrscheinlichkeit unsicher sind, können Sie eine Spanne angeben. Zum Beispiel können Sie etwas sagen wie „weniger als 20 Prozent“, „zwischen 30 und 40 Prozent“ oder „mehr als 80 Prozent“. Bitte versuchen Sie jedoch ohne Rundung oder Näherung zu antworten.**

**[If you are uncertain about the chances, you may give a range. For example, you may say something like “less than 20 percent,” “between 30 and 40 percent” or “greater than 80 percent”. Please try to answer without rounding or approximating.]**

\_\_\_\_\_ %

Ich habe bereits eine oder mehrere dieser Einschränkungen

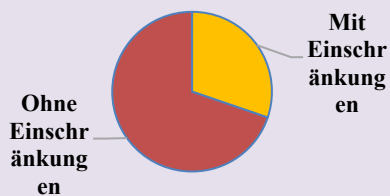
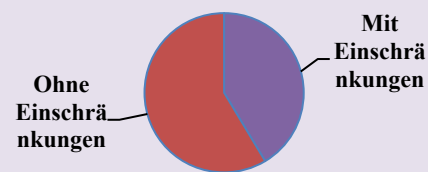
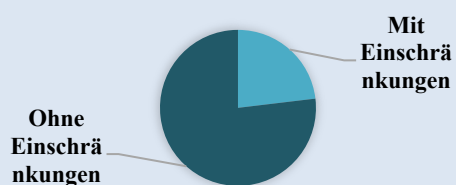
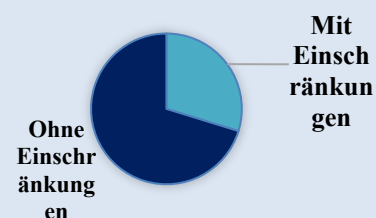
[I already have one or more of these limitations]

(Weiß nicht) [Don't know]

(Verweigerung) [Refusal]

**LISTE 3**

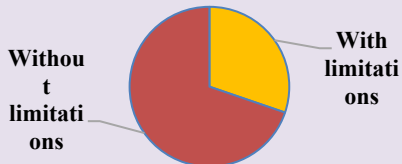
- Sich anziehen, einschließlich Socken und Schuhe
- Durch einen Raum gehen
- Baden oder Duschen
- Essen, zum Beispiel beim Zurechtschneiden der Speisen
- Ins Bett legen oder aus dem Bett aufstehen
- Benutzen der Toilette, einschließlich Hinsetzen und Aufstehen
- Benutzen einer Karte, um sich in einer fremden Umgebung zurechtzufinden
- Zubereiten einer warmen Mahlzeit
- Einkaufen von Lebensmitteln
- Telefonieren
- Medikamente einnehmen
- Arbeiten im Haus oder im Garten
- Mit Geld umgehen, zum Beispiel Rechnungen bezahlen oder Ausgaben kontrollieren
- Alleine das Haus verlassen und öffentliche Verkehrsmittel nutzen
- Ihre Wäsche waschen

**FRAUEN 65 UND ÄLTER****FRAUEN 75 UND ÄLTER****MÄNNER 65 UND ÄLTER****MÄNNER 75 UND ÄLTER**

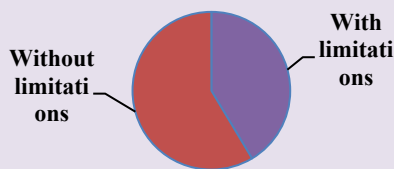
**Card 3**

- Getting dressed yourself, including socks and shoes
- Walking through a room
- Bathing and showering
- Eating, for example, cutting the food
- Laying in bed or getting out of bed
- Using the toilet, including sitting down and getting up
- Using a map to find the way around in a foreign surrounding
- Preparing a warm meal
- Grocery shopping
- Making a phone call
- Taking pills/medicine
- Working around the house and garden
- Handling money, for example, paying bills or controlling expenses
- Leaving the house alone and using public transport
- Doing the laundry

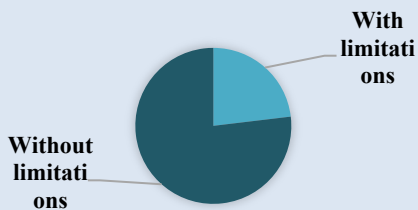
**WOMEN 65 AND OLDER**



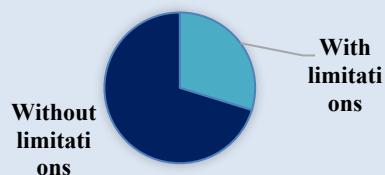
**WOMEN 75 AND OLDER**



**MEN 65 AND OLDER**



**MEN 75 AND OLDER**



**Answers (N = 10)**

TP 01	Less than 20%
TP 02	20%
TP 03	50%
TP 04	I already have one or more of these limitations, 20–30%
TP 05	65–70%
TP 06	100%
TP 07	100%
TP 08	I already have one or more of these limitations, 20–30%
TP 09	20%
TP 10	0%

**Cognitive techniques:**

General Probing, Difficulty Probing, Specific Probing

**Key questions and findings:****1. Do the interviewers have difficulties in noting down the respondents' answers?**

In two cases (TP 04, 08) the interviewers had difficulties in noting down the answers of the test persons. Both test persons first indicated which activities in list 3 they already had difficulties with, without indicating a probability of future limitations. Although this is correct in terms of the intention of the question and the interviewers noted the answer "I already have one or more of these limitations" for both test subjects, it was not clear to the interviewers whether the test subjects had understood the question correctly. They therefore asked the respondents to indicate the likelihood of developing limitations in the other activities listed, and then noted the percentages as an additional answer:

- TP 04: *When I am older than now, you mean? Or now at my age? You mean later than now? [...] Well, I actually only have difficulty bathing. I noticed the other day that I don't get out of the bathtub as well as before. Maybe it's because of the weight. I used to be slim, but over the years I've gained weight. But that's the only thing. I don't bathe anymore because I'm afraid I won't be able to get out of the tub. I have no problems with the other things.*

INT: *What do you think the probability is that you will ...*

TP 04: *Later [...], when I get older, maybe just the bathing. And maybe difficulties later with the map [using a map to find your way around in a foreign environment]. That you might have some difficulties in a foreign environment. I have no problems with shopping: I go out of the house and there is a bakery next door and the supermarket directly opposite.*

INT: *What is the probability between 0 and 100 that one day you will develop limitations on one or more of these activities? You mentioned earlier that you already have one of these limitations. But what is the probability in the ageing process ...*

TP 04: *In percent? Let's say 20 to 30 percent.*

- TP 08: *Shall I say the things where ...*

INT: *First of all, just read through it so that you can get an overview.*

TP 08: *Well, with the "work on the house and garden" it's getting harder and harder because I'm no longer fit enough for such strenuous physical activities. I would still be able to do some laundry, but my wife does that. So, actually only this work on house and garden.*

INT: *And if you had to state a probability that you would develop limitations in one or more of these activities?*

TP 08: *Beyond this "work on the house and garden"?*

INT: *Yes, well, generally in the future, in the ageing process.*

TP 08: *Well, you never know what is coming. But maybe 20% to 30%.*

In order to avoid such misunderstandings (between interviewer and respondent), it should first be asked whether the respondents already have limitations in one or more of these activities. Only if they answer in the negative they should then be asked about the probability of developing one or more of these restrictions in the future.

## **2. Are the respondents aware that they are supposed to answer in a general context rather than for each activity listed on the card separately?**

None of the test persons gave different answers for the individual activities. Test person 01 merely expressed the wish to be able to give more differentiated answers but had no difficulty in making a general judgement on all the activities mentioned: *"I would rather like to answer this in more detail. I tend to be 'under 20', but I do not have a good sense of direction. I think the probability would be higher [for using a map]. I hope that when I'm old I'm still healthy and clear enough to manage on my own. Let's keep it 'under 20%'."*<sup>29</sup>

## **3. Is the question text too long?**

Two test persons (TP 01, 09) commented on the length of the question or the amount of information that must be processed:

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<sup>29</sup> „Ich würde das lieber etwas detaillierter beantworten wollen. Ich tendiere zu ‚unter 20‘, allerdings habe ich keinen guten Orientierungssinn. Ich glaube, da wäre die Wahrscheinlichkeit höher [bei ‚Benutzen einer Karte...‘]. Ich hoffe, dass ich im Alter noch so gesund und klar bin, dass ich das alleine schaffe. Bleiben wir bei ‚unter 20 %‘.“ (TP 01)

- *"The question may be difficult for some people to answer. Firstly, there was a lot of text to follow. Then you had to focus on the diagrams, you forgot the first part again. I can't remember how many women in 100 can't do it."*<sup>30</sup> (TP 01)
- *"[The answer was] rather difficult. One must be careful not to get confused. Also with these diagrams."*<sup>31</sup> (TP 09)

In the cognitive interviews, the length of the question had no clear negative influence on the respondents' answering process. However, the interviews gave the impression that both the graphs and the indication to answer without rounding or approximation were ignored by most of the test subjects. One reason for this may be that the text of the question is too long, and respondents therefore only take into account information that they consider to be central and that they can remember.

#### 4. Are the charts comprehensible?

Only two of the ten test persons (TP 05, 09) included the graphs in their answers. Testperson 05, however, found them more disturbing than helpful:

- *"One is very much fixated on it. Without them, I think it would have been easier. Because now you have the pictures in front of your eyes and think, 'Hm ..., yes ...'. Then you are a bit distracted again and I would find it easier if you had asked me the question without them."*<sup>32</sup> (TP 05)
- *"If I look at the graph, what percentage there is. So I chose a slightly lower value. But of course, that's just an estimate. You can't calculate it."*<sup>33</sup> (TP 09)

The remaining eight test persons answered the question independently of the graphs. Four of these test persons commented or criticized the diagrams. Test person 01 found the graphs unnecessary, test person 02 doubted the correctness of the distributions shown, test person 07 criticised the colouring and test person 10 recommended that the percentages of the distributions be included in the graphs:

- *"No, [they had] no [influence on my evaluation]. They could have been left out."*<sup>34</sup> (TP 01)
- *"Seriously, well, I don't believe that. The diagrams here. Men and ageing, they didn't answer honestly. The experience is quite different. The experience is that men degenerate more and faster than women. Either the women were more honest and more likely to admit it or, I*

<sup>30</sup> „Die Frage ist für manche Leute bestimmt schwierig zu beantworten. Zum einen war das viel Text, dem man folgen musste. Dann musste man den Fokus auf die Schaubilder richten, da hat man den ersten Teil schon wieder vergessen. Ich weiß jetzt nicht mehr, wie viele Frauen von 100 das nicht schaffen.“ (TP 01)

<sup>31</sup> „[Die Beantwortung war] eher schwer. Man muss aufpassen, dass man nicht durcheinander kommt. Auch mit diesen Schaubildern.“ (TP 09)

<sup>32</sup> „Man fixiert sich da schon stark darauf. Ohne die wäre es, glaube ich, einfacher gewesen. Weil man dann eben die Bilder vor Augen hat und denkt, ‚Hm ..., ja ...‘. Da ist man wieder etwas abgelenkt und ich fände es einfacher, wenn Sie mir die Frage ohne die gestellt hätten.“ (TP 05)

<sup>33</sup> „Wenn ich mir das Diagramm anschau, wie viele Prozent das sind. Deshalb habe ich einen etwas geringeren Wert gewählt. Aber das ist natürlich nur eine Schätzung. Berechnen kann man das ja nicht.“ (TP 09)

<sup>34</sup> „Nein, [die hatten] gar keinen [Einfluss auf meine Bewertung]. Die hätte man weglassen können.“ (TP 01)

*think, the men don't admit it. I would have loved to have seen the interviews of the men; I can't imagine that. I think that men certainly don't like to admit such things. Especially when it starts with number 1 [the first activity on the list: 'Getting dressed yourself, including socks and shoes']. Women have given more honest answers."<sup>35</sup> (TP 02)*

- *"I don't like the colors."<sup>36</sup> (TP 07)*
- *"You might have added the percentages."<sup>37</sup> (TP 10)*

## 5. Do the respondents have difficulties to understand and/or answer the question?

In addition to the problems already described above (too long question text, ignoring, not understanding or criticizing the graphs), the answers of the three test persons who named the extreme values 0% and 100% (TP 06, 07, 10) indicated that they did not understand the question in the intended way.

The two test persons, who stated a probability of 100% (TP 06, 07), justified their answers by stating that everyone from a certain age on has to expect restrictions in one or more of these activities. Test person 06 therefore questioned the meaningfulness of the question and described it as "nonsense":

- *"I cared for my mother for 8 years. I know the path one takes. These complaints more or less all come at some point. It must be said quite clearly. [...] The question is nonsense for me, I'm sorry. You should rather ask something like: 'Imagine you are 60 years old, 70 years old, 80 years old. What could possibly apply to you?' Especially the connection between the list and the diagrams does not make sense [in the case of the period 'one day']."<sup>38</sup> (TP 06)*
- *"Of course, as you get older, you have physical and mental limitations. One hopes, of course, that this will always come later. But at 75 years of age, the one or other limitation is definitely there."<sup>39</sup> (TP 07)*

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<sup>35</sup> „Im Ernst, also, ich glaube das nicht. Die Diagramme hier. Männer und Altern, da haben welche nicht ehrlich geantwortet. Die Erfahrung ist doch ganz anders. Die Erfahrung ist die, dass die Männer viel stärker und schneller ‚degenerieren‘ als Frauen. Entweder waren die Frauen ehrlicher und geben es eher zu oder, glaube ich, die Männer geben das nicht zu. Ich hätte gerne die Interviews der Männer gesehen, ich kann mir das nicht vorstellen. Ich denke, dass Männer so etwas mit Sicherheit nicht gerne zugeben. Vor allem, wenn es losgeht mit Nummer 1 [der ersten Tätigkeit auf der Liste: ‚Sich anziehen, einschließlich Socken und Schuhe‘]. Da haben die Frauen ehrlichere Antworten gegeben.“ (TP 02)

<sup>36</sup> „Die Farben finde ich schlecht gewählt.“ (TP 07)

<sup>37</sup> „Man hätte die Prozentzahlen vielleicht noch einfügen können.“ (TP 10)

<sup>38</sup> „Ich habe meine Mutter 8 Jahre lang gepflegt. Ich kenne den Weg, den man geht. Diese Beschwerden kommen mehr oder weniger alle irgendwann. Das muss man ganz klar so sagen. [...] Die Frage ist für mich Nonsense, tut mir Leid. Da müsste man eher so etwas fragen wie: ‚Stellen Sie sich vor, Sie sind 60 Jahre alt, 70 Jahre alt, 80 Jahre alt. Was könnte auf Sie zutreffen?‘ Vor allem auch der Zusammenhang zwischen der Liste und den Diagrammen ergibt dann [beim Zeitraum ‚eines Tages‘] ja keinen Sinn.“ (TP 06)

<sup>39</sup> „Natürlich hat man mit zunehmendem Alter körperliche und geistige Einschränkungen. Man hofft natürlich, dass das immer erst später kommt. Aber mit 75 Jahren ist die eine oder andere Einschränkung auf alle Fälle da.“ (TP 07)



Test person 10 expressed a wish rather than the subjective probability of having to reckon with restrictions one day: *"This goes towards 0. This is very optimistic, but you can wish for it. [...] I hope I will be 100 years old and then drop dead, physically still unharmed. That is wishful thinking. But of course, one of these things can happen to you every day, regardless of your age. Some people have strokes at 35 and are handicapped."*<sup>40</sup>

Test person 03 criticizes the question as too hypothetical: *"So, I should answer now what is in a few years? But that is a strange question. I can go out of here now and drop dead. I hope that I can do these things for many years to come. But who knows? [...] I'm going to be 76 soon and I think it's going to come to me sometime. But I don't know what's coming or when or how, it's impossible to predict."*<sup>41</sup> The figure she quotes (50%) therefore appears to be an estimate between 0% and 100% ('fifty-fifty').

