

ESS Round 10

Rotating module:
Digital social contacts in work and family life

Module documentation – Final module

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1 Digital social contacts in work and family life

Digitalization has led to major changes in communication both in work and family life. On the one hand, great optimism exists regarding the implications of digital social contacts, e.g. via smartphone, for increased efficiency of communication and improved relationship quality due to new possibilities of contact. On the other hand, major concerns include a decline in family or workplace solidarity as well as greater distractions from family or work interactions and tasks. Rejecting any technological determinism which forecasts the same consequences from digitalization for all individuals in all countries, we suggest a rotating module for Round 10 of the ESS which 1) identifies different dimensions of digital social contact (frequency, content, costs and benefits involved) to allow for a broader understanding of digital phenomena, and 2) creates new possibilities from a European country-comparative perspective for multivariate analyses of the determinants of digital social contacts (e.g., social inequalities) and their consequences, especially for relationship quality, work-life balance, and well-being. We propose items on opportunities for access to digital communication (e.g., Internet access at home), the need for them (e.g., lower co-residence) and trust in digital social contact (e.g., privacy concerns), as complements to questions on workplace culture and available country information (e.g. on work related state policies) which are likely to shape individual agency to establish digital social contact in a way that it facilitates work-life balance and encourages relationship quality or well-being. We consider digital social contacts both in the family and at work.

1.1 DEFINITIONS

Face-to-face contact in the family domain refers to in-person communication with family members. We focus on communication with family members as we are interested in the expression of solidarity (support and appreciation), coordination of family activities, monitoring, as well as an “always-on-accessibility” in in this module. We consider major relationships in the family, namely parents and children, irrespectively of whether they are biological children or foster or adopted children.

Digital social contact in the family domain involves communication which is transmitted by electronic and especially computerized technology and which is not in person communication. We distinguish different types of digital communication taking into account whether the communication is flexible in location, whether it is synchronous communication, and how rich it the communication is when it is synchronous communication (visual vs. audio). Synchronous digital communication can be visual and audio communication at the same time (e.g. on a screen video chatting) or only audio communication which is flexible in location (e.g. on a mobile phone or smartphone) or not flexible in location (talking on a landline phone). For asynchronous communication we refer to contacting someone via text, email or messaging apps.

Face-to-face contact in the work domain refers to in-person communication at the workplace. We focus on communication with supervisors and co-workers as we are interested in the expression of solidarity (support and appreciation), coordination of work tasks, monitoring of job performance, work autonomy in time and place as well as an “always-on-accessibility” in in this module.

Digital social contact in the work domain involves communication which is transmitted by electronic and especially computerized technology and which is not in person communication. We distinguish different types of digital communication taking into account whether the communication is flexible in location, whether it is synchronous communication, and how rich it the communication is when it is synchronous communication (visual vs. audio). Synchronous digital communication can be visual and audio communication at the same time (e.g. on a screen video chatting) or only audio communication which is flexible in location (e.g. on a mobile phone or smartphone) or not flexible in location (talking on a landline phone). For asynchronous communication we refer to contacting someone via text, email or messaging apps.

1.2 GENERAL

1.2.1 Internet access

Internet access measures the location where the respondent has access to the Internet. Respondents can choose from a list of several locations and check all that apply. This measurement has been validated in prior research and only been slightly modified (Hargittai & Hsieh 2012).

Expected relationship with other complex and simple concepts:

Internet access indicates the opportunity of digital social contacts with work relations (supervisor, co-workers) and family relations (child, parent). Thus, we expect an association of internet access with digital social contact with the line manager, co-workers, child, and parent. Internet access might further be associated with internet skill and privacy concerns using digital technologies.

Question item(s)

G1

CARD 60

Imagine you wanted to access the Internet. At which of these locations would you be able to do it? Select all that apply.

PROMPT: At which others.

CODE ALL THAT APPLY

| | | |
|---------------------------------|----------------------------------------------------------|---|
| Mixed [InternetAccess4 + DKREF] | | |
| MIXED | Mixed [InternetAccess4 + DKREF] | |
| LIST | InternetAccess4 | |
| | At home | 1 |
| | At my workplace | 2 |
| | On the move ¹ | 3 |
| | At some other place (such as a cafe or a friend's house) | 4 |
| | None of the above | 5 |
| MISSING_GROUP | DKREF | |
| | Refusal | 7 |
| | Don't Know | 8 |

Translation notes:

¹ 'On the move' in the sense of when moving between different locations.

1.2.2 Familiarity with (three) internet-related items

Internet skill provides information on the competence of the respondent to use computer and internet-related items which is also important for the opportunity to use digital contact with work and family relations. We suggest a validated measurement which lists different computer and Internet related items (Advanced settings, PDF) and asks how familiar the respondent is with these items (Hargittai & Hsieh 2012).

Expected relationship with other complex and simple concepts:

Internet skill indicates whether digital social contact is an available opportunity of contact with work relations (supervisor, co-workers) and family relations (child, parent) of the respondent. Thus, we expect an association of internet skill with digital social contact with the supervisor (supdsc), co-workers (cowdsc), child (chdsc) and parent (pardsc). Internet access might further be associated with internet access (internac) and privacy concerns using digital technologies (privcon).

Question item(s)

G2

FAMPREF

CARD 61

How familiar¹ are you with each of the following computer and Internet-related items? **READ OUT EACH ITEM...** Preference settings

| | | |
|---------------------------|---------------------------|---|
| Mixed [Familiar5 + DKREF] | | |
| MIXED | Mixed [Familiar5 + DKREF] | |
| LIST | Familiar5 | |
| | Not at all familiar | 1 |
| | Not very familiar | 2 |
| | Somewhat familiar | 3 |
| | Very familiar | 4 |
| | Completely familiar | 5 |
| MISSING_GROUP | DKREF | |
| | Refusal | 7 |
| | Don't Know | 8 |

Translation notes:

¹ 'Familiar' should be translated to convey understanding rather than experience.

G3

FAMADVS

STILL CARD 61

(IF NECESSARY: How familiar are you with...) **READ OUT...**Advanced search

| | | |
|---------------------------|--|--|
| Mixed [Familiar5 + DKREF] | | |
|---------------------------|--|--|

| | | |
|---------------|---------------------------|---|
| MIXED | Mixed [Familiar5 + DKREF] | |
| LIST | Familiar5 | |
| | Not at all familiar | 1 |
| | Not very familiar | 2 |
| | Somewhat familiar | 3 |
| | Very familiar | 4 |
| | Completely familiar | 5 |
| MISSING_GROUP | DKREF | |
| | Refusal | 7 |
| | Don't Know | 8 |

G4
FAMPDF

STILL CARD 61

(IF NECESSARY: How familiar are you with...) **READ OUT...PDF**

| | | |
|---------------|---------------------------|---|
| | Mixed [Familiar5 + DKREF] | |
| MIXED | Mixed [Familiar5 + DKREF] | |
| LIST | Familiar5 | |
| | Not at all familiar | 1 |
| | Not very familiar | 2 |
| | Somewhat familiar | 3 |
| | Very familiar | 4 |
| | Completely familiar | 5 |
| MISSING_GROUP | DKREF | |
| | Refusal | 7 |
| | Don't Know | 8 |

1.2.3 General perceptions of digital technologies

We aim to measure general perceptions of digital communication in general referring to mobile and online communication. It gives an indication of digital optimism and scepticism which can also be used as an aggregated measure to indicate digital scepticism and optimism in the different ESS countries. It resembles the questions on contents of contact but also includes a question on privacy concerns instead of a question on monitoring which we thought was more important in this case.

1.2.3.1 Misinformation

This measurement indicates whether respondents think that online and mobile communication exposes people to misinformation.

Question item(s)

G9

MCINTER

STILL CARD 62

(IF NECESSARY: To what extent would you say that online and mobile communication...) **READ OUT...** exposes people¹ to misinformation²?

| | | |
|--------------------------------------|--------------------------------------|----|
| Mixed [NotAtAllCompletely10 + DKREF] | | |
| MIXED | Mixed [NotAtAllCompletely10 + DKREF] | |
| SCALE | NotAtAllCompletely10 | |
| | Not at all | 0 |
| | Completely | 10 |
| MISSING_GROUP | DKREF | |
| | Refusal | 77 |
| | Don't Know | 88 |

Translation notes:

¹ 'Exposes people to misinformation' in the sense of 'allows people to be subjected to misinformation'.

² 'Misinformation' in the sense of 'false information that is spread, regardless of whether there is intent to mislead'.

1.2.3.2 Solidarity

We aim to measure whether respondents perceive that online and mobile communication makes people feel closer to one another indicating digital optimism.

Question item(s)

The next few questions are about online and mobile communication. This refers to communication taking place over the Internet or mobile networks, using mobile phones, computers, tablets or other digital devices.

G5
MCCLOSE

CARD 62

To what extent would you say that online and mobile communication...**READ OUT**... makes people feel closer¹ to one another?

| | | |
|--------------------------------------|--------------------------------------|----|
| Mixed [NotAtAllCompletely10 + DKREF] | | |
| MIXED | Mixed [NotAtAllCompletely10 + DKREF] | |
| SCALE | NotAtAllCompletely10 | |
| | Not at all | 0 |
| | Completely | 10 |
| MISSING_GROUP | DKREF | |
| | Refusal | 77 |
| | Don't Know | 88 |

Translation notes:

¹ 'Closer' in the sense of emotional rather than physical proximity.

1.2.3.3 Accessibility and disturbance

This measurement indicates whether the respondent thinks that online and mobile communication means that work and personal life interrupt one another too often.

Question item(s)

G6
MCINTER

STILL CARD 62

(IF NECESSARY: To what extent would you say that online and mobile communication...) **READ OUT**... makes work and personal life interrupt each other?

| | | |
|--------------------------------------|--------------------------------------|----|
| Mixed [NotAtAllCompletely10 + DKREF] | | |
| MIXED | Mixed [NotAtAllCompletely10 + DKREF] | |
| SCALE | NotAtAllCompletely10 | |
| | Not at all | 0 |
| | Completely | 10 |
| MISSING_GROUP | DKREF | |
| | Refusal | 77 |
| | Don't Know | 88 |

1.2.3.4 Coordination

This measurement indicates whether respondents think that online and mobile communication makes it easier for people to coordinate and manage their activities.

Question item(s)

G7

MCCOORD

STILL CARD 62

(IF NECESSARY: To what extent would you say that online and mobile communication...) **READ OUT...** makes it easy to coordinate and manage activities?

| | | |
|--------------------------------------|--------------------------------------|----|
| Mixed [NotAtAllCompletely10 + DKREF] | | |
| MIXED | Mixed [NotAtAllCompletely10 + DKREF] | |
| SCALE | NotAtAllCompletely10 | |
| | Not at all | 0 |
| | Completely | 10 |
| MISSING_GROUP | DKREF | |
| | Refusal | 77 |
| | Don't Know | 88 |

1.2.3.5 Privacy concerns

We consider privacy concerns in using Internet and mobile phones. The chosen measurement on privacy concern is related to a study of the Oxford Internet Institute (2007) asking whether people agree or disagree with the statement that people who use the Internet and mobile phones put their privacy at risk: The measurement has also been used in the study of Eynon & Helsper (2011).

