UNIVERSITÉ DE GENÈVE
CENTRE INTERFACULTAIRE DE GÉRONTOLOGIE ET D'ÉTUDES DES VULNÉRABILITÉS

LONGPOP

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# Data production

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LONGPOP Expected Result 15.2

## 1. General information on the VLV study

The first wave of the Vivre-Leben-Vivere study (VLV) followed up on two previous cross sectional studies on old age in Switzerland, the first conducted by GUGISPRA (ancestor of the Centre for the Interdisciplinary Study of Gerontology and Vulnerability, CIGEV)) in 1979 called "Social retreat and dependency of elderly people" and the second, mainly being a repetition in 1994 titled "The autonomy of elderly persons in their socio-cultural environment".

VLV is an interdisciplinary study led by the CIGEV in several cantons of Switzerland. The first wave (VLV1) took place in 2011 and 2012. The study aimed at understanding vulnerability and resources in older age (see Oris et al., 2016 for a conceptual, methodological and critical overview). 3080 subjects were tested using paper-pencil self-administered questionnaires and face-to-face interviews, covering a broad selection of topics (e.g., information on biography, physical and psychological health, personality, societal participation, etc). More information on the VLV1 data set, its instruments and variables can be found at FORS (see http://forscenter.ch).

The second wave (VLV2) investigated the same subjects as in the first wave in a longitudinal approach, therefore reusing a large proportion of the topics of VLV1 and adding new aspects to the questionnaire (in particular, a more detailed assessment of cognition and care).

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## 2. VLV2 study methods

### 2.1 Participants

Participants of first wave of VLV were older adults aged 65 years or more. Using a stratified sampling method, the participants were selected by age group, sex and Swiss canton (Geneva, Valais, Tessin, Bern, Basel-Land and -City,).

Participants of the second wave of VLV were those (1) who were re-contacted from VLV1, except for those who had initially answered through proxies and those who lived in the Italian-speaking area, which was excluded in wave 2, and (2) who then accepted to participate in VLV2 (see Figure 1).

In total, 1063 participants took part in the study, of which 4 subjects had to be excluded as they did not correspond to the respective person that participated in the first wave. Out of the remaining 1059 subjects, 2 only answered the written questionnaire but did not participate in the face-to-face interview. For another 16 subjects, some problems emerged with their interview data, so that for those all interview data had to be removed from the sample. This resulted in valid face-to-face data for $N$ = 1041 subjects. However, for 13 subjects their Mini Mental State Examination (MMSE) score was lower than the cut-off of 21, so they only performed a much shortened version of the face to face interview. Forty-seven subjects did not fill out the paper-pencil questionnaire, which resulted in $N$ = 1012 subjects with valid paper-pencil data. All in all, for $N$ = 994 participants valid data of both the self-administered questionnaire and the face-to-face interview are available.

For 191 participants from VLV1 who had passed away, the date of death was collected. VLV2 participants were aged between 70.21 years and 102.56 years ($M$ = 80.71, $SD$ = 6.72, Range = 32.35 years).

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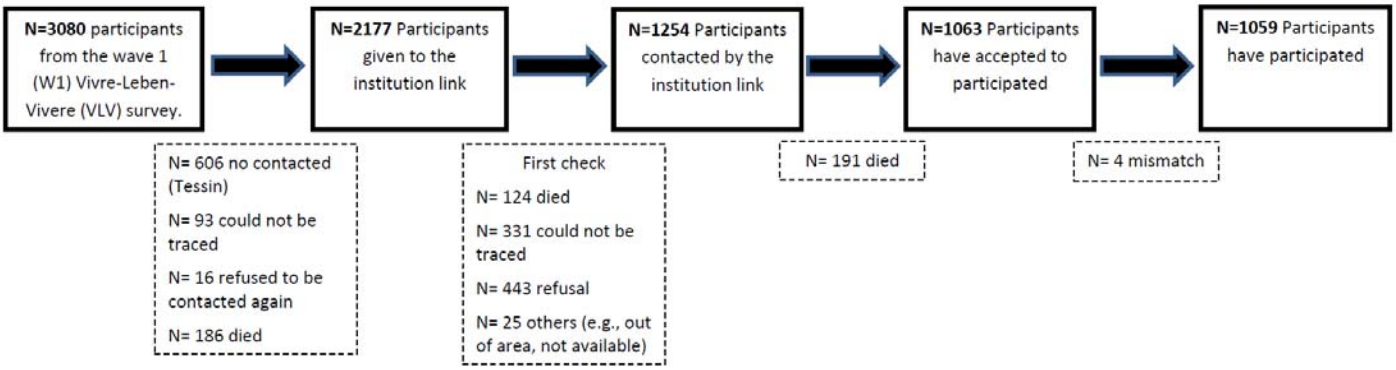


*Figure 1*. Evolvement of VLV2 sample based on VLV1 participants.