Test person 05 initially interpreted the question as asking her to indicate which of the activities on the list she expected to be restricted in old age. Only after the interviewer had gone over the matter several times did she name a probability: *"If I assume that I will do something when I am that age, I think it will be shopping, because it might be difficult to walk when I think of myself."* [The interviewer points out that a general judgement should be given on all activities]. *"At an advanced age, when I see the age indications [on the graph], I would say between 65 and 70%. If I assume myself, I would say 65% in any case. [...] That's me, because I have to do with my feet anyway and I'm a bit limited and it doesn't get better, it gets worse. I think at that age it might be about this percentage that I'm not really mobile anymore."*<sup>42</sup>

### Recommendations:

Question: We recommend splitting the question into two questions and initially just asking whether the respondents have difficulties in one or more of the listed activities. Respondents who answer in the negative to this (first) question should then be asked about the likelihood of developing one or more of the listed limitations.

<sup>40</sup> „Das geht gegen 0. Das ist zwar sehr optimistisch, aber man darf sich das ja wünschen. [...] Ich hoffe, ich werde 100 Jahre alt und falle dann tot um, körperlich noch unversehrt. Das ist das Wunschdenken. Aber natürlich kann eines dieser Dinge täglich erwischt, ganz unabhängig vom Alter. Manche bekommen mit 35 einen Schlaganfall und sind anschließend gehandicapt.“ (TP 10)

<sup>41</sup> „Also, ich soll jetzt beantworten, was in ein paar Jahren ist? Das ist aber eine komische Frage. Ich kann ja jetzt hier rausgehen und tot umfallen. Ich hoffe, dass ich das noch viele Jahre kann. Aber wer weiß? [...] Ich werde jetzt bald 76 und denke, altersmäßig kommt das irgendwann auf mich zu. Aber was kommt und wann und wie, weiß ich ja nicht, das kann man ja nicht voraussagen.“ (TP 03)

<sup>42</sup> „Wenn ich jetzt von mir ausgehe, wenn ich irgendwann in dem Alter bin, denke ich, das Einkaufen, weil vielleicht das Laufen schwerfallen könnte, wenn ich an mich denke.“ [Die Testleiterin weist darauf hin, dass ein allgemeines Urteil über alle Tätigkeiten abgegeben werden soll.] „Im höheren Alter, wenn ich da [auf dem Schaubild] die Altersangaben sehe, würde ich schon sagen zwischen 65 und 70 %. Wenn ich von mir ausgehe, würde ich sagen 65 % auf jeden Fall. [...] Das ist bei mir, weil ich sowieso mit den Füßen zu tun habe und da ein bisschen eingeschränkt bin und es nicht besser wird, eher schlimmer. Ich denke, dass es in dem Alter ungefähr der Prozentsatz sein könnte, wo ich nicht mehr richtig beweglich bin.“ (TP 05)

In addition, we recommend making the reference period in the question more specific in order to avoid "100% answers" in the sense of "at some point, of course, you can't do all this anymore, and even if only shortly before death".

Diagrams:

We recommend removing the graphs from the list, as they were not included in the answers of most test persons, were not understood or were perceived as distracting. This will also considerably reduce the length of the question text and the complexity of the information to be processed.

If the graphs are retained, we recommend reconsidering the colour selection (e.g. it is not clear why the same shade of red was chosen both times for the majority group in the case of women, whereas the same shade of blue was chosen for the minority group in the case of men).

Instruction on rounding: This instruction does not seem to be very effective, so we recommend deleting it. This would also reduce the length and complexity of the question.

If the rounding note is retained, we recommend that you include two small modifications in the first sentence and a comma in the last (in the German translation): „Wenn Sie sich bei der Wahrscheinlichkeit unsicher sind, können Sie auch eine Spanne angeben. [...] Bitte versuchen Sie jedoch, ohne Rundung oder Näherung zu antworten.“

Response options:

No changes recommended with one exception: In the German translation, we recommend deleting "your" from the last list item "wash your laundry" [„Ihre Wäsche waschen“], as all other activities are also neutrally formulated.

## Question 6: Estimated expectation of care cost coverage by insurance

**Wie hoch ist die Wahrscheinlichkeit, dass, falls Sie eines Tages eine oder mehrere dieser Tätigkeitsbeschränkungen entwickeln, Ihre gesetzliche oder private Krankenversicherung die Pflegekosten vollständig oder teilweise übernimmt?**

**[What are the chances that, in case you develop sometime in the future one or more of these activity limitations, the basic health insurance/national health system will cover the costs of long-term care, fully or in part?]**

*[Interviewer: Nur vorlesen, wenn der Befragte/r keine Antwort gibt]:*

*Wenn Sie sich über die Wahrscheinlichkeit unsicher sind, können Sie eine Spanne angeben. Zum Beispiel können Sie etwas sagen wie „weniger als 20 Prozent“, „zwischen 30 und 40 Prozent“ oder „mehr als 80 Prozent“. Bitte versuchen Sie jedoch ohne Rundung oder Näherung zu antworten.*

*[Interviewer: only read out if respondent does not provide an answer:*

*(If you are uncertain about the chances, you may give a range. For example, you may say something like “less than 20 percent,” “between 30 and 40 percent” or “greater than 80 percent”. In any case, please try to answer without rounding or approximating.)]*

\_\_\_\_\_ %

(Weiß nicht) [Don't know]

(Verweigerung) [Refusal]

### Answers (N = 8)

TP 01	70%
TP 02	100%
TP 03	50%
TP 04	-
TP 05	95%
TP 06	100%
TP 07	Don't know
TP 08	-
TP 09	80%
TP 10	Don't know

**Cognitive techniques:**

General Probing, Difficulty Probing

**Key questions and findings:**

Question 6 was only asked, if question 5 was not answered with „I already have one or more of these limitations“. This applied to eight respondents.

**Do the respondents have difficulties to understand and/or answer the question?**

The cognitive interviews revealed various problems with this question. Firstly, four subjects (TP 01, 03, 05, 09) interpreted the question as asking them to indicate what percentage of the nursing care costs would probably be covered by their health insurance:

- TP 01: *Well, I have a mother in need of care that I have in my mind's eye right now. And that has worked out so far, so I need someone who can take care of her. And this is also covered by the health insurance.*

INT: *Why did you not answer 100%?*

TP 01: *Because that is not true.*

INT: *Because not 100% of the costs are covered or 100% of the restrictions are not there?*

TP 01: *Because not 100% of the costs are covered. Maybe it is 80%, maybe I have misjudged a little bit. But in no case 100%.*

INT: *So the 70% [the TP's answer] refers to the costs that you estimate will be covered?*

TP 01: *Yes.*

- *"I would say that the health insurance company covers part of it, not all. 50%. They already cause problems when you get a tooth pulled. I have extra insurance for that, too." (TP 03, answer: "50%")*
- *"I came up with it because I have already consulted with the health insurance company about what it looks like when I can no longer climb stairs. Then they said that 95% of it would be covered. That I would get some kind of shopping assistance." (TP 05, answer: "95%")*
- *"Well, it's partially covering the costs. The allowance pays 70% and for the remaining 30% I have to take out private insurance. That changes from time to time with the state aid law and also with the health insurance. Well, it won't cover everything, that's clear. The domestic help is not fully paid, you have to pay extra. I assume 80%." (TP 09, answer: "80%")*

Two other test persons (TP 07, 10) found the question too hypothetical and could not answer it ("don't know"):

- *"Can't answer. How should I know? It depends on which limitations you develop and in which care level you are classified. I don't know what's coming and if my insurance will pay for it."*<sup>43</sup> (TP 07)
- *"I'm not sure how much the public health insurance will cover it. That is always difficult to say, you always have to check with the health insurance company in individual cases. You can't say it in such a general way."*<sup>44</sup> (TP 10)

Test person 02 pointed out that the probability of the health insurance company assuming the costs of nursing care depends on the number of restrictions on activities. For some of the restrictions on the list, the probability would be 0%, for several 100%. Her answer ("100%") was therefore based on the premise that she would develop several of the activity restrictions in the future: *"If I only have one of these, no nursing care insurance will be considered. If I can't dig around in my garden, no nursing care insurance will come into question. I would have to have virtually all the points or quite a few of them. Let's say I can't use a map, but I can do the rest, then I don't need long-term care insurance. I'd have to have at least a few points. If I can't use the phone, I can still live well. [...] If you say half [of the restrictions], then nursing care insurance will probably help. [...] Well, that's what I signed up for, then it comes 100%."* (TP 02)<sup>45</sup>

Only test person 06 (answer: "100%") seemed to have no problems understanding and answering the question:

TP 06: *That comes eventually, that's definitely the case. It is also an experience from the care of my mother. It can't go on without sometime.*

INT: *And you are also sure that the costs of care will then be fully or partially covered by the insurance?*

TP 06: *This is the case with the statutory nursing care insurance. If you still have savings, they will of course be gone at some point, that's clear [laughs].*

Last but not least, after the first reading of the question by the interviewers, two test subjects (TP 01, 03) asked to have the question read out again. This could be due to the complex syntactic structure of the question (left-branched structure), where several sentence parts are nested and appear before the main verb of the question ("cover"). A right-branched structure would be easier to understand, e.g. "What is the probability that your statutory or private health insurance will

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<sup>43</sup> *„Kann ich nicht beantworten. Woher soll ich das wissen? Das kommt ja auch darauf an, welche Einschränkungen sich entwickeln und in welche Pflegestufe man eingruppiert wird. [...] Ich weiß nicht, was auf mich zukommt und ob das meine Kasse dann bezahlt.“* (TP 07)

<sup>44</sup> *„Da bin ich mir nicht sicher, inwieweit die gesetzliche Krankenversicherung da etwas übernimmt. Das ist immer schwer zu sagen, das muss man im Einzelfall immer mit der Krankenkasse klären. So pauschal kann man das nicht sagen.“* (TP 10)

<sup>45</sup> *„Wenn ich nur einen dieser Punkte habe, kommt keine Pflegeversicherung in Frage. Wenn ich nicht in meinem Garten herumgraben kann, kommt keine Pflegeversicherung. Ich müsste quasi alle Punkte oder ziemlich viele dieser Punkte haben. Nehmen wir an, ich kann nur „Benutzen einer Karte“ nicht, aber den Rest kann ich, dann brauche ich keine Pflegeversicherung. Ich müsste mindestens ein paar Punkte haben. Wenn ich nicht mehr telefonieren kann, kann ich trotzdem gut leben. [...] Wenn man die Hälfte [der Tätigkeitsbeschränkungen] sagt, dann kommt wahrscheinlich die Pflegeversicherung zu Hilfe. [...] Naja, dafür habe ich sie abgeschlossen, dann kommt sie 100%-ig.“* (TP 02)

cover all or part of the nursing costs if you develop difficulties in one or more of these activities one day?

**Recommendations:**

Because of the problems described above and the very hypothetical nature of the question, we recommend that it be deleted.

If the question is intended to measure respondents' confidence in their long-term care insurance(s), it could be reworded as follows:

"Long-term care insurance does not always cover the costs when people develop one or more of the above-mentioned activity limitations. How likely do you think it is that your long-term care insurance(s) will cover the costs of such restrictions? - Very likely, more likely, more unlikely, very unlikely."

[„Pflegeversicherungen übernehmen nicht immer die Kosten, wenn Menschen eine oder mehrere der genannten Tätigkeitseinschränkungen entwickeln. Für wie wahrscheinlich halten Sie es, dass Ihre Pflegeversicherung(en) die Kosten für solche Einschränkungen übernimmt? – Sehr wahrscheinlich, eher wahrscheinlich, eher unwahrscheinlich, sehr unwahrscheinlich.“]

If the question is retained, we recommend using the term "limitations" [“-einschränkungen”] instead of "restrictions" [“-beschränkungen”] in the German translation, as this word was used in the previous question, and, as in the previous question, include two small modifications in the first rounding sentence and a comma in the last: „Wenn Sie sich bei der Wahrscheinlichkeit unsicher sind, können Sie auch eine Spanne angeben. [...] Bitte versuchen Sie jedoch, ohne Rundung oder Näherung zu antworten.“

## Question 7: Estimated probability of purchasing private long-term care insurance in the future

**Wie hoch ist die Wahrscheinlichkeit in Prozent, dass Sie irgendwann in der Zukunft eine private Pflegeversicherung abschließen?**

**[What is the percent chance that you will purchase private long-term care insurance sometime in the future?]**

*(Interviewer: Falls unklar, bitte erklären):*

*Unter "privat" verstehen wir eine Versicherung, die bei einer privaten Gesellschaft abgeschlossen wird, entweder auf rein freiwilliger individueller Basis oder im Rahmen eines Pflichtsystems. Eine Pflegeversicherung hilft, die Kosten für Langzeitpflege zu decken. Sie deckt normalerweise häusliche Pflege, Pflegeunterstützung, ambulant betreutes Wohnen, Tagespflegeeinrichtungen, Aufenthalte in Alten- oder Pflegeheimen oder in einem Hospiz ab. Einige dieser Leistungen könnten auch durch eine Krankenversicherung übernommen werden.*

*(Interviewer: Falls unklar, bitte erklären):*

*Wenn Sie sich über die Wahrscheinlichkeit unsicher sind, können Sie eine Spanne angeben. Zum Beispiel können Sie etwas sagen wie „weniger als 20 Prozent“, „zwischen 30 und 40 Prozent“ oder „mehr als 80 Prozent“. Bitte versuchen Sie jedoch ohne Rundung oder Näherung zu antworten.*

*[Interviewer: If unclear, explain:*

*By "private" we mean insurance subscribed with a private company, either on a pure voluntary individual basis or through a mandatory scheme. Long-term care insurance helps cover the cost of long-term care. It generally covers home care, assisted living, adult day-care, respite care, hospice care, and stays in nursing homes or residential care facilities. Some of the long-term care services might be covered by your health insurance.]*

*[Interviewer: only read out if respondent does not provide an answer:*

*If you are uncertain about the chances, you may give a range. For example, you may say something like "less than 20 percent," "between 30 and 40 percent" or "greater than 80 percent". In any case, please try to answer without rounding or approximating.]*

\_\_\_\_\_ %

(Befragter hat noch nie von privaten Pflegeversicherung gehört)

[Respondent has never heard of private long-term care insurance]

(Weiß nicht) [Don't know]

(Verweigerung) [Refusal]

**Answers (N = 5)**

TP 01	30%
TP 02	-
TP 03	0%
TP 04	-
TP 05	0%
TP 06	0%
TP 07	-
TP 08	-
TP 09	-
TP 10	0%

**Cognitive techniques:**

General Probing, Difficulty Probing

**Key questions and findings:**

Question 7 was only asked to those respondents who had answered "no" to question 4, i.e. who had stated that they did not have private long-term care insurance. This was the case for six respondents, but only five of them received question 7. Test person 04 was not read the question because the interviewer had incorrectly noted in question 4 that the test person had a private compulsory long-term care insurance.

**1. Do the respondents have difficulties to understand and/or answer the question?**

All five test persons who received the question found it "rather easy" or "very easy" to answer. Four test persons (TP 03, 05, 06, 10) stated a probability of 0%, justifying this by saying that private long-term care insurance is too expensive or that one is too old to benefit from it:

- *"Zero percent. I would have to be 20 years younger for that. I can't afford it, as I said."*<sup>46</sup> (TP 03)
- *"Because the dues are too expensive, that's why I'll never sign up for one. It's just too expensive. If it was offered at a lower price, yes, but not like this - on a low budget - it's impossible."*<sup>47</sup> (TP 05)
- *"I'm just too old, which means I wouldn't pay enough into an insurance like that to make it worthwhile. I'm retiring in two years, so I should've started paying up sooner."*<sup>48</sup> (TP 10)

<sup>46</sup> „Null Prozent. Dafür müsste ich 20 Jahre jünger sein. [...] Ich kann mir das nicht leisten, wie gesagt.“ (TP 03)

<sup>47</sup> „Weil die Beiträge zu teuer sind, deswegen werde ich auch nie eine abschließen. Es ist einfach zu teuer. Wenn es günstiger angeboten würde, ja, aber so – mit einem niedrigen Budget – nicht möglich.“ (TP 05)



Test person 01 stated a probability of 30% and, when answering the question, thought above all about how her health would develop: *"I would make that dependent on how my state of health develops. Whether it will get worse. Then I could well imagine that. But I also need a lot of information. I haven't read up on it yet."*<sup>49</sup>

## 2. How do the respondents come to their answer? Do they name a specific value or a range of values (e.g. do they approximate or round)?