Expected relationship with other complex and simple concepts:

Privacy concerns indicate the trust in digital social contact and thus are likely to shape the frequency of digital social contacts with work relations and family relations (child, parent). We further expect an association with internet access (internac) and internet familiarity.

Question item(s)

G8

MCPRIV

STILL CARD 62

(IF NECESSARY: To what extent would you say that online and mobile communication...) **READ OUT...** undermines personal privacy?

| | | |
|--------------------------------------|--------------------------------------|--|
| Mixed [NotAtAllCompletely10 + DKREF] | | |
| MIXED | Mixed [NotAtAllCompletely10 + DKREF] | |
| SCALE | NotAtAllCompletely10 | |

| | | |
|---------------|------------|----|
| | Not at all | 0 |
| | Completely | 10 |
| MISSING_GROUP | DKREF | |
| | Refusal | 77 |
| | Don't Know | 88 |

1.3 WORK

1.3.1 General

1.3.1.1 Job satisfaction

The concept job satisfaction measures the satisfaction of the respondent with the main job on an 11-point satisfaction scale. This concept has already been part of a rotating module in the ESS 2010 on family, work and well-being (G53). High job satisfaction has been defined based on need-satisfaction models developed; it involves work circumstances where individuals can fulfil their needs (for review see Herzberg et al. 2011 and Sirgi et al. 2001). Basic needs range from social needs (for interpersonal interaction) over survival needs (e.g. pay) to ego-needs (autonomy, self-esteem) (Sirgi et al. 2001).

The job demands-resources model (Bakker & Demerouti, 2007) further specifies work characteristics as work resources and demands, and their implications for job satisfaction and overall well-being. Job demands have been argued to involve physiological and or psychological costs which decrease job satisfaction. Job resources in contrast have been argued to allow for more motivation and energy and to buffer against negative implications of work-demands increasing job satisfaction (e.g. see Sirgi et al. 2001).

Digital technology use for interactions with co-workers and with the supervisor can increase workplace solidarity and cohesion, which has been identified as a major workplace resource for job satisfaction and which indicates social cohesion in the work team (for review see Aziri 2011). Digital technology such as the internet or smartphones make supervisors and co-workers more accessible when work problems, or work task questions occur, or when supervisor or co-worker support for balancing work and family tasks is required. Moreover there are additional possibilities to receive appreciation by one's supervisor via the Internet or mobile phones, increasing motivation and energy and thus job satisfaction. Accessibility and approximation are ecological influences specified for digital contact by Hertlein (2012) which advance coordination with supervisors and co-workers and further allow for the exchange of support and appreciation indicating social cohesion in the team.

Similarly to digital social contacts in the family domain, it can however be debated whether digital social contact can replace face-to-face contact with supervisors and co-workers and its implications for job satisfaction. Previous research has shown that telework weakens interpersonal bonds among teleworkers, colleagues, and supervisors, and that additional efforts are necessary to maintain such bonds (Golden 2006). Moreover, accessibility involved in digital social contact can further be used for monitoring and control (Is the subordinate working and where? Has the subordinate finished the work task already? How is the subordinate doing the work?) decreasing work autonomy which has been identified as a major work resource for job satisfaction in previous research (for review see Aziri 2011). First evidence however suggests that internet use at work increases job autonomy at work (Kirchner 2015).

Expected relationship with other complex and simple concepts:

We expect that face-to-face contact and digital social contact with line managers and coworkers as well as the experiences with digital social contacts with work relations are central predictors of job satisfaction. Moreover, job satisfaction is likely to be associated with organizational citizenship behaviour, social cohesion in the work team, work-to-life conflict, expectations at work and teleworking.

Question item(s)

Now let's talk about your work. Please answer these questions based on how things are today, even if the pandemic means that this is different to usual.

G34
STFMJOB

ASK IF CURRENTLY IN PAID WORK AT F17a OR F18 (IF 01 AT F17a OR F18 = 1)

CARD 68

How satisfied are you in your main job? Use this card where 0 is extremely dissatisfied and 10 is extremely satisfied.

INTERVIEWER: If the respondent has more than one job, they should answer about the one which occupies them for the most hours per week. If they have two jobs that are exactly equal, they should answer about the more highly paid of the two.

| | | |
|-----------------------------------------|-----------------------------------------|----|
| Mixed [DissatisfiedSatisfied11 + DKREF] | | |
| MIXED | Mixed [DissatisfiedSatisfied11 + DKREF] | |
| SCALE | DissatisfiedSatisfied11 | |
| | Extremely dissatisfied | 0 |
| | Extremely satisfied | 10 |
| MISSING_GROUP | DKREF | |
| | Refusal | 77 |
| | Don't Know | 88 |

1.3.1.2 Work-to-life conflict

Strain based conflict refers to restrictions to perform family or personal responsibilities due to work stress and strain. Following the ESS 2010 and 2004 we suggest to measure how often the respondent keeps worrying about work problems when the respondent is not working and how often the respondents feels too tired after work to enjoy the things he or she would like to do at home.

To describe work-life balance, previous research established the well-known concept of work-family conflict, which is ‘a form of inter-role conflict in which the role pressures from the work and family domains are mutually incompatible in some respect’ (Greenhaus & Beutell 1985: 77). This definition stresses the bidirectional relationship between work and family life; work may interfere with family life, and vice versa. Research indicates that spill-overs from work to family are more severe than family to work (Byron 2005). In addition, Greenhaus and Beutell (1985) distinguish time-based and strain-based conflicts between the two life domains. Time-based conflict occurs when time pressure in one domain makes it difficult to fulfil expectations in the other, whereas strain-based conflict is understood as exposure to stress in one domain, which influences the ability to perform in the other. Due to the restricted number of questions possible, we suggest a concept which measures work-to-family conflict reported as more severe in comparison to family-to-work conflict in previous research (e.g. Byron 2005). The concept we suggest has already been integrated in ESS rotating modules in 2010 and 2004 identifying time-based and strain based conflicts for respondents with and without family (G46-48, 49 and G50-52, 53).

Expected relationship with other complex and simple concepts:

To predict work-family conflict, the job demands-resources model (Bakker & Demerouti 2007) suggests that demands in the domains of work and family life influence an employee’s risk of experiencing stress and strain that then spill over from one life domain to the other, resulting in work-family conflict. Digital social contact with supervisors and colleagues can be both a resource or a demand increasing or decreasing work-life balance. Digital social contacts with supervisors and co-workers can be a resource to for employees to better balance work and family life involving advanced coordination of work and family demands increasing the autonomy when and where to work. On the other hand digital social contacts can be used in the interests of the employers to realize their flexibility and accessibility interests blurring the boundaries between work and family life (Abendroth & Reimann 2018). Previous research has shown positive as well as negative implications of flexible workplace arrangements for work-life balance pointing to the context dependence of the implications of digital social contacts for work-life balance (Abendroth & Den Dulk 2011; Abendroth & Reimann 2018; Bittman et al. 2009; Chesley 2005; Kossek 2016; Nam 2014; Wajcman et al. 2008). As a consequence, we expect work-to-life conflict to be associated with frequency and content of digital social contact as well as of face-to-face contact with supervisor and co-workers (expdicow, supftfc, cowftfc, exsolw).

1.3.1.2.1 Strain-based work-to-family conflict

Strain-based conflict refers to restrictions to perform family or personal responsibilities due to work stress and strain. Following the ESS 2010 and 2004 we suggest to measure how often the respondent feels too tired after work to enjoy the things he or she would like to do at home.

Question item(s)

G35
TRDAWRK

ASK IF CURRENTLY IN PAID WORK AT F17a OR F18 (IF 01 AT F17a OR F18 = 1)

CARD 69

Using this card, how often do you... **READ OUT**... feel too tired after work to enjoy¹ the things you would like to do at home?

| | | |
|---------------------------------------|---------------------------------------|---|
| Mixed [FrequencyNeverAlways5 + DKREF] | | |
| MIXED | Mixed [FrequencyNeverAlways5 + DKREF] | |
| LIST | FrequencyNeverAlways5 | |
| | Never | 1 |
| | Hardly ever | 2 |
| | Sometimes | 3 |
| | Often | 4 |
| | Always | 5 |
| MISSING_GROUP | DKREF | |
| | Refusal | 7 |

| | |
|------------|---|
| Don't Know | 8 |
|------------|---|

Translation notes:

¹ 'Enjoy' in the sense of get pleasure from.

1.3.1.2.2 Time-based work-to-family conflict (for respondents with children and/or partner)

Time based conflict refers to restrictions in time for family responsibilities due to demands at work. For respondents with children and/or partner, this for example indicates how often the respondents finds that the job prevents him or her from giving time to the partner or the family (see ESS 2010, 2004).

Question item(s)

G36

JBPRTFP

ASK IF CURRENTLY IN PAID WORK AT F17a OR F18 (IF 01 AT F17a OR F18 = 1)

STILL CARD 69

(IF NECESSARY: How often do you...) **READ OUT...** find that your job prevents you from giving the time you want to your partner or family?

INTERVIEWER: 'Partner' refers to partners of the same or opposite sex as the respondent (this applies to the following question too).

| | | |
|------------------------------------------------|------------------------------------------------|----|
| Mixed [FrequencyNeverAlways5 + NoPartnerDKREF] | | |
| MIXED | Mixed [FrequencyNeverAlways5 + NoPartnerDKREF] | |
| LIST | FrequencyNeverAlways5 | |
| | Never | 1 |
| | Hardly ever | 2 |
| | Sometimes | 3 |
| | Often | 4 |
| | Always | 5 |
| MISSING_GROUP | NoPartnerDKREF | |
| | Don't have partner/family | 6 |
| | Refusal | 77 |
| | Don't Know | 88 |

1.3.1.2.3 Strain-based work-to-family conflict (for respondents with children and/or partner)

Strain based conflict here refers to the situation that the partner or family gets fed up with the pressure of the respondent's job (see ESS 2010, 2004).

Question item(s)

G37
PFMFDJBA

ASK IF RESPONDENT DID NOT REPORT HAVING NO PARTNER OR FAMILY AT G36 (IF G36 = 01, 02, 03, 04, 05, 77, 88)

STILL CARD 69

Using this card, how often do you... **READ OUT**... find that your partner or family gets fed up with the pressure of your job?

| | |
|---------------------------------------|---------------------------------------|
| Mixed [FrequencyNeverAlways5 + DKREF] | |
| MIXED | Mixed [FrequencyNeverAlways5 + DKREF] |
| LIST | FrequencyNeverAlways5 |
| | Never 1 |
| | Hardly ever 2 |
| | Sometimes 3 |
| | Often 4 |
| | Always 5 |
| MISSING_GROUP | DKREF |
| | Refusal 7 |
| | Don't Know 8 |

1.3.1.3 Autonomy

Autonomy is an important predictor for job satisfaction and work-life balance. Measurements of autonomy have been established using scales on control on how one does job tasks (Karasek and Theorell 1990) and on control over work time and place (Abendroth & Den Dulk 2011). We now chose to measure locational flexibility in working to identify the direction of the association between digital social contact and the use of telecommuting.