## 2.2 Measures

Measures involved in the VLV2 study can be grouped in different categories of the older adults' life conditions: (1) socio-demographic information (e.g., financial resources, occupation and education of parents, multilingualism), (2) participation in – social – life and autonomy (e.g., life in society, family network, activities of daily living), (3) physical health (e.g., subjective health, chronic diseases comorbidity index), (4) mental health and psychological well-being (e.g., loneliness, perceived stress), (5) cognition (e.g., prospective memory, flexibility, specific cognitive functioning), (6) personality, self-perception and involvement in cognitive activities (e.g., personality, cognitive reserve, motivation for cognitive activities, memory self-efficacy), and (7) subjective perception of – own – aging (e.g., ageism, identification with group of older adults). The study consisted of two parts: a paper-pencil questionnaire and a face-to-face interview (Ballhausen et al., 2018).

*Paper-pencil self-administered questionnaire*

The paper-pencil self-administered questionnaires were sent to participants before the interviews. They were asked to complete them on their own before the face-to-face interview date. However, if they were not completed, the interviewer could assist in completing them.

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*Face-to-face interview*

The other part of the measures was assessed in the form of *face-to-face interviews*, which were conducted by 32 trained interviewers. These interviewers were employed by a research institute (The LINK institute: social, market and media research in Switzerland, https://www.link.ch). Beforehand, two training days with LINK and CIGEV staff took place to ensure correct administration of the tests.

Most measures of the interview were administered to all participants, but other measures were performed by only a part of the sample to reduce the total length of the interview, due to time and budget restrictions. To do so, a random rotation system between three parts was applied which determined which of these parts was not assessed: (1) CogTel ($N$ = 348); (2) family and social networks ($N$ = 344); (3) formal services and organization of daily living within household ($N$ = 349). In other words, some measures (e.g.,CogTel) were randomly administered to only two thirds of the sample (Ballhausen et al., 2018).

In addition, regardless to the rotation, when a participant had obtained a score on the MMSE inferior to 21, some subsequent measures were not administered. Likewise, when a participant lived in a retirement home, some subsequent measures were not administered.

### 2.3 VLV2 procedure

A soft launch of the study including 50 participants took place in January and February 2017. After small modifications, the main study then started. The main study was conducted between June and December 2017.

First, participants received an information letter by post. Then, they had a first contact with the interviewer by telephone. If a participant had passed away, a relative was asked to give information on the date of death ("end of life" questionnaire). Otherwise, if the target person agreed to participate, interviewers would make an appointment and the LINK institute dispatched the paper-pencil questionnaire. At the interview appointment, participants had to fill in the informed consent, and the interviewer verified and collected the paper-pencil

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questionnaire. Face-to-face interviews were then conducted. All completed documents went to the LINK institute.

On average, the paper-pencil self-administered questionnaire took the participants 91.6 minutes to complete, if not completed, another 38.8 minutes (on average) were taken for support from the interviewer. The face-to-face interview itself lasted on average 77.2 minutes (Ballhausen et al., 2018).

### 3. Linkage VLV and the Swiss National Cohort

The VLV dataset offers a broad range of indicators covering physical, mental, economic, as well as social resources. Some of the key measures are household income and income sources, social networks, social participation, various health indicators, and cognitive performance. Moreover, a retrospective questionnaire was used to collect information on work-, family-, health-, and residential trajectories as well as on the occurrence of critical life events, such as accidents or unemployment phases.

Despite already offering a wealth of variables that can serve for analyses, we further extended the VLV dataset by linking Swiss register-data to it. Specifically, we linked the Swiss National Cohort (SNC) (Bopp et al., 2009) which in itself is already a linkage between the Swiss census data and the Swiss mortality register. The result offers an exceptionally rich database that enables the analysis of the association between specific risk factors on all-cause as well as cause-specific mortality in old age. On a technical level, the linkage was established based on a probabilistic linkage between the (anonymous) VLV database with the SNC database using sex, date of birth, place of birth, place and geo-coordinates of the place of residence.

In addition, we also attributed to each VLV-participant a value for the Swiss SEP indicator, an area based socioeconomic indicator for all of Switzerland. The Swiss SEP has been elaborated and is maintained by the SNC team (see Panczak et al., 2012). It defines an SEP score for neighbourhoods using Census and road network data, median rent per square metre, proportion households headed by a person with primary education or less, proportion headed by a person in manual or unskilled occupation and the mean number of persons per room for a

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specific dwelling. Technically, we used GIS software to locate each participant in VLV1 in one of the aforementioned neighbourhoods and thus retained the corresponding value for the Swiss SEP. In cases where an individual was outside a defined neighbourhood, we attributed the SEP value of the closest neighbourhood.

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