All five test persons gave a specific value (0%, 30%).

### Recommendations:

Question:	No changes recommended with one exception: As in the previous two questions, we recommend including two small modifications in the first rounding sentence and a comma in the last (in the German translation): „Wenn Sie sich bei der Wahrscheinlichkeit unsicher sind, können Sie auch eine Spanne angeben. [...] Bitte versuchen Sie jedoch, ohne Rundung oder Näherung zu antworten.“
Response Options:	No changes recommended.

<sup>48</sup> „Ich bin einfach zu alt, d. h., ich würde nicht mehr genug in eine solche Versicherung einbezahlen, damit sich das lohnt. Ich gehe in zwei Jahren in Rente, da hätte ich früher mit dem Einzahlen anfangen müssen.“ (TP 10)

<sup>49</sup> „Ich würde das davon abhängig machen, wie sich mein Gesundheitszustand entwickelt. Ob er sich verschlechtert. Dann könnte ich mir das durchaus auch vorstellen. Allerdings brauche ich da auch noch viele Informationen. Ich habe mich darüber noch nicht informiert.“ (TP 01)

## Question 8: Perceived cost of private long-term care insurance

**Nun würden wir Sie gerne zu den Kosten für den Abschluss einer privaten Pflegeversicherung befragen. Welche dieser Antwortmöglichkeiten trifft am besten auf Sie zu?**

**[Now we would like to ask you about the costs of buying private long-term care insurance. Which of the following options best applies to you?]**

*(Interviewer: Antwortoptionen vorlesen und eine markieren!)*

*[Interviewer: Read out and check only one!]*

- Ich kann es mir nicht leisten, eine private Pflegeversicherung abzuschließen  
[I can't afford to buy private long-term care insurance]
- Obwohl ich es mir leisten könnte, eine private Pflegeversicherung abzuschließen, finde ich sie zu teuer  
[Even though I could afford to buy private long-term care insurance, I think it's too expensive]
- Ich kann es mir leisten, eine private Pflegeversicherung abzuschließen und finde sie nicht zu teuer [I can afford to buy private long-term care insurance and I don't think it's too expensive]
- Ich habe nicht genug Informationen zu den Preisen von privaten Pflegeversicherungen  
[I don't have enough information about prices of private long-term care insurance]
- (Weiß nicht) [Don't know]
- (Verweigerung) [Refusal]

### Frequency distribution (N = 5)

I can't afford to buy private long-term care insurance	2
Even though I could afford to buy private long-term care insurance, I think it's too expensive	-
I can afford to buy private long-term care insurance and I don't think it's too expensive	-
I don't have enough information about prices of private long-term care insurance	3
<i>(Don't know)</i>	-
<i>(Refusal)</i>	-

### Cognitive techniques:

General Probing, Difficulty Probing, Specific Probing

### Key questions and findings:

Question 8 was only asked to those test persons who had answered question 7. This applied to five test persons who all answered question 8.

#### 1. Do the respondents have difficulties to understand and/or answer the question?

All five test persons who received the question found it "rather easy" or "very easy" to answer. Two respondents (TP 03, 05) stated that they could not afford private long-term care insurance and three respondents (TP 01, 06, 10) that they did not have enough information on the prices of private long-term care insurance. None of the test persons had problems understanding or answering the question:

- *"Due to lack of interest and need, I have not yet addressed this issue."*<sup>50</sup> (TP 01, reply: "I do not have enough information on the prices of private nursing insurance")
- *"I really can't afford it, otherwise I might have finished this a few years ago. But I only get a small pension. Because my husband died so early, I only get the small widow's pension."*<sup>51</sup> (TP 03, reply: "I cannot afford to take out private nursing care insurance")
- *"Simply because my money is no longer sufficient to live on if I take out such an insurance policy."*<sup>52</sup> (TP 05, Answer: "I cannot afford to take out private long-term care insurance")
- *"I haven't dealt with this subject for the past few years."*<sup>53</sup> (TP 06, reply: "I do not have enough information on the prices of private nursing care insurance")
- *"I never cared about that. I have absolutely no idea how much it would cost a month."*<sup>54</sup> (TP 10, reply: "I do not have enough information on the prices of private long-term care insurance")

#### 2. Are the response options complete or is a category missing?

When asked, none of the respondents indicated that they were missing an answer category or that they would have liked to give a different answer.

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<sup>50</sup> „Mangels Interesse und mangels Bedarf habe ich mich noch nicht darum gekümmert.“ (TP 01)

<sup>51</sup> „Ich kann mir das wirklich nicht leisten, ansonsten hätte ich das vielleicht schon vor ein paar Jahren abgeschlossen. Aber ich bekomme nur wenig Rente. Weil mein Mann so früh gestorben ist, bekomme ich nur die kleine Witwenrente.“ (TP 03)

<sup>52</sup> „Ganz einfach, weil mir mein Geld zum Leben nicht mehr ausreicht, wenn ich so eine Versicherung abschließe.“ (TP 05)

<sup>53</sup> „Ich habe mich die letzten Jahre nicht mit dem Thema befasst.“ (TP 06)

<sup>54</sup> „Ich habe mich darum nie gekümmert. Ich habe überhaupt keine Idee, wie viel das im Monat kosten würde.“ (TP 10)

**Recommendations:**

Question: No changes recommended.

(Note: In the third answer option, a comma is missing after the infinitive construction in the German translation: „Ich kann es mir leisten, eine private Pflegeversicherung abzuschließen, und finde sie nicht zu teuer.“)

Response Options: No changes recommended.

## Question 9: Online activities

**Haben Sie während der letzten 3 Monate das Internet für folgende Tätigkeiten genutzt...**

**[During the past 3 months did you use the Internet to...]**

*Interviewer: Alle Antwortoptionen einzeln vorlesen und alle zutreffenden angeben.*

*[Interviewer: Read out each option separately and code all that apply]*

- E-Mails versenden und empfangen  
[Sending and receiving emails]
- Mit Familie und Freunden telefonieren oder chatten (z.B. mit WhatsApp oder Skype)  
[Calling or chatting with family and friends (e.g., with WhatsApp or Skype)]
- Aktivitäten in sozialen Netzwerken (z.B. Facebook, Twitter, Instagram)  
[Participating in social media (e.g., Facebook, Twitter, Instagram)]
- Waren und Dienstleistungen kaufen und verkaufen  
[Purchasing or selling goods or services]
- Rechnungen bezahlen oder Onlinebanking nutzen  
[Paying bills or using Internet banking]
- Fernsehen oder Videos schauen, Radio oder Musik hören  
[Watching TV or videos, listening to the radio or music]
- Spiele spielen  
[Playing games]
- Nachrichten suchen oder lesen  
[Searching or reading news]
- Informationen zu Gesundheitsthemen suchen  
[Searching for health-related information]
- Andere Informationen suchen  
[Searching for other information]
- An einem Forum oder einer Internetcommunity teilnehmen  
[Taking part in a forum or online community]
- Nutzung Onlinedating-Dienste  
[Accessing online dating services]
  
- (Weiß nicht) [Don't know]
- (Verweigerung) [Refusal]

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**Frequency distribution (N = 10)**

	<b>No. of mentions</b>
Sending and receiving emails	8
Calling or chatting with family and friends (e.g., with WhatsApp or Skype)	7
Participating in social media (e.g., Facebook, Twitter, Instagram)	6
Purchasing or selling goods or services	8
Paying bills or using Internet banking	7
Watching TV or videos, listening to the radio or music	8
Playing games	5
Searching or reading news	8
Searching for health-related information	6
Searching for other information	8
Taking part in a forum or online community	4
Accessing online dating services	2
<i>(Don't know)</i>	-
<i>(Refusal)</i>	-

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**Cognitive techniques:**

Specific Probing

**Key questions and findings:****1. Is an answer category missing?**

The probe whether the test persons had used the Internet for other activities not mentioned in the question was answered in the affirmative only by test person 02, who runs her own website: *"I run my own website and am my own webmaster. I do that every day. I set up a server with a friend of mine, yes, the usual. Nothing special."*<sup>55</sup>(TP 02)

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<sup>55</sup> „Ich betreibe meine Webseite selbst und bin mein eigener Webmaster. Das mache ich täglich. Ich habe mit einem Bekannten von mir einen Server eingerichtet, ja, das Übliche. Nichts Besonderes.“ (TP 02)

Two test persons (TP 03, 04) interrupted the test leaders before they could read out the answer options and explained that they had no Internet:

- *"I don't have Internet. I do not need it. I don't even have a smartphone."*<sup>56</sup> (TP 03)
- *"I don't have Internet."*<sup>57</sup> (TP 04)

In order to clearly distinguish the answers of such respondents from "don't know" answers, refusals or even interviewer errors (when not noting down the respondents' answers), we recommend adding an additional answer option such as "I do not use the Internet".

## 2. Are all answer categories understandable?

All eight test persons using the Internet found the answer categories "rather understandable" ( $n = 2$ ) or "very understandable" ( $n = 6$ ). Accordingly, none of the test persons stated that they were unclear or unfamiliar with any of the activities.

### Recommendations:

Question:	Since both a single and multiple answers can occur, we recommend adding "one or more of the" to the question:  "Have you used the Internet in the last 3 months for <u>one or more of the</u> following activities?".  [„Haben Sie während der letzten 3 Monate das Internet für <u>eine oder mehrere der</u> folgenden Tätigkeiten genutzt?“.]
Response Options:	The answer options should be supplemented by the category "I do not use the Internet" ["Ich nutze das Internet nicht"]. In addition, we recommend making a modification to the last answer option in the German translation ("Nutzung <u>von</u> Onlinedating-Diensten").

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<sup>56</sup> „Ich habe kein Internet. Ich brauche das nicht. Ich habe noch nicht einmal ein Smartphone.“ (TP 03)

<sup>57</sup> „Ich habe kein Internet.“ (TP 04)





## Key questions and findings:

### 1. How do respondents understand the term „financial knowledge“?

Two test persons (TP 02, 06) asked directly after hearing the question, what was meant by the term "financial knowledge":

- *"My financial knowledge? [Is it about] my own finances or about financial knowledge in the sense of financing processes, for example, in the state sense, i.e. what the Federal Republic of Germany does?"<sup>58</sup> (TP 02)*
- *"Hmm, financial knowledge. That's good, define that. That's a great word! [...] That's a broad word. It ranges from savings to options trading. Economics, micro and macro economics, gross domestic product. The question is nonsense to me. Far too vague, too undefined."<sup>59</sup> (TP 06)*

For seven test persons (TP 01, 02, 04, 06, 07, 08, 10), the term "financial knowledge" included both knowledge about private financial circumstances and processes and knowledge about more global, market or financial interrelationships and processes. All of these test persons assigned either a scale value of 4 (if they estimated their knowledge of global interrelationships to be rather low) or a scale value of 5 (if they estimated their knowledge of financial processes to be somewhat higher):

- *"I have just bought a few funds. I am interested in this. I also do online banking and I think I have a little more than mediocre knowledge about it. [...] [To me, financial knowledge means] maybe having a little bit of knowledge in the field of economics and politics. But also personal finances of course, that I have an overview."<sup>60</sup> (TP 01, answer: 5)*
- *"Financial knowledge in the sense of processes of financing, for example, in the state sense, i.e. what the Federal Republic of Germany does. I have just as much as no idea how they juggle billions. The connections, the gross national product, that's what I mean, is not my strength. I can estimate it, but it's not my strength. I know my own finances, of course, I know these well."<sup>61</sup> (TP 02, answer: 4)*
- *"[The value 5,] because I know relatively well about finances, through my studies and interest in the subject. I also went to business high school. So finance is already something that is very important for me, every day. Online banking, trading and a little gambling on the side.*

<sup>58</sup> „Mein Finanzwissen? [Geht es um] meine eigenen Finanzen oder um Finanzwissen im Sinne von Abläufe einer Finanzierung, zum Beispiel, im staatlichen Sinn, also, was die Bundesrepublik macht?“ (TP 02)

<sup>59</sup> „Hm, Finanzwissen. Das ist gut, definieren Sie das mal. Das ist ja ein klasse Wort! [...] Das ist weit gefasst. Das reicht vom Sparbuch bis zum Optionenhandel. Volkswirtschaftslehre, Mikro- und Makroökonomie, Bruttoinlandsprodukt. Die Frage ist für mich Nonsens. Viel zu ungenau, undefiniert.“ (TP 06)

<sup>60</sup> „Ich habe mir gerade ein paar Fonds gekauft und bin öfter bei der Bank tätig. Ich interessiere mich dafür. Ich mache auch Onlinebanking und denke, dass ich etwas mehr als mittelmäßiges Wissen darüber habe. [...] [Finanzwissen bedeutet für mich,] vielleicht ein bisschen Wissen im Bereich Wirtschaft und Politik zu haben. Aber auch die persönlichen Finanzen natürlich, dass ich einen Überblick habe.“ (TP 01)

<sup>61</sup> „Finanzwissen im Sinne von Abläufe einer Finanzierung, zum Beispiel, im staatlichen Sinn, also was die Bundesrepublik macht. Da habe ich genauso viel wie null Ahnung, wie sie mit Milliarden jonglieren. Die Zusammenhänge, das Brutto-Sozialprodukt, das meine ich, sind nicht meine Stärke. Ich kann es abschätzen, aber das ist nicht meine Stärke. Meine eigenen Finanzen, natürlich, kenne ich gut.“ (TP 02)

*You always have to be informed, like now with the corona virus, what effects it has on the stock market.*"<sup>62</sup> (TP 06, answer: 5)

- *"I'm in charge of our finances. I also have basic knowledge in this area, but I don't get involved in stock trading or anything like that. I don't know anything about that. That's why the four [...]."*<sup>63</sup> (TP 08, answer: 4)

The remaining three test persons focused either exclusively on their knowledge of private finances (TP 03, 05) or on their knowledge of financial processes (TP 09). Accordingly, these test persons rated their financial knowledge either very high (TP 03: scale value 7, TP 05: scale value 6) or comparatively low (TP 09: scale value 3):

- *"[Very high, 7] because I still do everything myself, my payments and insurances and everything. So I have to know about my finances, how much money I still have and how much I am allowed to spend."*<sup>64</sup> (TP 03)
- *"[Value 6] because I know very well about my finances and I manage everything very well. [...] By financial knowledge I mean when I have my fixed amount in the account and I try to deal with it so that I have enough for the whole month and everything is paid for."*<sup>65</sup> (TP 05)
- *"[By financial knowledge I mean] that you know about stock prices and things like that. I've never really thought much about it. If I say someone has financial knowledge, he must have studied or learned it. A banker, for example."*<sup>66</sup> (TP 09)

Overall, the results of the cognitive interviews indicate that the interpretation of the term "financial knowledge" has a systematic influence on the answer to the question.