1.3.1.3.1 Autonomy in time / time flexibility

We suggest to measure autonomy in time, indicating that the respondent can choose when to work due to the use of digital social contact at work. Autonomy in time has been identified as an important aspect of flexibility in the work domain (e.g. Abendroth & Den Dulk 2011). We rely on common measurements of flexibility indicating whether the respondent can decide when her or his work schedule begins and ends. A further possibility is to ask about whether the respondent can interrupt work for other responsibilities.

Expected relationship with other complex and simple concepts:

This concept provides some baseline information on autonomy in time. It helps to evaluate the autonomy in time involved in digital social contact measured in the concept on experiences with digital social contact.

Question item(s)

G38
DCSFWRKA

ASK IF CURRENTLY IN PAID WORK AT F17a OR F18 (IF 01 AT F17a OR F18 = 1)

CARD 70

To what extent are you allowed to decide your own starting and finishing times at work?

| | | |
|-------------------------------------|-------------------------------------|---|
| Mixed [NotAtAllCompletely3 + DKREF] | | |
| MIXED | Mixed [NotAtAllCompletely3 + DKREF] | |
| LIST | NotAtAllCompletely3 | |
| | Not at all | 1 |
| | To some extent | 2 |
| | Completely | 3 |
| MISSING_GROUP | DKREF | |
| | Refusal | 7 |
| | Don't Know | 8 |

1.3.1.3.2 Autonomy in place / teleworking

We suggest measuring autonomy in place, indicating that digital social contacts provide more flexibility in where to work. It indicates possibilities of telework irrespectively of formal policies. Autonomy in place has been identified as an important aspect of flexibility in the work domain (e.g. Allen et al., 2015; Gajendran & Harrison, 2007).

Measures of telework are well established in existing work-life balance research, although questions vary between, for example, working from home, teleworking or telecommuting (for reviews see Allen et al. 2015). We formulate the question based upon Nam (2014) because this study specifies for the frequency of teleworking and adjusts it in order to distinguish whether it is during official working hours or whether it is overtime work: ‘How often do you work from home or from another place of your choice during your basic or contracted working hours?’ ‘How often do you work from home or from another place of your choice during paid or unpaid overtime?’ Telecommuting is likely to increase the need for digital social contact with supervisors and co-workers and likely to shape the experiences with digital social contacts. Previous research has further shown that it is a central predictor of work-life conflict (wlc) holding also implications for job satisfaction (for review see Allen et al. 2015; Gajendran & Harrison 2007).

Expected relationship with other complex and simple concepts

We expect that teleworking is a central predictor of face-to-face contact and digital social contact with the line manager and with co-workers (supftfc, cowftfc, supdsc, cowdsc). Moreover, an association with expectations at work (expw), with work-life conflict (wlc), job satisfaction (jobsat), social cohesion in the work team (socowt) and (orgcib) can be expected. It is also a baseline for autonomy in place involved in digital social contact.

Question item(s)

G39
WRKHOME

ASK IF CURRENTLY IN PAID WORK AT F17a OR F18 (IF 01 AT F17a OR F18 = 1)

CARD 71

How often do you work from home or from another place of your choice during your regular working hours?

| | | |
|-----------------------------------------|-----------------------------------------|----|
| Mixed [FrequencyEveryDayNever6 + DKREF] | | |
| MIXED | Mixed [FrequencyEveryDayNever6 + DKREF] | |
| LIST | FrequencyEveryDayNever6 | |
| | Every day | 1 |
| | Several times a week | 2 |
| | Several times a month | 3 |
| | Once a month | 4 |
| | Less often | 5 |
| | Never | 6 |
| MISSING_GROUP | DKREF | |
| | Refusal | 77 |
| | Don't Know | 88 |

We see the need to at least have some information about how contact has changed due to Covid-19 to get some information on how the reported frequencies of contact differ from the contact before the Covid-19 pandemic. The two questions below assess the frequency of remote working compared with before the pandemic and whether any change was due to the pandemic.

G40
C19WHOME

ASK IF CURRENTLY IN PAID WORK AT F17a OR F18 (IF 01 AT F17a OR F18 = 1)

Compared with before the coronavirus pandemic, would you say that you work from home or from another place of your choice... **READ OUT...**

| | | |
|---------------------------------------------|---------------------------------------------|---|
| Mixed [MuchMoreMuchLess5 + NoWorkHomeDKREF] | | |
| MIXED | Mixed [MuchMoreMuchLess5 + NoWorkHomeDKREF] | |
| LIST | MuchMoreMuchLess5 | |
| | Much more often now | 1 |
| | A little more often now | 2 |
| | About the same | 3 |
| | A little less often now | 4 |
| | Much less often now | 5 |
| MISSING_GROUP | NoWorkHomeDKREF | |

| | | |
|--|------------------------------------------------------------|----|
| | I cannot work from home or from another place of my choice | 55 |
| | Refusal | 77 |
| | Don't Know | 88 |

G40a
C19WPLCH

ASK IF MORE OR LESS OFTEN AT G40 (IF G40 = 01, 02, 04, 05)

CARD 72

Would you say that this change occurred as a result of the coronavirus pandemic?

INTERVIEWER: 'this change' refers to the respondent working from home or from another place of their choice more/less often now compared with before the coronavirus pandemic, as reported at G40.

| | | |
|---------------|-----------------------------|---|
| | Mixed [YesNoInPart + DKREF] | |
| MIXED | Mixed [YesNoInPart + DKREF] | |
| LIST | YesNoInPart | |
| | Yes, entirely | 1 |
| | Yes, in part | 2 |
| | No | 3 |
| MISSING_GROUP | DKREF | |
| | Refusal | 7 |
| | Don't Know | 8 |

G61
MCWRKHOM

ASK IF RESPONDENT DID NOT REPORT HAVING NO ONLINE OR MOBILE COMMUNICATION WITH PEOPLE AT WORK AT G60 (IF G60 = 01, 02, 03, 04, 05, 77, 88)

CARD 84

To what extent does online and mobile communication between you and the people you work with make it easy to work from home or from another place of your choice?

| | | |
|---------------|--------------------------------------|----|
| | Mixed [NotAtAllCompletely10 + DKREF] | |
| MIXED | Mixed [NotAtAllCompletely10 + DKREF] | |
| SCALE | NotAtAllCompletely10 | |
| | Not at all | 0 |
| | Completely | 10 |
| MISSING_GROUP | DKREF | |
| | Refusal | 77 |

| | |
|------------|----|
| Don't Know | 88 |
|------------|----|

1.3.1.4 Expectations at work

We suggest the concept ‘Expectations at work’ to measure the family-friendliness of the workplace culture (Thompson et al. 1999; LEEP-B3: Diewald et al. 2015) – including a culture of physical presence and of the ideal worker norm of a worker who has few family obligations and prioritizes work (Acker, 1990; Cha & Weeden, 2014; Hodges & Budig, 2016; Kossek et al., 2010) as well as measurements of a digital workplace culture including practices of digital accessibility. We suggest a common measurement from Thompson et al. 1999 on work-family workplace culture which involves managerial support for work-life balance and organizational time demands. For each subconcept we were only able to choose 1 item due to space limitations. We further suggest to also consider a culture of physical presence which is highly important for the opportunity to use digital social contact for more flexibility in time and place. For a culture of physical presence it is important to consider that some jobs are more likely to require physical presence at the regular workplace.

Expected relationship with other complex and simple concept:

These expectations at work are expected to shape the frequency of digital social contact with work relations (coworkers and line managers) and the experiences with digital social contacts. Physical presence reduces the opportunity for digital social contact whereas expectations on accessibility and long hours increase the likelihood that digital social contact involves increased accessibility and disturbance of other activities (expdiconw).

1.3.1.5.1 High demanding work culture

High demanding work cultures address expectations to be constantly available for work tasks and contact in line with the ideal worker norm of a worker who has few family obligations and prioritizes work (Acker, 1990; Cha & Weeden, 2014; Hodges & Budig, 2016; Kossek et al., 2010). We expect that high demanding work cultures shape experiences with digital social contact at work (expdiconw), especially accessibility and disturbance. High demanding work cultures have already been found to moderate the implications of telework for work-life conflict and gender earning inequalities in German workplaces (Abendroth & Reimann 2018; Abendroth & Diewald, working paper).

Question item(s)

The next few questions are about the organisation or company you work in.

G41
WRKHOME

ASK IF CURRENTLY IN PAID WORK AT F17a OR F18 (IF 01 AT F17a OR F18 = 1)

CARD 73

If you work in an organisation, how often are employees in your organisation expected¹ to work overtime, whether at the workplace or at home?

| | |
|---------------------------------------------|---------------------------------------------|
| Mixed [FrequencyEveryDayNever6 + NOWORKORG] | |
| MIXED | Mixed [FrequencyEveryDayNever6 + NOWORKORG] |
| LIST | FrequencyEveryDayNever6 |

| | | |
|---------------|---------------------------------|----|
| | Every day | 1 |
| | Several times a week | 2 |
| | Several times a month | 3 |
| | Once a month | 4 |
| | Less often | 5 |
| | Never | 6 |
| MISSING_GROUP | NOWORKORG | |
| | I don't work in an organisation | 55 |
| | Refusal | 77 |
| | Don't Know | 88 |

Translation notes:

1 'Expected' may refer to either policy or culture within the respondent's organisation. This also applies to item G42.

G42
WRKRESP

ASK IF RESPONDENT DID NOT REPORT NOT WORKING IN AN ORGANISATION AT G41
(IF G41 = 01, 02, 03, 04, 05, 06, 77, 88)

STILL CARD 73

How often are employees in your organisation expected to be responsive to work communications outside working hours?

| | | |
|---------------|-----------------------------------------|----|
| | Mixed [FrequencyEveryDayNever6 + DKREF] | |
| MIXED | Mixed [FrequencyEveryDayNever6 + DKREF] | |
| LIST | FrequencyEveryDayNever6 | |
| | Every day | 1 |
| | Several times a week | 2 |
| | Several times a month | 3 |
| | Once a month | 4 |
| | Less often | 5 |
| | Never | 6 |
| MISSING_GROUP | DKREF | |
| | Refusal | 77 |
| | Don't Know | 88 |

1.3.1.5.2 Culture of physical presence at work

Culture of physical presence at work refers to expectations to be constantly present at work and opportunities to perform the job at other locations, decreasing the opportunity for digital social contact at work (supdsc, cowdsc) and teleworking (telw).

We see the need to at least have some information about how contact has changed due to Covid-19 to get some information on how the reported frequencies of contact differ from the contact before the Covid-19 pandemic. The question below assesses the perceived acceptance of home working by employers compared to before the pandemic.