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<sup>62</sup> „[Der Wert 5,] weil ich mich doch relativ gut mit Finanzen auskenne, durch das Studium und Interesse am Thema. Ich war auch auf dem Wirtschaftsgymnasium. Also Finanzwesen ist schon etwas, das für mich sehr wichtig ist, jeden Tag. Onlinebanking, Traden und ein bisschen Zocken nebenbei. Man muss sich auch immer informieren, wie jetzt mit dem Coronavirus, welche Auswirkungen das auf die Börse hat.“ (TP 06)

<sup>63</sup> „Ich kümmerge mich bei uns um die Finanzen. Ich habe da auch grundlegende Kenntnisse, aber von Aktienhandel oder Ähnlichem lasse ich die Finger. Da habe ich keine Ahnung davon. Deswegen die 4 [...].“ (TP 08)

<sup>64</sup> „[Sehr groß, 7], weil ich das alles noch selbst mache, meine Zahlungen und Versicherungen und alles. Da muss ich ja über meine Finanzen Bescheid wissen, wie viel Geld ich noch habe und wie viel ich ausgeben darf.“ (TP 03)

<sup>65</sup> „[Wert 6], weil ich über meine Finanzen sehr gut Bescheid weiß und es alles sehr gut meistere. [...] Unter Finanzwissen verstehe ich, wenn ich meinen Fixbetrag auf dem Konto habe und ich versuche damit umzugehen, sodass es mir für den ganzen Monat ausreicht und alles bezahlt ist.“ (TP 05)

<sup>66</sup> „[Unter Finanzwissen verstehe ich], dass man sich mit Börsenkursen und solchen Dingen auskennt. Ich habe mich damit noch nie groß beschäftigt. Wenn ich sage, jemand hat Finanzwissen, dann muss er das auch studiert oder gelernt haben. Ein Bankkaufmann zum Beispiel.“ (TP 09)

## 2. Is the showcard helpful or not needed?

As in question 1, all but two test persons (TP 01, 02) stated that presenting the card made it easier to answer the question:

- *"That's OK, rather helpful."*<sup>67</sup> (TP 07)
- *"That's more helpful when you have it in front of you."*<sup>68</sup> (TP 09)

### Recommendations:

Question: In order to avoid the term "financial knowledge" being interpreted differently, we recommend it to be defined. One possible formulation would be:

"Financial knowledge here means the understanding of financial issues and the ability to make appropriate and informed decisions about personal finances, such as budgeting, investments, insurance, real estate, debt management or tax planning."

[„Unter Finanzwissen verstehen wir hier das Verständnis von Themen im Finanzbereich sowie die Fähigkeit, angemessene und informierte Entscheidungen über persönliche Finanzen zu treffen, wie z. B. Haushaltsplanung, Geldanlagen, Versicherungen, Immobilien, Schuldenverwaltung oder Steuerplanung.“]

Response Options: No changes recommended.

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<sup>67</sup> „Das ist O. K., eher hilfreich.“ (TP 07)

<sup>68</sup> „Das ist schon eher hilfreich, wenn man das vor sich liegen hat.“ (TP 09)

## Question 11A: Partnership

**Haben Sie zurzeit einen Lebenspartner oder eine Lebenspartnerin?**

**[Do you currently have a partner?]**

- Ja → weiter mit Frage 11b [Yes → continue with question 11b]
- Nein → weiter mit Frage 12 [No → continue with question 12]
  
- (Weiß nicht) [Don't know]
- (Verweigerung) [Refusal]

### Frequency distribution (N = 10)

Yes	6
No	4
(Don't know)	-
(Refusal)	-

### Cognitive techniques:

None (filter question)

### Findings:

None of the test persons commented on this question and the interviewers did not note problems either.

### Recommendations:

Question: No changes recommended.

Response Options: No changes recommended.

## Question 11B: Planning financial future as a couple

**Planen Sie und Ihr Partner Ihre finanzielle Zukunft gemeinsam als Paar?**

**[Are you and your partner planning your financial future together as a couple?]**

- Ja [Yes]
- Nein [No]
  
- (Weiß nicht) [Don't know]
- (Verweigerung) [Refusal]

### Frequency distribution (N = 6)

Yes	5
No	1
(Don't know)	-
(Refusal)	-

### Cognitive techniques:

General Probing, Comprehension Probing

### Key questions and findings:

Question 11B was only asked to those respondents who had indicated in question 11A that they currently have a partner. This was the case for six respondents who all answered question 11B.

#### 1. How do the respondents interpret the question? How do respondents understand the term „planning your financial future as a couple“?

All test persons interpreted the question as to whether or not they had a joint account with their partner, or whether or not they shared both income and expenses. Five of the six respondents answered question 11B in the affirmative, only respondent 06 stated that he and his partner kept separate accounts:

- *"I have only been with my partner for three years and each has his own account and manages his own finances. [...] For me, ['planning the financial future together'] would mean having a joint account into which both pay and from which everything is paid"<sup>69</sup> (TP 06)*
- *"It was always clear to us. Since we've been married, we've been doing this together. It is also very important that both partners have insight into the finances and know where the money is invested. And also how it is spent. Over the years we have acquired something. A house, a small fortune perhaps also. And for the future, it is important to regulate what happens if something happens to either of them. That you're covered."<sup>70</sup> (TP 09)*
- *"We'll emigrate in two years and then throw all the money together. And then we'll see where that takes us. [...] ['Planning the financial future together'] means throwing everything together or sharing the expenses that arise."<sup>71</sup> (TP 10)*

Two test persons (TP 02, 07) also mentioned that they did not want to separate from their partner. However, a misinterpretation, as feared before the pretest (i.e. that the question could be interpreted as to whether one plans to separate from one's partner), was probably not present here. Rather, the test persons gave the impression that they were starting from their current situation and using the unplanned separation as a reason why this situation would continue in the future:

- *"We are both 62 and we talk about it often. And my husband is retiring with, I think, 66/67 and therefore ... so to speak ... we just look at it and therefore together, yes. And also together financially, so we don't intend to separate or divorce, but rather to shape a future together in retirement. [...] That we both protect each other financially. I am self-employed, but my husband is employed and he has more advantages than I do. Therefore, we are combining our financial possibilities."<sup>72</sup> (TP 02)*

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<sup>69</sup> „Ich bin erst seit drei Jahren mit meiner Partnerin zusammen und jeder hat sein eigenes Konto und regelt seine eigenen Finanzen. [...] Für mich würde [die finanzielle Zukunft gemeinsam planen] heißen, dass man ein gemeinsames Konto hat, in das beide einzahlen und von dem alles bezahlt wird.“ (TP 06)

<sup>70</sup> „Das war für uns immer klar. Seit wir verheiratet sind, machen wir das zusammen. Das ist auch sehr wichtig, dass beide Partner Einsicht in die Finanzen haben und wissen, wo das Geld angelegt ist. Und auch wie es ausgegeben wird. [...] Im Laufe der Jahre hat man sich etwas angeschafft. Ein Haus, ein kleines Vermögen vielleicht auch. Und für die Zukunft ist es wichtig, dass man regelt, was passiert, wenn einem der beiden etwas zustößt. Dass man abgesichert ist.“ (TP 09)

<sup>71</sup> „Wir werden in zwei Jahren auswandern und dann das ganze Geld zusammenwerfen. Und dann schauen wir mal, wo uns das hinführt. [...] [Die finanzielle Zukunft gemeinsam planen] bedeutet, dass man alles zusammen wirft bzw. die Unkosten teilt, die entstehen.“ (TP 10)

<sup>72</sup> „Wir sind beide 62 und reden öfters auch darüber. Und mein Mann geht mit, glaube ich, 66/67 in die Rente und deswegen ... sozusagen schauen wir halt dahin und daher auch gemeinsam, ja. Und finanziell auch gemeinsam, also, wir haben nicht vor, uns zu trennen oder scheiden zu lassen, sondern eher gemeinsam eine Zukunft im Rentenalter zu gestalten. [...] Dass wir uns beide gegenseitig absichern, also finanziell. Ich bin selbstständig, mein Mann ist aber angestellt und er hat dadurch mehr Vorteile als ich. Daher fügen wir unsere finanziellen Möglichkeiten zusammen.“ (TP 02)

- *”Because I want to be with my wife for the rest of my life. That automatically follows. I wasn't planning on divorcing my wife at some point. [...] Financial future is mutual assurance.”*<sup>73</sup>  
(TP 07)

## 2. Are there any other problems?

The interviewers occasionally noted that the female form of “partner” should also be included in the German translation of the question, as otherwise unpleasant situations may arise, especially as both the male and female forms are mentioned in the previous question. For example, a test person answered question 11A with *”Yes, I am married to my wife”*, but then received the question *”Do you and your partner plan ...”*, which the interviewer found unpleasant.

### Recommendations:

Question:	We recommend, analogous to question 11A, to include the female form of "partner" [“Ihre Partnerin”] in the German translation of the question text.
Response Options:	No changes recommended.

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<sup>73</sup> *„Weil ich mit meiner Frau bis zu meinem Lebensende zusammen sein möchte. Daraus ergibt sich das automatisch. Ich habe nicht geplant, mich irgendwann von meiner Frau scheiden zu lassen. [...] Finanzielle Zukunft ist die gemeinsame Absicherung.“* (TP 07)

## Question 12: Napping/resting during daytime

Die folgenden Fragen beziehen sich auf Ihren Schlaf. Wie viel Zeit haben Sie gestern mit Schlafen oder Ausruhen während des Tages verbracht? Nächtlichen Schlaf bitte nicht miteinbeziehen.

[The next questions are related to your sleep. How much time did you spend yesterday on napping and resting during daytime? Do not include sleeping at night time.]

Stunden [Hours]: \_\_\_\_\_

Minuten [Minutes]: \_\_\_\_\_

(Weiß nicht) [Don't know]

(Verweigerung) [Refusal]

### Answers (N = 10)

TP 01	45 min
TP 02	1 h
TP 03	1h 30 min
TP 04	0 min
TP 05	0 min
TP 06	2 h
TP 07	0 min
TP 08	1 h
TP 09	0 min
TP 10	1 h

### Cognitive techniques:

General Probing, Comprehension Probing, Specific Probing

### Key questions and findings:

#### 1. What do the respondents think about when answering the question? How do they arrive at their answers?

Most of the respondents ( $n = 7$ ) referred in their answers to sleeping or lying down during the day and stated that they either did so regularly (TP 03, 06, 08, 10) or rather rarely or never (TP 04, 07, 09):



- *"As a pensioner, I can afford to take an afternoon nap. This does not always result in sleeping, but sometimes in resting. But mostly I fall asleep anyway. An hour almost every day."*<sup>74</sup> (TP 08)
- *"When I come home at noon, I always lie down for an hour."*<sup>75</sup> (TP 10)
- *"Not at all. During the day, I only do it when I'm feeling bad. Then maybe I lie down for an hour between 2:00 and 3:00. But that doesn't happen very often. It's rare."*<sup>76</sup> (TP 04)
- *"Well, I didn't sleep during the day yesterday. Some people take naps regularly. But for me, it's only three or four times a month."*<sup>77</sup> (TP 09)

Of the remaining three test persons (TP 01, 02, 05), two stated that they had rested for 45 minutes (TP 01) and one hour (TP 02) on the previous day. However, it is not clear whether both test persons understood the term "resting" in the sense of the intention of the question. While - in our opinion - the question is about resting in the sense of "lying down and doing nothing", the two test persons interpreted resting as "taking a break from work and reading something, watching TV or playing around with the computer or mobile phone":

- *"I was thinking about how long I was lying on the couch reading the newspaper."*<sup>78</sup> (TP 01)
- *"Yesterday I took a break. [...] Well, yesterday I took a break. I worked a little, read a little, watched a little. An hour yesterday. [...] I was tired and thought I had to take a break, [because] I knew I had to work late at night. And that's why I forced myself to stop and take a break for an hour, so to speak. That's why it stayed in my head, because I was forcing myself to take a break - or rest."*<sup>79</sup> (TP 02)

## 2. How do they understand „napping and resting during daytime“?

When asked what they mean by "sleeping during daytime", all test persons stated that they associated it with a nap. Two subjects additionally specified that this did not only mean "lying on the couch" or "dozing", but "falling asleep properly" (TP 06, 08), while two other subjects explicitly included "lying down" or "holding a power nap" (TP 01, 02).

<sup>74</sup> „Als Rentner kann ich es mir leisten, ein Mittagsschläfchen zu halten. Das mündet zwar nicht immer im Schlafen, sondern, das ist manchmal auch nur Ruhen. Aber meistens schlafe ich dann trotzdem ein. So eine Stunde fast jeden Tag.“ (TP 08)

<sup>75</sup> „Wenn ich mittags nach Hause komme, lege ich mich immer für eine Stunde aufs Ohr.“ (TP 10)

<sup>76</sup> „Gar nicht. Tagsüber mache ich das nur, wenn es mir mal schlecht geht. Dann lege ich mich vielleicht mal zwischen 14 und 15 Uhr eine Stunde hin. Aber das passiert nicht so oft. Das ist selten.“ (TP 04)

<sup>77</sup> „Also, gestern habe ich nicht geschlafen tagsüber. [...] Manche Leute machen ja regelmäßig Mittagsschlaf. Aber bei mir kommt das nur drei- bis viermal im Monat vor.“ (TP 09)

<sup>78</sup> „Ich habe daran gedacht, wie lange ich auf der Couch lag und die Zeitung gelesen habe.“ (TP 01)

<sup>79</sup> „Gestern habe ich eine Pause gemacht. [...] Also, gestern habe ich pausiert. Ich habe etwas gearbeitet, habe etwas gelesen, etwas geguckt. Eine Stunde gestern. [...] Ich war müde und dachte, ich muss eine Pause machen, [da] ich wusste, dass ich abends spät arbeiten muss. Und deswegen habe ich mich dann gezwungen, sozusagen zu stoppen und eine Stunde Pause zu machen. Deswegen ist mir das so im Kopf geblieben, weil ich mich sozusagen gezwungen habe, mich selbst in die Pause geschickt – oder ausgeruht [habe].“ (TP 02)

The test persons were also asked to explain what they mean by "resting during daytime". Only two subjects interpreted the term as "lying down and doing nothing" (TP 06, 08):

- *"To lie down for a while, but not to be really gone."*<sup>80</sup> (TP 06)
- *"Not to sleep, but to be physically inactive and not to watch TV or something."*<sup>81</sup> (TP 08)

The rest of the test subjects understood it to mean drinking a coffee, reading, spending time on the mobile phone, watching television or listening to music:

- *"Resting is putting your feet on the table, having a cup of coffee and, for example, reading the newspaper or chatting on WhatsApp or something."*<sup>82</sup> (TP 01)
- *"Oh, that's sitting down and reading, for instance, that's resting."*<sup>83</sup> (TP 02)
- *"Just sit down, legs up, read a book, listen to music."*<sup>84</sup> (TP 05)

### 3. How representative was yesterday regarding the ordinary napping and resting behavior?

Seven of the ten test persons stated that they regularly spent as much time sleeping and/or resting during the day (TP 01, 04, 05, 07, 08, 09, 10). The remaining three subjects stated that their answer to question 12 was exceptional.

#### Recommendations:

**Question:** We recommend rephrasing the question. Firstly, it should be made clear that the focus of the question is on active recreation (sleeping or lying down). On the other hand, we recommend adjusting the reference period to ensure that the typical behavioral patterns of the respondents are recorded. A possible formulation of the question is:

"On a typical day, how much time do you spend napping or lying down and doing nothing actively during daytime? Please do not include sleep at night."

[„Wie viel Zeit verbringen Sie an einem typischen Tag damit, einen Mittagsschlaf zu halten oder sich mittags hinzulegen und nichts aktiv zu tun? Bitte beziehen Sie nächtlichen Schlaf nicht mit ein.“]

**Response Options:** No changes recommended.

<sup>80</sup> „Sich mal kurz hinlegen, aber nicht richtig weg sein.“ (TP 06)

<sup>81</sup> „Nicht schlafen, aber eben körperlich inaktiv sein und auch nicht Fernsehen schauen oder so.“ (TP 08)

<sup>82</sup> „Ausruhen ist Füße auf den Tisch legen, eine Tasse Kaffee trinken und z. B. Zeitung lesen oder WhatsApp chatten oder so etwas.“ (TP 01)

<sup>83</sup> „Och, das ist auch mal sich hinsetzen und z. B. etwas lesen, das ist Ausruhen.“ (TP 02)

<sup>84</sup> „Sich einfach mal hinsetzen, Beine hoch, Buch lesen, Musik hören.“ (TP 05)

## Question 13: Trouble sleeping

### Hatten Sie in letzter Zeit Schlafstörungen?

#### [Have you had trouble sleeping recently?]

- Ich hatte Schlafstörungen oder Veränderungen des Schlafverhaltens in der letzten Zeit  
[I had trouble with sleep or recent change in pattern]
- Ich hatte kein Problem mit dem Schlafen  
[I had no trouble sleeping]
- (Weiß nicht) [Don't know]
- (Verweigerung) [Refusal]

#### Frequency distribution (N = 10)

I had trouble with sleep or recent change in pattern	5
I had no trouble sleeping	5
(Don't know)	-
(Refusal)	-

#### Cognitive techniques:

None

#### Key questions and findings:

##### 1. Do the interviewers have to read out the answer categories or can they sort the answers of the respondents doubtlessly into the answer categories?

In the run-up to the pretest, GESIS pointed out that the answer categories here do not fit the question, since the question only implies the answers "yes" or "no". It was therefore feared that the interviewers might have difficulties in clearly assigning the answers of the respondents to one of the answer categories. However, these fears could not be confirmed in the pretest.

##### 2. Does the answer to question 13 match the answer to question 14?

Comparing the answers of the test persons to question 13 and question 14, it becomes clear that the test persons were thinking mainly of serious sleep problems in question 13: all five test persons who answered question 13 in the negative (TP 03, 04, 06, 07, 08) stated in question 14 that they suffered from at least one sleep problem (see Table 3).

**Table 3.** Conflicting answers between question 13 and question 14

<b>Test person</b>	<b>Answer question 13</b>	<b>Answer question 14</b>
03	I had no trouble sleeping	I wake up in the middle of the night or early morning and am not able to fall asleep again; I have to get up to use the bathroom; I feel cold; I have fears or concerns
04	I had no trouble sleeping	I wake up in the middle of the night or early morning and am not able to fall asleep again; I have to get up to use the bathroom
06	I had no trouble sleeping	I have to get up to use the bathroom; I cough or snore loudly
07	I had no trouble sleeping	I cough or snore loudly
08	I had no trouble sleeping	I have to get up to use the bathroom

**Recommendations:**

**Question:** The results of the cognitive interviews suggest that "minor" sleep problems such as snoring or having to go to the toilet at night are not considered in this question or are not rated as "sleep disorders" by several test persons. If these problems are to be treated as "sleep disorders", we recommend deleting question 13 and using question 14 in the questionnaire instead.

**Response Options:** Even if the interviewers had no problems sorting the respondents' answers into the given answer categories in the pretest, we still recommend to change the answer options to "Yes" and "No" (or at least to put a "Yes" or "No" in front of the answer options), since question 13 only allows these two answers.

## Question 14: Reasons for sleep-related issues

**Bitte sehen Sie sich Liste 5 an. Wenn Sie an den letzten Monat denken, trifft eine dieser Beschreibungen in Bezug auf Ihr Schlafverhalten auf Sie zu?**

- Ich kann nicht innerhalb von 30 Minuten einschlafen
- Ich wache mitten in der Nacht oder am frühen Morgen auf und kann nicht wieder einschlafen
- Ich muss aufstehen, um auf die Toilette zu gehen
- Ich kann nicht unbeschwert atmen
- Ich huste oder schnarche laut
- Mir ist oft kalt
- Mir ist oft zu warm
- Ich träume schlecht
- Ich habe Schmerzen
- Ich habe Ängste und Sorgen
- Ich höre Geräusche
  
- (Weiß nicht)
- (Verweigerung)

**[Please look at card 5. Thinking back of the past month, do any of these descriptions apply to you with regard to your sleep?]**

- I can't get to sleep within 30 minutes
- I wake up in the middle of the night or early morning and am not able to fall asleep again
- I have to get up to use the bathroom
- I can't breathe comfortably
- I cough or snore loudly
- I feel cold
- I feel too hot
- I have bad dreams
- I have pain
- I have fears or concerns
- I hear noises
  
- (Don't know)
- (Refusal)

**Frequency distribution (N = 10)**

	<b>No. of mentions</b>
I can't get to sleep within 30 minutes	3
I wake up in the middle of the night or early morning and am not able to fall asleep again	5
I have to get up to use the bathroom	6
I can't breathe comfortably	1
I cough or snore loudly	4
I feel cold	1
I feel too hot	1
I have bad dreams	-
I have pain	-
I have fears or concerns	2
I hear noises	2
<i>(Don't know)</i>	-
<i>(Refusal)</i>	-

**Cognitive techniques:**

General Probing, Confidence Rating, Difficulty Probing, Specific Probing

**Key questions and findings:****1. How do the respondents interpret the question? How do they arrive at their answer?**

The most frequently mentioned problems were having to go to the toilet at night ( $n = 6$ ), waking up in the middle of the night or early morning and not being able to go back to sleep ( $n = 5$ ) and loud coughing or snoring ( $n = 4$ ). Apart from having bad dreams and pain during the night, all response options were selected by at least one person.

The following explanations were given by the test persons for the most frequently selected options:

- *"I have very small and narrow nasal conches, which are often closed because I also have an allergy. Especially when I am lying flat in bed. [...] This also includes the fact that I snore*

louder because of this. And unfortunately, I go to the toilet often, not daily, but maybe three nights a week."<sup>85</sup> (TP 01)

- "Well, I wake up in the middle of the night or early in the morning, around 5:00, can't go back to sleep."<sup>86</sup> (TP 02)
- "I have to get up and go to the bathroom, that's right. Probably because I drink so much water in the evening. In the early morning I wake up and can't get back to sleep. Yeah, that's why I'm always up so early, 6:30 or 7:00."<sup>87</sup> (TP 03)
- "One is the bladder, the other the snoring. But I don't hear it, I only get told in the morning."<sup>88</sup> (TP 06)

Other test persons explained their problems with not being able to sleep due to stress, fears or worries.

- "And fears and worries, yes, well, I have such moments once in a while and they wake me up at night. That is, I'm awake and think about how you solve the problem. By worrying, especially by worrying."<sup>89</sup> (TP 02)
- "I have fears and worries, yes. What will become of me, whether my daughter can take care of me."<sup>90</sup> (TP 03)
- "I have a lot on my plate with the family, so it can happen that I think about it at night or wake up and don't go back to sleep."<sup>91</sup> (TP 10)

In summary, the test persons did not seem to have any problems in answering the question. When asked, all test persons described scenarios of their sleep behavior that well reflected the selected answer options.

## 2. How certain are the respondents that these issues have occurred during the past month?

All test persons stated that they were "rather sure" ( $n = 2$ ) or "very sure" ( $n = 8$ ) that the sleep problems they mentioned had occurred in the last month.

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<sup>85</sup> „Ich habe ganz kleine und enge Nasenmuscheln, die sind öfters mal zu, weil ich auch eine Allergie habe. Ganz besonders wenn ich flach im Bett liege. [...] Das schließt auch ein, dass ich dadurch leider auch lauter schnarche. Und der Toilettengang ist leider auch oft, nicht täglich, aber vielleicht dreimal pro Woche.“ (TP 01)

<sup>86</sup> „Also ich wache mitten in der Nacht oder früh am Morgen auf, etwa 5 Uhr, kann nicht wieder einschlafen [...]“ (TP 02)

<sup>87</sup> „Ich muss aufstehen und auf die Toilette gehen, das stimmt. Wahrscheinlich weil ich abends so viel Wasser trinke. Am frühen Morgen wache ich auf und kann nicht mehr einschlafen. Ja, darum bin ich immer so früh wach, um 6:30 Uhr oder 7 Uhr.“ (TP 03)

<sup>88</sup> „Das eine ist die Blase, das andere das Schnarchen. Aber das höre ich ja nicht, das bekomme ich nur morgens gesagt.“ (TP 06)

<sup>89</sup> „Und Ängste und Sorgen, ja, also, es gibt Momente, ich hab die mal und die wecken mich nachts. Das heißt, ich bin wach und denke nach, wie löst du das Problem. Durch Ängste, vor allem durch Sorgen.“ (TP 02)

<sup>90</sup> „Ich habe Ängste und Sorgen, ja. [...] Was mal wird, ob meine Tochter mich pflegen kann.“ (TP 03)

<sup>91</sup> „Ich habe mit der Familie viel um die Ohren, da kann es schon passieren, dass man nachts mal darüber nachdenkt oder aufwacht und nicht wieder einschläft.“ (TP 10)

### 3. How easy or difficult is it for the respondents to answer the question?

All test persons found the question "rather easy" ( $n = 2$ ) or "very easy" ( $n = 8$ ) to answer.

### 4. What time period do the respondents think about?

Half of the test persons ( $n = 5$ ) thought of the last four weeks when answering the question, one test person thought of the last calendar month (TP 01) and the others thought of a longer period, which however included the last four weeks. Depending on how long the problem had already existed, the latter test persons spoke of months or even years:

- *"[I thought] about the last months. Actually, since the problem is known to me or I notice it. I am dead tired in the morning when I wake up. That's not normal."*<sup>92</sup> (TP 05)
- *"This has been going on for a long time, for a couple of years now."*<sup>93</sup> (TP 08)

### 5. How often did these issues occur: once or regularly?

All test persons stated that the problems they mentioned occur with a certain regularity. Five test persons stated that they had these problems daily (TP 03, 05, 06, 08, 09). The other five test persons referred to periods of time between one and four times a week:

- *"Quite frequently. Three to four times a week."*<sup>94</sup> (TP 01)
- *"So several times a week. Sometimes every other night, because if I wake up one night and can't get back to sleep, I sleep through the next night because I'm so knocked out."*<sup>95</sup> (TP 02)
- *"Actually, both things happen daily, so every night."*<sup>96</sup> (TP 06)

### 6. Are the descriptions comprehensible?

The probe whether the individual answer options were understandable was answered in the affirmative by the majority of the test persons ( $n = 7$ ). Only three subjects criticized individual descriptions in the list as double stimuli (TP 01) or as too imprecise (TP 02, 06):

- *"It is understandable. But I think it is bad that coughing and snoring are mentioned together. As I said, I snore, but I do not cough. And also fears and worries: fear is more massive, worries are perhaps a little smaller. I'd rather discriminate between these two."*<sup>97</sup> (TP 01)

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<sup>92</sup> „An die letzten Monate. Eigentlich seit mir [das Problem] bekannt ist oder ich es bemerke. Ich bin ja morgens, wenn ich aufwache, todmüde. Das ist ja nicht normal.“ (TP 05)

<sup>93</sup> „Das geht schon sehr lange so, seit ein paar Jahren.“ (TP 08)

<sup>94</sup> „Schon häufig. Drei- bis viermal pro Woche.“ (TP 01)

<sup>95</sup> „Also mehrmals in der Woche, das würde ich sagen. Manchmal jede zweite Nacht, denn wenn ich eine Nacht wach werde und nicht wieder einschlafen kann, dann schlafe ich durch die nächste Nacht, weil ich so K. O. bin.“ (TP 02)

<sup>96</sup> „Eigentlich beides täglich, also jede Nacht.“ (TP 06)



- *"There's just something that puzzled me a bit, 'I have bad dreams,' and then I thought, huh, what do they mean, do they mean nightmares? That's something different for me. [...] I have bad dreams, that's, yes, that's more my dreams are perhaps not very tingling, yes, and that's what wakes me up, but they are not nightmares. Nightmares are much worse."*<sup>98</sup> (TP 02)
- *"This 'breathing comfortably' is a little too imprecise for me. This could be changed to 'I have breathing problems' or something like that. And the 'I hear noises'. Sure, if my neighbour has children, then I hear noises too. You have to differentiate if they are special, abnormal sounds that you hear or not."*<sup>99</sup> (TP 06)

### 7. Is a description regarding the sleeping behavior missing?

None of the test persons stated that they had suffered from a sleep problem in the last month that was not already mentioned in the answer options.

### 8. What do respondents understand by „I hear noises“?

When asked to understand the response option "hearing noises", the test persons named different types of sounds ranging from external environmental sounds, sounds in the house and imaginary sounds to waking up from snoring and tinnitus:

- *"Either any noise in the room, such as the heat crackling... Or when the wind blows outside, a branch cracks, a cat meows. That's what I mean by hearing noises."*<sup>100</sup> (TP 01)
- *"That you might hear something and think, 'What was that noise?' Like someone's in the house or something. When people are afraid, they hear noises loud, so they think they're being robbed or something."*<sup>101</sup> (TP 02)
- *"Maybe if it's loud somewhere at night. But it's pretty quiet around here."*<sup>102</sup> (TP 04)

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<sup>97</sup> „Verständlich ist es. Aber ich finde es schlecht, dass Husten und Schnarchen zusammen genannt wird. Wie gesagt, ich schnarche, aber ich huste nicht. Und auch Ängste und Sorgen: Die Angst ist ja massiver, Sorgen sind vielleicht ein bisschen kleiner. Das würde ich auch eher unterscheiden.“ (TP 01)

<sup>98</sup> „Es gibt nur was, was mich ein bisschen irritiert hat, „ich träume schlecht“, und dann habe ich mir gedacht, hm, was meinen die denn, meinen sie Alpträume? Das ist für mich ein Unterschied. [...] Ich träume schlecht, das ist, ja, das sind mehr meine Träume sind vielleicht nicht sehr prickelnd, ja, und dadurch werde ich wach, aber es sind keine Alpträume. [...] Alpträume sind viel schlimmer.“ (TP 02)

<sup>99</sup> „Dieses ‚unbeschwert Atmen‘ ist für mich ein bisschen zu ungenau. Das könnte man ändern in ‚Ich habe Atemprobleme‘ oder so etwas Ähnliches. Und das ‚Ich höre Geräusche‘. Klar, wenn mein Nachbar Kinder hat, dann höre ich auch Geräusche. Da sollte man unterscheiden, ob das besondere, von der Normalität abweichende Geräusche sind, die man hört, oder nicht.“ (TP 06)

<sup>100</sup> „Entweder im Zimmer irgendwelche Geräusche, wenn zum Beispiel die Heizung knackt. Oder wenn draußen der Wind weht, ein Ast knackt, eine Katze miaut. Das verstehe ich unter Geräusche hören.“ (TP 01)

<sup>101</sup> „Dass man vielleicht etwas hört und denkt ‚Was hat da so gekracht?‘. Als ob jemand im Hause ist oder so. Wenn Leute Angst haben, sie Geräusche laut hören, sodass sie denken, sie werden beraubt oder so.“ (TP 02)

<sup>102</sup> „Wenn es nachts vielleicht irgendwo laut ist. Aber bei uns ist es ziemlich ruhig.“ (TP 04)

- *"Because sometimes I wake up from hearing myself. Not outside sounds, only when I hear myself."*<sup>103</sup> (TP 05)
- *"This can be everything to me. Sounds of neighborhood children. You should define that, like 'sounds I'm not used to, that don't fit into the normal sleeping pattern'. But the other sounds are just there for me and I won't register them anymore."*<sup>104</sup> (TP 06)
- *"We sometimes hear the sound of flight. It's always at certain times. Or environmental sounds from large industrial plants or companies."*<sup>105</sup> (TP 09)
- *"Tinnitus or the neighbors, maybe. But I think tinnitus is more likely. That you have some sort of limitation in your old age."*<sup>106</sup> (TP 10)

The high fragmentation of definitions suggests that this option (as noted by TP 06) should be specified.

### Recommendations:

**Question:** In order to make the reference periods as concrete as possible and to standardize them across questions 14 to 16, we recommend asking for the "last four weeks" [„letzten vier Wochen“] in the question.