Question item(s)

G43
C19WHACC

ASK IF RESPONDENT DID NOT REPORT NOT WORKING IN AN ORGANISATION AT G41
(IF G41 = 01, 02, 03, 04, 05, 06, 77, 88)

CARD 74

Compared with before the coronavirus pandemic, how accepted is it for employees in your organisation to choose to work regularly from home or from another place of their choice nowadays?

| | | |
|--------------------------------------|----------------------------------------------------------------------------------------------------|----|
| Mixed [Accepted5+ WorkPandemicDKREF] | | |
| MIXED | Mixed [Accepted5 + WorkPandemicDKREF] | |
| LIST | Accepted5 | |
| | Much more accepted now | 1 |
| | A little more accepted now | 2 |
| | About the same | 3 |
| | A little less accepted now | 4 |
| | Much less accepted now | 5 |
| MISSING_GROUP | WorkPandemicDKREF | |
| | Employees need to work from home due to coronavirus restrictions | 33 |
| | Employees in my organization do not have a regular workplace | 44 |
| | Employees in my organization do not work regularly from home or from another place of their choice | 55 |
| | Refusal | 77 |
| | Don't Know | 88 |

1.3.1.5.3 Managerial support for work-life balance

Managerial support for work-life balance has been identified as a key dimension of work-life supportive workplace culture. We test whether the measurement of Thompson et al. 1999 on managerial support or the measurement on line manager support in line with the LEEP-B3 data and several other studies is more appropriate. Existing research indicates that the direct line manager is important for the work-life balance situation of employees.

Question item(s)

G44
SCLMSUP

ASK IF CURRENTLY IN PAID WORK AT F17a OR F18 (IF 01 AT F17a OR F18 = 1)

CARD 75

If you have a line manager¹, how much does he or she support employees in balancing work and personal commitments? Please choose a number from 0 to 10, where 0 means not at all and 10 means completely.

INTERVIEWER: Line manager refers to the person the respondent receives work instructions from on a regular basis; if the respondent has several line managers, ask them to think of the one they received work instructions from most recently. This applies to all questions referring to the respondent's line manager in this module.

| | | |
|----------------------------------------------|----------------------------------------------|----|
| Mixed [NotAtAllCompletely10 + NoLineManager] | | |
| MIXED | Mixed [NotAtAllCompletely10 + NoLineManager] | |
| SCALE | NotAtAllCompletely10 | |
| | Not at all | 0 |
| | Completely | 10 |
| MISSING_GROUP | NoLineManager | |
| | I don't have a line manager | 55 |
| | Refusal | 77 |
| | Don't Know | 88 |

Translation notes:

¹ 'Line manager': the person from whom the respondent directly receives work instructions on a regular basis.

1.3.2 Coworker

1.3.2.1 Social cohesion in work team

The concept social cohesion identifies the climate in the work team. We suggest to measure to what extent the respondent feels like they are a part of the team they work in. This is a shortened version of the concept validated in the Sustainable Workforce Survey.

Expected relationship with other complex and simple concepts:

Social cohesion in the work team is expected to be associated with frequency and content of digital social contact as well as of face-to-face contact with line manager and co-workers of (expdscw, supftfc, cowftfc, exsolw) which indicate associational solidarity (Bengtson and Roberts 1991).

Question item(s)

The next few questions are about the team in which you work.

G51

TEAMFEEL

ASK IF CURRENTLY IN PAID WORK AT F17a OR F18 (IF 01 AT F17a OR F18 = 1)

CARD 79

If you work in a team, how much do you feel like part of your team? Please choose a number from 0 to 10, where 0 means not at all and 10 means completely.

| | | |
|---------------------------------------|---------------------------------------|----|
| Mixed [NotAtAllCompletely10 + NoTeam] | | |
| MIXED | Mixed [NotAtAllCompletely10 + NoTeam] | |
| SCALE | NotAtAllCompletely10 | |
| | Not at all | 0 |
| | Completely | 10 |
| MISSING_GROUP | NoTeam | |
| | I don't work in a team | 55 |
| | Refusal | 77 |
| | Don't Know | 88 |

1.3.2.2 Organizational citizenship behavior

Organizational citizenship behavior refers to a person's voluntary commitment within an organization or company that is not part of his or her contractual tasks (for review see Organ & Ryan 1995). This measurement has been validated in the Sustainable Workforce Questionnaire.

Expected relationship with other complex and simple concepts:

Organizational citizenship behavior is expected to be associated with frequency of and experiences with digital social contact, as well as with face-to-face contact with line manager and co-workers (expdscw, supftfc, cowftfc, exsolw), as previous research indicates that organizational citizenship behavior depends on solidarity and cohesion in the workplace (Organ & Ryan 1995). We further

expect an association with work-to-life conflict (wlc), social cohesion in the work team (socwt), and job satisfaction (jobsat).

Question item(s)

G52

WRKEXTRA

ASK IF RESPONDENT DID NOT REPORT NOT WORKING IN TEAM AT G51 (IF G51 = 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 77, 88)

CARD 80

If needed, how willing would you be to take on extra responsibilities at work without being paid more? Please choose a number from 0 to 10, where 0 means not at all willing and 10 means completely willing.

| | | |
|---------------------------------------------|---------------------------------------------|----|
| Mixed [NotAtAllCompletelyWilling11 + DKREF] | | |
| MIXED | Mixed [NotAtAllCompletelyWilling11 + DKREF] | |
| SCALE | NotAtAllCompletelyWilling11 | |
| | Not at all willing | 0 |
| | Completely willing | 10 |
| MISSING_GROUP | DKREF | |
| | Refusal | 77 |
| | Don't Know | 88 |

1.3.2.3 Distance

This concept aims to measure the proportion of regular colleagues which are based at the same workplace as the respondent indicating the opportunity for face-to-face contact and the need for digital social contact. Answer categories also involve ‘I have no colleagues’.

Question item(s)

Now let’s talk about the colleagues you work with on a regular basis.

G53

COLPROP

ASK IF CURRENTLY IN PAID WORK AT F17a OR F18 (IF 01 AT F17a OR F18 = 1)

CARD 81

If you have colleagues, what proportion of them are based at the same physical location as you on a normal working day?

INTERVIEWER: If the respondent asks which colleagues to consider, ask them to refer to the colleagues they work with on a regular basis. If the respondent works at more than one location, ask them to think about the location they work at most frequently.

| | | |
|---------------------------------------------|---------------------------------------------|----|
| Mixed [ProportionColleagues + NOCOLLEAGUES] | | |
| MIXED | Mixed [ProportionColleagues + NOCOLLEAGUES] | |
| LIST | ProportionColleagues | |
| | All | 1 |
| | Very large | 2 |
| | Over a half | 3 |
| | About half | 4 |
| | Under a half | 5 |
| | Very small | 6 |
| | None | 7 |
| MISSING_GROUP | NOCOLLEAGUES | |
| | I don't have colleagues | 55 |
| | Refusal | 77 |
| | Don't Know | 88 |

1.3.2.4 Solidarity

Solidarity addresses appreciation and support from co-workers and line manager which has been found to increase job satisfaction work-life balance, organizational citizenship behavior and which indicates social cohesion in the workplace (Abendroth & Den Dulk 2011; Cohen & Wills 1985; de Lange et al. 2003; Gilbreath & Benson 2004; Organ & Ryan 1995). Hertlein (2012) further defines 'approximation' as an ecological influence of the use of the internet and mobile phones which have features which allow to approximate face-to-face situations and thus also the exchange of solidarity. Also, other studies suggest that digital social contacts can be a source for the exchange of solidarity (e.g. see review of Dworkin et al. 2018). Solidarity in digital social contact measures whether support and appreciation is part of digital social contact.

The concept aims to measure the exchange of support and appreciation. Here we rely on common measurements which have also been used in the German LEEP-B3 survey or partly in the Sustainable workforce survey. (For example, such measures involve questions on a) how often do you receive support from your co-worker with work-related problems? b) how often do you feel unjustly criticized by your co-workers?)

Expected relationship with other complex and simple concepts:

This concept provides some baseline information on overall solidarity in the relationship. It helps to evaluate the exchange of solidarity in digital social contact measured in the questions on experiences with digital social contact.

Question item(s)

G54
COLHLP

ASK IF RESPONDENT DID NOT REPORT HAVING NO COLLEAGUES AT G53 (IF G53 = 01, 02, 03, 04, 05, 06, 07, 77, 88)

CARD 82

How likely would your colleagues be to give you work-related help or advice, if needed?

| | | |
|-----------------------------|-----------------------------|---|
| Mixed [VeryLikely4 + DKREF] | | |
| MIXED | Mixed [VeryLikely4 + DKREF] | |
| LIST | VeryLikely4 | |
| | Very likely | 1 |
| | Likely | 2 |
| | Not very likely | 3 |
| | Not at all likely | 4 |
| MISSING_GROUP | DKREF | |
| | Refusal | 7 |
| | Don't Know | 8 |

1.3.2.5 Frequency of face-to-face contact

This concept measures the frequency of face-to-face contact with co-workers of those who are employed and follows the concept frequency digital social contact with child, parent and line manager. Those who are self-employed receive questions on contact with their co-workers when they have personnel. Face-to-face contact in the work domain refers to in person communication at the workplace. Communication at the workplace as the expression of solidarity (support and appreciation), coordination of work tasks, monitoring of job performance, and “always-on” accessibility are central content of contact we are interested in in the module.

Expected relationship with other complex and simple concepts:

The frequency of face-to-face contact with co-workers is likely to lower the need for digital social contact with co-workers and the trust in the relationship shaping the frequency of digital social contact with co-workers (cowdsc) as well as the experiences with digital social contacts with work relations (expdsc) and thus their consequences for job satisfaction (jobsat), work-life conflict (wlc), organizational citizenship behavior (orgcib) and social cohesion in the work team (socowt).

G55 COLSPEAK

ASK IF RESPONDENT DID NOT REPORT HAVING NO COLLEAGUES AT G53 (IF G53 = 01, 02, 03, 04, 05, 06, 07, 77, 88)

CARD 83

How often do you speak about work with your colleagues in person? Please only include occasions where you are physically in the same location.

| | | |
|----------------------------------------|----------------------------------------|---|
| Mixed [FrequencySeveralNever7 + DKREF] | | |
| MIXED | Mixed [FrequencySeveralNever7 + DKREF] | |
| LIST | FrequencySeveralNever7 | |
| | Several times a day | 1 |

| | | |
|---------------|-----------------------|----|
| | Once a day | 2 |
| | Several times a week | 3 |
| | Several times a month | 4 |
| | Once a month | 5 |
| | Less often | 6 |
| | Never | 7 |
| MISSING_GROUP | DKREF | |
| | Refusal | 77 |
| | Don't Know | 88 |

We see the need to at least have some information about how contact has changed due to Covid-19 to get some information on how the reported frequencies of contact differ from the contact before the Covid-19 pandemic. The question below compares the level of in-person communication with colleagues to before the pandemic.

Question item(s)

For the next few questions, please think about all the people you work with, regardless of whether they are your line manager or your colleagues.

G59
C19SPWRK

ASK IF RESPONDENT DID NOT REPORT HAVING NO LINE MANAGER AT G44 AND NO COLLEAGUES AT G53 (IF G44 = 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 77, 88 OR IF G53 = 01, 02, 03, 04, 05, 06, 07, 77, 88)

Now think about occasions where you and the people you work with are physically in the same location. Compared with before the coronavirus pandemic, would you say that you speak with the people you work with in person... **READ OUT...**

| | | |
|---------------|-----------------------------------|---|
| | Mixed [MuchMoreMuchLess5 + DKREF] | |
| MIXED | Mixed [MuchMoreMuchLess5 + DKREF] | |
| LIST | MuchMoreMuchLess5 | |
| | Much more often now | 1 |
| | A little more often now | 2 |
| | About the same | 3 |
| | A little less often now | 4 |
| | Much less often now | 5 |
| MISSING_GROUP | DKREF | |
| | Refusal | 7 |
| | Don't Know | 8 |

1.3.2.6 Frequency of digital social contact

This concept measures the frequency of digital social contact with co-workers of those who are employed and follows the concept frequency digital social contact with child, parent and line manager. Those who are self-employed receive questions on contact with their co-workers when they have personnel or when they work with other people who are self-employed.