Since this is a question with multiple answers, we recommend that this is already made clear in the question:

"If you think about the last four weeks, which of these descriptions apply to you with regard to your sleep?"

[„Wenn Sie an die letzten vier Wochen denken, welche dieser Beschreibungen treffen auf Ihr Schlafverhalten zu?“]

**Response Options:** We recommend specifying the answer option "I hear noises" ("I hear noises, such as ..." [„Ich höre Geräusche, wie z. B. ...“]) and either adding "too" to the answer option "I feel cold" ("I feel too cold" ["Mir ist oft zu kalt"]) or removing "too" from the answer option "I feel too warm" ["Mir ist oft zu warm"] to make the two answer options match.

<sup>103</sup> „Weil ich manchmal davon aufwache, wie ich mich selbst höre. Außengeräusche nicht, nur wenn ich mich selbst höre.“ (TP 05)

<sup>104</sup> „Das kann für mich alles sein. Geräusche von Nachbarskindern. Man sollte das schon definieren, so in etwa ‚Geräusche, die ich normalerweise nicht gewohnt bin, die nicht zum normalen Schlafablauf passen.‘ Aber die anderen Geräusche sind für mich einfach da und die registriere ich auch irgendwann nicht mehr.“ (TP 06)

<sup>105</sup> „Wir hören manchmal Fluggeräusche. Das ist immer zu bestimmten Zeiten. Oder auch Umweltgeräusche von großen Industriewerken oder Firmen.“ (TP 09)

<sup>106</sup> „Ein Tinnitus oder die Nachbarn vielleicht. Aber ich denke schon eher Tinnitus. Dass man im Alter dadurch irgendwelche Einschränkungen hat.“ (TP 10)

## Question 15: Subjective sleep quality

**Wie würden Sie insgesamt Ihre Schlafqualität im vergangenen Monat bewerten?  
Würden Sie sagen, sie ist...**

**[During the past month, how would you rate your sleep quality overall?  
Would you say it is...]**

- sehr gut [very good]
- gut [good]
- mittelmäßig [fair]
- schlecht [bad]
- oder sehr schlecht [or, very bad]
  
- (Weiß nicht) [Don't know]
- (Verweigerung) [Refusal]

### Frequency distribution (N = 10)

Very good	-
Good	6
Fair	3
Bad	-
Or, very bad	1
(Don't know)	-
(Refusal)	-

### Cognitive techniques:

General Probing, Difficulty Probing, Comprehension Probing

## Key questions and findings:

### 1. What are the respondents thinking about while answering the question? How do they arrive at their answers?

All test persons could answer the question and rated their sleep quality, apart from test person 05, either as "good" (TP 04, 06, 07, 08, 09, 10) or "fair" (TP 01, 02, 03). Test person 05 justified her answer ("very bad") by saying that she *"simply did not get enough sleep at all"*.

Most of the respondents referred in their answers to sleeping through the night (TP 03, 04, 05, 07, 08) or to waking up at night and (not) being able to fall asleep again (TP 02, 09, 10):

- *"Because I wake up more often, almost every second day, at night, after two and a half to three hours of sleep, and I cannot fall asleep again."*<sup>107</sup> (TP 02)
- *"Because I don't sleep through the night."*<sup>108</sup> (TP 03)
- *"Normally I go to the bathroom and fall asleep right away, without too much trouble usually."*<sup>109</sup> (TP 08)
- *"Because I usually sleep eight hours."*<sup>110</sup> (TP 09)

Two test persons (TP 01, 07) also mentioned problems with snoring and one test person (TP 01) stated that she sometimes had back pain:

- *"I also have back pain sometimes; my bed is not big enough. [...] Sometimes I wake up from my own snoring, which is terrible."*<sup>111</sup> (TP 01)
- *"About once a week, I have this problem with snoring."*<sup>112</sup> (TP 07)

Two other test persons mentioned falling asleep or irregular sleeping:

- *"I fall asleep well [...]."*<sup>113</sup> (TP 04)
- *"[...] because I often stay out late on weekends and then come to bed late and sleep irregularly."*<sup>114</sup> (TP 06)

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<sup>107</sup> „Weil ich öfter, fast jeden zweiten Tag, nachts wach werde, nach zweieinhalb bis drei Stunden Schlaf, und nicht wieder einschlafen kann.“ (TP 02)

<sup>108</sup> „Weil ich nicht die ganze Nacht durchschlafe.“ (TP 03)

<sup>109</sup> „Normalerweise gehe ich auf die Toilette und schlafe gleich wieder ein, ohne große Probleme in der Regel.“ (TP 08)

<sup>110</sup> „Weil ich in der Regel acht Stunden schlafe.“ (TP 09)

<sup>111</sup> „Ich habe manchmal auch Rückenschmerzen; mein Bett ist nicht groß genug. [...] Manchmal wache ich von meinem eigenen Schnarchen auf, das ist schrecklich.“ (TP 01)

<sup>112</sup> „Circa einmal pro Woche habe ich eben Probleme mit dem Schnarchen.“ (TP 07)

<sup>113</sup> „Ich schlafe gut ein [...].“ (TP 04)

<sup>114</sup> „[...] weil ich am Wochenende oft bis spät unterwegs bin und dann spät ins Bett komme und unregelmäßig schlafe.“ (TP 06)

## 2. How easy or difficult is it for the respondents to answer the question?

The majority of the test persons found answering the question "very easy" ( $n = 5$ ) or "rather easy" ( $n = 4$ ). Only test person 01 found it "rather difficult" to answer, as she would have liked to have an answer between "good" and "fair" in order to answer the question more accurately: *"I would have liked to have had a category between good and fair [because it is not good, but tends to be better than fair]."*<sup>115</sup>

## 3. What do the respondents understand by „sleep quality“?

All test persons defined "sleep quality" as falling asleep quickly, sleeping through the night or falling asleep again quickly after waking up in the night and/or waking up rested:

- *"When you can sleep through the night without problems, without getting up."*<sup>116</sup> (TP 03)
- *"Sleep quality for me means falling asleep well, sleeping through the night and waking up relaxed."*<sup>117</sup> (TP 06)
- *"To sleep through the night and wake up feeling refreshed, not still tired and exhausted."*<sup>118</sup> (TP 08)
- *"That I fall asleep calmly and if I wake up in the night I fall asleep quickly. When I wake up in the morning, I'm not tired. I'm comfortable."*<sup>119</sup> (TP 09)

### Recommendations:

Question: We recommend standardizing the tenses in the question; furthermore, the question could also be shortened:

"How would you rate your overall sleep quality in the past month? Was it..."

[„Wie würden Sie insgesamt Ihre Schlafqualität im vergangenen Monat bewerten? War diese...“]

In order to make the reference periods as concrete as possible and to standardize them across questions 14 to 16, we recommend asking for the "last four weeks" in the question.

Response Options: No changes recommended.

<sup>115</sup> „Da hätte ich jetzt gerne eine Kategorie zwischen gut und mittelmäßig gehabt [, weil es nicht gut ist, aber tendenziell besser als mittelmäßig].“ (TP 01)

<sup>116</sup> „Wenn man die ganze Nacht durchschlafen kann, ohne Probleme, ohne aufzustehen.“ (TP 03)

<sup>117</sup> „Schlafqualität bedeutet für mich, gut einzuschlafen, durchzuschlafen und entspannt aufzuwachen.“ (TP 06)

<sup>118</sup> „Durchschlafen und dass man erholt wieder aufwacht; dass man nicht noch kaputt und müde ist.“ (TP 08)

<sup>119</sup> „Dass ich ruhig einschlafe und falls ich mal nachts aufwache, schnell wieder einschlafe. Dass, wenn ich morgens aufwache, ich nicht gerädert bin, sondern mich wohlfühle.“ (TP 09)

## Question 16: Self-reported frequency of waking up rested

**Bitte sehen Sie sich Liste 6 an. Wie oft haben Sie sich im vergangenen Monat wirklich ausgeruht gefühlt, als Sie morgens aufgewacht sind?**

**[Please look at card 6. During the past month, how often did you feel really rested when you woke up in the morning?]**

- Nicht vorgekommen im letzten Monat [Not during the past month]
- Weniger als einmal pro Woche [Less than once a week]
- Einmal oder zweimal pro Woche [Once or twice a week]
- Dreimal pro Woche oder häufiger [Three or more times a week]
  
- (Weiß nicht) [Don't know]
- (Verweigerung) [Refusal]

### Frequency distribution ( $N = 10$ )

Not during the past month	1
Less than once a week	-
Once or twice a week	2
Three or more times a week	7
<i>(Don't know)</i>	-
<i>(Refusal)</i>	-

### Cognitive techniques:

Information retrieval probing, Category Selection Probing, Comprehension Probing, Specific Probing

### Key questions and findings:

#### 1. How do the respondents arrive at their answer? How do the respondents remember the information?

The vast majority of the test persons stated that they felt really rested once or twice a week ( $n = 2$ ) or three times or more often a week ( $n = 7$ ) in the past month when they woke up in the morning. Only test person 05 stated that this had never been the case last month and justified this with her

acute sleep problems: *"Because I am exhausted every morning. Because I haven't slept or haven't slept in one piece."*<sup>120</sup>

When answering the question, all the test persons remembered how they had felt when they woke up in the morning. The reasons given by the respondents for their choice of answers matched the given answer in all cases:

- *"For one thing, it was my birthday and I was under a little bit of stress with the preparation and follow-up. And I had overnight guests for more than a week and there I am [with the thoughts] more and more with the guests and less with myself."*<sup>121</sup> (TP 01, answer: "Once or twice a week")
- *"I've been calculating, well, the last month has been one of intense insomnia. Once a week or twice a week I slept through it, then I'm usually more rested the next day."*<sup>122</sup> (TP 02, answer: "Once or twice a week")
- *"I usually fall asleep well and wake up rested. It's actually rare that I wake up thinking I didn't sleep well."*<sup>123</sup> (TP 04, answer: "Three times a week or more often")
- *"I've been thinking about how I usually wake up in the morning. And then I'm actually fit. I have no trouble getting up in the morning."*<sup>124</sup> (TP 07, answer: "Three times a week or more often")

## 2. What do they understand by „feeling really rested“?

The test persons defined the term "feeling really rested" either affirmatively as feeling (physically and mentally) recovered, relaxed or fit, or negatively as not wanting to sleep any longer or not feeling tired:

- *"So wake up and not have the impression that oh, I'd have to lie down and sleep for another three hours. but that you feel relaxed, even in your body."*<sup>125</sup> (TP 02)
- *"Not wanting to sleep anymore."*<sup>126</sup> (TP 06)

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<sup>120</sup> „Weil ich jeden Morgen fix und fertig bin. Aufgrund dessen, weil ich nicht geschlafen habe oder nicht an einem Stück geschlafen habe.“ (TP 05)

<sup>121</sup> „Zum einen hatte ich Geburtstag und hatte durch die Vor- und Nachbereitung ein bisschen Stress. Und ich hatte über eine Woche Übernachtungsgäste und da bin ich [mit den Gedanken] auch immer mehr bei den Gästen und weniger bei mir selbst.“ (TP 01)

<sup>122</sup> „Ich habe gerechnet, also, der letzte Monat war heftig mit Schlafstörungen. Einmal die Woche oder zweimal die Woche habe ich durchgeschlafen, dann bin ich meistens ausgeruhter am nächsten Tag.“ (TP 02)

<sup>123</sup> „Ich schlafe eigentlich immer gut ein und wache ausgeruht auf. Es kommt eigentlich selten vor, dass ich aufwache und denke, ich habe nicht gut geschlafen.“ (TP 04)

<sup>124</sup> „Ich habe überlegt, wie ich morgens in der Regel aufwache. Und da bin ich eigentlich fit. Mir fällt das Aufstehen morgens nicht schwer.“ (TP 07)

<sup>125</sup> „Also aufwachen und nicht den Eindruck haben, oh, ich müsste mich noch drei Stunden hinlegen und schlafen. Sondern dass Sie den Eindruck haben, Sie sind entspannt, auch der Körper.“ (TP 02)

<sup>126</sup> „Nicht weiterschlafen zu wollen.“ (TP 06)

- *"If you wake up in the morning very relaxed and not broken. If you get out of bed easily, without problems, rested."*<sup>127</sup> (TP 07)
- *"That when I get up, I'm really awake and don't need another half hour to come to. I feel fit for the day."*<sup>128</sup> (TP 08)
- *"When you're fit in the morning, really rested."*<sup>129</sup> (TP 10)

### 3. What do they understand by „past month“?

As with question 14, half of the respondents ( $n = 5$ ) thought of the last four weeks when answering the question. Two test persons thought of the last calendar month (TP 01, 09), one of the current calendar month (TP 03) and the remaining two test persons thought of a longer period of time, which, however, included the last four weeks or the last month (TP 06: "The last months"; TP 08: "The last years").

#### Recommendations:

Question: To make the temporal reference periods as concrete as possible and to standardize them across questions 14 to 16, we recommend asking for the "last four weeks" [„letzten vier Wochen“ ] in the question.

Response Options: No changes recommended.

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<sup>127</sup> „Wenn man morgens sehr entspannt aufwacht und nicht gerädert ist. Wenn man leicht aus dem Bett kommt, ohne Probleme, ausgeruht.“ (TP 07)

<sup>128</sup> „Dass ich nach dem Aufstehen eben wirklich wach bin und nicht noch eine halbe Stunde brauche, um zu mir zu kommen. Dass ich mich für den Tag wieder fit fühle.“ (TP 08)

<sup>129</sup> „Wenn man fit ist morgens, richtig ausgeruht.“ (TP 10)



## Question 17: Sleep-related issues reported by others

**Bitte sehen Sie sich Liste 7 an. Hat jemand, der Ihnen nahesteht – etwa ein Partner, ein Verwandter oder eine Pflegekraft – Ihnen gesagt, dass Sie im Schlaf eines dieser Dinge tun?**

**[Please look at card 6. Has someone close to you, like a partner, a relative or a caregiver, told you that you do any of these things during your sleep?]**

- Laut schnarchen [Snore loudly]
- Lange Pausen zwischen Atemzügen während des Schlafens machen  
[Have long pauses between breathes while asleep]
- Zucken oder treten mit den Beinen während des Schlafens  
[Have legs twitching or jerking while asleep]
- Phasen der Orientierungslosigkeit oder Verwirrung während des Schlafens haben  
[Have episodes of disorientation or confusion during your sleep]
- Andere Arten der Unruhe während des Schlafens zeigen, bitte angeben:  
[Have other restlessness while asleep, please specify:]
- (Weiß nicht) [Don't know]
- (Verweigerung) [Don't know]

### Frequency distribution (N = 7<sup>130</sup>)

Snore loudly	7
Have long pauses between breathes while asleep	3
Have legs twitching or jerking while asleep	1
Have episodes of disorientation or confusion during your sleep	-
Have other restlessness while asleep, please specify:	3
<i>Teeth grinding</i> (TP 01)	
<i>Screaming during nightmares</i> (TP 04)	
<i>Singing</i> (TP 05)	
(Don't know)	-
(Refusal)	-

<sup>130</sup> Since question 17 allowed multiple answers, the absolute *N* does not correspond to the number of test persons, but is larger.

**Cognitive techniques:**

Specific Probing

**Key questions and findings:****1. Do the respondents have difficulties understanding and/or answering the question?**

Seven of the ten test persons stated that they did one or more of the mentioned things in their sleep, while three test persons answered the question in the negative (TP 03, 09, 10).

Two subjects (TP 02, 06) pointed out problems in understanding or answering the question.

Test person 02 first stated that no one had told her that she did any of the above things in her sleep. In the course of the interview, she then said that although she snored and a doctor certified that she did so after a sleep test, she did not snore "loudly". Spontaneously she would therefore not have chosen any of the things mentioned: *"No, actually not. [...] Well, I know that I, like many people, snore, but not out loud, I know that. So I don't snore loudly, but I know that I snore because I took a sleep test like years ago. And then the doctor said that I had a very quiet snore, a very slight handicap in my nose. But that would be so small. And my husband says, that's not true at all, I don't snore; maybe he's nice [laughs]."*<sup>131</sup> In this case, it was unclear to the interviewer whether she should note down the answer "loud snoring" or whether the focus of the question was on the "loud". In the end she decided to record "snore loudly" for the test person.

Test person 06 pointed out that the answer option "to have phases of disorientation or confusion during sleep" was not correctly formulated, since such phases cannot be experienced during sleep, but only after waking up: *"So legally speaking, sleep is like unconsciousness. You are not liable to prosecution during sleep. So, how is that possible? It's only possible when you wake up."*<sup>132</sup>

**2. Do the respondents understand that the question is about the symptoms pointed out by someone else rather than realizing the symptoms themselves?**

All test persons interpreted the question to mean whether someone else had told them that they did one or more of the things mentioned in their sleep.

**3. Who is pointing this out to the respondents?**

The test persons mainly named partners (TP 06, 07, 08), family members (TP 01, 04), friends (TP 05) or even doctors (TP 02) as persons who had told them that they did one or more of these things in their sleep.

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<sup>131</sup> „Nein, eigentlich nicht. [...] Also, ich weiß, dass ich, wie viele Menschen, schnarche, aber nicht laut, das weiß ich. Also laut schnarchen nicht, aber dass ich schnarche, weiß ich, weil ich vor Jahren so einen Schlaftest gemacht habe. Und dann hatte der Arzt damals gesagt, ich hätte ein ganz leises Schnarchen, also eine ganz leichte Behinderung in der Nase. Aber das wäre so gering. Und mein Mann sagt, das stimmt gar nicht, ich schnarche nicht; er ist vielleicht nett [lacht].“ (TP 02)

<sup>132</sup> „Also juristisch gesehen ist Schlaf wie Bewusstlosigkeit. Sie sind im Schlaf nicht strafmündig. Also, wie soll das gehen? Das geht doch eigentlich nur, wenn man aufwacht.“ (TP 06)

#### 4. How often do the respondents do those things: once or regularly?

Of the seven subjects who do one or more of these things in their sleep, three stated that they did not know how often they did them (TP 01, 02, 03). Four subjects stated that they did these things regularly or very often (TP 05, 06, 07, 08):

- *"I cannot say. Well, it was, I mean, it was not that often. But I can't answer it."*<sup>133</sup> (TP 02)
- *"I don't know. That I notice it myself is very rare. That I wake up thinking, 'Oh, my God, I snored so loud I woke up."*<sup>134</sup> (TP 04)
- *"Very often, actually, every night. At least for the last four weeks, when she [the girlfriend] could attest to it."*<sup>135</sup> (TP 05)
- *"It's harder to answer, but probably every night."*<sup>136</sup> (TP 08)

#### 5. Is the list complete?

Three respondents mentioned other types of anxiety that are not listed in the response options. These were teeth grinding (TP 01), screaming during a nightmare (TP 02: *"When I have nightmares, I know I'm screaming. This again was said by my partner. Well, I woke him up once before because I was screaming because of a nightmare."*<sup>137</sup>) and singing (TP 05).

#### Recommendations:

Question:	To simplify the sentence structure in the German translation of the question, the word "you" could be placed in front and "or more" added:  „Hat Ihnen jemand, der Ihnen nahesteht – etwa ein Partner, ein Verwandter oder eine Pflegekraft – gesagt, dass Sie im Schlaf eines oder mehrere dieser Dinge tun?“
Response Options:	For the answer option "Take long pauses between breaths while sleeping" [„Lange Pausen zwischen Atemzügen während des Schlafens machen“], we recommend adding an article ("den") before "breaths" [“Atemzüge”] in the German translation.

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<sup>133</sup> „Kann ich nicht sagen. Also, es war, ich meine, es war nicht so oft. Aber ich kann es nicht beantworten.“ (TP 02)

<sup>134</sup> „Das weiß ich nicht. Dass ich es selbst bemerke, ist sehr selten. Also, dass ich aufwache und denke, ‚oh jetzt habe ich aber laut geschnarcht‘, und bin dadurch aufgewacht.“ (TP 04)

<sup>135</sup> „Sehr häufig, eigentlich jede Nacht. Zumindest in den letzten vier Wochen, als sie [die Freundin] es bezeugen konnte.“ (TP 05)

<sup>136</sup> „Das ist schwieriger zu beantworten, aber wahrscheinlich doch jede Nacht.“ (TP 08)

<sup>137</sup> „Wenn ich Alpträume habe, weiß ich, dass ich schreie. Das hat wiederum mein Partner gesagt. Also, ich habe ihn schon einmal geweckt, weil ich wegen eines Alptraums geschrien habe.“ (TP 02)

## Question 18: Sleep disorders diagnosed by health professionals

**Wurde Ihnen je von medizinischem Fachpersonal mitgeteilt, dass Sie an einer Krankheit leiden, die Veränderungen Ihrer Art zu schlafen zur Folge hatte?**

**[Have you ever been told by a health professional that you have a condition that resulted in changes in the way you sleep?]**

- Ja [Yes]
- Nein [No]
- (Weiß nicht) [Don't know]
- (Verweigerung) [Refusal]

### Frequency distribution (N = 10)

Yes	-
No	10
(Don't know)	-
(Refusal)	-

### Cognitive techniques:

Paraphrasing, Comprehension Probing, Specific Probing

### Key questions and findings:

#### 1. How do the respondents interpret the question?

All ten test persons answered the question with "no". Six of them interpreted the question as intended, i.e. as to whether they had ever been told by medical professionals that they had sleep problems due to illness:

- *"[The question was] whether a doctor had ever told me that I snore because of an illness."*<sup>138</sup> (TP 07)
- *"[The question is] whether my family doctor or a specialist ever told me I had trouble sleeping for certain reasons."*<sup>139</sup> (TP 08)

<sup>138</sup> „[In der Frage geht es darum], ob mir ein Arzt gesagt hätte, dass ich aufgrund einer Krankheit schnarche.“ (TP 07)

<sup>139</sup> „[In der Frage geht es darum], ob mir mein Hausarzt oder ein Facharzt jemals gesagt hat, dass ich aus bestimmten Gründen schlecht schlafe.“ (TP 08)

Three test persons (TP 01, 02, 10) should have answered the question in the affirmative based on their (previous) statements, at least if one interprets their described problems as "illnesses". All three subjects reported problems with their nose or respiratory tract that would influence their sleep:

- *"I have very small and narrow nasal conchas, which are often closed because I also have an allergy. Especially when I lie flat in bed. That is simply the case. That also includes the fact that I snore louder because of it. Sometimes I wake up from my own snoring, which is terrible. I've been to an otolaryngologist for my nose. And he thinks I could have an operation to enlarge the nasal concha. But it's not so bad that I have to go to a sleep lab now, or need sleep masks or anything. I don't think so."<sup>140</sup> (TP 01)*
- *"So I don't snore loudly, but I know I snore because I took a sleep test years ago. And then the doctor said that I had a very quiet snore, a very slight handicap in my nose."<sup>141</sup> (TP 02)*
- *"The question is that if you have your respiratory tract straightened - as I did about 35 years ago - this will have an effect on your breathing and snoring. That was then gone."<sup>142</sup> (TP 10)*

In addition, test person 06 misunderstood the question as to whether a healthcare professional had ever told her that she had sleep problems, i.e., whether it was diagnosed during sleep: *"[The question is] whether a healthcare professional told me that my sleep was not normal. But now that I haven't been in hospital for 30 years, I don't think that happened. [...] Doctors and nurses [are] the only ones who could hear me at night, theoretically."<sup>143</sup>*

## 2. What do they understand by „health professional“?

The test persons associated with this term mainly (family) doctors ( $n = 9$ ), specialists/doctors in sleep laboratories ( $n = 5$ ), nurses ( $n = 3$ ) and medical assistants ( $n = 1$ ). None of the test persons stated that the term was incomprehensible or complicated.

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<sup>140</sup> *„Ich habe ganz kleine und enge Nasenmuscheln, die sind öfters mal zu, weil ich auch eine Allergie habe. Ganz besonders wenn ich flach im Bett liege. Das ist einfach so. Das schließt auch ein, dass ich dadurch leider auch lauter schnarche. [...] Manchmal wache ich von meinem eigenen Schnarchen auf, das ist schrecklich. [...] Ich bin öfters bei einem HNO-Arzt wegen meiner Nase. Und der meint, ich könnte mich operieren lassen, die Nasenmuscheln vergrößern lassen. Aber das ist nicht so schlimm, dass ich jetzt in ein Schlaflabor müsste oder irgendwelche Schlafmasken brauche oder so. Das eher nicht.“ (TP 01)*

<sup>141</sup> *„Also laut schnarchen nicht, aber dass ich schnarche, weiß ich, weil ich vor Jahren so einen Schlaftest gemacht habe. Und dann hatte der Arzt damals gesagt, ich hätte ein ganz leises Schnarchen, also eine ganz leichte Behinderung in der Nase.“ (TP 02)*

<sup>142</sup> *„Es geht [bei der Frage] darum, dass wenn man sich zum Beispiel die Atemwege begradigen lässt – so wie ich vor ca. 35 Jahren –, dass das einen Einfluss auf die Atmung bzw. das Schnarchen hat. Das war dann weg.“ (TP 10)*

<sup>143</sup> *„[Bei der Frage geht es darum], ob mir ein ärztliches Personal gesagt hat, dass mein Schlaf nicht normal wäre. Aber da ich jetzt, glaube ich, 30 Jahre nicht mehr im Krankenhaus war, kam das nicht vor. [...] Ärzte und Krankenschwestern [wären] ja die Einzigen, die mich mal nachts hören könnten theoretisch.“ (TP 06)*

**Recommendations:**

Question: In order to avoid misinterpretation of the question, we recommend rephrasing it. One possible formulation is:

"Have you ever been told by health care professionals that you have a disease or physical impairment that affects your sleep (your sleep quality)?"

[„Wurde Ihnen je von medizinischem Fachpersonal mitgeteilt, dass Sie an einer Krankheit oder körperlichen Beeinträchtigung leiden, die Auswirkungen auf Ihren Schlaf (Ihre Schlafqualität) hat?“]

Response Options: No changes recommended.

## 5 Appendix: Cognitive questionnaire

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### Question 1

- N1\_F1 Können Sie Ihre Antwort bitte noch etwas näher erläutern? Warum haben Sie sich für den Wert [Antwort Frage 1] entschieden?  
[Can you explain your answer to me in more detail? Why did you choose (Answer question 1)?]
- N2\_F1 Was verstehen Sie in dieser Frage unter „erfolgreich altern“?  
[What do you understand by „ageing successfully“?]
- N3\_F1 Können Sie mir bitte eine Person beschreiben, die erfolgreich altert? Worin zeichnet sich erfolgreich altern für Sie aus?  
[Can you describe a person who successfully ages? What distinguishes successfully ageing?]
- N4\_F1 Und wie würden Sie eine Person beschreiben, die nicht erfolgreich altert?  
[How would you describe a person who doesn't age successfully?]
- N5\_F1 *INT: Falls noch nicht erkennbar:*  
Haben Sie beim Beantworten der Frage an das Altern ganz allgemein gedacht oder eher an den Alterungsprozess im hohen Alter?  
*[Interviewer: If not yet clear:*  
While answering the question, did you think of ageing in general or the ageing process at a high age?]
- N6\_F1 Fanden Sie es hilfreich, die Antwortoptionen zur Frage vorgelegt zu bekommen oder fanden Sie das Vorlegen der Karte eher unnötig?  
[Was it helpful or rather unnecessary to get the card with the answer options presented?]

### Question 2 and 3

- N1\_F2 *INT ohne Nachfrage beantworten: Haben die Testpersonen in Frage 2 Probleme mit der Definition von „einer Portion“ Obst oder Gemüse?*  
*[Interviewer's answer, without having asked the respondent: Did the respondent have difficulties in defining „a serving“ of fruits or vegetables in question 2?]*
- N1\_F3 Wir möchten uns mit der letzten Frage noch etwas näher beschäftigen. Sie haben angegeben, dass Sie an einem typischen Tag [Antwort Frage 3] Portionen Obst oder Gemüse essen. Wie sind Sie zu diesem Wert gekommen?  
[We want to take a closer look at the last question. You answered that on a typical day, you eat about (answer to question 3) serving(s) of fruits and vegetables. How did you get to this value?]

- N2\_F3 Wie leicht oder schwer ist es Ihnen gefallen, die Frage zu beantworten?  
[How easy or difficult was it for you to answer the question?]
- N3\_F3 *INT: Falls „sehr/eher schwer“:*  
Warum fanden Sie die Beantwortung der Frage eher schwer/sehr schwer?  
[Interviewer: *If „rather difficult/ very difficult“:*  
Why was answering the question rather difficult/ very difficult for you?]
- N4\_F3 An welche Arten von Obst und Gemüse haben Sie beim Beantworten der Frage gedacht? Bitte sagen Sie mir für die folgenden Obst- und Gemüsesorten jeweils, ob Sie diese in Ihrer Antwort berücksichtigt haben oder nicht:
- frisches (d.h. unverarbeitetes) Obst und Gemüse
  - Säfte oder Smoothies
  - tiefgefrorenes Obst oder Gemüse
  - getrocknetes Obst oder Gemüse
  - Obst oder Gemüse in Dosen
  - Etwas anderes, und zwar:
- [About what kind of fruits or vegetables did you think about while answering the question? Please tell me on the basis of the following kinds of fruits and vegetables, if you considered them in your answer or not:
- fresh (e.g. raw) fruits and vegetables
  - Juices and smoothies
  - frozen fruits or vegetables
  - dried fruits or vegetables
  - canned fruits or vegetables
  - Something else:
- N5\_F3 In der Frage wurden Sie gebeten, „stärkehaltige Wurzeln“ wie Maniok nicht in Ihrer Antwort zu berücksichtigen. Haben Sie den Begriff Maniok schon einmal gehört und falls ja, können Sie mir erklären, was sich dahinter verbirgt?  
[In question 3 you were asked to exclude „starchy roots“ such as cassava in your answer. Have you ever heard of the term „cassava“ and if yes, can you explain what it is?]
- N6\_F3 Was verstehen Sie in dieser Frage unter, „stärkehaltigen Wurzeln“? Können Sie mir Beispiele von stärkehaltigen Wurzeln nennen?  
[What do you understand by „starchy roots“? Can you name examples?]

#### Question 4

- N1\_F4 *Falls TP mit „Ja“ geantwortet hat:*  
Können Sie Ihre Antwort bitte noch etwas näher erläutern? Woran haben Sie beim Beantworten der Frage gedacht?  
[If respondent answered with „Yes“:



Can you please explain your answer to me in more detail? What did you think about while answering the question?]

- N2\_F4 *Falls TP mit „Nein“ geantwortet hat:*  
Was verstehen Sie unter einer privaten Pflegeversicherung?  
*[If respondent answered with „No“:*  
What do you understand by „private long-term care insurance?]
- N3\_F4 Worin liegt für Sie der Unterschied zwischen einer privaten Pflicht-Pflegeversicherung und einer privaten freiwilligen Pflegeversicherung?  
*[What is the difference between a compulsory private long-term care insurance and an optional private long-term care insurance?]*
- N4\_F4 Wie leicht oder schwer ist es Ihnen gefallen, die Frage zu beantworten?  
*[How easy or difficult was it for you to answer the question?]*
- N5\_F4 *INT: Falls „sehr/eher schwer“:*  
Warum fanden Sie die Beantwortung der Frage eher schwer/sehr schwer?  
*[Interviewer: If rather difficult/ very difficult“:*  
Why was answering the question rather difficult/ very difficult for you?]