Expected relationship with other complex and simple concepts:

We suggest that the frequency of face-to-face contact with co-workers (cowffc) (S) and teleworking (telw) are important predictors of the frequency of digital social contacts with the co-worker because they define the need for digital social contacts. Internet access (internac) (S) and Internet skill (intsk) (S) as well as specific expectations at work (expw) further define the opportunity for digital social contacts with co-workers and privacy concerns (privcon (S)) the trust in the use of digital communication devices and thus also the frequency of digital social contacts with co-workers. We further suggest that the frequency of digital social contacts with co-workers is associated with job satisfaction (jobsat), social cohesion in work team (socowt), organizational citizenship behavior (orgcib) and work-life conflict (wlc).

Question item(s)

G56
COLSCRN

ASK IF RESPONDENT DID NOT REPORT HAVING NO COLLEAGUES AT G53 (IF G53 = 01, 02, 03, 04, 05, 06, 07, 77, 88)

STILL CARD 83

How often do you speak about work with your colleagues such that you can see each other on a screen?

| | | |
|----------------------------------------|----------------------------------------|----|
| Mixed [FrequencySeveralNever7 + DKREF] | | |
| MIXED | Mixed [FrequencySeveralNever7 + DKREF] | |
| LIST | FrequencySeveralNever7 | |
| | Several times a day | 1 |
| | Once a day | 2 |
| | Several times a week | 3 |
| | Several times a month | 4 |
| | Once a month | 5 |
| | Less often | 6 |
| | Never | 7 |
| MISSING_GROUP | DKREF | |
| | Refusal | 77 |
| | Don't Know | 88 |

G57
COLPHONE

ASK IF RESPONDENT DID NOT REPORT HAVING NO COLLEAGUES AT G53 (IF G53 = 01, 02, 03, 04, 05, 06, 07, 77, 88)

STILL CARD 83

How often do you speak about work with your colleagues using a phone or other device? Please include calls you make or receive, but exclude calls where you and your colleagues see each other on a screen.

| | | |
|----------------------------------------|----------------------------------------|----|
| Mixed [FrequencySeveralNever7 + DKREF] | | |
| MIXED | Mixed [FrequencySeveralNever7 + DKREF] | |
| LIST | FrequencySeveralNever7 | |
| | Several times a day | 1 |
| | Once a day | 2 |
| | Several times a week | 3 |
| | Several times a month | 4 |
| | Once a month | 5 |
| | Less often | 6 |
| | Never | 7 |
| MISSING_GROUP | DKREF | |
| | Refusal | 77 |
| | Don't Know | 88 |

G58
COLCOM

ASK IF RESPONDENT DID NOT REPORT HAVING NO COLLEAGUES AT G53 (IF G53 = 01, 02, 03, 04, 05, 06, 07, 77, 88)

STILL CARD 83

How often do you communicate about work in writing with your colleagues via text, email or messaging apps?

| | | |
|----------------------------------------|----------------------------------------|---|
| Mixed [FrequencySeveralNever7 + DKREF] | | |
| MIXED | Mixed [FrequencySeveralNever7 + DKREF] | |
| LIST | FrequencySeveralNever7 | |
| | Several times a day | 1 |
| | Once a day | 2 |
| | Several times a week | 3 |
| | Several times a month | 4 |
| | Once a month | 5 |

| | | |
|---------------|------------|----|
| | Less often | 6 |
| | Never | 7 |
| MISSING_GROUP | DKREF | |
| | Refusal | 77 |
| | Don't Know | 88 |

We see the need to at least have some information about how contact has changed due to Covid-19 to get some information on how the reported frequencies of contact differ from the contact before the Covid-19 pandemic. The question below compares the level of online and mobile communication with colleagues to before the pandemic.

G60
C19MCWRK

ASK IF RESPONDENT DID NOT REPORT HAVING NO LINE MANAGER AT G44 AND NO COLLEAGUES AT G53 (IF G44 = 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 77, 88 OR IF G53 = 01, 02, 03, 04, 05, 06, 07, 77, 88)

Compared with before the coronavirus pandemic, would you say that you have online or mobile communication with the people you work with... **READ OUT...**

INTERVIEWER: If necessary, remind the respondent that ‘online or mobile communication refers to communication taking place over the Internet or mobile networks, using mobile phones, computers, tablets or other digital devices.’

| | | |
|-------------------------------------------|-------------------------------------------------------------------------|----|
| Mixed [MuchMoreMuchLess5 + NoDigCommWork] | | |
| MIXED | Mixed [MuchMoreMuchLess5 + NoDigCommWork] | |
| LIST | MuchMoreMuchLess5 | |
| | Much more often now | 1 |
| | A little more often now | 2 |
| | About the same | 3 |
| | A little less often now | 4 |
| | Much less often now | 5 |
| MISSING_GROUP | NoDigCommWork | |
| | I don't have online or mobile communication with the people I work with | 55 |
| | Refusal | 77 |
| | Don't Know | 88 |

1.3.3 Supervisor

1.3.3.1 Solidarity

Solidarity addresses appreciation and support from co-workers and line manager which has been found to increase job satisfaction work-life balance, organizational citizenship behavior and which indicates social cohesion in the workplace (Abendroth & Den Dulk 2011; Cohen & Wills 1985; de Lange et al. 2003; Gilbreath & Benson 2004; Organ & Ryan 1995). Hertlein (2012) further defines approximation as an ecological influence of the use of the internet and mobile phones which have features which allow to approximate face-to-face situations and thus also the exchange of solidarity. Also other studies suggest that digital social contacts can be a source for the exchange of solidarity (e.g. see review of Dworkin et al. 2018). Solidarity in digital social contact measures whether support and appreciation is part of digital social contact and whether it makes the respondent less connected with the family relation of interest.

The concept aims to measure the exchange of support and appreciation. Here we rely on common measurements which have also been used in the German LEEP-B3 survey or partly in the Sustainable workforce survey. The survey, for example, involves questions on a) how often do you receive support from your supervisor with work-related problems? b) how often does you supervisor show you appreciation for the work you do? c) how often do you feel unjustly criticized by your supervisor?

Expected relationship with other complex and simple concepts:

This concept provides some baseline information on overall solidarity in the relationship. It helps to evaluate the exchange of solidarity in digital social contact measured in the questions on experiences with digital social contact.

Question item(s)

G45
MANSUPP

ASK IF RESPONDENT DID NOT REPORT HAVING NO LINE MANAGER AT G44 (IF G44 = 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 77, 88)

CARD 76

How likely would your line manager be to give you work-related help or advice, if needed?

| | | |
|-----------------------------|-----------------------------|---|
| Mixed [VeryLikely4 + DKREF] | | |
| MIXED | Mixed [VeryLikely4 + DKREF] | |
| LIST | VeryLikely4 | |
| | Very likely | 1 |
| | Likely | 2 |
| | Not very likely | 3 |
| | Not at all likely | 4 |
| MISSING_GROUP | DKREF | |
| | Refusal | 7 |
| | Don't Know | 8 |

1.3.3.2 Distance

This concept aims to measure frequency of being at the same workplace at the same time to indicate the opportunity for face-to-face contact.

Question item(s)

G46

MANWRKPL

ASK IF RESPONDENT DID NOT REPORT HAVING NO LINE MANAGER AT G44 (IF G44 = 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 77, 88)

CARD 77

How often are you and your line manager at the same workplace at the same time?

INTERVIEWER: If necessary, clarify that ‘same workplace’ refers to the same physical location.

| Mixed [FrequencyEveryDayNever6 + NoRegWorkplace] | | |
|--------------------------------------------------|--------------------------------------------------|----|
| MIXED | Mixed [FrequencyEveryDayNever6 + NoRegWorkplace] | |
| LIST | FrequencyEveryDayNever6 | |
| | Every day | 1 |
| | Several times a week | 2 |
| | Several times a month | 3 |
| | Once a month | 4 |
| | Less often | 5 |
| | Never | 6 |
| MISSING_GROUP | NoRegWorkplace | |
| | I don't have a regular workplace | 44 |
| | Refusal | 77 |
| | Don't Know | 88 |

1.3.3.3 Frequency of face-to-face contact

This concept measures the frequency of face-to-face contact with the supervisor of those who are employed and follows the concept frequency digital social contact with child and with parent. Face-to-face contact in the work domain refers to in-person communication at the workplace. Communication at the workplace as the expression of solidarity (support and appreciation), coordination of work tasks, monitoring of job performance, and “always-on” accessibility are central content of contact we are interested in in the module.

Expected relationship with other complex and simple concepts:

The frequency of face-to-face contact with the supervisor is likely to lower the need for digital social contact with the supervisor and the trust in the relationship shaping the frequency of digital social contact with the supervisor (supdsc) as well as the experiences with digital social contacts with work relations (expdsc) and thus their consequences for job satisfaction (jobsat), work-life conflict (wlc),

organizational citizenship behavior (orgcib) and social cohesion in the work team (socowt). The frequency of face-to-face contact is further associated with telework (telw) restricting the opportunity for face-to-face contact.

Question item(s)

G47

MANSPEAK

ASK IF RESPONDENT DID NOT REPORT HAVING NO LINE MANAGER AT G44 (IF G44 = 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 77, 88)

CARD 78

How often do you speak about work with your line manager in person? Please only include occasions where you are physically in the same location.

| | | |
|----------------------------------------|----------------------------------------|----|
| Mixed [FrequencySeveralNever7 + DKREF] | | |
| MIXED | Mixed [FrequencySeveralNever7 + DKREF] | |
| LIST | FrequencySeveralNever7 | |
| | Several times a day | 1 |
| | Once a day | 2 |
| | Several times a week | 3 |
| | Several times a month | 4 |
| | Once a month | 5 |
| | Less often | 6 |
| | Never | 7 |
| MISSING_GROUP | DKREF | |
| | Refusal | 77 |
| | Don't Know | 88 |

1.3.3.4 Frequency of digital social contact

This concept measures the frequency of digital social contact with the supervisor of those who are employed and follows the concept frequency digital social contact with child and with parent. Digital social contact in the work domain involves communication which is transmitted by electronic and especially computerized technology, and which is not in-person communication.

Expected relationship with other complex and simple concepts:

We suggest that the frequency of face-to-face contact with the supervisor (supftfc) and teleworking (telw) are important predictors of the frequency of digital social contacts with the supervisor because they define the need for digital social contacts. Internet access (internac) and Internet skill (intsk) as well as specific expectations at work (expw) further define the opportunity for digital social contacts with the supervisor and privacy concerns (privcon) the trust in the use of digital communication devices and thus also the frequency of digital social contacts with the supervisor. We further suggest that the frequency of digital social contacts with supervisors is associated with job satisfaction (jobsat), social cohesion in work team (socowt), organizational citizenship behavior (orgcib) and

work-life conflict (wlc). It is further likely to moderate the implications of face-to-face contact with the supervisor (supftfc) for these outcomes.

Question item(s)

G48

MANSCRN

ASK IF RESPONDENT DID NOT REPORT HAVING NO LINE MANAGER AT G44 (IF G44 = 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 77, 88)

STILL CARD 78

How often do you speak about work with your line manager such that you can see each other on a screen?

| | | |
|----------------------------------------|----------------------------------------|----|
| Mixed [FrequencySeveralNever7 + DKREF] | | |
| MIXED | Mixed [FrequencySeveralNever7 + DKREF] | |
| LIST | FrequencySeveralNever7 | |
| | Several times a day | 1 |
| | Once a day | 2 |
| | Several times a week | 3 |
| | Several times a month | 4 |
| | Once a month | 5 |
| | Less often | 6 |
| | Never | 7 |
| MISSING_GROUP | DKREF | |
| | Refusal | 77 |
| | Don't Know | 88 |

G49

MANPHONE

ASK IF RESPONDENT DID NOT REPORT HAVING NO LINE MANAGER AT G44 (IF G44 = 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 77, 88)

STILL CARD 78

How often do you speak about work with your line manager using a phone or other device? Please include calls you make or receive, but exclude calls where you see each other on a screen.

| | | |
|----------------------------------------|----------------------------------------|---|
| Mixed [FrequencySeveralNever7 + DKREF] | | |
| MIXED | Mixed [FrequencySeveralNever7 + DKREF] | |
| LIST | FrequencySeveralNever7 | |
| | Several times a day | 1 |
| | Once a day | 2 |

| | | |
|---------------|-----------------------|----|
| | Several times a week | 3 |
| | Several times a month | 4 |
| | Once a month | 5 |
| | Less often | 6 |
| | Never | 7 |
| MISSING_GROUP | DKREF | |
| | Refusal | 77 |
| | Don't Know | 88 |

G50
MANCOM

ASK IF RESPONDENT DID NOT REPORT HAVING NO LINE MANAGER AT G44 (IF G44 = 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 77, 88)

STILL CARD 78

How often do you communicate about work in writing with your line manager via text, email or messaging apps?

| | | |
|---------------|----------------------------------------|----|
| | Mixed [FrequencySeveralNever7 + DKREF] | |
| MIXED | Mixed [FrequencySeveralNever7 + DKREF] | |
| LIST | FrequencySeveralNever7 | |
| | Several times a day | 1 |
| | Once a day | 2 |
| | Several times a week | 3 |
| | Several times a month | 4 |
| | Once a month | 5 |
| | Less often | 6 |
| | Never | 7 |
| MISSING_GROUP | DKREF | |
| | Refusal | 77 |
| | Don't Know | 88 |

1.4 FAMILY

1.4.1 Child

1.4.1.1 Identifier

This question is used to identify whether the respondent has a child 12 years or older. This question is necessary as a filter because questions on digital social contact with children will only be asked to respondents with a child 12 years or older, where digital social contact is more likely to occur on a regular basis in contrast to younger ages. We now not only ask whether the respondent has a child 12 or older but also how many to be better able to control for the number of children. To realize a random pick of the child we refer to the one who had his or her birthday most recently.

Question item(s)

Now I would like to ask you about your family.

G10
CHLDO12

How many children aged 12 or over do you have? Please include any grown-up children.

| | | |
|--------------------------------|--------------------------------|----|
| Mixed [NumberChildren + DKREF] | | |
| MIXED | Mixed [NumberChildren + DKREF] | |
| NUMERIC | NumberChildren | |
| | TYPE IN | |
| MISSING_GROUP | DKREF | |
| | Refusal | 77 |
| | Don't Know | 88 |

1.4.1.2 Gender

This concept measures the gender of the previously identified child. Demographics of family members not in the same household were asked in the rotating module of the ESS 2004.

Expected relationship with other complex and simple concepts:

The gender of the child is likely to impact the frequency of face-to-face with the child (chftf) and digital social contact (chdsc) as previous research indicates that especially women are more likely to sustain family relationships.

Question item(s)

G11a
GNDRO12A

ASK IF RESPONDENT HAS 2 OR MORE CHILDREN AGED 12 OR OVER AT G10 (IF G10 > 1)

Now please think of your son or daughter¹ aged 12 or over who had his or her birthday most recently. Is this child² male or female?

INTERVIEWER: If the respondent has more than one son or daughter with the same birthday, ask them to think of the son or daughter whose name comes first alphabetically.

| | | |
|----------------------|----------------------|---|
| Mixed [Sex2 + DKREF] | | |
| MIXED | Mixed [Sex2 + DKREF] | |
| LIST | Sex2 | |
| | Male | 1 |
| | Female | 2 |
| MISSING_GROUP | DKREF | |
| | Refusal | 7 |
| | Don't Know | 8 |

Translation notes:

¹ 'Son or daughter' can be translated as 'child' if this term does not imply young age.

² 'Child' in the sense of a son or daughter of any age.

G11b

GNDRO12B

ASK IF RESPONDENT HAS 1 CHILD AGED 12 OR OVER AT G10 (IF G10 = 1)

Is this child¹ male or female?

| | | |
|----------------------|----------------------|---|
| Mixed [Sex2 + DKREF] | | |
| MIXED | Mixed [Sex2 + DKREF] | |
| LIST | Sex2 | |
| | Male | 1 |
| | Female | 2 |
| MISSING_GROUP | DKREF | |
| | Refusal | 7 |
| | Don't Know | 8 |

Translation notes:

¹ 'Child' in the sense of a son or daughter of any age.

1.4.1.3 Age

For parent questions about the face-to-face contact and digital social contact with their children, we randomly pick one child by referring to the child who had his or her birthday most recently. This concept measures the age of this child. For the questions on digital and face-to-face contact we only consider children with a minimum age of 12 years (beginning of secondary school).

Expected relationship with other complex and simple concept:

We expect that the age of the child is an important predictor of the frequency of digital social contact (chdsc) and face-to-face contact (chffc) as well as of the experiences with digital social contact. Younger children are more likely to live in the same household, decreasing the need to exchange family solidarity in a digital way. However, parents of younger children are also more likely to feel major need to monitor what their children are doing, increasing the likelihood that digital social contact is used for monitoring.

Question item(s)

G12
AGEO12

ASK IF MALE, FEMALE OR REFUSAL AT G11a OR G11b (IF G11a = 1, 2, 7 OR G11b = 1, 2, 7)

How old is {he/she}?

| | | |
|---------------------|---------------------|-----|
| Mixed [Age + DKREF] | | |
| MIXED | Mixed [Age + DKREF] | |
| NUMERIC | Age | |
| | TYPE IN | |
| MISSING_GROUP | DKREF | |
| | Refusal | 777 |
| | Don't Know | 888 |

1.4.1.4 Lives in household

This concept measures whether the previously identified child lives in the household. Information on gender and birthdate of others in the household, as well as their relation to the respondent, are already part of the core module.

Expected relationship with other complex and simple concept:

We expect an association of ‘child lives in household’ with the frequency of digital social contact with the child (chdsc) and experiences with digital social contact with family members (expdisoncf). Whether the child lives in the household is likely to lower the need for digital social contact with the child and the need to exchange solidarity to monitor the child in a digital way.

Question item(s)

G13
HHLIO12

ASK IF MALE, FEMALE OR REFUSAL AT G11a OR G11b (IF G11a = 1, 2, 7 OR G11b = 1, 2, 7)

Does {he/she} live in the same household as you?

INTERVIEWER: If respondent says ‘Sometimes’, codes as ‘Yes’.

| | | |
|-----------------------|-----------------------|---|
| Mixed [YesNo + DKREF] | | |
| MIXED | Mixed [YesNo + DKREF] | |
| LIST | YesNo | |
| | Yes | 1 |
| | No | 2 |
| MISSING_GROUP | DKREF | |
| | Refusal | 7 |
| | Don't Know | 8 |

1.4.1.5 Relationship quality child

Assessments of relationship quality in the family domain have a long tradition (e.g. see Roeters et al 2010; Rogers and White 1998). This concept asks how close the respondent feels to the identified child. It is an established measure of the Longitudinal Study of Generations, 1971, 1985, 1988, 1991, 1994, 1997, 2000, 2005 [California]. Following attachment theory (Hill 1988) and self-expansion theory (Ickes & Duck 2000), the amount of time spent together raises mutual understanding and mutual commitment fostering relationship quality. Research findings confirm that the time spent with family members is key in explaining relationship quality in parent-child relationships (e.g. Hochschild, 1997; Huston et al. 2005; Roeters et al. 2010). Technology use for parent-child interactions can increase intimacy and feelings of closeness because users are less inhibited in their communications, have more frequent interaction allowing for specific knowledge of daily activities, and tend to more self-disclosure in new forms of communication fostering relationship quality (Hertlein 2012). Whether digital social contact can replace face-to-face contact however has been questioned. Face-to-face contact is necessary for hands-on help and includes all communication dimensions important to establish relationship quality (Hertlein 2012, Jamieson 2013). Also media richness theory suggests that the media use for communication with low richness could involve greater risks of misinterpretation (Drfat & Lengel 1986). Frequent initiatives of digital social contact by parents could further be perceived as monitoring or disturbance of other activities, negatively impacting relationship quality (Devitt & Roker, 2009). Digital social contact might further only be used for coordinating each other's lives with little influence on relationship quality.

Expected relationship with other complex and simple concepts:

We expect that face-to-face contact and digital social contact with the child (chfffc, chdsc) as well as the experiences with digital social contacts with family relations are important predictors of relationship quality.

Question item(s)

G14

CLOSE012

ASK IF MALE, FEMALE OR REFUSAL AT G11a OR G11b (IF G11a = 1, 2, 7 OR G11b = 1, 2, 7)

CARD 63

Taking everything into consideration, how close¹ do you feel to {him/her}?

| | | |
|------------------------|------------------------|--|
| Mixed [Close5 + DKREF] | | |
| MIXED | Mixed [Close5 + DKREF] | |

| | | |
|---------------|------------------|---|
| LIST | Close5 | |
| | Extremely close | 1 |
| | Very close | 2 |
| | Quite close | 3 |
| | Not very close | 4 |
| | Not at all close | 5 |
| MISSING_GROUP | DKREF | |
| | Refusal | 7 |
| | Don't Know | 8 |

Translation notes:

¹ 'Close' in the sense of emotional rather than physical proximity.

1.4.1.6 Distance

If the previously identified child does not live in the household, this concept measures the physical distance in travel time.

Expected relationship with other complex and simple concept:

The physical distance between parent and child contributes to identifying the need for digital social contact and the need to exchange solidarity in a digital way. Following from this, it is a major predictor of the frequency of digital social contact (chdsc) and face-to-face contact (chftfc) as well as of the experiences with digital social contact (expdiconf).