#### Question 5

- N1\_F5 *INT ohne Nachfrage beantworten: Gibt es Probleme, die Antwort der Testpersonen zu notieren bzw. in das Antwortfeld einzutragen?*  
*[Interviewer's answer, without having asked the respondent: Are there any issues in noting the respondent's answer?]*
- N2\_F5 Können Sie mir Ihre Antwort bitte noch etwas näher erläutern? Wie sind Sie zu Ihrer Antwort gekommen? (Wie haben Sie den Prozentwert/die Wahrscheinlichkeit berechnet?)  
*[Can you explain your answer to me in more detail? How did you get to your answer? (How did you calculate the percentage?)]*
- N3\_F5 Wie leicht oder schwer ist es Ihnen gefallen, diese Frage zu beantworten?  
*[How easy or difficult was it for you to answer the question?]*
- N4\_F5 Warum fanden Sie die Beantwortung der Frage eher/sehr schwer?  
*[Why was answering the question rather difficult/ very difficult for you?]*
- N5\_F5 Wie verständlich fanden Sie die Schaubilder?  
*[How comprehensible are the graphs to you?]*
- N6\_F5 Warum fanden Sie die Schaubilder eher/sehr unverständlich?  
*[Why do you think the graphs are rather incomprehensible/ very incomprehensible?]*

**Question 6**

N1\_F6 Können Sie mir Ihre Antwort bitte noch etwas näher erläutern? Wie sind Sie zu Ihrer Antwort gekommen? (Wie haben Sie den Prozentwert/die Wahrscheinlichkeit berechnet?)

[Can you explain your answer to me in more detail? How did you get to your answer? (How did you calculate the percentage?)]

N2\_F6 Wie leicht oder schwer ist es Ihnen gefallen, diese Frage zu beantworten?

[How easy or difficult was it for you to answer the question?]

N3\_F6 Warum fanden Sie die Beantwortung der Frage eher/sehr schwer?

[Why was answering the question rather difficult/ very difficult for you?]

**Question 7 and 8**

N1\_F7 *(INT: Nur falls TP Frage 7 beantwortet hat):*

Wir möchten uns mit den beiden Fragen noch einmal etwas näher beschäftigen. Beginnen wir mit der ersten Frage nach der Wahrscheinlichkeit, mit der Sie in der Zukunft eine private Pflegeversicherung abschließen werden. Sie haben angegeben, dass die Wahrscheinlichkeit dafür [Antwort Frage 7] % beträgt.

Können Sie mir Ihre Antwort bitte noch etwas näher erläutern? Wie sind Sie zu Ihrer Antwort gekommen? (Wie haben Sie den Prozentwert/die Wahrscheinlichkeit berechnet?)

[Interviewer: Only if the respondent answered question 7:

We now want to deal more closely with the two questions. Let's start with the first question regarding the probability with which you will get a private long-term care insurance in the future. You have answered with a probability of (answer to question 7)%.

Can you explain your answer to me in more detail? How did you get to your answer? (How did you calculate the percentage?)]

N2\_F7 Wie leicht oder schwer ist es Ihnen gefallen, diese Frage zu beantworten?

[How easy or difficult was it for you to answer the question?]

N3\_F7 *INT: Falls „sehr/eher schwer“:*

Warum fanden Sie die Beantwortung der Frage eher/sehr schwer?

[Why was answering the question rather difficult/ very difficult for you?]

N1\_F8 Bei der [zweiten / letzten] Frage, haben Sie angegeben, [Antwort Frage 8]. Können Sie mir Ihre Antwort noch näher erläutern? Woran haben Sie beim Beantworten der Frage gedacht?

[In the second/last question you answered that (answer to question 8). Can you explain your answer to me in more detail? What did you think of when answering the question?]

- N2\_F8 Wie leicht oder schwer ist es Ihnen gefallen, diese Frage zu beantworten?  
[How easy or difficult was it for you to answer the question?]
- N3\_F8 *INT: Falls „sehr/eher schwer“:*  
Warum fanden Sie die Beantwortung der Frage eher/sehr schwer?  
*[Interviewer: If „rather difficult/ very difficult“:*  
Why was answering the question rather difficult/ very difficult for you?]
- N4\_F8 *Falls noch nicht erkennbar:*  
Fehlt bei dieser Frage noch eine Antwortmöglichkeit? Hätten Sie gerne eine andere Antwort gegeben als die, die ich Ihnen vorgelesen habe?  
*[If not recognized yet:*  
Is an option in this question missing? Would you like to give another answer than I have read to you?]

### Question 9

- N1\_F9 Wie verständlich fanden Sie die einzelnen Antwortkategorien?  
[How are comprehensible are the answer options for you?]
- N2\_F9 *Falls noch nicht erkennbar:*  
Wurden hier Tätigkeiten genannt, die Sie unklar fanden oder die Ihnen nicht geläufig sind? Falls ja, welche waren das?  
*[If not recognized yet:*  
Are there any activities listed that you don't understand or don't know about? If yes, which are those?]
- N3\_F9 Haben Sie das Internet in den letzten 3 Monaten noch für Tätigkeiten genutzt, die hier nicht genannt wurden?  
[Did you use the internet during the past three months for activities that were not listed?]

### Question 10

- N1\_F10 Können Sie mir Ihre Antwort bitte noch etwas näher erläutern? Warum haben Sie sich für den Wert [Antwort Frage 10] entschieden?  
[Can you explain your answer to me in more detail? Why did you choose (answer to question 10)?]
- N2\_F10 Was verstehen Sie in dieser Frage unter „Finanzwissen“?  
[What do you understand by „financial knowledge“?]

N3\_F10 Fanden Sie es hilfreich, die Antwortoptionen zur Frage vorgelegt zu bekommen oder fanden Sie das Vorlegen der Karte eher unnötig?

[Was it helpful or rather unnecessary to get the card presented?]

### Question 11A and Question 11B

N1\_F11b Können Sie mir Ihre Antwort auf die letzte Frage bitte noch näher erläutern? Woran haben Sie beim Beantworten der Frage gedacht?

[Can you explain your answer to the last question to me in more detail? What did you think about while answering the question?]

N2\_F11b Was verstehen Sie in dieser Frage unter „die finanzielle Zukunft gemeinsam planen“?

[What do you understand by „planning financial future as a couple“?]

### Question 12

N1\_F12 Wie sind Sie zu diesem Wert gekommen? (Woran haben Sie beim Beantworten der Frage gedacht?)

[How did you get to this value? (What did you think about while answering the question?)]

N2\_F12 Was verstehen Sie in dieser Frage unter „Schlafen während des Tages“?

[What do you understand by „napping during daytime“?]

N3\_F12 Und was verstehen Sie unter „Ausruhen während des Tages“?

[What do you understand by „resting during daytime“?]

N4\_F12 War der Tag gestern eine Ausnahme oder verbringen Sie regelmäßig ca. [Antwort Frage 12] mit Schlafen und Ausruhen während des Tages?

[Was yesterday an exception or do you regularly spend about (answer to question 12) with napping and resting during daytime?]

### Question 13 and 14

N1\_F13 *INT notieren: Wurden die Antwortoptionen bei Frage 13 vorgelesen?*

[Interviewer note: Were the answer options from question 13 read out loud?]

N1\_F14 Können Sie mir Ihre Antwort(en) bitte noch etwas näher erläutern?

[Can you explain your answer(s) to me in more detail?]

N2\_F14 Wie sicher sind Sie sich, dass diese Schlafprobleme im letzten Monat aufgetreten sind?

[How certain are you that those sleep-related issues have occurred during the last month?]

- N3\_F14 *INT: Falls „sehr/eher unsicher“:*  
Warum sind Sie sich eher/sehr unsicher?  
*[Interviewer: If „rather uncertain/ very uncertain“:*  
Why are you rather uncertain/ very uncertain about this?]
- N4\_F14 Und wie leicht oder schwer ist es Ihnen gefallen, diese Frage zu beantworten?  
*[How easy or difficult was it for you to answer the question?]*
- N5\_F14 *INT: Falls „sehr/eher schwer“:*  
Warum fanden Sie die Beantwortung der Frage eher/sehr schwer?  
*[Interviewer: If „rather difficult/ very difficult“:*  
Why was answering the question rather difficult/ very difficult for you?]
- N6\_F14 An welchen Zeitraum haben Sie beim Beantworten der Frage gedacht? An...  
 ...den letzten Kalendermonat  
 ...den aktuellen Kalendermonat  
 ...die letzten vier Wochen  
 ...oder an einen anderen Zeitraum? (→ *INT: bitte erläutern lassen!*)  
*[What time period were you thinking about while answering the question? I was thinking about...]*  
 ...the last calendar month  
 ...current calendar month  
 ...the last four weeks  
 ...or a different time period? (→ *Interviewer: have it explained!*)
- N7\_F14 *INT: Falls TP mindestens ein Problem angibt:*  
Wie häufig [ist das Problem/sind diese Probleme] im letzten Monat aufgetreten? (Können Sie mir eine Zahl nennen?)  
*[Interviewer: If respondent states at least one issues:*  
How often did the issues/those issues occur during the last month? (Can you name a number?)]
- N8\_F14 Wie verständlich fanden Sie die einzelnen Beschreibungen in der Liste? Fanden Sie irgendwelche Beschreibungen unklar?  
*[How comprehensible were the descriptions in the list? Are any descriptions not clear for you?]*
- N9\_F14 Hatten Sie im letzten Monat noch andere Schlafprobleme, die nicht in der Liste aufgeführt sind?  
*[Did you have any additional sleep-related issues during the last month, that were not listed?]*

N10\_F14 Was verstehen Sie hier unter der letzten Beschreibung „Geräusche hören“?  
[What do you understand by „hearing noises“?]

### Question 15

N1\_F15 Können Sie mir Ihre Antwort bitte noch etwas näher erläutern? Warum haben Sie sich für die Antwort [Antwort Frage 15] entschieden?  
[Can you explain your answer to me in more detail? Why did you choose (answer to question 15)?]

N2\_F15 Wie leicht oder schwer ist es Ihnen gefallen, diese Frage zu beantworten?  
[How easy or difficult was it for you to answer the question?]

N3\_F15 *INT: Falls „sehr/eher schwer“:*  
Warum fanden Sie die Beantwortung der Frage eher/sehr schwer?  
[Interviewer: If „rather difficult/very difficult“:  
Why was answering the question rather difficult/very difficult for you?]

N4\_F15 Was verstehen Sie in dieser Frage unter „Schlafqualität“?  
[What do you understand by „sleep quality“?]

### Question 16

N1\_F16 Wie haben Sie sich daran erinnert, dass das im vergangenen Monat [Antwort Frage 16] vorgekommen ist? Wie sind Sie beim Beantworten der Frage vorgegangen?  
[How did you remember that this happened (answer to question 16) during the past month? How did you go about while answering the question?]

N2\_F16 *INT: Falls noch nicht erkennbar:*  
Warum haben Sie sich für die Antwort [Antwort Frage 16] entschieden? Können Sie mir das bitte näher erläutern?  
[If not recognized yet:  
Why did you choose (answer to question 16)? Can you explain that to me in more detail?]

N3\_F16 Was verstehen Sie in dieser Frage unter „sich wirklich ausgeruht fühlen“?  
[What do you understand in this question by „feeling really rested“?]

N4\_F16 In der Frage ist vom „vergangenen Monat“ die Rede. An welchen Zeitraum haben Sie da gedacht? An...  
 ...den letzten Kalendermonat  
 ...den aktuellen Kalendermonat  
 ...die letzten vier Wochen  
 ...oder an einen anderen Zeitraum? (→ *INT: bitte erläutern lassen!*)

[The question refers to the past month. What time period did you think about? I was thinking about...

- ...the last calendar month
- ...current calendar month
- ...the last four weeks
- ...or a different time period? (→ *Interviewer: have it explained!*)

### Question 17

N1\_F17 *INT: Nur falls TP keine Antwort bei F17 ausgewählt, ansonsten weiter mit N2\_F17:*

Bedeutet das, dass...

- ...Sie keines dieser Dinge im Schlaf tun → weiter mit N5\_F17
- ...Sie etwas davon tun, es Ihnen aber niemand gesagt hat, sondern Sie es selbst bemerkt haben → weiter mit N4\_F17
- ...oder Sie nicht wissen ob Sie es tun, da es Ihnen noch niemand gesagt hat?  
→ weiter mit N5\_F17

[*Interviewer: Only if the respondent hasn't chosen any option in question 17, if he/she did, continue with N2\_F17:*

Does that mean that you...

- ...don't do any of these things when you sleep? → continue with N5\_F17
- ...do any of these things and have recognized it yourself but nobody has told you yet? → continue with N4\_F17
- ...don't know if you do any of these things because nobody has told you yet?  
→ continue with N5\_F17]

N2\_F17 *INT: Falls TP mindestens eine der Antworten ausgewählt:*

Hat Ihnen jemand gesagt, dass Sie [das/diese Dinge] tun oder haben Sie das eher selbst bemerkt?

- Jemand hat es mir gesagt → weiter mit N3\_F17
- Habe es selbst bemerkt → weiter mit N4\_F17
- Beides → weiter mit N3\_F17

[*Interviewer: If the respondent chooses at least one of the answer options:*

Did anybody tell you that you have done this/these things or did you recognize it yourself?]

- Somebody told me → weiter mit N3\_F17
- Recognized it myself → weiter mit N4\_F17
- Both → weiter mit N3\_F17

N3\_F17 Darf ich Sie fragen, wer Ihnen gesagt hat, dass Sie [das/diese Dinge] im Schlaf tun?

[May I ask you who told you that you do this/these things during your sleep?]

- N4\_F17 Wie häufig machen Sie [das/diese Dinge] im Schlaf?  
[How often do you do this/these things during your sleep?]
- N5\_F17 Gibt es sonstige Dinge, die Sie im Schlaf tun, die hier aber nicht aufgeführt sind?  
[Are there any other things you do during your sleep that were not listed?]

**Question 18**

- N1\_F18 Können Sie die Frage bitte noch einmal in Ihren eigenen Worten wiederholen? Worum geht es bei der Frage?  
[Can you please repeat the question in your own words? What is the question about?]
- N2\_F18 Was verstehen Sie in dieser Frage unter „medizinischem Fachpersonal“? An welche Personen haben Sie hier gedacht?  
[What do you understand by „health professionals“? Who were you thinking of?]
- N3\_F18 *INT: Falls TP mit „ja“ geantwortet hat:*  
Können Sie mir Ihre Antwort bitte noch etwas näher erläutern? An welcher Krankheit leiden Sie und inwiefern beeinflusst diese Ihren Schlaf?  
[Interviewer: If respondent answered with „yes“:  
Can you explain your answer to me in more detail? What sleep disorder do you suffer from and how does it affect your sleep?]



## 6 Glossary: Cognitive techniques

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Think Aloud	<i>„Please vocalize everything that comes to your mind while you answer the following question. Please also vocalize things that seem unimportant to you. The question is...“.</i>
Comprehension Probing	<i>„What would you say is a ‘representative democracy’?“</i>
Category Selection Probing	<i>„You have just said that you strongly agree with this statement. Why did you select this answer?“</i>
Information Retrieval Probing	<i>„How did you remember that you went to the doctor [...] times in the past 12 months?“</i>
General/Elaborative Probing	<i>„Can you please explain your answer a little further?“</i>
Specific Probing	<i>„You have just answered ‘yes‘ to this question. Does that mean that you have already done [...] or that you principally would do [...] if required, but have not yet done [...]?“</i>
Emergent Probing	<i>„I noticed that you frowned when I read out the answer categories to you. Could you please tell me why you did that?“</i>
Difficulty Probing	<i>„How easy or difficult was it for you to answer the question?“ If „rather difficult/very difficult“: „Why was answering the question rather difficult/very difficult for you?“</i>
Paraphrasing	<i>„Please repeat the question that I have just read out to you in your own words.“</i>
Confidence Rating	<i>„How sure are you that you went to the doctor [...] times in the past 12 months?“</i>