Question item(s)

G15

TTMINO12

ASK IF NO AT G13 (IF G13 = 2)

About how long would it take you to get to where {he/she} lives, on average? Think of the way you would travel and of the time it would take door to door. Please give your answer in hours and minutes.

| | | |
|------------------------------|------------------------------|------|
| Mixed [HoursMinutes + DKREF] | | |
| MIXED | Mixed [HoursMinutes + DKREF] | |
| DATETIME | HoursMinutes | |
| | TYPE IN | |
| MISSING_GROUP | DKREF | |
| | Refusal | 7777 |
| | Don't Know | 8888 |

1.4.1.7 Frequency of face-to-face contact

This concept measures the frequency of face-to-face contact with the previously identified child, asking the respondent how often you communicate with this child in person, where you are both physically present in the same place. Following the ISSP Social Networks Module 2001, response categories for face-to-face contact are suggested ranging from daily, at least several times a week, at least once a week, at least once a month, several times a year, to less often. For seeing/visiting the mother, we see the following distribution over the response categories in the ISSP: Lives in the same household 13.5%, daily 7.2%, several times a week 7.8%, at least once a week 9.4%, at least once a month 9.2%, several times a year 7.4%, less often 3.7%, never 0.7%, mother no longer alive 37.5%. For seeing/visiting son or daughter: 14.4% lives in the same household, daily 7.7%, several times a week 6.1, at least once a week 6.5, at least once a month 5.1%, several times a year 3.6%, less often 1.1%, no son or daughter: 42.4%). However, we suggest differentiating daily and multiple times a day.

Expected relationship with other complex and simple concepts:

The frequency of face-to-face contact with the child is likely to lower the need for digital social contact with the child and the trust in the relationship shaping the frequency of digital social contact with the child, as well as the experiences with digital social contacts and thus their consequences for relationship quality with the child. In line with Bengtson and Roberts (1991) classic framework, contact measures associational solidarity.

Question item(s)

G16
SPEAKO12

ASK IF MALE, FEMALE OR REFUSAL AT G11a OR G11b (IF G11a = 1, 2, 7 OR G11b = 1, 2, 7)

CARD 64

How often do you speak with {him/her} in person? Please only include occasions where you are physically in the same location.

| | | |
|----------------------------------------|----------------------------------------|----|
| Mixed [FrequencySeveralNever7 + DKREF] | | |
| MIXED | Mixed [FrequencySeveralNever7 + DKREF] | |
| LIST | FrequencySeveralNever7 | |
| | Several times a day | 1 |
| | Once a day | 2 |
| | Several times a week | 3 |
| | Several times a month | 4 |
| | Once a month | 5 |
| | Less often | 6 |
| | Never | 7 |
| MISSING_GROUP | DKREF | |
| | Refusal | 77 |
| | Don't Know | 88 |

We see the need to at least have some information about how contact has changed due to Covid-19 to get some information on how the reported frequencies of contact differ from the contact before the Covid-19 pandemic. The question below compares the level of in-person communication with the child compared to before the pandemic.

G20
C19SPO12

ASK IF MALE, FEMALE OR REFUSAL AT G11a OR G11b (IF G11a = 1, 2, 7 OR G11b = 1, 2, 7)

Now think about occasions where you and {him/her} are physically in the same location. Compared with before the coronavirus pandemic, would you say that you speak with {him/her} in person...**READ OUT...**

| | | |
|---------------------------------------|-----------------------------------------------------------|----|
| Mixed [MuchMoreMuchLess5 + NeverSame] | | |
| MIXED | Mixed [MuchMoreMuchLess5 + NeverSame] | |
| LIST | MuchMoreMuchLess5 | |
| | Much more often now | 1 |
| | A little more often now | 2 |
| | About the same | 3 |
| | A little less often now | 4 |
| | Much less often now | 5 |
| MISSING_GROUP | NeverSame | |
| | We are never in the same location now due to the pandemic | 55 |
| | Refusal | 77 |
| | Don't Know | 88 |

1.4.1.8 Frequency of digital social contact

We suggest questions to specify Internet use and the use of mobile phones for contact with specific work and family relations, here the contact with a child. Digital social contact with the child involves communication which is transmitted by electronic and especially computerized technology and which is not in-person communication. We distinguish speaking to your child so that you can see each other on a screen, speaking to your child using a mobile phone, computer, tablet or other digital device excluding calls where you can see each other on a screen, contacting your child via text, email or messaging apps. This allows to distinguish flexibility in digital communication, synchronous communication and the richness of synchronous communication.

Expected relationship with other complex and simple concepts:

We suggest that the frequency of face-to-face contact with the identified child (chffc) as well as co-residence (chinh) and distance between the parent and the child (chdis) are important predictors of the frequency of digital social contact with the child because they define the need for digital social contact. Also the age of the child is likely to be of importance because it indicates the need for specific care, advice or monitoring. Internet access (internac) and Internet skill (intsk) further define the opportunity for digital social contact with the child and privacy concerns (privcon) the trust in the use of digital communication devices and thus also the frequency of digital social contact with the

child. We further suggest that the frequency of digital social contacts with the child are associated with relationship quality with the child (chrelqu) and the experiences with digital social contacts with family members (expdscf).

Question item(s)

G17
SCRNO12

ASK IF MALE, FEMALE OR REFUSAL AT G11a OR G11b (IF G11a = 1, 2, 7 OR G11b = 1, 2, 7)

STILL CARD 64

How often do you speak with {him/her} such that you can see each other on a screen?

| | | |
|----------------------------------------|----------------------------------------|----|
| Mixed [FrequencySeveralNever7 + DKREF] | | |
| MIXED | Mixed [FrequencySeveralNever7 + DKREF] | |
| LIST | FrequencySeveralNever7 | |
| | Several times a day | 1 |
| | Once a day | 2 |
| | Several times a week | 3 |
| | Several times a month | 4 |
| | Once a month | 5 |
| | Less often | 6 |
| | Never | 7 |
| MISSING_GROUP | DKREF | |
| | Refusal | 77 |
| | Don't Know | 88 |

G18
PHONEO12

ASK IF MALE, FEMALE OR REFUSAL AT G11a OR G11b (IF G11a = 1, 2, 7 OR G11b = 1, 2, 7)

STILL CARD 64

How often do you speak with {him/her} using a phone or other device? Please include calls you make or receive, but exclude calls where you see each other on a screen.

| | | |
|----------------------------------------|----------------------------------------|---|
| Mixed [FrequencySeveralNever7 + DKREF] | | |
| MIXED | Mixed [FrequencySeveralNever7 + DKREF] | |
| LIST | FrequencySeveralNever7 | |
| | Several times a day | 1 |
| | Once a day | 2 |
| | Several times a week | 3 |

| | | |
|---------------|-----------------------|----|
| | Several times a month | 4 |
| | Once a month | 5 |
| | Less often | 6 |
| | Never | 7 |
| MISSING_GROUP | DKREF | |
| | Refusal | 77 |
| | Don't Know | 88 |

G19
COMO12

ASK IF MALE, FEMALE OR REFUSAL AT G11a OR G11b (IF G11a = 1, 2, 7 OR G11b = 1, 2, 7)

STILL CARD 64

How often do you communicate in writing with each other via text¹, email or messaging apps?

| | | |
|---------------|----------------------------------------|----|
| | Mixed [FrequencySeveralNever7 + DKREF] | |
| MIXED | Mixed [FrequencySeveralNever7 + DKREF] | |
| LIST | FrequencySeveralNever7 | |
| | Several times a day | 1 |
| | Once a day | 2 |
| | Several times a week | 3 |
| | Several times a month | 4 |
| | Once a month | 5 |
| | Less often | 6 |
| | Never | 7 |
| MISSING_GROUP | DKREF | |
| | Refusal | 77 |
| | Don't Know | 88 |

Translation notes:

¹ 'Text' means SMS. This also applies to items G31, G50 and G58.

We see the need to at least have some information about how contact has changed due to Covid-19 to get some information on how the reported frequencies of contact differ from the contact before the Covid-19 pandemic. The question below compares the level of online and mobile communication with the child compared to before the pandemic.

G21
C19MCO12

ASK IF MALE, FEMALE OR REFUSAL AT G11a OR G11b (IF G11a = 1, 2, 7 OR G11b = 1, 2, 7)

Compared with before the coronavirus pandemic, would you say that you have online or mobile communication with {him/her}...**READ OUT**...

INTERVIEWER: If necessary, remind the respondent that ‘online or mobile communication refers to communication taking place over the Internet or mobile networks, using mobile phones, computers, tablets or other digital devices.’

| | | |
|-----------------------------------|-----------------------------------|---|
| Mixed [MuchMoreMuchLess5 + DKREF] | | |
| MIXED | Mixed [MuchMoreMuchLess5 + DKREF] | |
| LIST | MuchMoreMuchLess5 | |
| | Much more often now | 1 |
| | A little more often now | 2 |
| | About the same | 3 |
| | A little less often now | 4 |
| | Much less often now | 5 |
| MISSING_GROUP | DKREF | |
| | Refusal | 7 |
| | Don't Know | 8 |

1.4.2 Parent

1.4.2.1 Identifier

This question is aimed to identify the parent for the following questions on the contact and relationship with this parent. It is asked whether either of your parents is still alive. Answer categories refer to all possible answers: both parents alive, only one parent alive, neither parent alive. If both parents are alive the respondent receives the instruction to think about the parent who had the birthday most recently. The interviewer instruction further clarifies "respondent has more than one parent with the same birthday, ask for the parent whose name comes first alphabetically".

Question item(s)

I realise the next question might be sensitive, but I need to check something to make sure I ask you the right questions later on.

G22
LIVPNT

CARD 65

Are any of your parents still alive? Please read out the number next to the answer that applies from this card.

INTERVIEWER: Parents refers to biological parents only.

| | | |
|------------------------------|-------------------------------|---|
| Mixed [YesNoParents4+ DKREF] | | |
| MIXED | Mixed [YesNoParents4 + DKREF] | |
| LIST | YesNoParents4 | |
| | Yes, both parents | 1 |
| | Yes, only my mother | 2 |
| | Yes, only my father | 3 |
| | No, no parent | 4 |
| MISSING_GROUP | DKREF | |
| | Refusal | 7 |
| | Don't Know | 8 |

1.4.2.2 Gender

The concept identifies the gender of the identified parent asking whether this is your mother or father.

Question item(s)

G23
PNTMOFA

ASK IF BOTH PARENTS ALIVE AT G22 (IF G22 = 1)

Now please think of your parent who had his or her birthday most recently. Is this your mother or your father?

| | | |
|-----------------------------------|------------------------------------|---|
| Mixed [MotherFatherOther3+ DKREF] | | |
| MIXED | Mixed [MotherFatherOther3 + DKREF] | |
| LIST | MotherFatherOther3 | |
| | Mother | 1 |
| | Father | 2 |
| | Other | 3 |
| MISSING_GROUP | DKREF | |
| | Refusal | 7 |
| | Don't Know | 8 |

1.4.2.3 Age

This concept measures the age of the parent assigned.

Expected relationship with other complex and simple concept:

We expect that the age of the parent is an important predictor of the frequency of digital social contact (pardsc) and face-to-face contact (parftfc) as well as of the experiences with digital social contacts (expdscf). Older parents often require more care from their children increasing the need for contact.

Question item(s)

G24
AGEPNT

ASK IF MOTHER OR FATHER AT G22, OR MOTHER, FATHER OR REFUSAL AT G23 (IF G22 = 2, 3 OR G23 = 1, 2, 7)

How old is {he/she}?

INTERVIEWER: Accept the respondent's estimate if they cannot provide an exact age.

| | | |
|---------------------|---------------------|-----|
| Mixed [Age + DKREF] | | |
| MIXED | Mixed [Age + DKREF] | |
| NUMERIC | Age | |
| | TYPE IN | |
| MISSING_GROUP | DKREF | |
| | Refusal | 777 |
| | Don't Know | 888 |

1.4.2.4 Lives in household

This concept measures whether the previously identified parent lives in the household.

Expected relationship with other complex and simple concepts:

Whether the parent lives in the household is likely to lower the need for digital social contact with the parent shaping the frequency of digital social contact (pardsc) as well as the experiences with digital social contacts (expdsc).

Question item(s)

G25

HHLIPNT

ASK IF MOTHER OR FATHER AT G22, OR MOTHER, FATHER OR REFUSAL AT G23 (IF G22 = 2, 3 OR G23 = 1, 2, 7)

Does {he/she} live in the same household as you?

INTERVIEWER: If respondent says ‘Sometimes’, codes as ‘Yes’.

| | | |
|-----------------------|-----------------------|---|
| Mixed [YesNo + DKREF] | | |
| MIXED | Mixed [YesNo + DKREF] | |
| LIST | YesNo | |
| | Yes | 1 |
| | No | 2 |
| MISSING_GROUP | DKREF | |
| | Refusal | 7 |
| | Don't Know | 8 |

1.4.2.5 Relationship quality parent

This concept asks how close the respondent feels to the identified parent. It is based on the US Longitudinal Study of Generations.

Expected relationship with other complex and simple concepts:

We expect that face-to-face contact and digital social contact with the parent (parftfc, pardsc) as well as the experiences with digital social contacts with family relations (expdiconf) are important predictors of relationship quality.

Question item(s)

G26

CLOSEPNT

ASK IF MOTHER OR FATHER AT G22, OR MOTHER, FATHER OR REFUSAL AT G23 (IF G22 = 2, 3 OR G23 = 1, 2, 7)

CARD 66

Taking everything into consideration, how close¹ do you feel to {him/her}?

| | | |
|------------------------|------------------------|---|
| Mixed [Close5 + DKREF] | | |
| MIXED | Mixed [Close5 + DKREF] | |
| LIST | Close5 | |
| | Extremely close | 1 |
| | Very close | 2 |
| | Quite close | 3 |
| | Not very close | 4 |
| | Not at all close | 5 |
| MISSING_GROUP | DKREF | |
| | Refusal | 7 |
| | Don't Know | 8 |

Translation notes:

¹ 'Close' in the sense of emotional rather than physical proximity.

1.4.2.6 Distance

If the previously identified parent does not live in the household, this concept measures the physical distance in travel time. The distance contributes to identify the need for digital social contacts. It resembles the question on the distance, from the perspective of the child.

Expected relationship with other complex and simple concepts:

The physical distance between parents and child contributes to identify the need for digital social contacts and the need to exchange solidarity digitally. Following from this, it is a major predictor of the frequency of digital social contacts (pardsc) and face-to-face contacts (parftfc) as well as of the experiences with digital social contacts (expdiconf).

Question item(s)

G27

TTMINPNT

ASK IF NO AT G25 (IF G25 = 2)

About how long would it take you to get to where {he/she} lives, on average? Think of the way you would travel and of the time it would take door to door. Please give your answer in hours and minutes.

| | | |
|------------------------------|------------------------------|--|
| Mixed [HoursMinutes + DKREF] | | |
| MIXED | Mixed [HoursMinutes + DKREF] | |
| DATETIME | HoursMinutes | |
| | TYPE IN | |
| MISSING_GROUP | DKREF | |

| | | |
|--|------------|------|
| | Refusal | 7777 |
| | Don't Know | 8888 |

1.4.2.7 Frequency of face-to-face contact

This concept measures the frequency of face-to-face contact with the previously identified parent and follows the concept of frequency face-to-face contact with child.

Expected relationship with other complex and simple concepts:

The frequency of face-to-face contact with the parent is likely to lower the need for digital social contact with the parent and the trust in the relationship shaping the frequency of digital social contact with the parent (pardsc) as well as the experiences with digital social contacts with family relations (expdiconf) and thus their consequences for relationship quality with the parent (parrelqu). In line with Bengtson and Roberts (1991) classic framework, contact measures associational solidarity.

Question item(s)

G28
SPEAKPNT

ASK IF MOTHER OR FATHER AT G22, OR MOTHER, FATHER OR REFUSAL AT G23 (IF G22 = 2, 3 OR G23 = 1, 2, 7)

CARD 67

How often do you speak with {him/her} in person? Please only include occasions where you are physically in the same location.

| | | |
|----------------------------------------|----------------------------------------|----|
| Mixed [FrequencySeveralNever7 + DKREF] | | |
| MIXED | Mixed [FrequencySeveralNever7 + DKREF] | |
| LIST | FrequencySeveralNever7 | |
| | Several times a day | 1 |
| | Once a day | 2 |
| | Several times a week | 3 |
| | Several times a month | 4 |
| | Once a month | 5 |
| | Less often | 6 |
| | Never | 7 |
| MISSING_GROUP | DKREF | |
| | Refusal | 77 |
| | Don't Know | 88 |

We see the need to at least have some information about how contact has changed due to Covid-19 to get some information on how the reported frequencies of contact differ from the contact before the

Covid-19 pandemic. The question below compares the level of in-person communication with the parent compared to before the pandemic.

G32
C19SPPNT

ASK IF MOTHER OR FATHER AT G22, OR MOTHER, FATHER OR REFUSAL AT G23 (IF G22 = 2, 3 OR G23 = 1, 2, 7)

Now think about occasions where you and {him/her} are physically in the same location. Compared with before the coronavirus pandemic, would you say that you speak with {him/her} in person...**READ OUT...**

| Mixed [MuchMoreMuchLess5 + NeverSame] | | |
|---------------------------------------|-----------------------------------------------------------|----|
| MIXED | Mixed [MuchMoreMuchLess5 + NeverSame] | |
| LIST | MuchMoreMuchLess5 | |
| | Much more often now | 1 |
| | A little more often now | 2 |
| | About the same | 3 |
| | A little less often now | 4 |
| | Much less often now | 5 |
| MISSING_GROUP | NeverSame | |
| | We are never in the same location now due to the pandemic | 55 |
| | Refusal | 77 |
| | Don't Know | 88 |

1.4.2.8 Frequency of digital social contact

This concept measures the frequency of digital social contact with the previously identified parent and follows the concept of frequency digital social contact with child.

Expected relationship with other complex and simple concepts:

We suggest that the frequency of face-to-face contact with the parent (parftfc) as well as co-residence (parinhh) and distance between the parent and the child (pardis) are important predictors of the frequency of digital social contacts with the parent because they define the need for digital social contacts. Also the age of the parent is likely to be of importance because it indicates the need for specific care (parbirth). Internet access (internac) and Internet skill (intsk) further define the opportunity for digital social contacts with the parent and privacy concerns (privcon) the trust in the use of digital communication devices and thus also the frequency of digital social contacts with the parent. We further suggest that the frequency of digital social contacts with the parent are associated with relationship quality with the parent (parrelqu) and the experiences with digital social contacts with family members (expdicnf).

Question item(s)

G29
SCRNPNT

ASK IF MOTHER OR FATHER AT G22, OR MOTHER, FATHER OR REFUSAL AT G23 (IF G22 = 2, 3 OR G23 = 1, 2, 7)

STILL CARD 67

How often do you speak with {him/her} such that you can see each other on a screen?

| | | |
|----------------------------------------|----------------------------------------|----|
| Mixed [FrequencySeveralNever7 + DKREF] | | |
| MIXED | Mixed [FrequencySeveralNever7 + DKREF] | |
| LIST | FrequencySeveralNever7 | |
| | Several times a day | 1 |
| | Once a day | 2 |
| | Several times a week | 3 |
| | Several times a month | 4 |
| | Once a month | 5 |
| | Less often | 6 |
| | Never | 7 |
| MISSING_GROUP | DKREF | |
| | Refusal | 77 |
| | Don't Know | 88 |

**G30
PHONEPNT**

ASK IF MOTHER OR FATHER AT G22, OR MOTHER, FATHER OR REFUSAL AT G23 (IF G22 = 2, 3 OR G23 = 1, 2, 7)

STILL CARD 67

How often do you speak with {him/her} using a phone or other device? Please include calls you make or receive, but exclude calls where you see each other on a screen.

| | | |
|----------------------------------------|----------------------------------------|---|
| Mixed [FrequencySeveralNever7 + DKREF] | | |
| MIXED | Mixed [FrequencySeveralNever7 + DKREF] | |
| LIST | FrequencySeveralNever7 | |
| | Several times a day | 1 |
| | Once a day | 2 |
| | Several times a week | 3 |
| | Several times a month | 4 |
| | Once a month | 5 |
| | Less often | 6 |
| | Never | 7 |

| | | |
|---------------|------------|----|
| MISSING_GROUP | DKREF | |
| | Refusal | 77 |
| | Don't Know | 88 |

G31
COMPNT

ASK IF MOTHER OR FATHER AT G22, OR MOTHER, FATHER OR REFUSAL AT G23 (IF G22 = 2, 3 OR G23 = 1, 2, 7)

STILL CARD 67

How often do you communicate in writing with each other via text¹, email or messaging apps?

| | | |
|----------------------------------------|----------------------------------------|----|
| Mixed [FrequencySeveralNever7 + DKREF] | | |
| MIXED | Mixed [FrequencySeveralNever7 + DKREF] | |
| LIST | FrequencySeveralNever7 | |
| | Several times a day | 1 |
| | Once a day | 2 |
| | Several times a week | 3 |
| | Several times a month | 4 |
| | Once a month | 5 |
| | Less often | 6 |
| | Never | 7 |
| MISSING_GROUP | DKREF | |
| | Refusal | 77 |
| | Don't Know | 88 |

Translation notes:

¹ 'Text' means SMS. This also applies to items G31, G50 and G58.

We see the need to at least have some information about how contact has changed due to Covid-19 to get some information on how the reported frequencies of contact differ from the contact before the Covid-19 pandemic. The question below compares the level of online and mobile communication with the child compared to before the pandemic.

G33
C19MCPNT

ASK IF MOTHER OR FATHER AT G22, OR MOTHER, FATHER OR REFUSAL AT G23 (IF G22 = 2, 3 OR G23 = 1, 2, 7)

Compared with before the coronavirus pandemic, would you say that you have online or mobile communication with {him/her}...**READ OUT**...

INTERVIEWER: If necessary, remind the respondent that ‘online or mobile communication refers to communication taking place over the Internet or mobile networks, using mobile phones, computers, tablets or other digital devices.’

| | | |
|-----------------------------------|-----------------------------------|---|
| Mixed [MuchMoreMuchLess5 + DKREF] | | |
| MIXED | Mixed [MuchMoreMuchLess5 + DKREF] | |
| LIST | MuchMoreMuchLess5 | |
| | Much more often now | 1 |
| | A little more often now | 2 |
| | About the same | 3 |
| | A little less often now | 4 |
| | Much less often now | 5 |
| MISSING_GROUP | DKREF | |
| | Refusal | 7 |
| | Don't Know | 8 |